



CANADA
4-H Ontario

www.4-hontario.ca

4-H ONTARIO PROJECT



Horse Project

REFERENCE MANUAL

The 4-H Pledge

I pledge my Head to clearer thinking,
my Heart to greater loyalty,
my Hands to larger service,
my Health to better living,
for my club, my community and my country.

The 4-H Motto

Learn To Do By Doing

4-H Ontario Provincial Office

111 Main Street, Box 212
Rockwood, ON N0B 2K0
TF: 1.877.410.6748
TEL: 519.856.0992
FAX: 519.856.0515
EMAIL: inquiries@4-hontario.ca
WEB: www.4-HOntario.ca

Project Resource Information:

Updated by: Elizabeth Johnston, 4-H Ontario & Justina Reinhart, 4-H Ontario Summer Resource Student
Photo credit: Rebecca Palmer
Layout by: Mary-Kathleen Dunn
Date: March, 2016

Thank you to the 4-H Horse Project Advisory Committee members who assisted with the update of this resource:

Kelly Barclay, Carleton 4-H Association
Pam Coburn, Ontario Equestrian Federation
Gayle Ecker, Equine Guelph
Jim Leask, Bruce 4-H Association
Marj Larson, Kenora 4-H Association
Carrie Purcell, York 4-H Association



4-H Ontario grants permission to 4-H Volunteers to photocopy this 4-H project resource for use in their local 4-H program.

All information presented in this Project Resource was accurate at the time of printing.

The development of this project resource was made possible through the support of the OHRIA (Ontario Horse Racing Industry Association).



CANADA
4-H Ontario

INTRODUCTION

Welcome to 4-H Ontario's Horse Project!

The purpose of the 4-H Horse Project is to help members learn about horses and how to properly care for a horse. By participating in the 4-H Horse Project, members can increase their knowledge of horse husbandry as well as improve their horsemanship skills by learning basic safety handling principles. Members will learn about their own horse if they have one, other horse breeds, safety, health, anatomy, physiology, behavior, conformation, nutrition, facilities, grooming, equipment, transport, judging and horsemanship.

Members will develop respect for horses, responsibility in caring for horses and discipline in the way horses are handled. Members will also develop patience in training and neatness in both their own and their horse's appearance, a general respect for the horse industry and members will learn and grow personally as they participate in the many activities this project has to offer.. There are several ways to participate in the horse project, even if a member doesn't own their own horse.

Being a top horseman or horsewoman requires learning all you can about horses, and setting and achieving goals for you and your horse. With humane training methods, a well-trained horse will respond to your wishes and give you its best.

Objectives:

1. To understand the history of horses and their development over the years
2. To increase knowledge levels about the husbandry of horses
3. To learn how to safely work with and around horses
4. To learn about proper horse welfare and to be able to identify horse related issues
5. To learn about the various breeds of horses
6. To learn how to have fun with horses
7. To learn how to properly transport horses
8. To engage youth to be advocates of a healthy horse industry
9. To learn about the elements of judging and public speaking
10. To learn the proper use of parliamentary procedure

How to Use This Manual

4-H Ontario's Horse project is made up of 4 parts:

1. The Reference Book:

The reference book is laid out into 7 sections:

Section 1 – General Knowledge

Section 2 – Feeding & Nutrition

Section 3 – Horse Health & Concerns

Section 4 – Horse Care

Section 5 – Fun With Horses

Section 6 – Other

Within each section are several units. Each unit could be used as a meeting. Use your own discretion as to which units are appropriate for the age and knowledge of the members in your club. There are more units than can be covered in 12 hours of a typical 4-H project. A member could take this project for multiple years and learn different content each year.

Each unit contains Learning Objectives, a Roll Call question, a suggested agenda, Topic Information, Activities and a Digging Deeper section. Activities should be used in combination with the discussion of topic information to teach members in a hands-on, interactive learning environment.

2. The Record Book

This booklet is designed to make it easier for members to record information throughout the club. Members are to record their expectations and goals for the project in addition to contact information, meeting dates and roll calls. Print or photocopy pages from the Reference Book that you think will benefit the members either as a resource or an activity. Answers for the Activity Pages can be found at the end of each meeting in the Reference Manual.

The Record Book should be given to each member at the beginning of the first meeting. Ask members to keep it in a binder or duotang so they can add to it easily.

Go through the Record Book with the members and explain the charts and forms. Encourage them to use their Record Books at every meeting and record as much information as possible. As an added incentive, a prize could be given at the end of the project for the best Record Book.

3. Creative Horsemanship

4. 4-H Horse Assessment Tools Supplement

Including STEM in the 4-H Horse Project

What is STEM and why is it important?

Since 1915, 4-H in Ontario has engaged youth in science, technology, engineering, and math (STEM). This has traditionally meant a solid focus on agricultural science, mechanics, entrepreneurship, natural sciences and household science. Today, 4-H has grown to include rocketry, robotics, computer science, environmental sciences, and more. 4-H provides hands-on learning experiences to encourage learning about the world around us. Our lives are completely immersed in science and technology.

Understanding how science, engineering, and technology impact our lives, solve problems and create new ones makes it easier to navigate our modern world.

In school, science classes need to cover a broad range of topics in a limited amount of time while STEM in 4-H allows members and leaders time to dig deeper into ideas and concepts and to spend as much time as desired to work on projects based on personal interests, questions, and skills.

STEM in 4-H allows a person to work on their own questions, design their own tests, create their own models, build their understanding, and share their work with others – learn to do by doing. That’s what science and engineering are, trying to understand the natural universe and develop solutions to the problems faced in our world today. Science is inquiry that uses a specific approaches and skills. But all learning is an inquiry process so working with science helps develop your learning muscles.

Within 4-H, the STEM process can go even further to include the Arts, thus changing the acronym to STEAM – Science, Technology, Engineering, Art & Math.

STEAM in 4-H Ontario Projects

As you work through the Horse Project, you will see STEAM integrated throughout the project within almost all of the activities provided. Examples of activities include ‘The Melon Drop, Pasta Skeleton of the Horse, Horse Sizes and Evolution Mix Up,’ amongst many others.

STEAM can be challenging but it can also be fun! Be sure to try out the activities. Observe what works and what doesn’t and how activities can be changed slightly to get different results. It’s all a part of the STEAM learning process!

Table of Contents

Introduction	1
Section 1 – General Knowledge	
What is a Horse?.....	13
Horse Safety in the Barn and Transporting.....	25
Parts of a Horse.....	43
Conformation.....	57
Conformational Faults.....	73
Horse Behaviour.....	93
Anatomy & Physiology.....	111
Identification.....	129
Breeds.....	149
Soundness & Blemishes.....	167
Section 2 – Feeding & Nutrition	
Digest This!	183
Feeding Your Horse.....	197
Chew on This.....	219
Section 3 – Horse Health & Concerns	
General Health.....	235
Diseases.....	257
Lameness.....	273
Parasites.....	289
Section 4 – Horse Care	
Facilities.....	301
Grooming and Hoof Care	321
First Aid	343
Section 5 – Fun With Horses	
Equipment.....	353
Other Commonly Used Equipment	371
Working With Horses - Groundwork.....	393
Working With Horses - Getting Ready to Ride.....	403
Movement.....	415
Riding.....	425
Rider’s Body Position.....	445
How To’s of Riding.....	457
Section 6 – Other	
Selection & Buying.....	483
Judging.....	493
Fitting and Showing Supplement.....	505

Planning a Meeting

Plan your meetings well. Review all the information well in advance so you are prepared and ready!

Before Each Meeting:

- Read the topic information and activities and photocopy any relevant resources for the members' Record Books.
- Be familiar with the topic information for each meeting. Think of imaginative ways to present the information to the members. Do not rely on just reading the information out loud. Review available resources, plan the meetings and choose activities and themes that complement the ages and interests of your members. The Record Book contains extra activities that can be used if you need to fill in time or if one of the suggested meeting activities does not suit your group of members.
- Gather any equipment and/or resources that will be needed to complete the meeting.
- Each 4-H project must be held over a period of at least 4 separate meetings (most projects have 6 meetings) totaling a minimum of 12 hours. Typically, 4-H meetings are approximately 120 minutes (2 hours) in length. Before each meeting, create a timeline to ensure that you are providing an adequate amount of instructional time for club completion.

Included in this introduction section is a Leader's Planning Chart to help with the planning of meetings. In addition to the chart, keep track of what went well and what could be changed next time. That way, each time this project is run, the content of the meetings can be different!

When planning each meeting, a typical 4-H meeting agenda should include the following:

- Welcome & Call to Order
- 4-H Pledge
- Roll Call
- Parliamentary Procedure:
 - Secretary's Report
 - Treasurer's Report (if any)
 - Press Report
 - New Business: local and provincial 4-H activities/opportunities, upcoming club activities
- Meeting content and activities
- Clean-up
- Social Recreation and/or refreshments
- Adjournment

Judging and Communications:

Each meeting must include either a judging or public speaking activity.

- Judging gives the members an opportunity to use judging techniques as part of the learning process. Through judging, members learn to evaluate, make decisions and communicate with others. They also develop critical thinking skills, confidence and self-esteem. Many examples are used in this reference book but use your imagination! As long as members are setting criteria and critically thinking about where items fit within that set of criteria, they are learning the basic skills of judging!
- A communications activity has been provided for each meeting but can be included in the Roll Call or social recreation time. These activities do not need to involve the topic of horses as the outcome is more about understanding the concepts of effective communication.

Electing Your Executive

Elections can be chaired by a youth leader, senior member or club leader. The person chairing the elections is not eligible for any positions.

Procedure:

1. All positions are declared vacant by the chairperson, who indicates this by saying "I'd like to declare all positions vacant."
2. The group decides on the method of voting (i.e. show of hands, ballot or standing).
3. The chairperson accepts nomination from members for each position being filled. Nominations do not require a seconder. Nominations are closed by motion or declaration by the chairperson.
4. Each member nominated is asked if he/she will stand for the position. Names of members who decline are crossed off.
5. Voting takes place by selected method and majority rules (i.e. member with most votes).
6. Announce the name of the successful member. Offer congratulations and thank all others that ran for the position.
7. If ballots are used, a motion to destroy the ballots is required and voted on.

Steps in Making a Motion

The motion is a very important key to having good meetings. Motions are a way of introducing topics for discussion and allowing each member to speak and vote. Any member can make a motion.

Steps in Making a Motion:

1. Address the chairperson (i.e. raise your hand).
2. Wait for the chairperson to acknowledge you.
3. Make the motion: "I move that..."
4. Another person seconds the motion: "I second the motion."
5. Chairperson states the motion.
6. Chairperson calls for discussion of the motion.
7. Chairperson restates the motion.
8. Chairperson calls the vote: "All in favour? Opposed?"
9. Chairperson announces the result of the vote: "Motion carried" or "Motion defeated."

Leader Planning Guide:

Meeting #	Date/Place/ Time	Topics Covered	Activities	Materials Needed

As a club volunteer your responsibilities are to:

- Complete the volunteer screening process and to attend a volunteer training session.
- Notify the local association of the club, arrange a meeting schedule and participate in club meetings, activities and the Achievement program.
- Review the project material in the Reference and Record books to familiarize yourself with the information and adapt it to fit your group. Be well organized and teach the material based on your group's age, interest and experience level.
- Organize the club so members gain parliamentary procedure, judging and communication skills.
- Have membership lists completed and submitted along with fee collected (if applicable) by the end of the second meeting.
- Have members fill out a Participant Agreement Form and identify any health concerns. Ensure that all members, leaders and parent helpers know the appropriate actions during any emergency. Check with members for any food allergies or dietary restrictions and plan snacks accordingly.

As a club member your responsibilities are to:

- Participate in at least 2/3 of his/her own club meeting time. Clubs must have a minimum of 12 hours of meeting time.
- Complete the project requirement to the satisfaction of the club leaders.
- Take part in the project Achievement Program.
- Fill in and complete the Record Book.
- Complete any other project as required by the club leaders.

Achievement Program Ideas/Suggestions

- If members have a project animal for this club, show the animal at a local fair/show.
- Host a horse information day and educate the public about the horse industry in the area. If possible, have a horse(s) there for people to see and touch.
- Be a part of a local Farm Safety Day. Have a display about safety while working with horses.
- Have members make a presentation at school about the 4-H Horse Project and/or their project animal.
- Create a skit about horses and perform it at school, at a senior's home, at another organization's meeting, etc.

Special Projects

These projects are done outside of meeting time and are for members interested in doing more – often senior members. It's up to you as the leader to decide if you will require members to complete a Special Project for club completion. Some ideas include:

- Write a press release about the horse industry to your area.
- Visit a horse farm. Interview the owner or someone who works there and write a press release for the newspaper.
- Create a display about a topic related to horses.
- Create a video about a topic related to horses. Post on YouTube.

Tour & Guest Speaker Ideas

- Visit a local horse farm. Have the owner or someone who works there give a tour and speak about the operation.
- Visit a horse auction.
- Have guest speakers attend meetings to supplement the material in the Reference Manual. Speakers could include a horse farmer, veterinarian, horse nutritionist, feed salesperson, someone who trains and/or competes with horses.
- Visit a local racetrack for a behind the scenes tour.
- Visit a local feed store, feed mill and/or tack shop.
- Tour the Equine Centre at the Ontario Veterinary College.
- Attend the Royal Agricultural Winter Fair in Toronto.
- Attend a horse show at a local fair.
- Attend an RCMP Musical Ride performance.

Horse Project References and Resources

4-H Alberta www.4h.ab.ca

4-H Horse Safety Program Overview – Penn State Extension www.extension.psu.edu/4-h/.../horses/.../horse-safety.../horse-safety-overview

15 Minute Horse Fix <https://15minutehorsefix.wordpress.com/>

4-H South Dakota <http://igrow.org/4h/south-dakota-4h/>

4-H USA <http://www.4-h.org/resource-library/curriculum/4-h-horse/giddy-up-and-go/>

Agriculture and Agri-Food Canada <http://www.agr.gc.ca>

Arabian Horse Association <http://www.arabianhorses.org/youth>

Discovery Education Puzzle Makers <http://puzzlemaker.discoveryeducation.com>

Equine Guelph www.equineguelph.ca

Equestrian Out Reach <http://www.equestrianoutreach.org>

EquiMania <http://www.equimania.ca/dangerdetective/onfarm.html>

Green TV – Evolution of the Horse <https://vimeo.com/117493344>

Horse & Road Safety Awareness <http://www.hrsa.org.uk>

Horse Journals www.horsejournals.com

Horse Side Vet Guide - Equine Health Resource www.HorseSideVetGuide.com

InfoVets <http://infovets.com>

Kentucky 4-H Horse Volunteer Certification Resource Manual <http://www2.ca.uky.edu/horsediscovery>

Ontario Ministry of Agriculture, Food & Rural Affairs www.omafra.gov.on.ca

Quick Worksheets <https://quickworksheets.net>

Pet Breeds <http://horses.petbreeds.com/>

TES Global Ltd. <https://www.tes.com/teaching-resource>

The Chronicle of the Horse <http://www.chronofhorse.com>

the Horse <http://www.thehorse.com>

The Horse Channel www.horsechannel.com

Understanding Horse Behaviour – University of Tennessee Agricultural Extension <https://ag.tennessee.edu/AnimalScience/4-H/Publications/UnderstandingHorseBehavior-PB1654.pdf>

**I pledge my Head to clearer thinking,
my Heart to greater loyalty,
my Hands to larger service
my Health to better living
for my club, my community and my country.**



CANADA

4-H Ontario

MEETING 1: WHAT IS A HORSE?

Topics:

- Equine family
- Evolution of the horse

Objectives:

- To increase awareness of who belongs in the equine family
- To understand the history and evolution of the horse

Roll Call

- How old do you think the oldest ancestor of the horse is?
- What is your reason for wanting to learn more about horses?

Sample Meeting Agenda – 2 hrs. 10 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Activity Related to Topic	Activity #1 – Travel Through Time - Evolution of the Horse Video (information found at the end of this meeting)	15 min
Topic Information Discussion	Review the history of the horse.	30 min
Activity Related to Topic	Activity #2 – Evolution Mix Up (instructions found at the end of this meeting).	30 min
Public Speaking/Judging Activity	Activity #3 - Judging Horses (instructions found at the end of this meeting)	30 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

SECTION 1: GENERAL KNOWLEDGE**Topic Information**

There is a lot to learn about horses and the more we know about them, the better care we can provide for them thus making happier animals.

What is a Horse?

Horses are members of the equine family. Equine family members include:

- horses and ponies (a horse that measures below 14.2 hands high at the withers)
- donkeys
- zebras
- mules (donkey sire, horse or pony dam)
- hinnies (horse or pony sire, donkey dam)

History of the Horse**Evolution****1. *Hyracotherium (Dawn Horse)***

- Size of a large dog
- Oldest known ancestor of horses
- Lived 55 to 60 million years ago
- Characteristics included:
 - short face
 - eye sockets in middle of the head
 - short diastema (the space between the front teeth and the cheek teeth)
 - beginnings of horse-like ridges on molars
 - four toes, well spread for walking on soft ground

2. *Mesohippus (Middle Horse)*

- Size of a deer
- Weighed approximately 75 pounds
- 1.2 metres (4 feet) long
- Lived 37 to 32 million years ago
- Characteristics included:
 - Three toes
 - Stood mostly on middle toe
 - Fossils found in Oligocene locations in Colorado, Nebraska, Dakota and Canada

3. *Merychippus*

- Size of a modern pony
- Considered a milestone in the evolution of the horse
- Lived 17 to 11 million years ago
- Characteristics included:
 - Long face and long legs
 - Three toes with a well-developed hoof on the central toe
 - Same tooth pattern as modern horse
 - First known “grazing horse”
- Found in many late Miocene locations throughout the United States

4. *Pliohippus*

- Approximately 1.2 metres tall
- Lived 5.3 to 2.5 million years ago
- Characteristics included:
 - Developed hooves
 - Barely visible side toes
- Found in many late Miocene locations in Colorado, Nebraska, North and South Dakota and Canada.
- Considered the ‘grandfather’ of the modern horse

5. *Equus*

- Size varies, most are approximately 1.7 metres tall (16.3 hands)
- Lived approximately 4 million years ago to present day
- *Equus* is the only surviving genus in the once diverse family of horses
- Characteristics included:
 - One toe (hoof)
 - No hoof twist
 - Grazing teeth
- Major glaciations brought these animals to the “Old World.” Some spread to Africa (zebra), other to the Middle East (donkey) and Asia and Europe (horse).
- Fossils of *Equus* are found on every continent except Australia and Antarctica.

6. *Modern Equines*

- The ice age killed most one toed horses in North America and in South America, horses died out due to climate change and hunting.

SECTION 1: GENERAL KNOWLEDGE**Domestication**

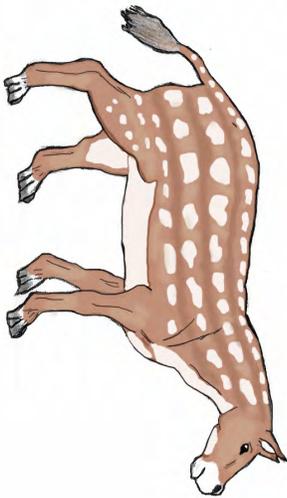
Domestication of horses began approximately 6000 years ago in the Ukraine and Kazakhstan. Horses were domesticated either as pets or as work animals and were sometimes used for meat. As the horse's popularity grew, they were increasingly used for work. With the invention of cars and modern farming equipment, many horses are now used for pleasure only.

Today

Horses are still used for work in many places from drawing carts to plowing fields. Horses are also used as companion, riding, pleasure and competition animals. Horses are used for halter, driving, pony club (gymkhana), jumping, barrel racing and much more.

SECTION 1: GENERAL KNOWLEDGE

EVOLUTION OF THE HORSE



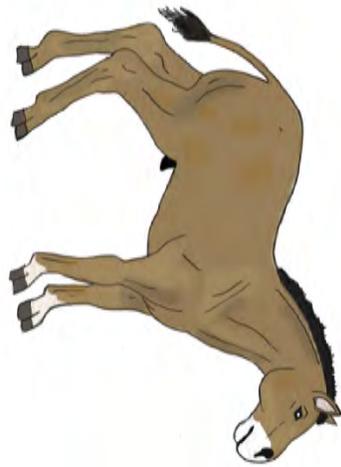
1. Hyracotherium (Dawn Horse)

- dog sized
- lived 55 million years ago
- four toes



3. Merychippus

- size of a modern pony
- lived 17-11 million years ago
- well developed hoof on central toe
- looked like a horse



2. Mesohippus (Middle Horse)

- size of a deer
- lived 37-32 million years ago
- three toes, mostly stood on middle toe



4. Pliohippus

- 1.2 meters tall
- lived 5.3 to 2.5 million years ago
- developed hooves, barely visible side toes



5. Equus

- sizes vary, most are around 1.7 meters tall (16.3 hands).
- lived from approximately 4 million years ago to present day
- developed hooves, chestnut on leg believed to be old toe

SECTION 1: GENERAL KNOWLEDGE**BEFORE THE NEXT MEETING**

Try one of these activities at home.

1. Examine the hooves/feet of several different animals. How many are similar to the hoof of a horse. Create a chart listing the kind of animal and type of hoof/foot. If possible, create a drawing of the foot and label the difference between the different animals. Record your findings in your Record Book.

AND/OR

2. Create a graph showing the change in height of horses over time. Record your findings in your Record Book.

DIGGING DEEPER

For Senior Members

The Very Beginning - Hyracotherium

The horse has evolved from *Hyracotherium*, a small creature standing less than 0.4 m tall, to the modern-day horse, a much taller animal standing approximately 1.6 m tall.

Using the library or the Internet, research as to what life would have been like for the Hyracotherium. While researching consider the following questions:

1. Hyracotherium lived in a dense forest area dominated by a rich undergrowth of ferns. What do you think the advantages of small body stature might be in this type of environment?
2. A change in vegetation to grasslands brought about changes in the shape of the horse's leg. What changes in vegetation could have caused the evolution of the horse?
3. The teeth of the browsers, such as *Meshippus*, were covered with a thick layer of enamel. The teeth of the modern-day horse, by comparison, have less enamel and appear to be much wider and flatter. Provide reasons for some of the changes in teeth.
4. Why would changes in the environment have caused changes in the horses' predators?

Create a chart comparing the environment, predators, eating habits and nutrition of the Hyracotherium compared to today's horses.

Record your findings in your Record Book and be prepared to share these findings at the next meeting.

SECTION 1: GENERAL KNOWLEDGE

ACTIVITIES**Activity #1 - Travel Through Time - Evolution of the Horse Video****Items Needed:**

- Laptop
- Projector & Screen if possible
- Connection to the Internet

Instructions:

- Watch the following video: <https://vimeo.com/117493344>

Following the video, ask members the following questions:

- How tall do they think the original ancestor of horses was? (0.4m)
- What do they think the habitat (environment) was like when the first horses (Hyracotherium) lived?
- Why do they think the look of the horse changed over time? (adapt to environment (climate, available food, predators))
- Do they think horses will continue to change the way they look in the future?

Activity #2 - Evolution Mix-Up

Wildlife biologists use their observation skills to locate animals and take measurements of animal behaviour. These scientists rely on highly sharpened senses to determine small changes in a landscape.

Most people have very good eyes. We can see but are we really observing? Do you stop to notice the squirrel digging in the grass or notice a bird's nest in the tree? The plants and animals that share our homes are very good at hiding. How good are you at spying them?

Items Needed:

- Evolution Worksheets (one copy of page one for each group plus one for the leaders; activity pages found at the end of this meeting)
- Scissors
- Re-sealable bags or paper clips
- Evolution Worksheet page two (one copy for the leaders)

Instructions:

1. Print off a copy of page one for each group plus an extra. Keep the extra one for a reference sheet.

SECTION 1: GENERAL KNOWLEDGE

2. Cut the other sheets up into squares. Keep the squares from each sheet together in a re-sealable bag or paper-clipped together.
3. Put members into groups of three or four members per group.
4. Have members try to group the information for each horse together with the descriptions given on the squares.

Using page two of the Evolution Worksheet, ask members the following questions:

- Was it easy or hard to figure out which information belonged to which horse?
- What evidence did researchers have to figure out that the horse has evolved over 60 million years? (fossil evidence)
- What is a fossil?

Activity #3 - Judging Horses

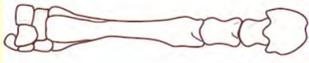
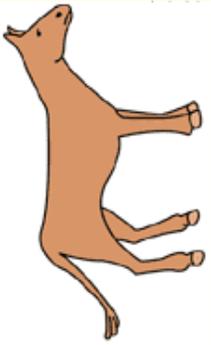
Items Needed:

- A picture of each horse discussed in the Evolution Mix Up Activity
- Judging Sheet (found at the end of this meeting)
- Pen/pencil

Instructions:

1. Create a list of criteria of desirable traits found in a horse.
2. Give each member a Judging Sheet.
3. Using the criteria list created, ask each member to judge the horses according to their traits listed in the previous activity.
4. If desired, have members give reasons as to why they ranked the horses as they did, or discuss the rankings as a group and why certain horses rank higher than others according to the pre-established criteria.

SECTION 1: GENERAL KNOWLEDGE

<p>Equus</p> 	<p>1 million years ago</p>	<p>1.6m</p>	<p>Single hoof, runs quickly over hard ground</p> 	<p>Single hoof, well spread for walking on soft ground</p> 	
<p>Pliohippus</p> 	<p>10 million years ago</p>	<p>1.0m</p>	<p>Other toes lost as only middle hoof used</p> 	<p>4 toed hoof, well spread for walking on soft ground</p> 	
<p>Merychippus</p> 	<p>30 million years ago</p>	<p>1.0m</p>	<p>Middle toe developed into a hoof, to run faster</p> 	<p>Toe lost for moving faster over dry ground</p> 	
<p>Mesohippus</p> 	<p>40 million years ago</p>	<p>0.6m</p>	<p>Toe lost for moving faster over dry ground</p> 	<p>4 toed hoof, well spread for walking on soft ground</p> 	
<p>Hyracotherium</p> 	<p>60 million years ago</p>	<p>0.4m</p>	<p>4 toed hoof, well spread for walking on soft ground</p> 	<p>4 toed hoof, well spread for walking on soft ground</p> 	

SECTION 1: GENERAL KNOWLEDGE

Fossil evidence

What is a fossil?

Fossils are evidence of a plant or animal that lived many years ago - skeletons, shells, footprints

How can we use fossils as evidence of evolution?

- We can tell the age of many of the layers of rock containing fossils - this means we know how old the fossil are
- Similarities and differences between fossils in rocks of different ages allow us to see how species have evolved/ changed over billions of years
- Can suggest what a habitat was like millions of years ago

Problems with fossil evidence:

- Few organisms form fossils
- Fossils can be damaged by geological activity
- There are often gaps in fossil records

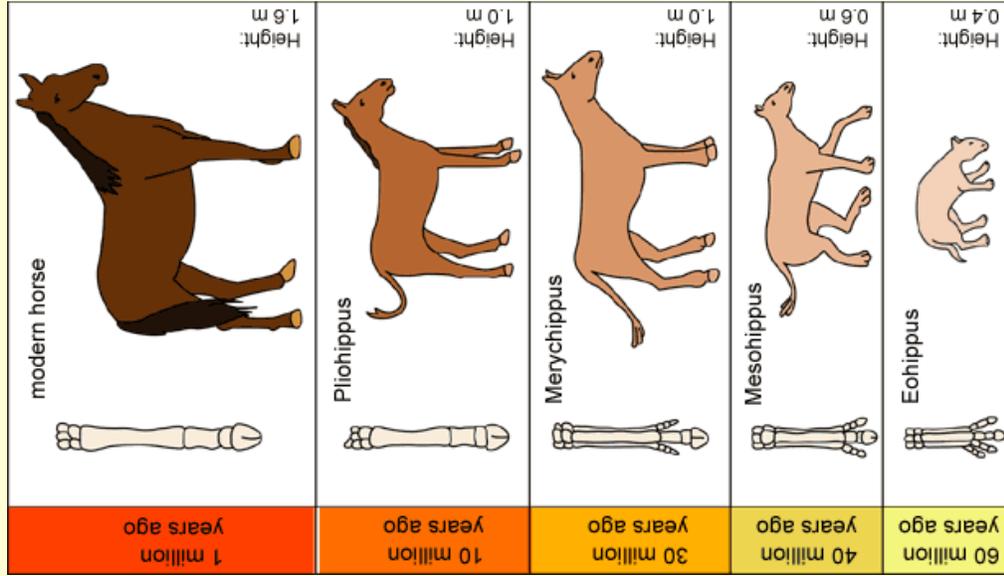
Example: Evolution of the horse

How do we know that the horse has evolved over 60 million years?

Fossil evidence

What changes can we tell from the fossil records?

- Four toed hoof has evolved into a single hoof which is more suitable for running
- Modern day horse is much taller than its original ancestor



Fossil evidence timeline

Million years ago	Fossil found
50	Monkeys and apes
200	Mammals
300	Reptiles
350	Amphibians
450	Land plants
3000	Simple bacteria

SECTION 1: GENERAL KNOWLEDGE

Judging Horses – Evolution of Horses**Judging Card****Criteria:**

1. Does the horse look like it has the ability to out run predators?
2. Does the horse have the ability to find different types of food?
3. Is the horse able to run over various types of ground?
4. Does the horse need a lot of food to survive?
5. Does the anatomy of the hoof contribute to its ability to survive?
6. Does the teeth structure affect the horse's ability to survive?

Giving Reasons:

I place this class of _____, _____, _____, _____.

I place _____ first because.....

I place _____ over _____ because.....

I place _____ over _____ because.....

I place _____ over _____ because.....

I place _____ 4th because.....

For these reasons, I place this class of _____, _____, _____, _____.

Official Placing _____.

MEETING 2: HORSE SAFETY IN THE BARN AND TRANSPORTING

Topic:

- Safety while handling horses
- Buying a helmet
- Safety in a riding arena
- Trailering horses
- First Aid
- Safety on trails and on the road

Objectives:

- To increase awareness of safety issues when working with and around horses

Roll Calls

- Name one thing you can do while working with a horse to make the situation safer.
- Have you ever witnessed an unsafe situation when someone was working with a horse? If so, what was it?

Sample Meeting Agenda – 2 hrs. 10 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Topic Information Discussion	Review the Safety and Helmets sections.	20 min
Public Speaking/Judging Activity	Activity #1 – Danger Detective (instructions found at the end of this meeting)	15 min
Topic Information Discussion	Review what The Riding Arena, Safety on the Trail, Trailering Horses, Premise ID and First Aid sections.	30 min
Activities Related to Topic	Choose from Activities #2, #3 #4 and/or #5 (Fire Drill, The Melon Drop, The Light Bulb Drop or Danger Scavenger Hunt) (instructions found at the end of this meeting).	40 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 1: GENERAL KNOWLEDGE

Topic Information

Safety

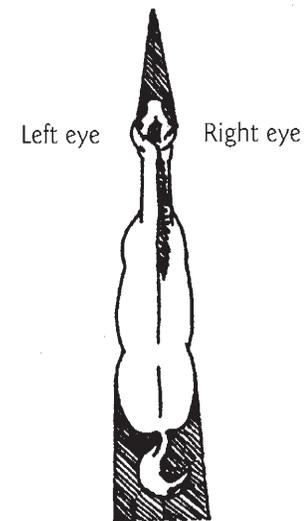
Safety is everyone's responsibility!

Safety is the most important activity when handling horses.

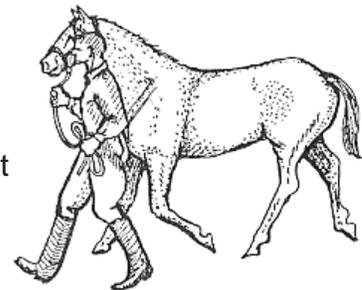
Caution must be taken around even the quietest horse. Accidents can happen when you least expect them.

1. **Do not run around horses.** If horses see sudden movement without seeing the cause of it, they may kick, strike or bolt, causing injury.
2. **When approaching a horse,** always walk toward the shoulder; never from behind or ahead. Even in a stall, try to approach towards the shoulder. ***Always let a horse know you are approaching by talking to it.***
3. **Horses have three blind spots** where they can't see you; directly between both eyes extending out approximately 10 inches (25 cm.), directly behind them and under their head. Their hips also block their vision of their rump area. Speaking to your horse lets it know where you are at all times.
4. **Lead** a horse from the left side, walking between the head and shoulder. This position gives you the best control while maintaining optimum safety. Place your right hand approx. 6 inches (15 cm.) down the shank, carry any excess lead rope in your left hand.
5. Never wrap the reins or lead shank around your hand or any part of your body so that if the horse were to bolt it would not wrap dangerously around you.
6. **When leading a horse, turn it to the right (away from you) so it won't step on you.** Push its head to the right using the leadshank, held in your right hand, and as you turn stay between its head and shoulder.
7. When the horse is tied do not go under the neck of a horse to get to the other side. If you do, you are passing through a blind spot and may frighten the horse. **Go around the hindquarters,** talk to your horse and keep hand contact on the horse as you walk around, so that it knows it's you when you pass through its blind spot. The closer you stand to a horse, the less likely you are to be injured if kicked. You may be shoved away, but not badly hurt.

Blind spot in front of horse



Blind spot in rear



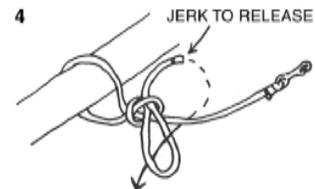
LEADING AT HALTER

SECTION 1: GENERAL KNOWLEDGE

8. When grooming the underside of a horse or working on the legs or feet, never sit or kneel. **Always keep your feet on the ground and a hand on the horse so you can react quickly if needed.** While handling or grooming do not drop grooming tools or equipment near the horse. Place them away from the horse so you will not trip on them, or they will not be stepped on by the horse.
9. When you are working around horses, **wear protective footwear.** Do not wear runners, flip flops or go barefoot. **When riding, always wear footwear with a heel such as work boots, riding boots or cowboy boots. Gloves will help prevent ropeburn.** Do not wear anything that dangles when working with horses.
10. **Do not mount your horse in a barn** or close to the overhanging edge of a roof.
11. **Never ride a horse into or out of a barn or stable.**



12. **Tying Your Horse:** When you tie your horse, tie it to a secure object (like a fence post secured in the ground) that will not break or move if the horse pulls back. Never tie a horse to the rail of a fence. It may break or the nails may pull out if the horse pulls back. If possible never tie below the level of the horses withers. Tie your horse, using a quick release knot. Tie the shank to the post so that it is short enough that your horse can not get a leg over the rope. **Never tie a horse with reins. Always use a lead shank.**



Tuck the loose end through the loop, if your horse plays with the rope.

13. Keep a pocket knife handy where you tie your horse and also one in the horse trailer, so that if you ever need to release your horse from its leadshank and you are unable to untie it, you can cut the leadshank. This may be necessary if a horse is frightened and pulls too hard on the leadshank.
14. When working around your horse (grooming, washing, saddling, and so on) maintain at least 90 degrees of space between your horse and any solid objects (fence or wall). Teach your horse to stand still at a 90 degree angle to where it is tied.
15. Avoid accidents by **practicing safe management procedures.** Keep all equipment in good repair. Maintain clean aisles and well-constructed stalls and fences. Check equipment regularly to ensure a safe experience every time.
16. If releasing your horse into a stall or field turn the horse around to face the door or gate before letting it go. Respect your horse's instincts. Any horse no matter how calm has a first instinct for survival. Try to anticipate situations that

SECTION 1: GENERAL KNOWLEDGE

may make him nervous, and get him used to them. Get to know your, and your horse's strengths and weaknesses, and get help from a professional when you need it.

Helmets

As stated in the 4-H Ontario Policy Manual, Policy O-HS-04 – Helmet Use - Industry approved helmets will be worn by all participants engaged in project material where safety is of a concern. This includes the 4-H Ontario Horse Project.

Reasons why wearing a helmet is so important:

- Head injuries are the most common reason for horse-related hospital admissions.
- Horseback riding carries a higher injury rate per hour of exposure than downhill ski racing, football, hang gliding and motorcycle racing.
- Medical examiner reports show that 60% or more of horse related deaths are caused by head injuries. Helmets can reduce this possibility by 70 to 80%.
- Repeated trauma to the head, even when minimal, can cause cumulative damage to the brain. Each new incident expands the original damage and the brain cannot recover 100% from the injury.
- Non-ASTM/SEI or BSI certified helmets offer no protection whatsoever and are strictly for cosmetic purposes.
- Rural riders (riding around their home) lead the injured list. Most riders are injured while riding for recreation.
- Death is not the only serious outcome of unprotected head injuries. Those who survive with brain injury may suffer epilepsy, intellectual and memory impairment and personality changes.
- **The consistent wearing of an ASTM/SEI (American Society for Testing and Materials Safety Equipment Institute) or BSI (British Standards Institution) approved equestrian helmet, both in competition and recreational riding, will hopefully minimize severe injury.**

Safety Tip

If you hit your head at any time, let your parents, coaches, leaders and/or teachers know immediately!

There are a variety of videos that can be found online to show the importance of wearing a helmet while riding a horse including the *Every Time Every Rider* series of videos found on Youtube.

Tips for buying a helmet:

- Only purchase an ASTM/SEI or BSI helmet. Look for the appropriate labels of approval along with the date of manufacture. Helmets older than 5 years need to be replaced.
- Be sure the helmet fits the intended rider correctly. Ask for help from a

SECTION 1: GENERAL KNOWLEDGE

knowledgeable person.

- Each rider should have their own personal helmet. Riders should not share helmets.
- Any colour or style of equestrian helmet is acceptable provided it is approved and fits properly. If the helmet is comfortable and the rider likes the style and colour, it will be used on every ride.

The Riding Arena

An arena is a fenced or covered rectangular area set aside for training and riding horses. When it is outdoors it may be called a riding ring.

The **“track or rail”** is the part of the arena where the horses normally work. The outside track follows the walls or fence and the inside track is about 3 metres inside of the outside track.

When you are riding on the track with your right side towards the centre of the arena, you are on the right rein. When you are riding with your left side towards the centre of the arena, you are on the left rein.

Rules of the Riding Arena

When riding in an arena with other riders it can become like a busy highway. It is important that you follow some basic rules to help keep the traffic flowing and to prevent accidents.

1. Riders must close gates behind them when they enter or exit the arena. Keeping the gates closed at all times ensures that horses will not bolt out of the arena. It is a good idea for riders to dismount and lead their horses through the gate.
2. Be aware of others around you. Be careful not to cut anyone off.
3. Keep at least six feet of space all around when possible (or one horse length between riders). The rider following another should be able to see the heels of the horse in front of him. Keep out of bunches.
4. Horses moving slower are given priority for using the outside track. Riders working faster must move to the inside track.
5. When riders are working in different directions, those riding on the left rein are given priority for using the outside track. Those working on the right rein would move to the inside track. This rule means riders know they will pass oncoming riders, left shoulder to left shoulder.
6. When working at the walk, a rider should



*Photo credit: IRH International Riding Helmets
<http://irhhelmets.com/>*

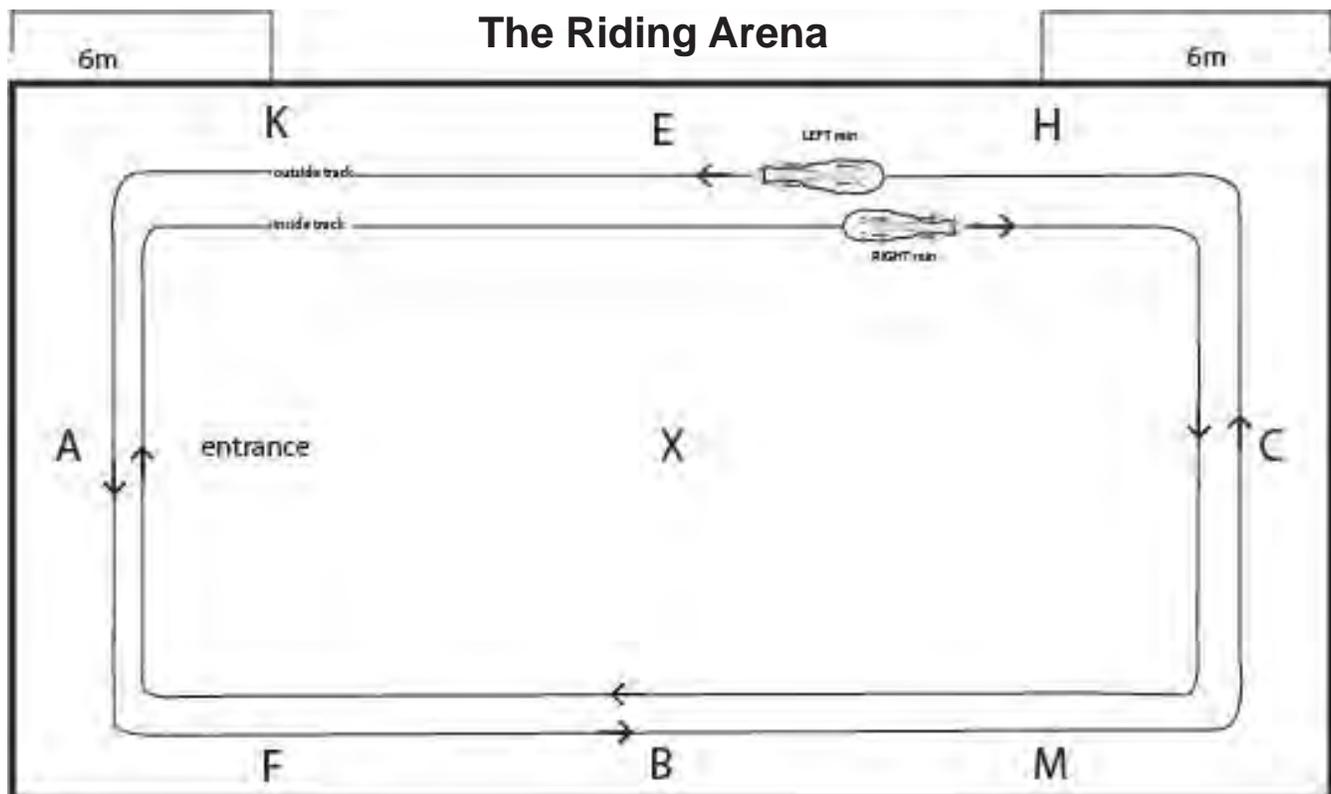
SECTION 1: GENERAL KNOWLEDGE

use the outside track to keep out of the way of faster horses, unless all of the horses are traveling at a walk.

6. When working at the walk, a rider should use the outside track to keep out of the way of faster horses, unless all of the horses are traveling at a walk.
7. If you have to stop for any reason, you must move off the track to the centre of the arena. e.g. to adjust tack.
8. If you must stop on the rail or slow your horse down, make sure there is space behind you for riders to respond to your transition.
9. When exiting the arena, do not rush. Leave the arena at a walk, in single file.
10. The order of the letters in the diagram are in a specific order and are used as markers for teaching and riding patterns.

A - all
 K - King
 E - Edward's
 H - horses
 C - can
 M - make
 B - beautiful
 F - foals

With "X" in the centre



SECTION 1: GENERAL KNOWLEDGE

Safety on the Trail

Riding with a group of people on a trail can be a lot of fun. There are some basic rules to follow for the safety of people and their horses. Don't show off. This is not the time or place.

1. Always allow one horse length or more between yourself and the next rider.
2. Have a designated, experienced lead rider (trail boss) and someone experienced to bring up the rear. This will keep your group as a tight unit. Keep a calm horse at the front and rear of the group.
3. If someone needs to stop, to adjust equipment, etc., have everyone stop. This will prevent runaways as horses left behind may try to catch up to horses that have continued on ahead. If there is a runaway horse all riders should stop. A horse is a herd animal and will likely return to the group.
4. When crossing roads, have everyone line up along the road and cross over together at the same time when traffic is clear. This gets the group across safely and quickly and prevents a long string of horses crossing the road. Reassemble in a line on the other side.
5. When crossing streams or rivers, be careful to cross where it is shallow and safe. Have someone experienced remain behind to help any horses through that may not want to go. Undo standing martingales and tie-downs before crossing in case your horse hits a deep spot. Your horse needs the full use of its head and neck to swim.
6. If you are riding and get caught in a thunderstorm, avoid riding under trees, on hills or along stream beds. Try to obtain shelter under a lean-to shed or a properly grounded barn. Horses can be a high risk in electrical storms especially if they are wearing metal shoes. Try to stay in a low, heavily forested area.
7. Suggested equipment to take on a ride:
 - protective clothing or carry rain gear,
 - sun screen and hat,
 - carry small first aid kit, phone, hoof pick, pocket knife, water/ sponge, wire cutters and rope.
8. Avoid trail riding alone; but if you do ride alone tell someone where you are going and when you expect to return.
9. Avoid riding at night on roads or highways. Wear light colored clothing and put reflective tape on rider or tack if you choose to ride at night.
10. A red ribbon tied into the horse's tail indicates a kicker, so stay away!!!
11. A blue ribbon tied in the horse's tail indicates a stallion, so use caution.
12. Be patient with less experienced riders.

Knowledge of proper horsemanship with regular use and review of safety guidelines will make horse experiences safer and more enjoyable. Recognize that there are no short cuts to becoming a knowledgeable horseman or woman. Be prepared to spend considerable time developing safe horse handling and riding skills.

SECTION 1: GENERAL KNOWLEDGE

Keep an open mind, continue to seek more information and be receptive to ideas of reputable, experienced people. If you have a problem with your horse or are unsure how to safely handle a situation, do not hesitate to seek professional advice. Remember, safety is everyone's responsibility!

Trailer Horses

Trailer Horses should be done with two people if at all possible. Seek advice of people experienced in transporting horses before trailering for the first time.

Consideration should be given to the size of trailer and weight to be towed when selecting a towing vehicle. The size of the vehicle should be sufficient to stop the load as well as to pull it.

The Ministry of Transportation in Ontario (MTO) has specific regulations regarding trailers, for example, recommended weights, brakes, etc. Contact them for the most current regulations.

Checking your trailer

The towing vehicle and trailer should be serviced and checked regularly for the following:

1. Rotting or weakened floor boards.
2. Open, rusted or weakened door hinges and latches.
3. Proper and safe operation of hitch, lights, brakes and safety chains.
4. Wheel bearings, tire wear and proper inflation.
5. Sharp projections inside or outside the trailer.

Be sure the trailer is properly constructed and that it meets provincial requirements for brakes and lights. The trailer should be of sufficient height to give the horse ample neck and head room and be free from sharp or protruding objects.

Before Loading

Before loading, be sure to check the ground area behind and around the trailer to ensure safe footing. Be sure the trailer is level and steady and cannot move as the horse enters. If necessary, place chocks (blocks) behind the wheels to keep the trailer steady.

Unless you and your horse are experienced, remove the bridle, saddle and other equipment before loading. Use a properly fitted halter and a good sturdy lead shank (wearing gloves reduces the risk to you). Avoid the use of nylon lead shanks because of potential rope burns. Always pack a spare halter and lead rope in case your halter or lead rope breaks.

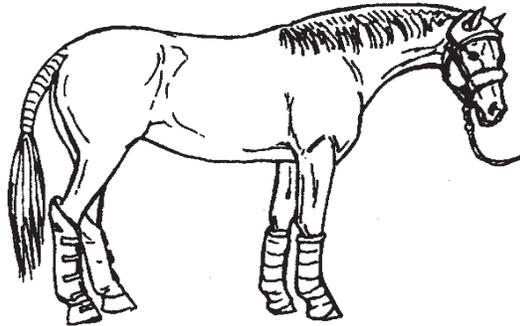
Leg injuries may be minimized or prevented by putting on shipping boots. Give your horse a chance to get used to the feel of the protective boots before you load him. Always include a well-stocked first-aid and tool kit when trailering.

SECTION 1: GENERAL KNOWLEDGE

Leg Wraps

Horse prepared for shipping

1. Shipping boots
2. Tail wrap
3. Poll protector
4. Halter and lead rope



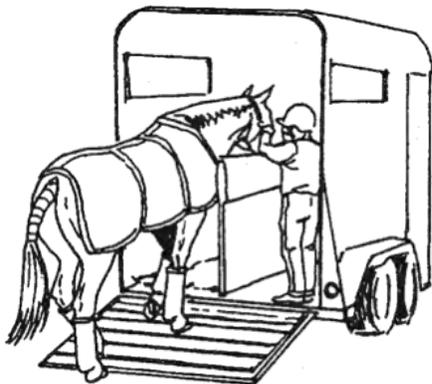
Shipping boot

Allow Time

It is natural for horses not to want to go into a small space like your trailer. Teach your horse to load days, weeks or months before you have to haul him. Don't wait until it's time to go. Always allow sufficient time for loading the horse, and remain calm but firm with the horse at all times! One of the most common mistakes when teaching horses to load in a trailer is not allowing sufficient time to properly accustom the horse to the process. A horse that has a positive experience will become easier to load with each lesson.

Loading Safely into Trailer!

The loading procedure should be done with at least two people whenever possible. If you have trouble loading or unloading, get experienced help!



Loading safely into a trailer

When attempting to load, position the horse so that it is straight with the trailer entrance. Be sure that the safety-escape door is unlatched so you are not trapped if the horse begins to panic. Secure the butt-bar (if the trailer has one) immediately after the horse is loaded and before the horse is tied. Opinions vary on hauling a horse tied or loose. If you tie, allow sufficient length of rope so the horse can move its head for balance and comfort, but tight enough so the horse cannot turn around or bother the horse next to him. Always tie with a quick release knot or use panic snaps on the trailer ties. Be sure all doors and latches are secured.

Hauling

When hauling only one horse in a two-horse trailer, it should be hauled on the left side. If two horses are being hauled, the heaviest animal should be hauled on the left. Due to the crowning structure of most roads, this assures a smoother tow and an easier ride for the horse. When hauling, all normal driving laws should be observed. Drive defensively, avoid sudden stops or turns, and allow additional distance for braking. Remember that the weight and movement of horses and the trailer will often push the towing vehicle. Look far ahead to avoid emergencies. Allow extra time for slower driving and unexpected delays.

Always speak to a horse that is in a trailer before attempting to handle it. When traveling, check the horse, hay net or bag, trailer tires, lights and hitch at every stop

SECTION 1: GENERAL KNOWLEDGE

before continuing. Adjust the feeding schedule to avoid traveling immediately after feeding grain. Feed smaller amounts more often if necessary. This will help prevent digestive upsets due to hauling. Water the horse as frequently as possible, especially in hot weather. When hauling a horse in the winter, the horse must be protected against windchill (by closing off openings, hooding, blanketing, etc. to match the severity of the conditions).

Ventilation

Be sure that proper ventilation is provided in the trailer at all times, but especially during the summer months e.g. roof vents, screened windows etc. Often horses that are “poor haulers” have had bad experiences such as being blanketed and getting too hot on the trip due to poor ventilation. Never allow anyone to throw cigarettes or matches out of the moving vehicle. The air currents can pull these items into the trailer and cause a fire.

Footing

Use rubber mats with sufficient bedding for secure footing. Shavings or sand are commonly used to provide adequate footing and to keep the horse comfortable during hauling. For example, a horse on a long haul may not urinate without bedding to absorb the sound and splash. However, for a short haul, if you are using a trailer which is not completely enclosed, the bedding may blow around and irritate the horse’s eye and respiratory system. In this instance, you might choose to eliminate the bedding.

Unloading

Before unloading, be sure the ground area behind and around the trailer to ensure safe footing. When unloading, use caution when dropping the ramp/tailgate or opening the rear door. The horse may try to back out as soon as the ramp/tailgate is opened. Having the butt-bar secure will prevent the horse from flying back, breaking the tie or halter, and falling over backwards. Always untie the horse first before opening the rear door. Back the horse out slowly and straight or slightly to the centre. After a long haul, walk the horse to restore circulation and ease stiff muscles before the horse is put into a stall.

When the trailer is disconnected and parked, be sure to place chocks (Blocks) to secure the wheels. Never load or unload a horse into or out of an unhitched trailer. Never tie a horse to a disconnected trailer.

If you require further information on hauling horses, check out the resource ‘Canadian Equine Codes of Practice’ from the National Farm Animal Care Council.

Transportation Regulations

When you transport your horse within Ontario (e.g. to 4-H shows, agricultural fairs, pastures, for sale (to a neighbour, auction market) or for slaughter), provincial regulations do not require that the horse is accompanied by an Ontario Livestock Manifest.

SECTION 1: GENERAL KNOWLEDGE

Premise Identification Program (PID)

A Premises Identification Number, referred to as a Premises ID (PID), is a number identifying a parcel of land where agri-food activities occur. Each parcel of land, or premises, registered will receive a unique Premises ID and a certificate will be issued displaying this number.

A Premises ID is the first step to an effective traceability system and can lead to business advantages such as operational efficiencies and increasing market access for certain species of livestock. Also, a Premises ID helps to identify the agri-food activities as well as contact information of a specific parcel of land. In the event of an emergency, knowing the agri-food activities and having up-to-date contact information is critical.

While there is currently no traceability system in Ontario in place for horses, it is still a good idea to have a PID for farms where horses are housed.

For more information in Ontario contact the Provincial Premises Registry at: <https://www.ontarioppr.com>

First Aid

Having some knowledge of first aid is important. It is good idea for 4-H members to take a certified first aid course. At riding clinics and club activities, identify a parent or leader(s) as the designated first aider before the event starts.

Information about first aid for horses can be found in the meeting on “Health.”

Horse Tip

If you ever receive a foot injury when working with your horse (stepped on, kicked in the ankle, etc.), leave your work or riding boot on as this will help to prevent swelling. Once you find medical assistance, the boot may need to be removed.

SECTION 1: GENERAL KNOWLEDGE**BEFORE THE NEXT MEETING**

Try one of these activities at home.

1. Watch someone as they load a horse onto a trailer. Take note as to whether or not the horse was comfortable being loaded and how long it took. Once the horse is loaded, ask the people who loaded the horse the following questions:
 - Is it the first time the horse was loaded into a trailer?
 - If it was easy to load the horse, how did they train the horse to load properly?
 - If the horse was difficult to load, what training are they going to do to try and make it easier the next time?

Record your findings in your Record Book.

AND/OR

2. Create your own First Aid Kit to have with your tack supplies. Research online, at the library or talk to someone trained in First Aid to find out what supplies you should have in your kit. Bring your kit to the next meeting.

DIGGING DEEPER

For Senior Members

Horse Barn Emergency

What would happen if the barn caught on fire? Or if a horse gets loose? Or is someone injured?

The barn is a great place to be but it also presents many dangers. Create a list of the dangers that are found or could happen in a horse barn.

Once this list is made, for each item on the list, create established protocols of what to do in each situation (if your list is quite lengthy, choose at least 3 dangers to create protocols for). Be sure to include both a plan for what to do in the emergency as well as preventative measures that could be taken so the danger is minimized or eliminated.

Record your findings in your Record Book and be prepared to share the protocols you have established with the members of your club at the next meeting.

SECTION 1: GENERAL KNOWLEDGE

ACTIVITIES**Activity #1 - Danger Detective****Items Needed:**

- Computer/Laptop

Instructions:

1. Have members work individually, in pairs or as a group to work through the Danger Detective website found at: <http://www.equimania.ca/dangerdetective/onfarm.html>
2. Discuss the various dangers members encountered while doing the activity.

Activity #2 - Fire Drill

While we never want to think about a barn being on fire, unfortunately it happens.

Items Needed:

- Horse barn
- Stuffed Horses (or real horses depending on the age and abilities of the members)
- Some type of alarm noise indicating a fire

Instructions:

1. Before starting this activity, have a discussion about all of the exits points of the barn and a meeting spot outside of the barn.
2. Have members move to various spots in the barn.
3. Sound the fire alarm.
4. Have members exit the barn as quickly as possible with their horse, WITHOUT running or alarming their horse. The horse will already be alarmed enough with the noise.
5. Meet at the designated spot outside and count to make sure everyone is there.

Ask members the following question:

- What happens if your horse does not want to leave the barn?

Discuss that, even though we are very attached to our animals (in this case, horses), that if their horse does not want to leave the barn that members should leave anyway as their safety is of the utmost importance and leave the horse behind. Tell members that they need to meet at the designated spot and that a plan will be made, along with 4-H leaders, adults and/or emergency personnel as to what the next steps will be to save their horse if possible.

SECTION 1: GENERAL KNOWLEDGE

Stress that the people **must** exit the barn as quickly as possible as smoke can overtake a human in under a minute.

Activity #3 - The Melon Drop (Helmet Safety)

Items Needed:

- Not-too ripe honeydew melon (2) or head-sized pumpkin (2)
- Equine helmets (2)

Instructions:

1. Purchase 2 melons – if desired, take a helmet to the grocery store to find the right size. Shake the melons to figure out which is ripe. You will be able to hear the seeds rattle in a ripe honeydew melon so avoid the noisy melons.
2. Draw a smiley face on one of the melons and a sad face on the other one.
3. Place the smiley face melon in a helmet. The sad melon does not get a helmet.
4. Discuss that the melons are similar to our heads. Ask members what they think will happen when the melons are dropped.
5. Hold the helmeted and unhelmeted melons out to your sides, one in each hand and tip your hands toward the members to drop them in unison (or you could ask an older member to do this).
6. The unhelmeted melon will smash.
7. The helmet on the other melon will last for three drops, then split on the fourth drop, still preventing the melon from smashing all over.

Variation – have someone sitting on a horse (a quiet horse!) and have them drop the melons to simulate the distance that a person would fall if they were to fall from their horse.

NOTE: Do not use these helmets again for riding.

Activity #4 - The Light Bulb Drop (Helmet Safety)

Items Needed:

- Light bulb
- Equine helmets

Instructions:

1. Wrap a light bulb in heavy duty kitchen plastic wrap. Secure the bottom with a rubber band.
2. Tape the wrapped bulb into a bicycle helmet.

SECTION 1: GENERAL KNOWLEDGE

3. Drop the helmet top down from above your head onto a hard, flat surface. The light bulb will not break.
4. Drop the light bulb without the helmet. The bulb will shatter.
5. **Do not use this helmet again for riding** although with only a light bulb inside, it should last indefinitely for more demos. Be sure the helmet is marked “demo-only – not for riding.”

Variation – have someone sitting on a horse (a very quiet horse!) and have them drop the light bulbs to simulate the distance that a person would fall if they were to fall from their horse. Be sure that the horse does not step in any broken light bulb pieces.

Activity #5 - Danger Scavenger Hunt

Make a scavenger hunt list of potential safety concerns that can be found in your barn, stable, etc. If you are stuck for ideas, take a walk through your barn or use this meeting or search the Internet for ideas.

Items Needed:

- Scavenger hunt lists (sample list provided at the end of this meeting)
- Pencils/pens

Instructions:

1. Establish boundaries as to how far members can go from the starting point to find the items on their scavenger hunt list.
2. Divide the members into pairs or groups of three. Depending on the age of the group and where the hunt is being held, you may want an adult helper or senior member paired with each group.
3. Hand out lists and pencils.
4. Have the members as many things on the list as they can in a given amount of time.
5. Discuss their findings.

Ask members the following questions:

- Did anyone find something that they have never noticed before?
- Did they find any additional safety concerns that weren't on the list?
- Why is it important to identify safety concerns?
- Why is it important to be aware of your surroundings?

SECTION 1: GENERAL KNOWLEDGE

Danger Scavenger Hunt

Safety Concern	Did you find it?	Where did you find it?	What should be done to correct the problem?
Rider is not wearing a helmet			
Horse tied up using reigns			
Someone not wearing protective footwear			
Broken fence			
One person loading a horse			
Horse tied to a light, breakable post			
Riding a horse from outside into the barn			

SECTION 1: GENERAL KNOWLEDGE

Kids running around horses			
Loading a horse into a trailer that is not attached to a truck and is not blocked			

MEETING 3: PARTS OF THE HORSE

Topic:

- Parts of the horse's body and hoof

Objectives:

- To increase awareness of the different parts of the horse's body

Roll Calls

- Name three different parts of a horse.
- Which part of the horse do you think is the most important part?

Sample Meeting Agenda – 2 hrs. 10 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Public Speaking/Judging Activity	Activity #1 – Equine Guelph Anatomy CD (instructions found at the end of this meeting)	15 min
Topic Information Discussion	Review the parts of the horse.	30 min
Activities Related to Topic	Choose from Activities #2, #3 #4 # 5 #6 and/or #7 (The Hoof, Parts of the Horse Wordsearch, Parts of the Horse, Body Bingo, Pin the Part on the Pony, Clover Says!) (instructions found at the end of this meeting).	60 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

NOTE: Activities can be interspersed with information when reviewing the parts of the horse.

SECTION 1: GENERAL KNOWLEDGE

Topic Information

Just like any other kind of animal, horses have many different body parts...all of them have special and specific functions and all of them have their own names. If you are going to work with and understand horses, then you need to know how to talk about your animal.

Glossary of Terms

Abdomen or Belly – the broad area underneath the horse between the brisket and the flank

Back – the horse's back runs from the withers to the loin. This contains the spinal column and it is important that it isn't too long or the muscles will not be able to support a rider.

Barrel – the large area below the back in the general vicinity of the rib cage. This is where the heart, lungs and stomach of the horse are housed. It is also where an unconditioned horse often shows its excess weight.

Brisket – an area directly behind the forelegs at the front of the abdomen

Buttock – the area below the dock, at the very back of the broad muscled area above the hind legs

Cannon – the long bone in the lower leg. A short cannon bone is stronger than a longer cannon bone and a flat cannon bone is stronger than a round cannon bone

Cheek (jowls) – distinctive rounded bones on the sides of the horse's head. They are often larger and more prominent in stallions than yearlings and mares.

Chest – the area between the two shoulders, across the front of the animal. The width, depth and muscling of the chest will influence how well the horse can move. A chest that is too wide produces a labored, waddling stride and a chest that is too narrow may interfere with the horse's movement. The chest muscles should be well "v'd".

Chestnut – the small, flat-topped rough, irregular raised projection of horn-like material found on the inside of each leg of all horses. It is believed that chestnuts used to be a toe in early years.

Chin groove – the hollow between the chin and the branches of the jaw

Crest – the top of the neck

Croup – the area above the thigh and in front of the dock and tail. Its length extends from the point of the croup to the tail and will determine the length of the stride.

Dock – the solid, fleshy part of the horse's tail, at the point where the tail joins the body

Ears – the ear should be a size proportionate to the size of the horse's head. The ears tell a lot about the mood of the horse.

SECTION 1: GENERAL KNOWLEDGE

External Features

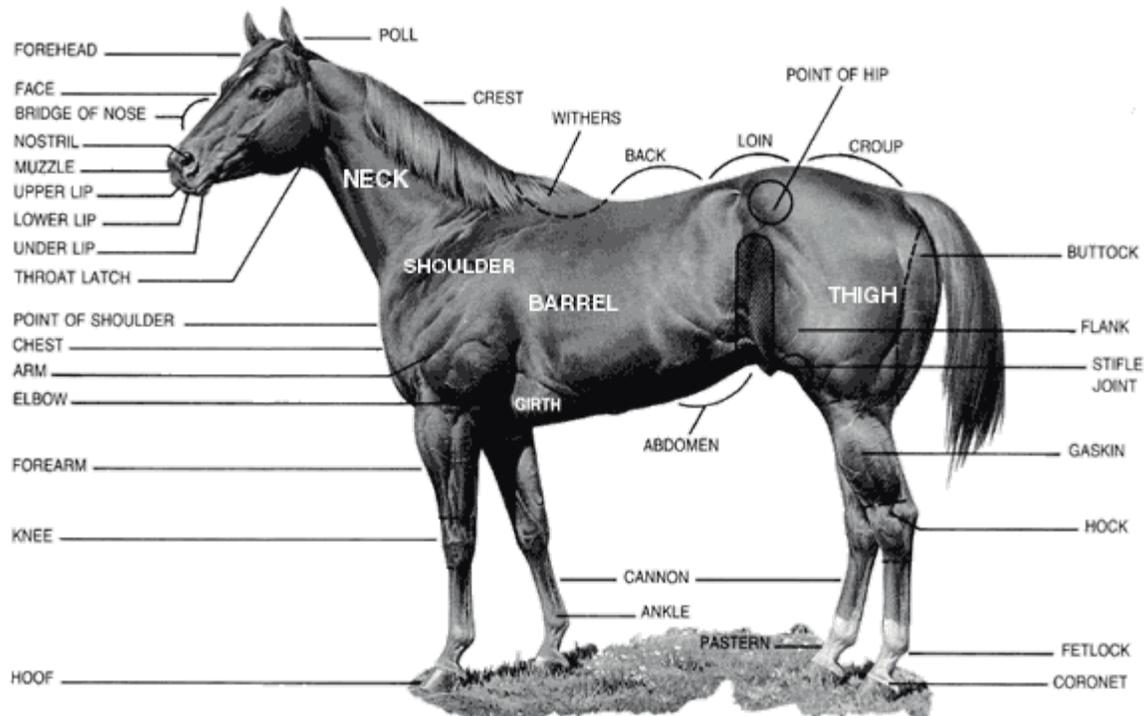
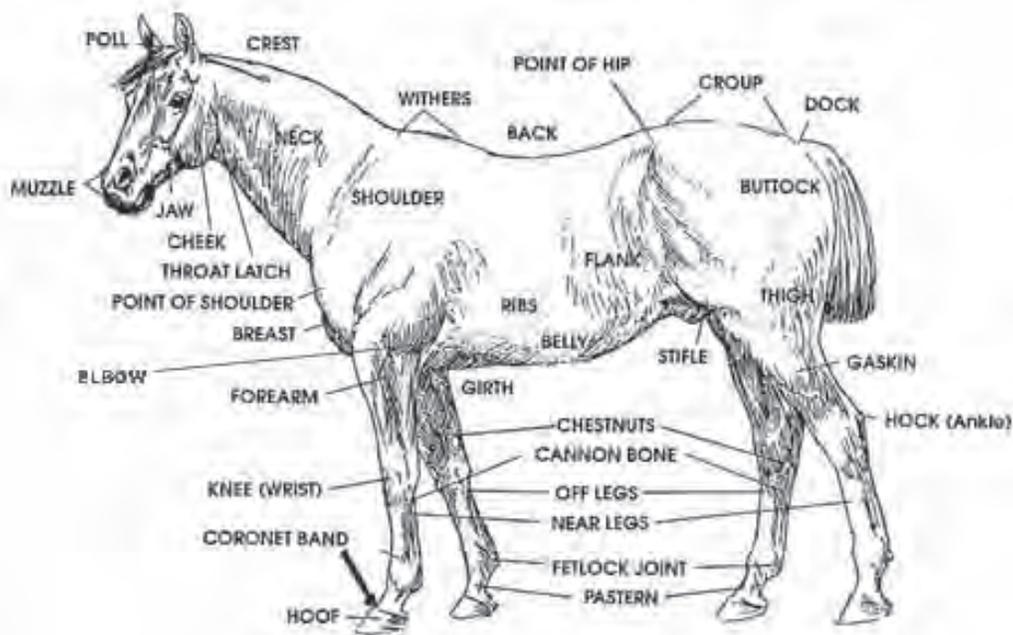


Diagram Credits: Think Like A Horse <http://www.thinklikeahorse.org/index-5.html>



Elbow – a point at the top of the forearm where the bone is close to the surface towards the rear (girth area)

Eye – located on the side of the skull. With one eye, a horse can see about 190-195 degrees. Using both eyes horses can see almost 350 degrees and the horse almost has a complete sphere of vision around its body with only a few small blind spots.

SECTION 1: GENERAL KNOWLEDGE

Fetlock – the joint between the large pastern bone and cannon. A large fetlock jointing provides greater surface area for the attachment of tendons and ligaments.

Flank – the region at the back of the barrel, below the loin and in front of and below the thigh. This spot is sensitive on most horses.

Forearm – the upper part of the foreleg, between the upper arm and the knee. The length of the forearm will affect how far the leg can be extended, therefore affecting the stride. Muscles in the forearm provide power and support for the lower leg.

Forelock – a lock of hair growing from the front of the head

Gaskin – the area at the front of the hind leg, above the hock and below the stifle. The length of the gaskin will affect the length of the stride of the hind leg. Muscles in the gaskin provide power and support for the lower leg.

Head – the horse uses its head for balance. The head also contains the horse's brain and should be of a triangular shape, to increase the cranial or brain capacity.

Heart girth – an imaginary line drawn around an animal through the withers and the brisket.

Hock – a large, clean, flat hock provides greater surface area for the attachment of tendons, ligaments and muscles.

Hoof – the hoof provides the surface on which the horse travels. A larger hoof distributes the weight stress over a larger area.

Knee – the major joint in the foreleg, between the cannon and the forearm. A large, clean, flat knee increases the area of attachment for tendons, ligaments and muscles.

Loin – the area in front of and below the croup, and above and in front of the thigh. The loin should be well muscled.

Muzzle – describes the area that includes the nostrils, chin and mouth as far back as the end of the mouth. A smaller mouth means increased sensitivity to the bit.

Neck – also used for balance, the neck should be long enough to help the horse maintain equilibrium and balance depending on what it is used for. However, it should not be so long that it puts extra weight on the forelegs.

Nostril – should be large for easy air passage

Pastern – the small bone above the foot. The pastern is important for absorbing the weight of the horse as it moves. A moderately long sloped pastern helps to absorb the pressure.

Point of the buttock – is the highest point of the buttock at the extreme rear of the animal

Point of the hip – the point between the back and the rump or croup where the hip bone is near the surface and causes a lump

SECTION 1: GENERAL KNOWLEDGE

Point of the hock – the point on the hind legs where the hock ends

Point of the shoulder – is marked by a slight lump or protrusion where the scapula (shoulder bone) ends just beneath the skin

Poll – a point behind the ears at the top of the head

Shoulder – the horse's front leg is attached to the body at the shoulder, by only muscle and tendons. A long shoulder increases the area of attachment and length of muscles, providing greater shoulder rotation, forearm extension and length of stride. A well-sloped shoulder provides shock absorption and allows the foreleg to be raised higher.

Stifle – a small area at the lower front of the thigh, below and behind the flank. It is the widest point of the horse when viewed from behind.

Thigh – the large muscled area below the croup, in front of the buttock and above the stifle and hind legs

Throatlatch – the hollow under the head, between the cheeks

Upper arm – the area above the elbow and below the shoulder that corresponds with the humerus or upper leg bone

Withers – the area at the base of the mane where the neck and back meet. The muscles attached to the withers are used for raising the head and neck, moving the head and neck from side to side, rotating the shoulder and extending the spine. When measuring the height of the horse, the height of the withers is what is recorded.

Parts of the Hoof

The hoof is one of the most important parts of the horse. It needs to be understood in greater detail. Without good hooves, the horse won't be able to live.

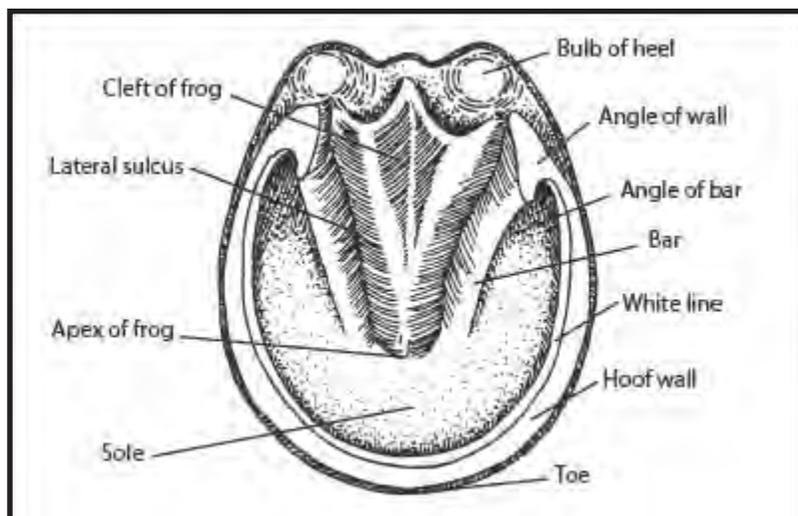
Bars – the thickened raised portions of the wall near either side of the frog

Cleft of the frog – the central groove of the frog

Coronary band – the narrow band at the hairline from which the hoof wall grows

Corium – is the middle layer of the hoof wall and is the thickest. It contains the pigment that gives the hoof its colour. The hoof will be the same colour as the skin above it.

Frog – is an elastic tissue that divides the sole into two equal halves. It should be large and well developed with no moisture showing. The frog distributes pressure as the



Credit: <http://pixgood.com/parts-of-the-hoof.htm>

SECTION 1: GENERAL KNOWLEDGE

horse moves and the action of the frog, when it makes contact with the ground, helps circulate blood up the leg. The frog normally sheds several times a year.

Heel – the back of the foot that hits the ground first as the horse travels

Laminae – is the inner layer of the hoof wall, which carries most of the weight of the horse. The laminae act as shock absorbers.

Periople – is the waxy outer layer of the hoof wall. It begins below the coronary band and covers the heels. This layer is covered with thin, horny scales that reduce the evaporation of moisture from the hoof and protects the hoof from drying out.

Quarter – the rear portion of the hoof, behind the sidewalls, where the hoof begins to curve inwards

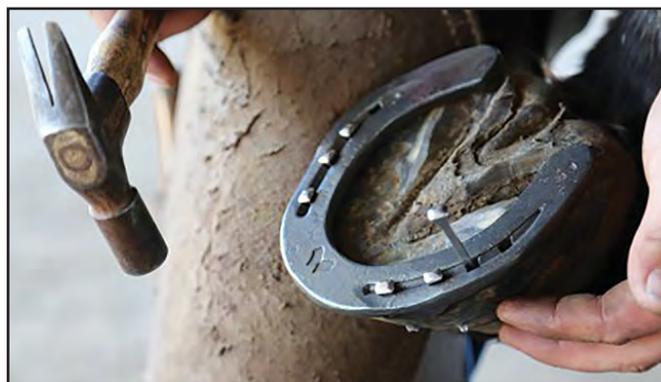
Sidewall – the side of the hoof

Sole – forms the bottom surface of the foot. The sole is concave from front to back and from side to side because it is not intended to support weight

Toe – the front of the hoof

Wall – the hoof wall is the outer portion of the foot. It is not an even thickness around the foot. It is thickest at the toe, where it is under the most pressure and thinnest at the quarters. The hoof wall is the outer portion of the foot and is made up of three layers; the periople, the corium and the laminae.

White line – the connection between the sole and the wall



*Picture Credit: American Farriers Journal
www.americanfarriers.com*

SECTION 1: GENERAL KNOWLEDGE

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Study a horse's foot and be prepared to identify the various parts to your leader at the next meeting. Start collecting pictures of horses from magazines, newspapers, the internet, etc. and put into your Record Book.

AND/OR

2. Try your hand at drawing a horse. After your horse is drawn, label the horse with as many parts as you can remember from this meeting. Put your labeled drawing in your Record Book.

AND/OR

3. Look at one of your horses or a horse in your neighborhood to see if you can tell how a body part helps it move, sense danger or change direction. Write down your observations in your Record Book.

SECTION 1: GENERAL KNOWLEDGE

DIGGING DEEPER**For Senior Members****Parts of the Horse - What if something goes wrong?**

Choose one or more parts of the horse as shown on the diagram in this meeting. What happens when this part does not look and/or work correctly? Is it something the horse can live with? How does it affect the horse? Does it affect the value of the horse both functionally and financially?

Create a chart listing the body part and the effects if it does not look and/or work properly.

Record your findings in your Record Book.

ACTIVITIES**Activity #1 - Equine Guelph Anatomy CD**

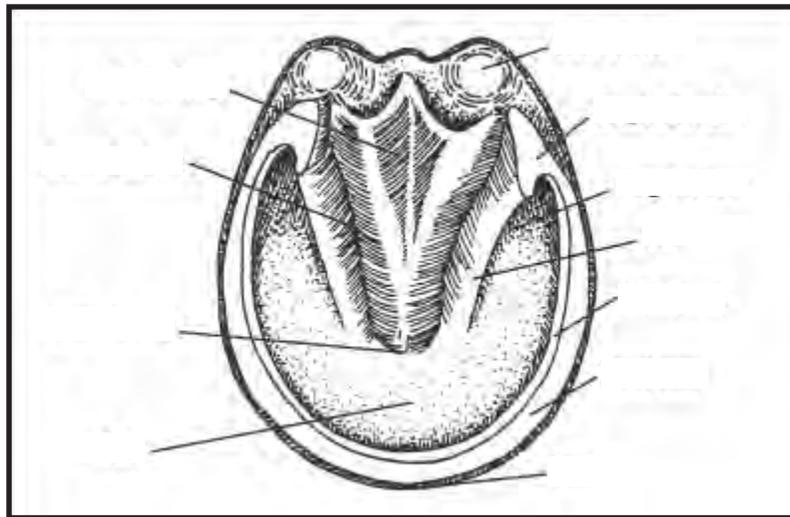
Using the CD that your Association Resource Contact should have, review the parts of the horse using the interactive activity found on the CD.

SECTION 1: GENERAL KNOWLEDGE

Activity #2 - The Hoof

Using the following clues, label the parts of the hoof:

1. The back of the foot that hits the ground first as the horse travels
_____.
2. The soft, elastic, triangular shaped tissue in the middle of the hoof that helps to circulate blood back up the leg of the horse _____.
3. The thickened raised portion of the wall near the frog
_____.
4. The connection between the sole and the wall – at the laminae
_____.
5. The protective tissue that covers the bottom of the hoof and is easily bruised
_____.
6. The horny growth on the outside of the hoof that supports weight
_____.
7. The waxy outer covering of the hoof wall _____.
8. The narrow band at the hairline from which the hoof wall grows
_____.

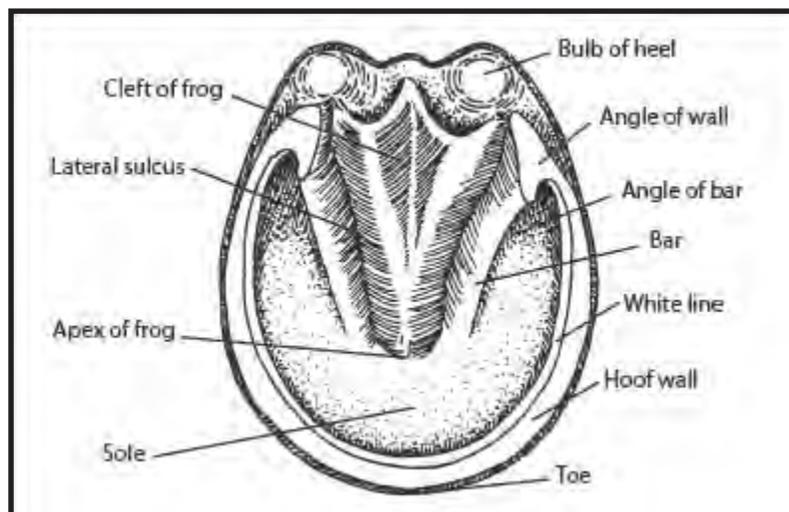
**Word Bank**

Bar, heel, frog, periople, sole, wall, white line, coronary band

SECTION 1: GENERAL KNOWLEDGE

Activity #2 - The Hoof – Answer Key

Using the following clues, label the parts of the hoof:



Credit: <http://pixgood.com/parts-of-the-hoof.htm>

1. The back of the foot that hits the ground first as the horse travels heel.
2. The soft, elastic, triangular shaped tissue in the middle of the hoof that helps to circulate blood back up the leg of the horse frog.
3. The thickened raised portion of the wall near the frog bar.
4. The connection between the sole and the wall – at the laminae white line.
5. The protective tissue that covers the bottom of the hoof and is easily bruised sole.
6. The horny growth on the outside of the hoof that supports weight periople.
7. The waxy outer covering of the hoof wall wall.
8. The narrow band at the hairline from which the hoof wall grows coronary band.

SECTION 1: GENERAL KNOWLEDGE

Activity #3 - Parts of the Horse Wordsearch

s l u f h n t h r o a t l a t c h w c i
 n t f x e e e b f p f k t r q c l r k e
 u z i h i t b h a h c n l m u x e v u s
 v g e f t f l s o a u c b b v s s d a y
 z m l l l k t o b o s h w e t p u o r c
 c w o n o e r x c d f e s o h f b o b d
 w i n s r j k y e k b e c n b r f a u w
 n t o n s r e h t i w k e k e l q l e m
 e s s l z k p d b q w n i p v h e g i l
 j q t p e h o c k k k z j z l v h c o l
 v p r x w r e y b c t x l l u u a i i p
 n h i g s p r z t u g w v p k t s k q o
 t h l n q q p a w x c m j b n q y e q i
 l l o p x n i d b e u u q k a b i o l z
 y q m a m o h b b j n y h a l t z p x w
 s t u k o n y i r i k p k f f k m y i d
 f z r y p n u v k b n q v q c i o b h v
 j g c k t a b s d g e m t q m u z z l e
 a c s f y c a i f m e d r c f t q y q r
 n q y e c g y d n o e y v a t n h o i y

arm
 back
 barrel
 cannon
 cheek
 crest
 croup
 elbow
 fetlock
 flank
 gaskin

hock
 hoof
 knee
 loin
 muzzle
 nostril
 pastern
 poll
 stifle
 throatlatch
 withers

SECTION 1: GENERAL KNOWLEDGE

Activity #4 - Parts of the Horse**Items Needed:**

- A quiet horse (or the outline of a horse cut out and taped to a wall)
- Masking tape
- Permanent marker

Instructions:

1. Write out the parts of a horse on pieces of masking tape.
2. Using a quiet horse (or the outline of a horse taped to a wall) have members match the masking tape word to the part of the horse.

Activity #5 - Body Bingo**Items Needed:**

- Picture of the Horse Anatomy diagram found earlier in the section
- Small pieces of paper with each body part on the diagram written on the pieces of paper
- Bingo page for each member (found on the next page)
- Pennies, buttons, marshmallows, etc. (something that members can use on their Bingo card)

Instructions:

1. Give each member a Bingo page
2. Have each member fill in the squares on their Bingo card using parts of the horse found on the diagram.
3. Put the small pieces of paper (with the body parts written on them) in a bowl.
4. Before starting the game, announce what members need to do to win (i.e. straight line, full card, four corners, etc.)
5. Pull pieces of paper, one by one, out of the bowl and call out body parts until a winner shouts Bingo!

Body Bingo

B	I	N	G	O
		FREE SPACE		

SECTION 1: GENERAL KNOWLEDGE

Activity #6 - Pin the Part on the Pony**Items Needed:**

- Two large posters of a horse
- Picture of the Horse Anatomy diagram found earlier in the section
- 2 sets of small pieces of paper with each body part on the diagram written on the pieces of paper
- Masking tape or push pins

Instructions:

1. Divide the members into two teams.
2. Place each set of small pieces of paper with the body parts names into separate bowls.
3. Have teams race against each other to label their horse. Only one team member can pull a piece of paper at a time and that piece of paper must be taped/pinned on the correct spot on the horse before the next member of the team can draw a piece of paper. The first team to have all of their pieces of paper on their horse wins.

Activity #7 - Clover Says!**Items Needed:**

- Stuffed horse/model horse/picture of a horse for each member

Instructions:

1. Each member will need a stuffed horse/model horse or a picture of a horse.
2. Begin the game of "Clover Says" incorporating the parts of the horse. For example, the person leading the activity says "Clover says touch the horse's nose!" Members should then touch the nose on toy, model or picture.
3. If the person leading the activity does not open with the command with "Clover says..." then the members should not respond. For example, if the leader says, "Touch the horse's mane!", the members should not touch the horse's mane. If they do, then they are out of the game.
4. More complex commands could include "Clover says touch the horse's hock AND the horse's throatlatch!"

MEETING 4: CONFORMATION

Topic:

- How a Horse is Put Together
- Methods to Determine 'Balance'

Objectives:

- To understand how the way a horse is built (its conformation) affects how well it performs

Roll Calls

- What does it mean when you say a horse has 'sound conformation'?
- Name someone you could talk to that could give you good advice as to what a horse looks like that has sound conformation.

Sample Meeting Agenda – 2 hrs. 5 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Topic Information Discussion	Review what good conformation looks like in a horse and methods of determining balance.	50 min
Public Speaking/Judging and Activities Related to Topic	Choose from Activities #1, #2 and/or #3 (Horse Conformation Word Scramble, Magazine Mania and Learn to Find a Horse's Balance) (instructions found at the end of this meeting).	50 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

NOTE: Activities can be interspersed with information when reviewing the parts of the horse.

SECTION 1: GENERAL KNOWLEDGE

Topic Information

How is a Horse Put Together?

Conformation is really how well a horse is built and how good it looks. It is very important and it affects how the horse will perform. Poor conformation can cause health issues and pain. Consider the following points when evaluating the conformation and form of a horse for a certain function and refer to the factsheets on “Parts of the Horse” to help identify any of the parts discussed in this section.

- The horse is an athlete. We must evaluate the structures which contribute to the horse’s ability to perform and remain sound. Most types of unsoundness are a direct result of additional stress, strain and bruising resulting from poor conformation.
- Conformation is heritable – whether it is good or bad
- Conformation and breed type should be evaluated against a standard of excellence. Most breed associations establish a standard of excellence for their own breed.
- No one part of the horse is of greater importance than another. Each part has a specific function.

Hooves

It is a good idea to start looking at a horse from the bottom up! Hooves should be solid and a good size for the size of the horse. They should be big enough to distribute the stress and concussion over a large area. Hoof walls should be free of major cracks in which the outer wall is actually split. Such cracks may cause a horse to be lame. Hooves should be clear of founder rings and ridges.

The Balanced Hoof

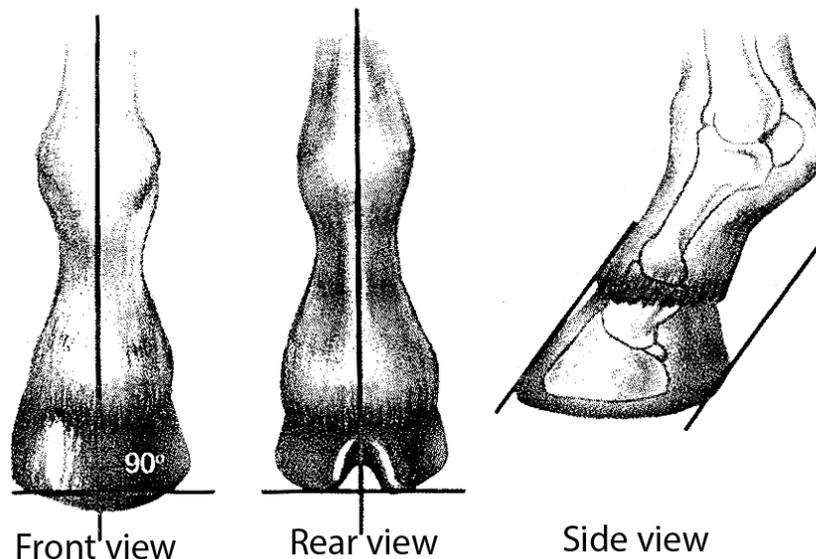


Diagram Credit: Alberta 4-H Horse Project Guide

Pasterns

The length and angulation of the pasterns are important. The short sections of leg just above the hoof should be sloped. When the horse is standing square, the front pasterns should be at an angle of about 45 to 50 degrees and the back pasterns should be at an angle of about 50 to 55 degrees. Moderately long, sloping pasterns help to absorb concussion. If the horse is built so that its pastern is too steep, it will be rough to ride. If it is too flat or steep, the horse may be susceptible to injury of the tendons, ligaments and the fetlock joint.

Ideal Pastern Angle



Diagram Credit: Alberta 4-H Horse Project Guide

Legs

Look over the legs carefully. There is no muscling in the legs or feet of the horse. The legs do not include the forearm or the gaskin. The legs extend from the knees and hocks down to the hooves. The legs are a very important part to watch for major scars, swelling and any unsoundness that may cause lameness. When viewed from the front or back, the legs should be straight with the joints lined up. A horse's legs should stand straight under it without angling in or out.

Knee

The size of the knee affects its function. A large (relative to the size of the horse), clean, flat knee increases the area of attachment for tendons, ligaments and muscles from the forearm. A large, flat knee also increases the area of support to reduce stress on the knee.

Cannon Bone

The length of the cannon bone affects the function of the horse. A short cannon bone is stronger than a long one. There is less mass to extend, which causes the horse to have a longer stride. The bone should be large. A flat cannon bone is stronger than a round one.

SECTION 1: GENERAL KNOWLEDGE

Forearm

The size of the forearm affects its function. The arm should be relatively long in relation to the length of the cannon bone and well-muscled. A longer forearm allows for greater extension of the foreleg. An arm that is too short decreases the length of the stride, while an arm that is too long restricts the movement and muscles tire quickly. Long muscling in the forearm provides greater contraction and lift of the leg. Volume of muscling provides power and support for the lower leg.

Hock

A large, clean, flat hock provides greater surface area for the attachment of tendons, ligaments and muscles. This also increases the area of support to reduce stress on the hock.

Gaskin

A longer Haskin allows greater extension of the hind leg. Long muscling provides greater contraction and lift of the leg. A greater volume of muscling provides power and support for the lower leg.

Chest

The chest should be wide, deep and well-muscled. Muscles should be well “v-ed up”. This will increase the ability of the horse to move laterally. A chest that is too wide produces a laboring, waddling stride. A chest that is too narrow may cause the horse to experience interference when it travels.

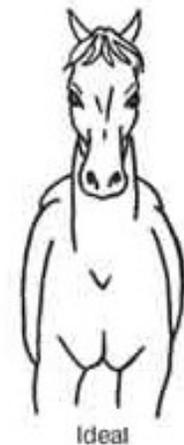


Diagram Credit:
Alberta 4-H Horse
Project Guide

Shoulder

The horse's front leg is attached to the body only by muscle and tendons. The front legs are a sling that holds the body. A longer

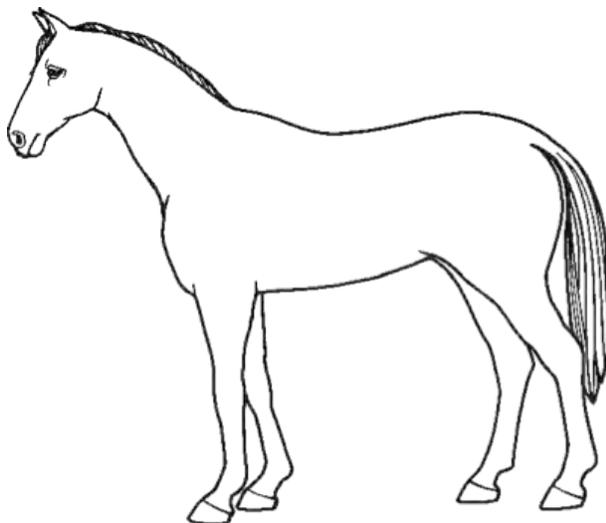
Well Sloped Shoulder

Diagram Credit:
Alberta 4-H Horse Project Guide

shoulder increases the area of attachment and the length of muscles, providing greater shoulder rotation, forearm extension and length of stride. The slope of the shoulder is measured along the scapular spine to the top of the withers (not to the point of the shoulder).

A well-sloped shoulder provides shock absorption and allows the foreleg to be raised higher to allow the stride to be fully completed before the foot strikes the ground. The shoulders of the horse should be sloped at the same angle as the pasterns. A more sloping shoulder provides freedom of movement, elasticity of gait, lightens the forehand and decreases concussion.

SECTION 1: GENERAL KNOWLEDGE

Muscling in the shoulder should be long and well developed for strength and absorption of concussion. Too much muscle increases the weight on the forearm and decreases the freedom of movement.

Back

The horse's back should be about as long as its neck. Avoid a short neck, long back combination. This can reduce the balance, handling and ability of the horse to manage weight. The loin and back muscles help carry the weight of the rider and lift the forearm of the horse. The back must be strong and well-muscled. The bones of the spinal column should not stick out higher than the muscle around it. When you feel along the back of the horse, the spine should be flat and "soft". Not rough and bony. The spine should lie concave with the muscles higher on either side of it.

Loin

The loin is the pivot point of the horse's back. A short, wide and muscular loin is needed to carry power from the hind legs forward. There are no bones in the loin, but it is supported by the spinal column. The loin should feel elastic when palpated (examined by touch) showing lots of muscling and strength. It should not be long, narrow or poorly muscled.

Heartgirth

The horse needs depth of heartgirth and spring of fore-rib to provide room for maximum function of the heart and lungs.

Hip and Croup

A long hip and croup have longer muscles, which increases the length of stride. The shape of the hip and croup varies according to the body type. A more level hip and croup provides a long, flowing stride. A more sloping hip and croup allows the hind legs to drive further underneath the body for power and speed.

Hindquarters

A well-muscled hindquarter is necessary for strength and power. The volume and length of muscling depends upon body type. When viewed from the back, the stifle should be the widest point on the horse.

Withers

The withers should be well defined, not rounded, to help hold the saddle comfortably in place. Round withers make it difficult to keep the saddle in place without cinching your saddle too tight. This is uncomfortable for the horse and the looser saddle on round withers makes it annoying and dangerous for the rider if the saddle rolls over. Withers of a longer length have a greater area for muscle attachment. Muscles attached at the withers are used for raising the head and neck, moving the head and neck from side to side, rotation of the shoulder and extension of the spine. Long withers are frequently associated with well-sloped shoulders. When a horse's height is measured, the measurement is measured from the ground to the top of the withers.

SECTION 1: GENERAL KNOWLEDGE

Neck

Horses use their head and neck to balance and length is required to maintain equilibrium. Adequate length depends on what the horse is used for. With increased length of muscle, the range of movement of the shoulder and length of the stride will increase. If the neck is too long, the weight of the forearm increases. If the neck is too short, the length of the stride and suppleness of the horse decreases. A neck with a clean, arched shape is more flexible, especially in the poll. The depth and set of the neck also affects the horse's function. A trim neck, set high into the shoulder, decreases the weight on the forearm. A thick, narrow set neck increases the weight on the forearm and may restrict shoulder movement.

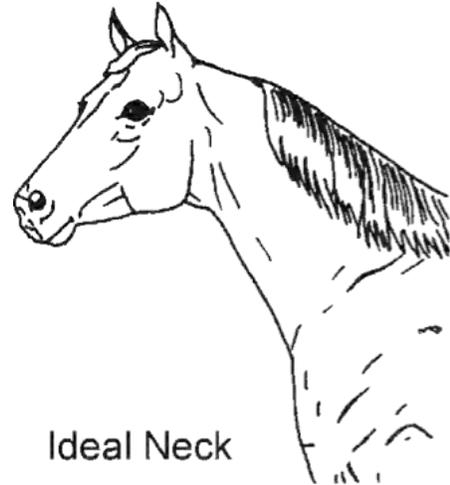
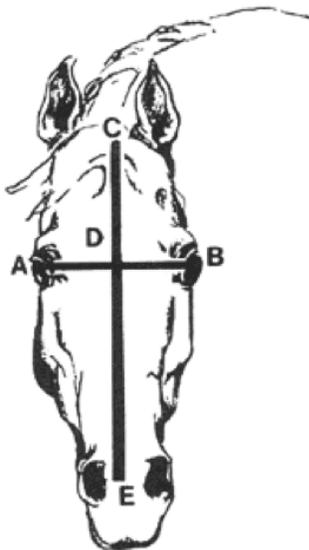
**Ideal Neck**

Diagram Credit: Alberta 4-H Horse Project Guide



$AB = CD$ and $1/2 DE$

Credit: <http://www.infovets.com/books/equine/A/A124.htm#3>

Throatlatch

The throatlatch should be free from fat to provide room for breathing, swallowing and circulation. This will also increase the ability of the horse to flex at the poll. It should be wide when viewed from underneath but thin when viewed from the side. One of the signs of a cribber is a very thick throatlatch.

The horse's head is proportional. The distance from A to B is equal to the distance from C to D and one-half the distance from D to E.

Head

Look for a head that is in proportion with the rest of the horse, not too big and not too small. If the head is too large, the centre of gravity is shifted forward and the horse tends to be a heavy mover. Vision may also be restricted by a large head. If the head is too small, the centre of gravity is shifted backwards and the horse tends to be light in front. There is inadequate room for the teeth and other internal structures in the head. Short nasal passages reduce the amount of space for warming air before it reaches the lungs.

Nostrils should be large and flaring to increase the airflow in and out of the lungs. Look for width between the eyes. The head should be of a triangular shape to increase the brain capacity. The eyes should be large and wide set to

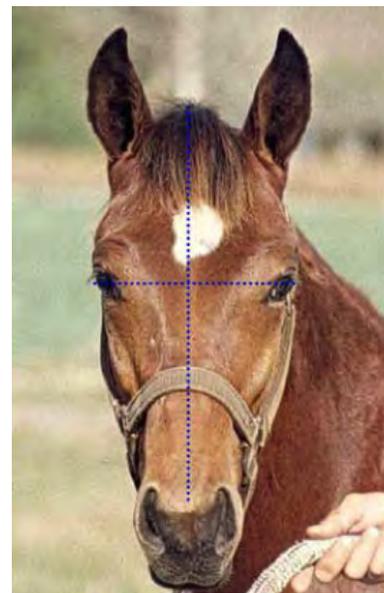


Photo credit: University of Georgia Cooperative Extension <http://extension.uga.edu/publications/detail.cfm?number=B1400>

SECTION 1: GENERAL KNOWLEDGE

increase the horse's field of vision.

When eyes are small and set deep into the head (as in pig eyes) vision is restricted, especially to the rear. The ears should be alert and proportionate to the rest of the horse's head and body. Check that there are no unsightly bumps or cavities and watch for responses to sounds and sight for signs of deafness and blindness.

Muscling

Just like in humans, muscle is the tissue that contracts and relaxes to cause your horse to move. Muscling refers to the length, definition and volume of muscle in your horse.

Definition

If you're a weight lifter, you know all about definition! Long, smooth muscles are more desirable than short, bunchy ones. Long muscles give the horse a longer stride and more endurance. Bunch muscles tire more quickly and give your horse less endurance.

Length

You can easily see the outline or definition of each muscle beneath the skin of your horse. A horse that is overweight has little muscle definition because it is difficult to see the muscles. A horse that is in good condition (neither under or overweight so that there is little muscle definition) will show the best muscle definition.

Volume

This is the amount of muscle. The greater the volume or amount of muscle, the greater the strength of the horse. To find the amount of muscling on your horse, look in these areas. Evaluate the amount of muscling and determine if it is desirable.

1. Chest
2. Shoulder, arm and forearm
3. Loin and croup
4. Buttock and thigh
5. Stifle and gaskin

There is also a difference between horses. For example, **stallions** should typically look masculine:

- Heavier, more powerful muscling
- A larger and broader head
- A larger muzzle and jaw
- A thicker, more muscular neck
- More substance or (larger) bone

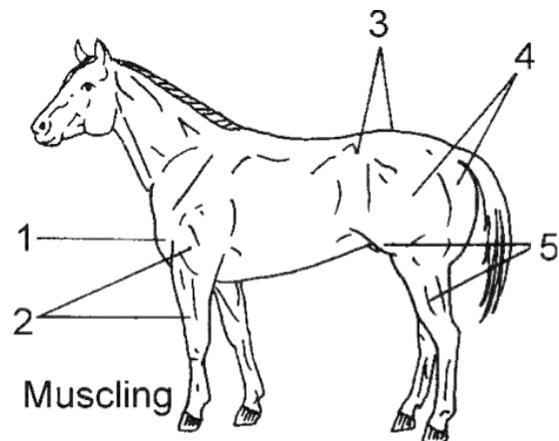


Diagram Credit: Alberta 4-H Horse Project Guide

SECTION 1: GENERAL KNOWLEDGE

Mares should typically look feminine:

- More refinement about the head and neck
- Not as heavily muscled and have less substance of bone

NOTE: A lack of masculinity in the stallion or a lack of femininity in the mare may indicate a reduced ability to reproduce.

Geldings should look more masculine than the mare, but much less masculine than the stallion. The volume of muscling and substance bone in a gelding will be about the same as in the mare.

Balance

A horse is said to be in balance when all of the parts of the body are in correct proportion to each other. Balance results in a pleasing, smooth appearance. Smoothness is similar to balance and indicates that all parts of the horse's body blend together smoothly, while having adequate muscle definition.

Methods of Determining Balance

Symmetry

A way of determining balance – when viewing the horse from the front and rear, divide the horse in half down the spinal column and down the middle of each limb. Each half should be a “mirror image” of the other.

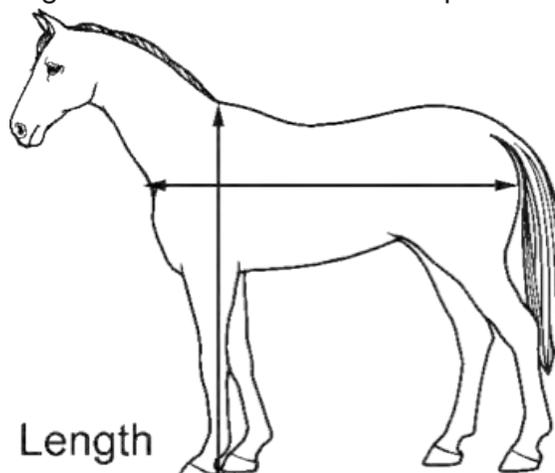


Symmetry

Length = Height

The length of the horse from the point of shoulder to the point of buttock should be equal to the height of the horse from the top of the withers to the ground.

The length of the foreleg from the ground to the elbow should be equal to the depth of the heartgirth from the elbow to the top of the withers.



Length

Diagram Credit: Alberta 4-H Horse Project Guide

Diagram Credit:
Alberta 4-H Horse
Project Guide

SECTION 1: GENERAL KNOWLEDGE

Depth of Heartgirth = Length of Foreleg

The length of the foreleg (fetlock) from the ground to the elbow should be equal to the depth of the heartgirth from the elbow to the top of the withers.

Levelness of Topline

The point of the croup should be on the same height as or lower than the top of the withers, so that the horse naturally travels “uphill”. Immature horses will have a rump that may be higher than the withers until they reach the age of three.

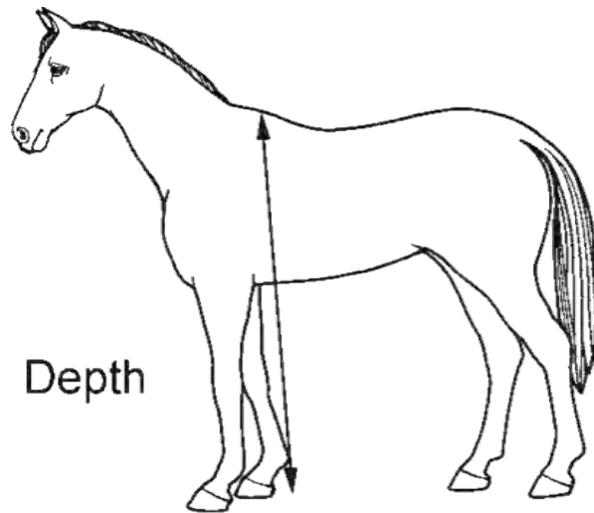


Diagram Credit: Alberta 4-H Horse Project Guide

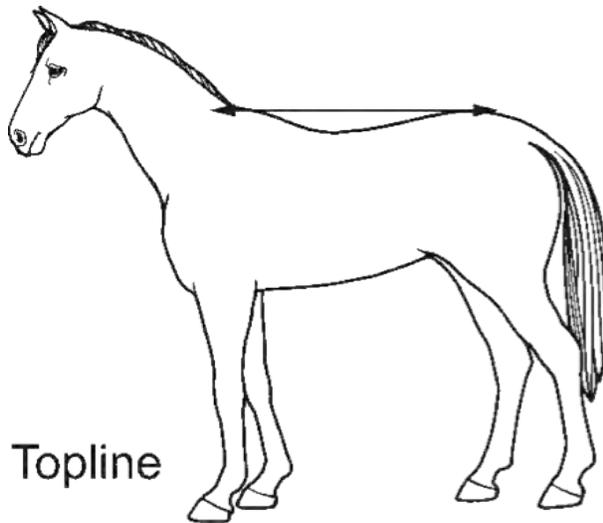


Diagram Credit: Alberta 4-H Horse Project Guide

Centre of the Horse

When the horse is divided through the centre of the back, the forequarter (not including the head and neck) should be equal in size to the hindquarter. Note that the centre of gravity is different from the centre of the horse. Because of the weight of the head and neck, the centre of gravity is just behind the elbow when the horse is standing. When the horse is divided through the middle of the back, approximately 60 percent of the weight is carried on the front legs, because of the additional weight of the head and neck.

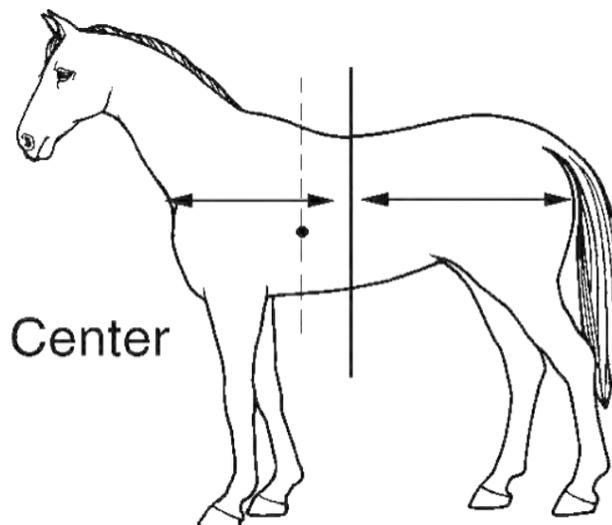


Diagram Credit: Alberta 4-H Horse Project Guide

SECTION 1: GENERAL KNOWLEDGE

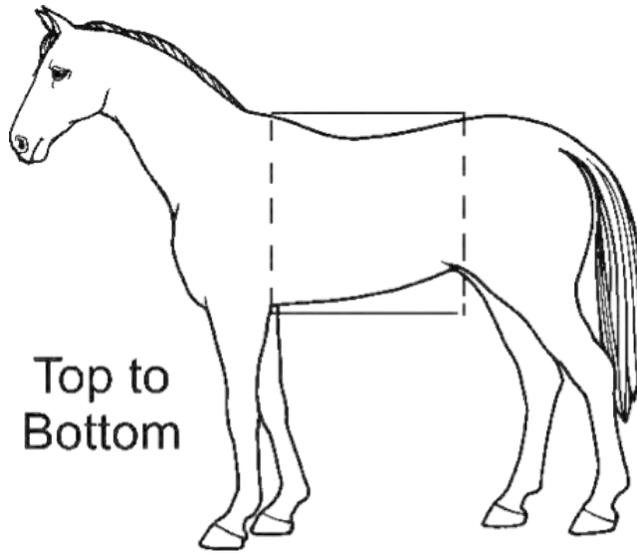


Diagram Credit: Alberta 4-H Horse Project Guide

Top to Bottom Line Ratio

The well-balanced horse has a shorter topline (from the point of the withers to the point of the hip) in comparison to a longer underline (from the point of the elbow to the stifle).

Square

Draw a box around the horse. Draw it so that the width of the box is equal to the length of the horse from the point of the shoulder to the point of the buttock and the height is equal to the height of the horse from the top of the withers to the ground. On a well-balanced horse, this box will form a square.

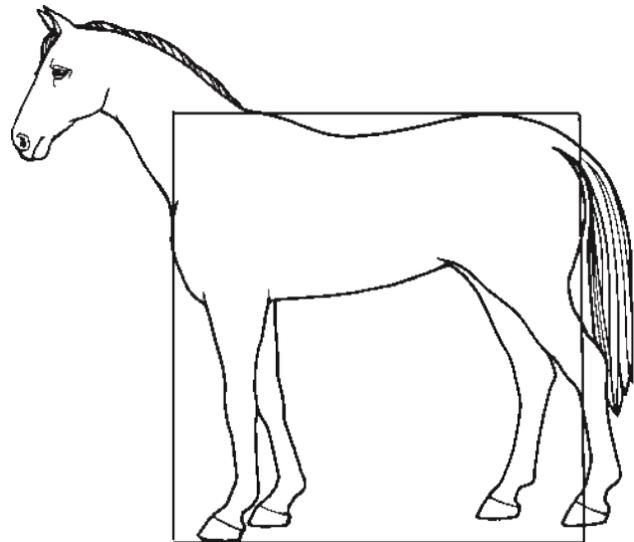


Diagram Credit: Alberta 4-H Horse Project Guide

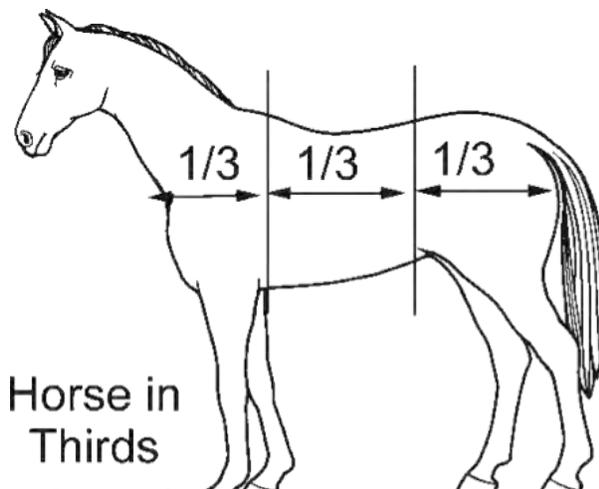


Diagram Credit: Alberta 4-H Horse Project Guide

Divide the Horse in Thirds

Divide the horse into thirds by dropping lines down from the top of the withers and the point of the hip. The length of each of the three segments should be the same.

SECTION 1: GENERAL KNOWLEDGE

Equal Lengths

In the well-balanced horse, each of the head, neck, shoulder, topline and hip should be of approximately equal lengths.

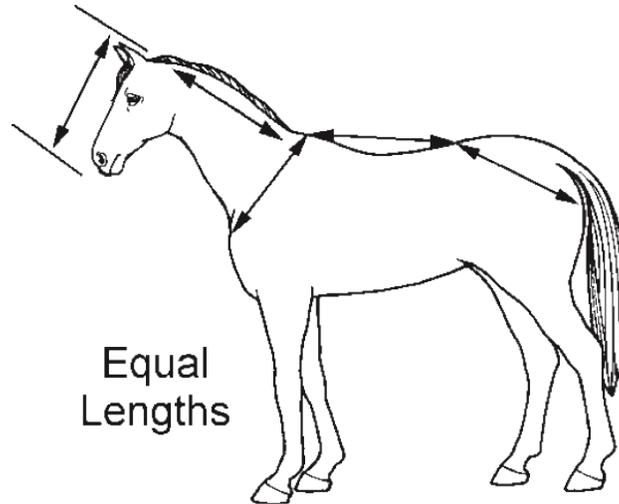


Diagram Credit: Alberta 4-H Horse Project Guide

SECTION 1: GENERAL KNOWLEDGE

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Talk to a horse owner, farrier, showperson or a veterinarian in your area about the importance of good conformation in a horse. Write down their answers and report them along with your own comments at the next meeting.

AND/OR

2. Take a look at your horse's head or at a picture of a horse's head from a magazine. Be sure to look at the horse straight-on. Determine on your horse's head if $AB = CD$ and $1/2 DE$ (based on the diagram in this meeting). Draw a picture of your horse's head (or use the magazine picture) and label it with the letters A,B,C,D and E and fill in the lines joining these letters.

DIGGING DEEPER

For Senior Members

Horses on the International Stage

Equine conformation evaluates the degree of correctness of a horse's bone structure, muscles and its body proportions in relation to each other. Undesirable conformation can limit the ability to perform a specific task. Although there are several universal "faults," a horse's conformation is usually judged by what its intended use may be. Thus "form to function" is one of the first set of traits considered in judging conformation. A horse with poor form for a Grand Prix show jumper could have excellent conformation for a World Champion cutting horse, or to be a champion draft horse. Every horse has good and bad points of its conformation and many horses (including Olympic caliber horses) excel even with conformation faults.

Find a picture of a horse that is competing on the International stage. Determine what the intended use for this is at the International level and then evaluate the conformation of this horse. Label the picture with all of the good conformational traits that this horse has as well as anything you see that may be undesirable. If possible, find out the monetary value of this horse and how much it has earned over the years if it has been competing for money.

Research what offspring has come from this horse and if those horses have been successful as well.

Include this picture in your Record Book as well as details about the value and offspring of this horse. Be prepared to share it with the club at the next meeting.

Excerpts taken from <http://horsehints.org/Conformation.htm>

SECTION 1: GENERAL KNOWLEDGE

ACTIVITIES**Activity #1 - Horse Conformation Word Scramble*****Items Needed:***

- Horse Conformation Word scramble worksheet (one per member) (found at the end of this meeting)
- Pen/pencil

Instructions:

- Have members work individually or in partners.
- Give each member a worksheet.
- All scrambled words on the worksheet can be found in the information section in this meeting.

Activity #2 - Magazine Mania***Items Needed:***

- Old equestrian magazines
- Stopwatch or clock
- Scissors

Instructions:

1. Divide members into groups of two or three.
2. Give each group the same number of equestrian magazines and scissors.
3. Have a timed race to see which group can find a picture a horse that they think is the most conformationally correct.
4. When the time is up have each group (or just the winning group depending on time) show the picture they found and have them explain why they chose that picture.

Activity #3 - Learn to Find a Horse's Balance!

Items Needed:

- Photo, model or a quiet live horse
- Pen or chalk
- Tape

Instructions:

On a photo, model or live horse, find the following:

- Poll
- Withers
- Point of shoulder
- Loin coupling

Mark each point in pen or chalk. Draw or tape a line from the withers to the point of the shoulder. Ask members the following question:

- What angle does the shoulder make in relation to the ground?

Now draw lines showing the following:

- Distance from the poll to the withers
- Length from the throatlatch to the neck-shoulder junction
- Topline from the withers to the loin coupling
- Underline from just behind the elbow to the stifle
- Square of the hip

Find the relationship between these lines. Ask members:

- When you compare the length of one line to another, what ratios are 1:1 and what are 1:2?
- When the should angle is changed, how does this change the ratios?
- Why is the shoulder called the fulcrum point of balance?

Activity Credit: Arabian Horse Association http://www.arabianhorses.org/youth/docs/LegUp_Conf.pdf

SECTION 1: GENERAL KNOWLEDGE

Horse Conformation Word Scramble



Name: _____

Date: _____

chest
heartgirth
withers

hindquarters
balance
muscling

shoulder
definition

length
pastern

hooves
throatlatch

croup
gaskin

1. ohsveo _ _ _ v _ s
2. trnspae _ _ s _ e _ _
3. nisakg _ _ s _ _ n
4. lrdeusho s h _ _ _ _ _
5. tches c _ _ _ _
6. gerrahhhti _ e a _ _ _ _ t _
7. purco _ _ _ _ p
8. werhist _ _ t h _ _ _
9. hltaorahctt _ _ r _ _ _ _ a _ c _
10. druerqstahni _ _ _ _ q u _ r _ _ _ _
11. nefiodinti d e _ i _ _ _ _ _
12. siumlgn m _ _ _ _ _ g
13. gnhelt l e _ _ _ _
14. blacean _ _ l a _ _ _ _

MEETING 5: CONFORMATIONAL FAULTS

Topic:

- Different conformation faults in a horse's body
- Deviations in the way a horse travels

Objectives:

- Learn to identify different faults in the way a horse moves and in its body

Roll Calls

- What are three examples of conformation faults in a horse?
- Name one thing that is a blemish in a horse that is sometimes mistaken for a conformation fault.

Sample Meeting Agenda – 2 hrs. 25 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Public Speaking/Judging Activity	Activity #1 – Horse Feet & Leg Conformation Memory Game (instructions found at the end of this meeting)	20 min
Topic Information Discussion	Review conformation faults in horses	60 min
Activities Related to Topic	Choose from Activities #2, #3 and/or #4 (Magazine Mania, Judging Horses, Blemishes vs. Unsoundness) (instructions found at the end of this meeting).	40 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

Note: Activities could be interspersed with Topic Information.

Note: All diagrams in this section are courtesy of the Alberta 4-H Horse Project Guide.

SECTION 1: GENERAL KNOWLEDGE

Topic Information

Conformation Faults

The following is a list of common conformation faults found in horses. Most horses have at least one conformation fault. Judging conformation involves evaluating which horse has fewer and less important ones or which horse is more correct than the others in the class.

Head

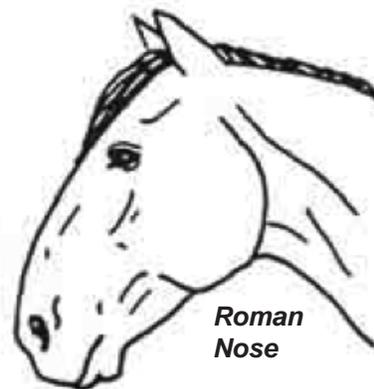
Roman Nose – the bridge of the nose has a rounded or convex shape when viewed from the side. This conformation fault restricts the horse's frontal vision.



Pig Eye – small eyes which are set too far back into the head. This conformation fault restricts vision, especially to the rear, and the horse often has a nervous or unruly disposition.

Pig Eye

Photo credit:
<http://www.equestrianoutreach.org>



Platter Jaw – an excessively large jowl. This conformation fault is most commonly found in stock type breeds and reduces the ability of the horse to flex at the poll which may restrict breathing, blood circulation and swallowing.

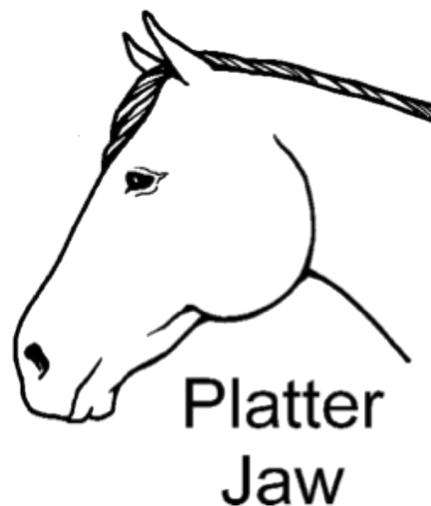
Small Nostrils - opening of the nostrils (also called the nares) is narrow and somewhat restricted. The conformation fault limits the ability to expand the nostrils



for breathing while working hard and may occur in any breed. Horses with small nostrils are best for pleasure-riding or non-speed sports. Small nostrils are often seen in horses that also have narrow jaws and muzzle.

Small Nostrils

Photo credit: <http://www.horses-photos.org/>



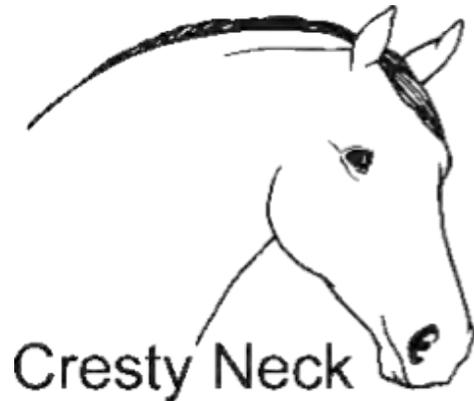
SECTION 1: GENERAL KNOWLEDGE

Neck

Ewe Neck

Ewe Neck – neck appears to be “turned over”. This conformation fault restricts flexation at the poll and a horse tends to throw its head upward. This can also restrict vision.

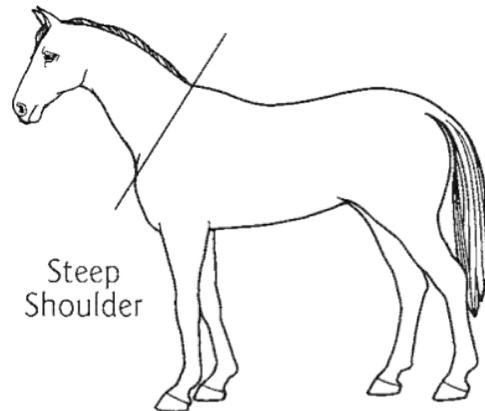
Cresty Neck – excess fat deposits on the crest of the neck. This fault increases the weight carried on the forelegs of the horse and may be an indication of founder.



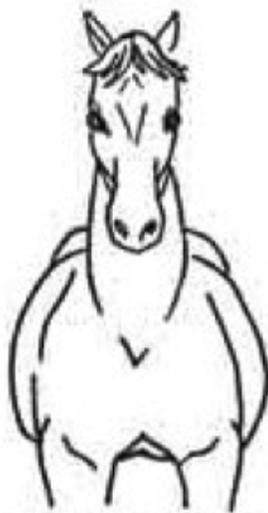
Cresty Neck

Shoulder

Steep shoulder – shoulder angle steeper than 50 degrees. This decreases the length of stride in a horse and makes them rough to ride. It also increases concussion on the forelegs.

Steep
Shoulder

Narrow Chest



Extra-Wide Chest

Chest

Narrow Chest – legs are too close together and legs may interfere when the horse travels

Extra Wide Chest – legs are set too far apart. This produces a laboring, waddling stride.

SECTION 1: GENERAL KNOWLEDGE

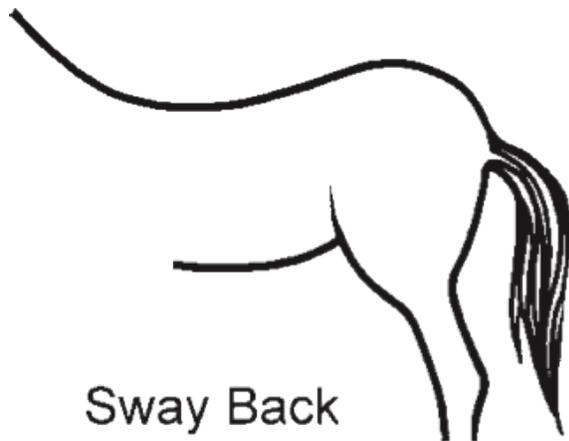
Topline

Mutton Withers – low, wide withers. This type of withers are prone to injury if the saddle slides forward. It is hard to keep the saddle in place without it being too tight and the saddle is prone to slip to one side.

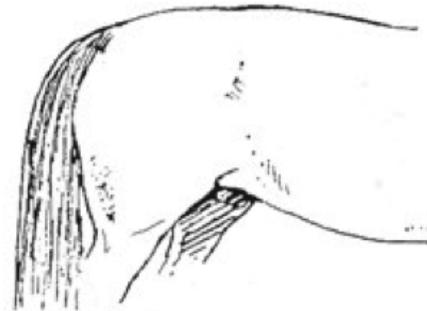
Sway Back – weak topline. This is usually seen in older horses and in horses with long backs and, or loins. This restricts the horse's ability to pull legs forward beneath the hindquarters.

**Mutton Withers**

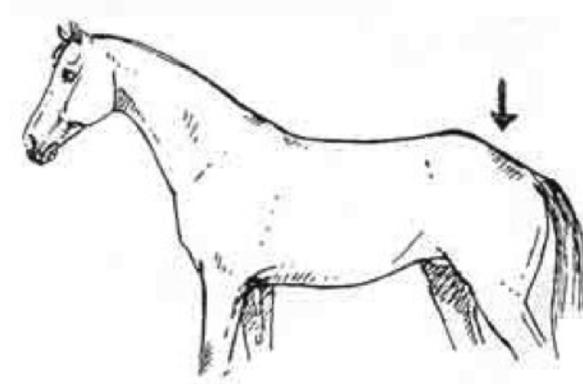
Photo credit:

<http://www.equestrianoutreach.org>**Sway Back**

Roach Back – loin has a rounded (convex) appearance when viewed from the side. This can restrict flexibility.

**Roach Back****Hip and Croup**

Goose Rump – hip is too steep when viewed from the side. This decreases the length of stride and speed while increasing concussion on the hind legs.

**Goose Rump**

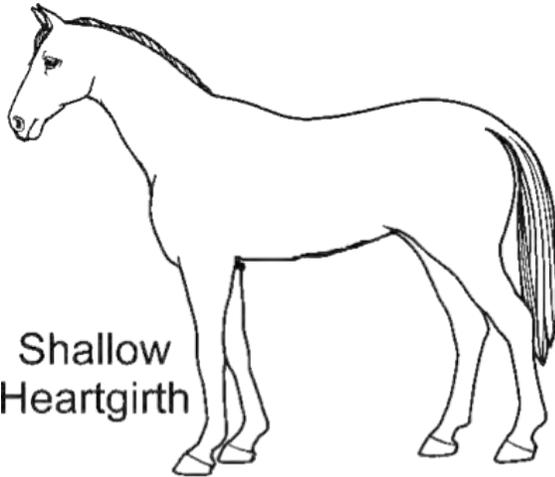
SECTION 1: GENERAL KNOWLEDGE

Rafter Hip – when viewed from the rear, the width at the point of the hip is greater than the width at the stifle. This results in a hip that is too flat over the top and indicates a lack of muscular development. This may interfere with the horse while travelling due to lack of muscular support.



Rafter Hip

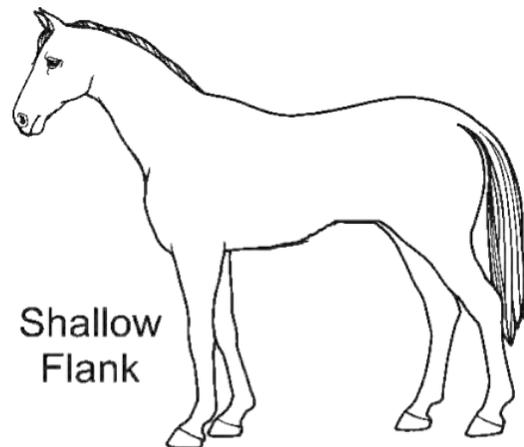
Heartgirth and Flank



Shallow Heartgirth

Shallow Heartgirth – depth from withers to elbow is less than the length from elbow to ground. This restricts the capacity for heart and lungs and may decrease endurance of the horse.

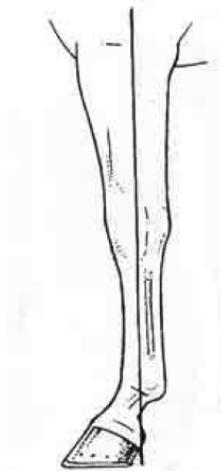
Shallow Flank (Cut Up in the Flank) – pronounced narrowing in the flank region. This decreases capacity of the digestive system and decreases the foal carrying capacity in mares.



Shallow Flank

Feet and Legs

It is common for two or more defects in the feet and legs to appear together. To help identify defects in the feet and legs, pretend you are carrying a “string” with a weight attached to the bottom. This “string” can then be used to help evaluate the front legs and the back legs of a horse standing square.



Ideal Front Leg

SECTION 1: GENERAL KNOWLEDGE

Front Leg Defects

A) Viewing from the Side

From the side, the “string” would hang so that it divides the knee, cannon, fetlock and hoof.

Buck Knees (Over at the Knee) – the knee is forward of a line that bisects (divides in half) the foreleg. This horse will be susceptible to bowed tendons.

*Buck Knees**Calf Knee*

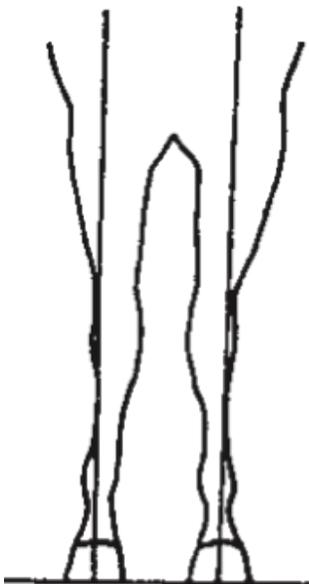
Calf Knees (Back at the Knee) – the knee is behind a line that bisects the foreleg. This places excess stress on the front of the knee and strain on the tendons. This horse will be susceptible to chip fractures of the knee and bowed tendons. Calf knees are more serious than buck knees.

Tied In at the Knee – the flexor tendon appears to be too close to the cannon bone just below the knee. This horse will be susceptible to bowed tendons.

*Tied in at the Knee*

B) Viewing from the Front

From the front, the “string” would hang so that it intersects the hooves in half.

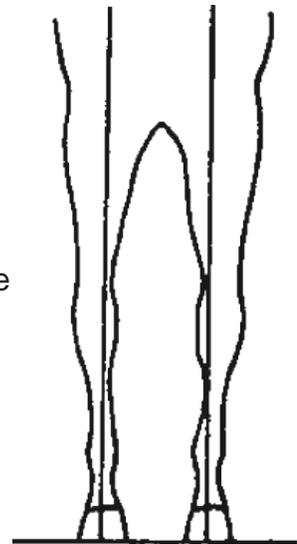
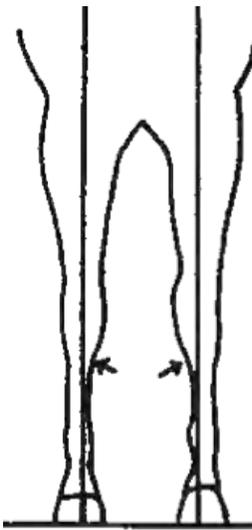


Knock Knees – the knees lie inside parallel lines bisecting the forelegs. This places excess stress on the outer knee, and strain on the inside ligaments of the forelegs.

Knock Knees

SECTION 1: GENERAL KNOWLEDGE

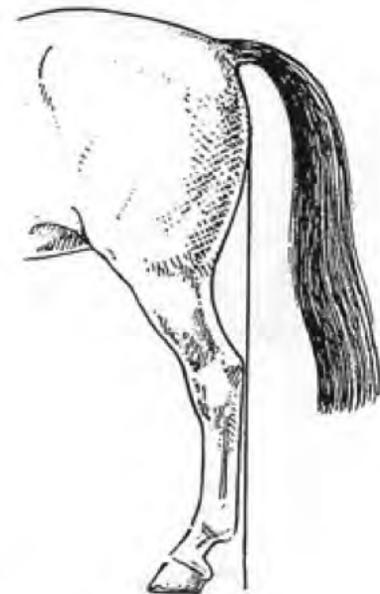
Bowlegs (Bandy-Legged) – the knees lie outside parallel lines bisecting the forelegs. This places excess stress on the inner knee and strains on the outside ligaments of the forelegs.

*Bowlegs**Bench Knees*

Bench Knees – the cannon bone is offset to the outside of the knee. This places more stress on the inside splint bones and the horse will be more susceptible to splints or knee chips.

Hind Leg Defects**A) Viewing from the Side**

Again from the side, the “string” would hang so that it falls down from the point of the buttocks. Look for how that string would then lie in relation to the hock, cannon, pastern and hoof.

*Ideal Rear Legs**Sickle Hocks*

Sickle Hocks – excessive angulation of the hock joint. The horse appears to be standing under from the hock down. This places excess strain on the planter ligament and the horse will be susceptible to curbs.

SECTION 1: GENERAL KNOWLEDGE

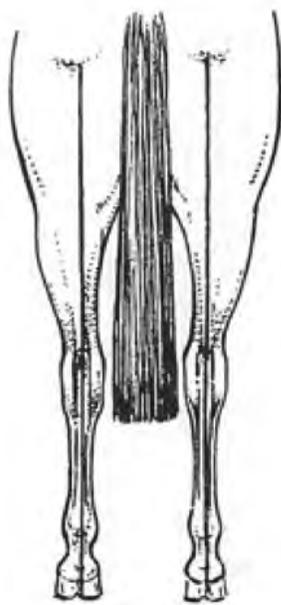
Post-Legged – insufficient angulation of the hock joint. The entire leg appears too straight and the hind leg is usually set ahead of a line dropped from the point of the buttock. The pasterns are usually also too straight. This places excess stress on the front of the hock joint and on the stifle joint. A horse will be susceptible to bog spavins, thoroughpins, bone spavins or stifling.

B) Viewing from the Rear

From behind, the “string” would still hang from the point of the buttocks. Look for how it then hangs in relation to the hocks, cannon and hooves.



Post Legs



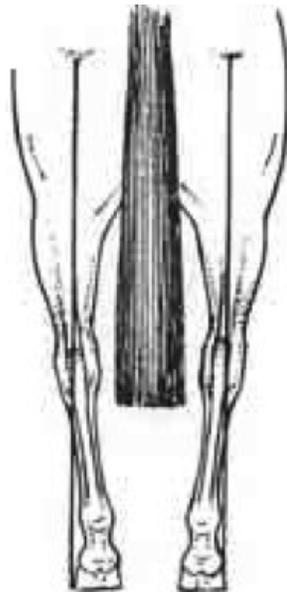
Cow Hocks

Cow Hocks – the hocks are too close together and point toward one another causing the feet to be widely separated and often pointing outward. This hind leg defect may place excess stress on the hock joint and strain on the ligaments. This horse may be susceptible to bone spavins, curbs and thoroughpins.

Bow-Legged – the hocks lie outside parallel lines bisecting the hind legs. This may cause interference because the horse moves narrower at the ground than at the hock and places excess stress on the hock joint and strain on the ligaments. This horse will be predisposed to bog spavins, curbs or thoroughpins.



Bow Legged



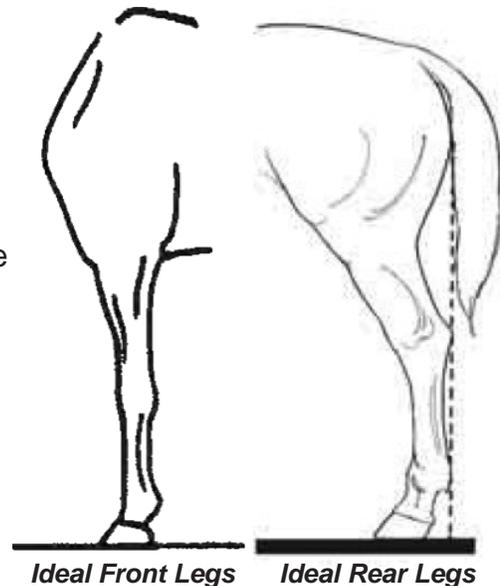
Bowed Hocks

SECTION 1: GENERAL KNOWLEDGE

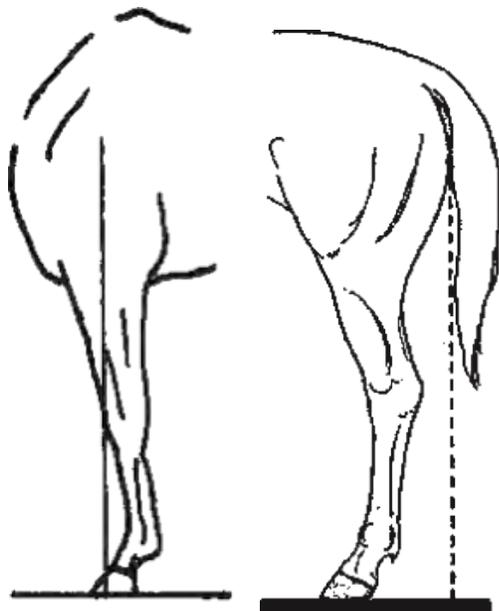
Hind Leg Defects

A) Viewing from the Side

The front and rear legs must also be evaluated for how they are positioned under the body of the horse. They should come under the horse's body so that they stand square and strong, as the ideal pictures show. With a picture of ideal legs, it is then easier to evaluate legs for the following defects.



Standing Under (Camped Under)



Standing in Front *Standing Behind*

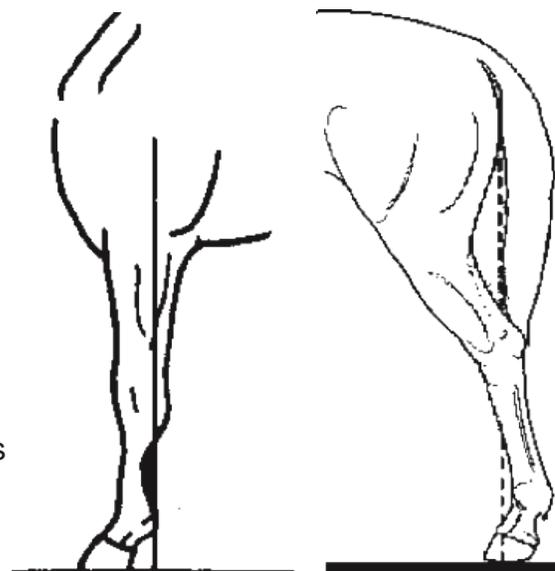
Front – the entire foreleg from the elbow down is too far under the body. This places excess weight on the forelegs.

Rear – the entire hind leg is placed too far forward under the body. The horse may also be sickle-hocked or post-legged; stress is the same as for sickle hocks or post-legged, respectively.

Standing Under (Camped Out)

Front – the entire foreleg from the elbow down is too far forward. This places excess stress on the front of the knee and strain on the ligaments and tendons

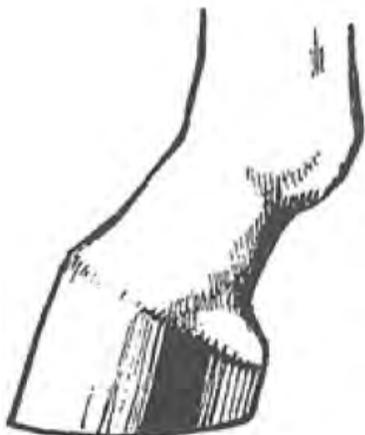
Rear – the entire hind leg is placed too far backwards. The horse may also have steep rear pasterns and, or be sickle hocked; stress is the same as for sickle hocks.



Standing in Front *Standing Behind*

SECTION 1: GENERAL KNOWLEDGE

Steep Pasterns – often accompanied by a steep shoulder. The pastern length may be short or long. This increases the effect of concussion on the fetlock joint, pastern joint and navicular bone. It is called a “club foot” if the hoof angle is also too steep. This horse may be susceptible to osselets, ringbone, navicular syndrome, side bones and splints.

*Steep Pastern**Ideal Pastern*

Weak Pasterns – pasterns are usually too long and sloping. In extreme cases, the fetlock may touch the ground when the horse travels. This horse will be predisposed to injury of the tendons, ligaments and the fetlock joint.

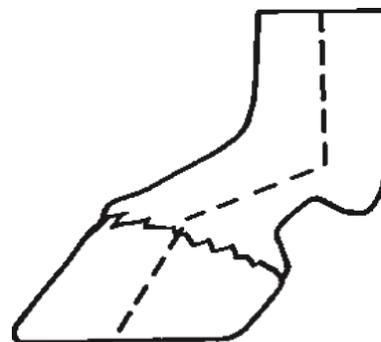
*Weak Pastern*

Broken Hoof



Broken Hoof/Pastern Axis (Angle) – the angle of the pastern and the angle of the hoof are not the same. When the pastern slopes more than the front wall of the hoof, additional strain occurs on the tendons and ligaments.

Coon Foot – occurs when the pastern slopes more than the front wall of the hoof, so much that the angle is nearly parallel to the ground. This places additional strain on the tendons and ligaments.

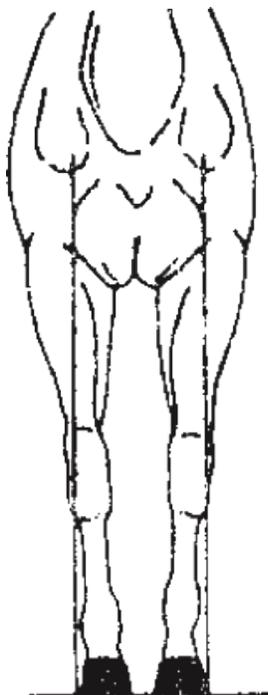
*Coon Foot**Club Foot*

Club Foot – is a serious conformation fault in which the hoof angle is too steep (60% of more). This horse may be susceptible to osselets, ringbone, navicular syndrome, side bones and splints. Horses with a club foot often stumble and are unsafe to ride.

SECTION 1: GENERAL KNOWLEDGE

B) Viewing from the Front/Rear

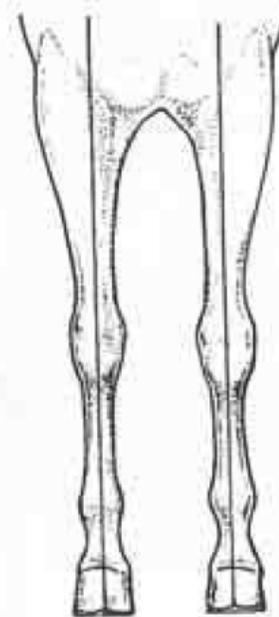
The front and rear legs must also be evaluated for how they are positioned under the body of the horse. They should come under:



Toe-in (Pigeon Toed)

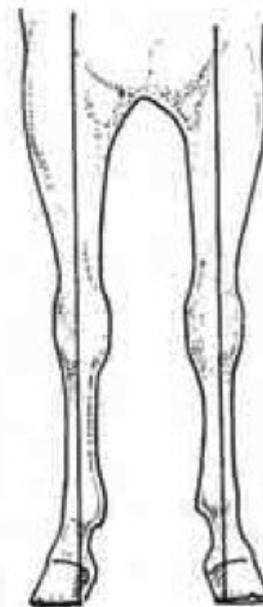
Base Narrow – the forelegs (hindlegs) are closer together at the ground than at the top of the leg. If the base of the feet is narrow, this may be accompanied by toe-in or toe-out conformation. There is more weight and stress placed on the outside of the legs and the horse may be susceptible to windpuffs, ringbone and sidebone.

Toe-In (Pigeon Toed) – the toes point toward each other. If the horse toes in or is pigeon toed, more weight and concussion is placed on the outside of the pastern and hoof. This is usually seen with base-narrow and bow-legged conformation.



Ideal Front Legs

Toe-Out (Splay Footed) – the toes point away from each other. This may be seen with either base-narrow or base-wide conformation and is often present if the horse is cow-hocked. If the horse toes out or is splay footed, more weight and concussion is placed on the inside of the pastern and hoof



Toe Out (Splay Footed)

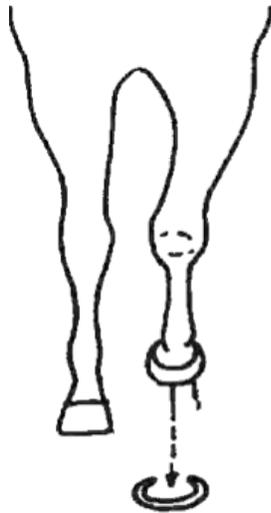
Ways of Going or Travel

The way a horse travels is the way it moves. Ideally, both the front and hind legs should move forward in a straight line. The back feet should travel in the same tracks as the front feet. The horse should move with a long, fluid, ground clearing stride rather than a short, choppy stride. This is the most efficient way of moving and it places the least stress on the limbs. Watch the horse's feet carefully for how straight the horse travels and check the tracks left by the horse for signs of deviations in the horse's stride. Such deviations may indicate a conformation fault.

SECTION 1: GENERAL KNOWLEDGE

Deviations from Travel in Horses include:

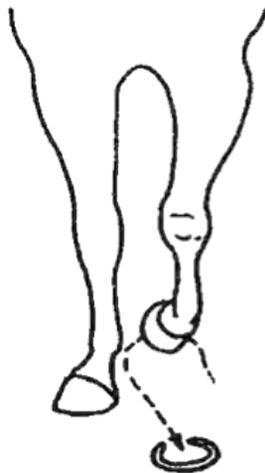
A) Viewing from the Front/Rear



Ideal Travel

Paddling (Winging Out) – throwing the feet outward while in motion. This is usually associated with toe-in conformation.

Winging (Winging In, Dishing) – throwing the feet inward while in motion. This is usually associated with toe-out conformation and is more serious than paddling, since it may lead to interference when the horse moves.



Winging (Winging In, Dishing)



Paddling (Winging Out)



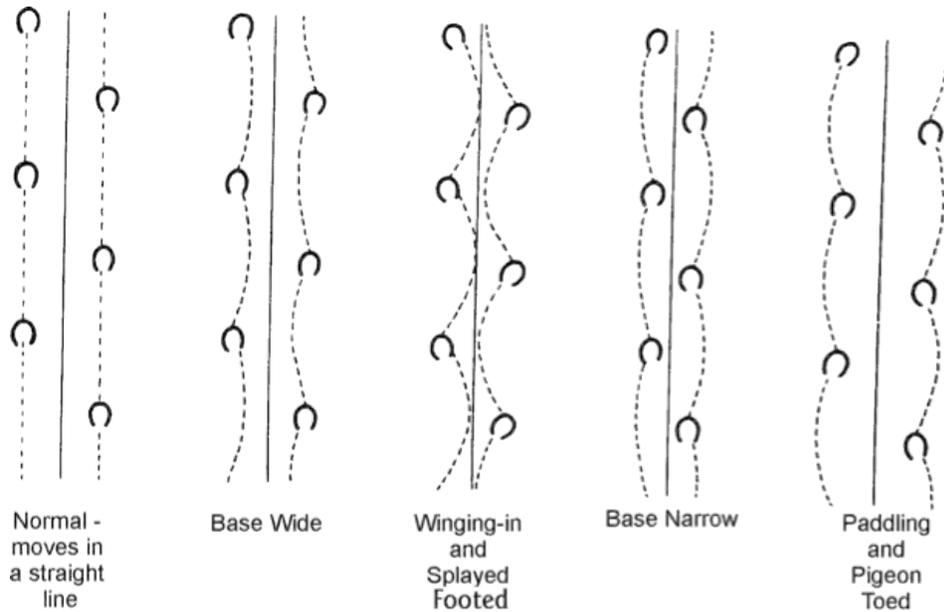
Plaiting (Rope Walking)

Plaiting (Rope Walking) – twisting of the striding leg around the supporting leg so that the horse appears to be walking a tightrope. One forefoot may appear to land directly in front of the other. This is more serious than paddling, since it may lead to interference and stumbling.

SECTION 1: GENERAL KNOWLEDGE

Interference – when one foreleg (hindleg) strikes the opposite foreleg (hindleg) while in motion

View of a horse's gait with various deviations.



B) Viewing from the Side

Overreaching – the hind foot strikes the heel of the forefoot before the forefoot leaves the ground. If the horse is shod, the front shoe may be pulled off by the hind foot. 'Over reach' or 'bell boots' are worn to prevent this.

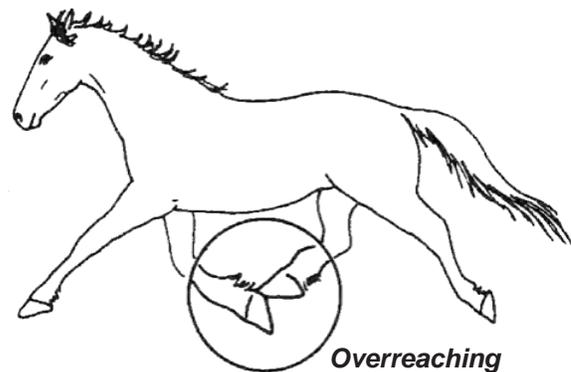


Photo credit: Horse Side Vet Guide - Equine Health Resource - HorseSideVetGuide.com

SECTION 1: GENERAL KNOWLEDGE

Forging – the toe of the hind foot strikes the sole or shoe of the forefoot while in motion.



Photo credit: Horse Side Vet Guide - Equine Health Resource - HorseSideVetGuide.com

Scalping – the toe of the forefoot strikes the coronary band of the hind foot.

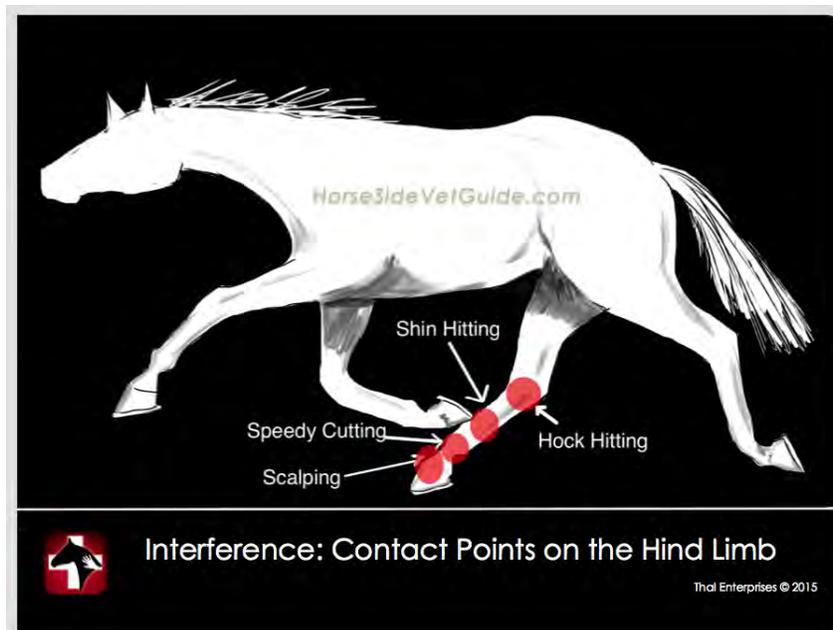


Photo credit: Horse Side Vet Guide - Equine Health Resource - HorseSideVetGuide.com

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Take photographs of a horse and compare them with the standard picture of a horse with good conformation.

AND/OR

2. Take a horse out for a ride and observe its stride carefully. If it shows any of the defects discussed in this meeting, contact your veterinarian to talk about ways that you can prevent this from becoming a problem. Report the results at your next meeting.

AND/OR

3. If possible, talk to someone who is a certified horse judge. Ask them which conformation faults they look for when judging and which conformation traits are most desirable. Record your findings in your Record Book.

SECTION 1: GENERAL KNOWLEDGE

DIGGING DEEPER

For Senior Members

How Do You Evaluate Conformation?

Conformation in horses should be evaluated carefully. All good judges, veterinarians, horse owners and trainers should have a system to identify good conformation and conformation faults. Each person has a system which works for them.

A horse should be viewed from each side, making sure to evaluate the horse at a standstill and while in motion (walk and trot). The fore and hind legs should be evaluated for straightness, correct angles, slope, muscling and proportion. The pelvis and croup are evaluated for symmetry, length and straightness. The head and neck are evaluated for normal balance and appropriate length and curvature, with special attention being paid to the teeth and bite.

Method for Evaluating Conformation/Balance

- To help you evaluate whether the horse's legs are straight, imagine a plum line (a piece of string with a weight at the bottom allowed to swing freely and hang straight).
- When standing in front of or behind the horse, imagine two lines:
 1. One line from the point of the shoulder (front) straight to the ground. The line should intersect the carpus (knee), fetlock, pastern and hoof in the middle of each structure.
 2. One line from the tuber ischium (back) straight to the ground. The line should intersect the tarsus (hock), fetlock, pastern and hoof in the middle of each structure.
- When viewing a horse from the side, imagine two lines:
 1. One line from the top of the scapula (front) down the leg. The line should intersect the carpus and fetlock in the middle of the joints.
 2. One line from the top of the tuber ischium (back) down the leg. The line should follow the back of the hock and cannon bone to the ground.

Take pictures of your horse (or a friend's horse once you have asked permission) or by using pictures from the Internet, take pictures of the horse from the front, the back and from each side. Have the pictures developed (or print them from the Internet) and then try drawing lines on the pictures to demonstrate the above.

Put your pictures in your Record Book and be prepared to share the pictures with the club at the next meeting.

Excerpts taken from: the Horse <http://www.thehorse.com/articles/10115/conformation-in-horses>

ACTIVITIES

Activity #1 - Horse Feet & Leg Conformation Memory Game

Items Needed:

- 2 sets of Game Pieces (found at the end of this meeting) printed (ideally on cardstock)

Instructions:

1. All members sit in a circle.
2. Place the game pieces face down in the centre of the circle.
3. The first player gets to turn over two game pieces. If the game pieces match, the player gets to keep those pieces and it counts as a point. The first player then gets to turn over two more game pieces. If the game pieces match, the player continues. If the game pieces do not match, the pieces are turned back down and the next player gets to turn over two game pieces.
4. This continues until all of the game pieces have been matched up.
5. The player with the most matches wins the game.

Credit: 2015 Youth HORSE Training Program (Horse Ownership Responsibility Safety & Education) Trainer's Guide, Rebecca Bott, Assistant Professor & SDSU Extension Equine Specialist, courtesy of iGrow.org

Activity #2 - Magazine Mania

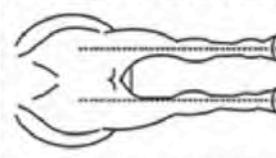
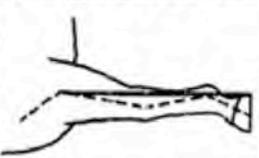
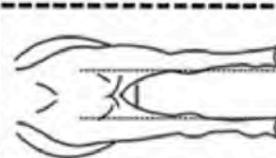
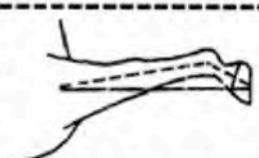
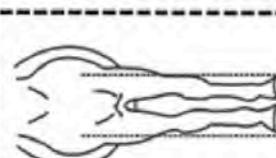
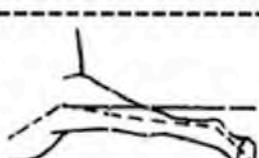
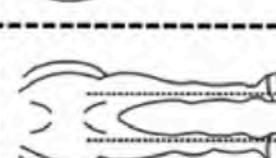
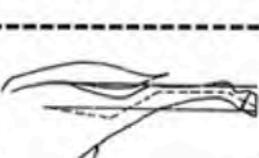
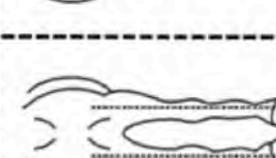
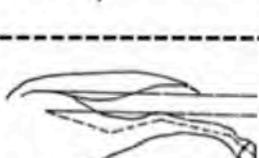
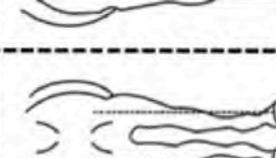
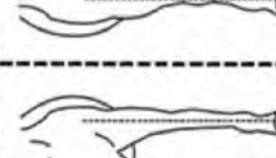
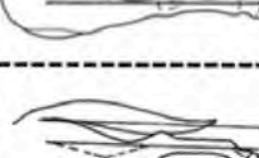
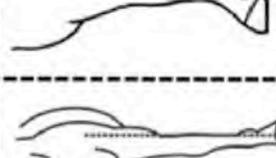
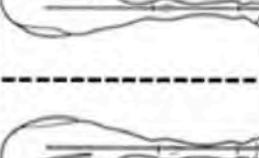
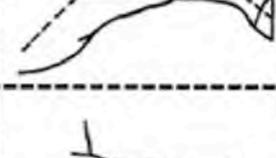
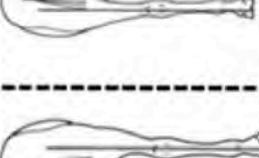
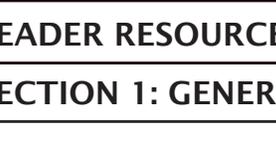
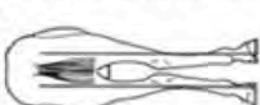
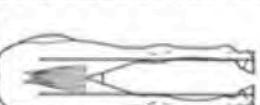
Items Needed:

- Old equestrian magazines
- Stopwatch or clock
- Scissors

Instructions:

1. Divide members into groups of two or three.
2. Give each group the same number of equestrian magazines and scissors.
3. Have a timed race to see which group can find the most common conformational problems in the pictures of the horses.
4. When the time is up have each group (or just the winning group depending on time) show the pictures they found and the conformational problem with the horse in the picture.

SECTION 1: GENERAL KNOWLEDGE

	Front View Ideal		Rear View Bowlegged		Front View Base Wide		Rear View Camped Under Camped Out		Front View Base Narrow		Rear View Camped Out		Front View Toes Out		Rear View View Ideal		Front View Pigeon Toed		Rear View Sickle Hocked		Front View Wide Traveling		Rear View Travel Cow Hocked		Front View Base Narrow, Toes Out		Rear View Camped Out		Front View Bowlegged		Rear View Too Straight		Front View Knock Kneed		Rear View Ideal		Front View View Ideal		Rear View Stands Wide		Front View Calf-Kneed		Rear View Stand Close		Free Space		Winging Inward		Normal Straight Line		Travel Cow Hocked		Wide Traveling		Close Traveling		Travel Ideal		Rear View Cow Hocked		Rear View Bowlegged
---	-----------------------------	---	--------------------------------	---	---------------------------------	---	--	---	-----------------------------------	---	---------------------------------	---	--------------------------------	---	---------------------------------	---	-----------------------------------	---	--	--	--	--	--	---	---	---	---------------------------------	---	---------------------------------	---	-----------------------------------	---	---------------------------------------	---	----------------------------	---	----------------------------------	---	----------------------------------	--	----------------------------------	--	----------------------------------	---	-----------------------	--	---------------------------	--	---------------------------------	--	------------------------------	--	---------------------------	--	----------------------------	--	-------------------------	--	---------------------------------	--	--------------------------------

Activity #3 - Judging Horses

Items Needed:

- 4 horses
- Judging Scorecard (found at the end of this meeting)
- Pen/pencil

Instructions:

1. Discuss criteria for what you are looking for in an ideal horse, based on the conformation faults discussed during this meeting.

Head

Neck

Shoulder

Chest

Topline

Hip and Croup

Heartgirth and Flank

Feet and Legs

2. Have four horses tied in a row or in separate stalls.
3. Using the Judging Card, found at the end of this meeting, have members judge the horses, writing down their placing of the horses and their reasons for their placings.
4. Have senior and/or experienced members give oral reasons for their choices.

Discussion/Comments - Discuss the importance of judging in regards to assessing quality.

A set of reasons is meant to compare the differences in the items that were judged, in this case horses. Your reasons explain why you placed the class the way you did. The most important reasons should be first and the least important last. Make sure you aren't just describing the articles. You must compare them. Try to have a least two or three points for each comparison. This will ensure that you stay within any time limits. As you gain confidence and experience, you may wish to add more reasons

SECTION 1: GENERAL KNOWLEDGE

Judging Horses**Judging Card****Criteria:**

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Giving Reasons:

I place this class of _____, _____, _____, _____.

I place _____ first because.....

I place _____ over _____ because.....

I place _____ over _____ because.....

I place _____ over _____ because.....

I place _____ 4th because.....

For these reasons, I place this class of _____, _____, _____, _____.

Official Placing _____.

MEETING 6: HORSE BEHAVIOUR

Topic:

- The Nature of the Horse
- The Way Horses Act
- Horse's Body Language

Objectives:

- To learn about horses' behaviour

Roll Calls

- What are three characteristics that make a horse different from another horse?
- Of all of the senses, which sense do you think is most important to a horse and why?

Sample Meeting Agenda – 2 hrs. 15 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Activities Related to Topic	Activity #1 – Behaviour of a Horse Observation (instructions found at the end of this meeting)	20 min
Topic Information Discussion	Review what The Nature of the Horse	30 min
Public Speaking/Judging Activity	Choose from Activities #2, #3 #4 and/or #5 (Sight of a Horse, Horse Behaviour, Curious Horse Behaviour in a New Environment, Behaviour Problems in Horses) (instructions found at the end of this meeting).	60 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

Note: Activities could be interspersed with Topic Information.

SECTION 1: GENERAL KNOWLEDGE**Topic Information****The Nature of the Horse**

The more we understand the nature of horses (the way they think, how they act and react to different situations, what pleases them, what scares them) the easier it will be to ride and train them.

Horses are herd animals. In large herds, they will develop smaller subherds, each with its own leader and followers. Life in a herd is a very comfortable and safe place once the herd has established its pecking order. Each member is either more dominant or more submissive to other members of the herd. Leadership of the herd usually falls to an older stallion or mare. If an alpha mare is in the herd, leadership will fall to her above stallions in the herd. Authority, once established, is rarely questioned.

Hearing

The hearing ability of the horse has made them popular with hunters. The horse is able to hear the game animals before they can be seen

Each of the horse's ears are able to rotate to about 180° and act as rotary antennas – rotating to the source of the sound that interests them. The hearing ability is not a problem. Sudden noises are more likely to upset a horse than a steady sound. If a horse hears sudden and loud noises often, it will get used to them.

Trainers use their voices when they are schooling horses. The horse responds to the tone and forcefulness of the voice. They may not recognize the words. This is why clucking and whistling work well as cues. The same command should always be used to get a certain response.

Smell

Smell is well developed in the horse. The horse uses smell as much as sight to identify another horse, a person or an object. Let the horse smell anything that is strange to it. Generally, smell does not cause a major reaction and the horse will move on once it is satisfied. If the horse dislikes a smell it may blow hard through the nostrils or snort. A horse will often snort just before it shies from an unacceptable smelling object.

Horses establish their territory and make statements with their feces and urine. When horses are first introduced to other horses, and they blow into each other's nostrils, they are sharing information about each other. When new horses are turned out to a new pasture, a great deal of sniffing goes on!

Taste

Horses have individual preferences when it comes to tastes. Some horses will refuse to eat grain when medication is mixed in, some will graze on plants that are poisonous, and some will reject food by its taste or smell.

Food preference is learned. The horse is sensitive to flavour but develops a liking for certain feed because it has had it before. A horse may dislike a certain food because they did not feel well after eating. Palatability of forages is related to the texture of the

SECTION 1: GENERAL KNOWLEDGE

feed. Grasses like bluegrass, brome grass and fescue are eaten before wheat grass and slough grasses. Most horses like alfalfa and clover, which are legumes. This preference makes the horse eat the forage it likes first.

Sight

Horses have very keen eyesight (especially sensitive to movement). Their vision is very well suited to life in a herd. When grazing, they see about 320° of the horizon, making it easy to sight a predator. Their eyes are on each side of their head and they see two distinctly different pictures simultaneously. This is called monocular vision. Each eye can see about 180° on its respective side. A fleeing horse can see if a predator is catching up to it. Binocular vision (seeing only one picture) is weak and is only experienced by a horse when it looks straight ahead. The horse does not see three dimensionally. They see flat and probably in poor detail.

Horses have two blind spots. They cannot see things that are very close to the centre of their face. This is why a horse will back up, or shift its head when approached from directly in front. The other blind spot is directly behind the horse. This is why you should never approach a horse from directly behind. If you startle the horse, it may kick out in fear.

Touch

When working with horses you are often touching the horse and putting objects against the horse's body. The most sensitive areas on the horse are the mouth, feet, flanks, neck and shoulders. The mouth is only sensitive to pain. The other parts of the body are sensitive to pressure. The amount of pressure that needs to be used will depend upon the horse. It is affected by the thickness of the skin, the sensitivity of the nerve endings in the skin and the experience of the horse.

Touch affects the whole body. Unlike the other senses, it can get tired. When this happens, the horse may not react to cues that it knows. This can be the rider's fault. For example, a rider that does not stay still in the saddle can give the horse so many touch cues that the horse will not know what to do. The touch sense will get tired and the horse will not respond when a cue is given. The body has other touch receptors. The hair of the horse is sensitive to touch. If you run your hand lightly across the tips of the hair, most horses will flinch. The horse also has long, coarse guard hairs on its jaw, muzzle and around the eyes. They warn the horse about the distance they are from an object. This is important in poor light. These hairs also cue the horse to shake off flies.

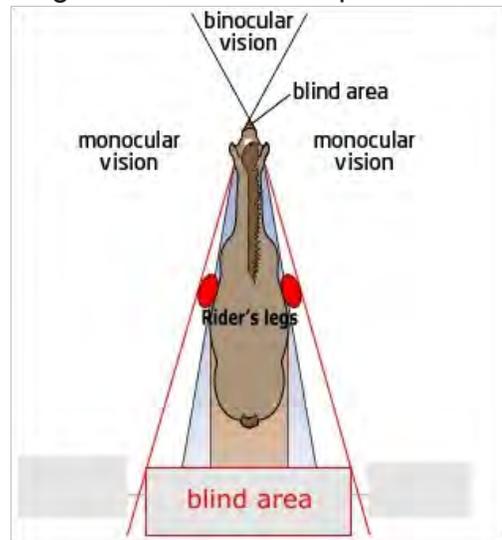


Photo credit: Horse & Road Safety Awareness <http://www.hrsa.org.uk>

SECTION 1: GENERAL KNOWLEDGE**Sounds that Horses Make**

Horses can produce a range of sounds to express different emotions:

- Nickers are usually friendly, soft and submissive
- Neighs are stronger and more aggressive
- A horse will call out very loudly when panicking
- Squeals are most often made when a horse first meets another horse
- Mares and their foals can identify each other by the sounds they make

Fears

In their natural environment, the horse is considered to be a prey animal. Other animals, including man, are perceived to be predators. Horses are naturally curious, yet quite suspicious. Everything is potentially dangerous until proven otherwise. They have a natural instinct to flee from danger. With their keen eyesight and very long legs, they are well equipped to do this. By educating and training horses, we diminish their flight instinct as they learn to trust certain movements and objects. However, in a panic situation, even a well-trained horse will revert to its flight instinct as a solution to the fear. It is this instinct to flee which has kept the species alive for thousands of years.

If you are working with a horse that is afraid of cars, motorcycles, bicycles, etc. do not take the horse onto a busy roadway until it has learned to accept these vehicles as non-threatening. If possible, park a car or motorcycle in the horse's pasture so that it can be accustomed to it. Have someone start the vehicle while you are holding the horse nearby. Work very slowly to encourage the horse to accept the sight and sound of the vehicle. Gradually, have the vehicle move in view of the horse. Exposure in a safe environment is the only way to break down the horse's fear.

Because of their natural instinct to flee danger, horses lie down only when they feel completely safe. In a herd, members will take turns lying down so some horses are always on their feet to act as look outs to alert the other horses of any potential dangers.

Biting

Biting is an annoying habit that can catch some people and horses unaware. Biting and nipping can be encouraged by overfeeding tidbits to the horse. Young foals (especially colts) bite and nip as part of their play. Slapping a young colt on the muzzle will only encourage it to bite again. A horse that bites has respect issues and needs to learn respect for its human handlers.

The ways that you can stop a horse from biting include:

- Use a block technique by putting your hand up to prevent the horse from coming into your space
- Lunging the horse
- Using vocal reprimands

SECTION 1: GENERAL KNOWLEDGE

- Disciplining the horse by putting pressure on the shank
- Gelding the biting colt is usually the best cure. After castration, it may take several months for the horse to stop biting
- Striking a horse in the face area is not recommended or necessary. This practice will result in a horse which will become head shy and difficult to catch and bridle.

Learning

The horse's ability to learn is important to us as we work with horses and as owners, trainers and handlers. Learning includes the way a horse acts with people and other horses, leading, riding and feeding. Learning takes place for both the horse and the rider. The longer you work with a horse, the easier it is to predict how the horse will respond and will help you decide how to use the horse to the best of its ability.

Teacher

Obedience to a leader is quite natural to horses. Handlers that are able to have their horse regard him or her as the leader of the herd are at an advantage.

Learning Environment

The environment of the horse is important to learning. This includes factors such as the level of nutrition, health care and handling. A horse that has been well kept and properly handled learns more quickly than a horse that has had little care or handling. Horses are usually reluctant to attempt anything that they suspect might cause them physical harm. If they are injured, flight may become impossible. Therefore, not stepping into water or not walking up the ramp of a trailer makes a lot of sense to a horse concerned for its survival.

Schedule

For the horse to learn, the trainer needs to plan ahead. Simple skills should be taught first. As the horse learns, it can be taught more difficult skills based on the simple ones. Although the horse cannot suddenly perform a difficult skill, it can apply the knowledge. For example, the horse can do a sliding stop with some speed after it has learned to do a balanced stop at a walk and trot. Like most animals, horses are creatures of habit and find comfort in routine.

Suggestions for Working with Your Horse (Reward Your Horse)

When you are training a horse, rewards must be given. The rewards are varied. It may be verbal or a pat. The horse may have learned these before it is trained to ride. After a horse has worked with speed for some time, stopping and resting is a reward. If the horse has been worked on the bit, riding with loose reins is rewarding. These rewards are good for all horses.

The pressure-release (reward) system positively affects the learning of the horse. As the handler, you will ask the horse to do something, for example back up while working with it on the ground. You apply pressure to the lead rope backwards and verbally ask your horse to back up. When he responds by backing up a step you immediately reward

SECTION 1: GENERAL KNOWLEDGE

him by releasing the pressure and saying “good boy.” Repetition is good for your horse so do this a few times. Once he understands what you are asking for and it’s working well, you can increase to 2 or 3 steps incrementally while continuing to reward him for a correct response. You should give the same response every time the horse responds properly.

Avoid hitting or punishing the horse if he gives you an incorrect response. Chances are he simply does not yet understand what it is you want him to do. You should never get angry when working with your horse. Remember to take your time and remain calm.

The same is true when riding your horse. Using the same example of backing up, you move your feet forward slightly, lean back slightly, give him your “back up” cue and pull slightly on the reins. Continue with this pressure until he steps backwards. Immediately release the pressure on his mouth and say “good boy.”

Horse Tip

It is important to always get help from an experienced trainer if you are having trouble with your horse. Never put yourself in an unsafe situation.

Attention Span

The length of time a horse is worked will depend upon the age of the horse and the amount of hard physical work it is doing. A young horse has a short attention span. It cannot be worked for a long time at one skill. More can be taught in short, daily sessions. The horse should only be worked until it gives a correct response to a new skill. An older horse can be expected to work for a longer period of time. The horse will be expected to respond correctly and immediately to cues that it know.

Physical Condition

When introducing new experiences to a horse, spend several days to achieve your objective. Don’t expect every horse to behave identically when something new is introduced. A horse will progress much faster if it has trust and confidence in its handler. Physical ability of the horse must be considered. Because of conformation, size and previous injuries, a horse may be unable to perform certain skills. Not every horse has the athletic ability to jump, rein or do games, even if they have the learning ability.

Boredom

Just like you, a horse can get bored. Prevent this by turning it out to pasture daily, providing a companion, providing stall toys or supplementing the diet by adding hay at regular intervals.

Body Language of Horses

Horses communicate a lot by body language. A horse’s expressions and the way it moves the different parts of its body will tell other horses and people (who know how to read this body language), exactly how it feels or what it wants. After spending time around horses, you will start to be able to read their body language. When starting to interpret a horse’s body language, start by looking at the position of the ears, head and mouth and the expression in its eyes.

SECTION 1: GENERAL KNOWLEDGE

Body language is one of the fastest methods of finding out that a horse is sick. The behavior of the horse will change. A horse that normally comes to you may not come to you at all. A horse with stomach pains may look at its side, roll, stretch or lie down and refuse to stand. Recognizing that the horse is sick means that it will be treated quickly.

Ears

The ears are one of the best and most visible signs of a horse's mood. When the ears are pressed flat back, the horse is usually quite angry or stubborn. This is often accompanied by a swishing tail and a kick may soon follow. Sometimes ears laid back will mean extreme concentration, as in a racehorse or show jumper making extreme efforts. It may also lay its ears back if it is uncomfortable. If a horse has its ears pricked forward, it is probably curious or completely alert. A horse that flicks its ears around when being ridden is usually very attentive to what its rider is asking of it. When a horse has its ears relaxed and lopsided, it is resting. If its ears are droopy and hanging to the side, it is a good indication that the animal is sick.

Head

An outstretched head and neck denotes curiosity. When on the defensive or on alert the horse lifts and arches its head and neck. Repeated nodding of the head may mean that the horse is impatient. Often a horse will nod its head while you are grooming or if it has made a correct response while you are riding. A well-trained horse that enjoys being ridden will look pleased with itself. It is more enjoyable for the horse to do a skill correctly.

Mouth

When a horse is extremely relaxed and content, its lower lip may be droopy. Stubborn or alert horses will have their lips drawn tight. A horse with bared teeth means business and will likely attack. This will not occur until the ears are laid flat against the neck.

When horses curl up their upper lip it is known as the 'flehmen technique', and horses do this when they are aware of a scent in the air. For example, a stallion will do this when he is aware of a mare's hormone scent when she is in season.



Relaxed, content horse with a droopy lower lip

*Photo Credit: 15 Minute Horse Fix
<https://15minutehorsefix.wordpress.com/>*

SECTION 1: GENERAL KNOWLEDGE



Flehmen Technique

Photo Credit: PATH International

<http://www.pathintl.org>

Nostrils

Horses will make a snorting noise with their nostrils when they are unsure or frightened of something.

Eyes

Curiosity or alarm is expressed through a wide eye. A horse that is resting will have droopy eyelids. Squinting is the signal of a horse getting ready to attack or react aggressively to something. Some squinting can also be a sign that the horse is in pain.

Back

Before a horse buck or shies away from something, it will tense and round its back. A horse that flinches or drops its back under pressure may have a sore back.

Hooves and Legs

A horse rarely kicks without warning. As a threat and warning, a horse will lift its hoof off the ground and pin its ears back. Horses often rest a foot by standing on just three feet. The front feet are usually used offensively (a horse pawing at the ground may be a sign of impatience) and the hind feet are used defensively (kicking).

Tail

The tail is also a useful measure of a horse's mood. If it is firmly clamped down, the horse may be preparing to react violently to something (attack). This tail carriage also denotes submission. When it is relaxed, the horse is relaxed. When it is carried up and somewhat away from the body, the horse is alert and curious. A tail held straight up in the air means a horse is very high spirited and showing off.

SECTION 1: GENERAL KNOWLEDGE

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Test a horse's taste buds by offering it several different kinds of horse feed or treats such as oats, carrots, sugar cubes and various kinds of hay. Take note of which ones it likes best and bring this list to the next meeting.

AND/OR

2. Some plants can be poisonous to horses if ingested. Research in the library or online to create a list of these plants. Make special note as to which of these plants grow in your area. Bring the list to the next meeting and be prepared to share it with the group.

SECTION 1: GENERAL KNOWLEDGE

DIGGING DEEPER**For Senior Members****Observing Horse Behaviour - Checklist**

This meeting covers various desirable and undesirable behaviours in horses. Using the information from this meeting as well as researching further information on the behavior of horses, create a behavior evaluation checklist.

Once the list has been created, consult with a horse trainer, breeder, veterinarian or someone you trust that works with horses to review your checklist. Upon their suggestions, make changes to list and then apply it to your own horse.

Understanding abnormal behavior of horses will help to make the best management decisions possible when working with horses.

Record your findings in your Record Book.

ACTIVITIES

Activity #1 - Behaviour of a Horse Observation

Horses have a language all their own! Learning to understand what a horse is saying through its behavior can help us when we are working around different horses. Observe a horse for at least ten minutes at three different times during the day. Record the different behaviours you observe. Watch quietly without attracting the horse's attention.

Items Needed:

- Behaviour of a Horse Observation worksheet (found at the end of this meeting)
- Pen/pencil
- Horse

Instructions:

1. Give each member 3 copies of the Behaviour of a Horse Observation worksheet.
2. Have members work individually or in small groups of 2 or 3 members.
3. Have members observe a horse for at least ten minutes at three different times during the day. Have members record the different behaviours that they observe.
4. Discuss the findings as a group.

Note: This could also be a Take Home Activity.

Activity #2 - Sight of a Horse

Items Needed:

- Sight of a Horse Worksheet (found at the end of this meeting)
- Pen/pencil

Instructions:

1. Give each member a copy of the Sight of a Horse worksheet.
2. Have members work individually or in small groups of 2 or 3 members to fill in the diagram, outlining the horse's areas of vision and blind spots.

Ask members the following questions:

- Where are the horse's blind spots?
- Where does the horse see the best?
- If a horse can't see you when you are in one of its blind spots, what might happen?

SECTION 1: GENERAL KNOWLEDGE

Activity #3 - Horse Behaviour**Items Needed:**

- Horses (3) that are safe to handle
- Horse Behaviour Chart worksheet (found at the end of this meeting)
- Pen/pencil

Instructions:

1. Give each member a copy of the Horse Behaviour Chart worksheet.
2. Have members conduct a simple test to determine each horse's behavior and disposition and write comments about how each horse responds to each activity listed.

Activity #4 - Curious Horse Behaviour in a New Environment**Items Needed:**

- One horse
- Stall toy
- Curious Horse Behaviour in a New Environment worksheet
- Pen/pencil

Instructions:

1. Give each member a Curious Horse Behaviour in a New Environment worksheet.
2. Introduce a horse to a new environment. Young horses often work best.
3. Observe the behavioural responses of the horse and answer the questions on the worksheet.
4. If the horse has settled into their new environment fairly quickly, introduce a stall toy and observe the behavior of the horse.

Activity #5 - Behaviour Problems in Horses

Using the information in this meeting and by doing some research on the Internet, answer the questions on the Behaviour Problems worksheet. This can be done as individual members or in small groups.

Activity #1 - Behaviour of a Horse Observation Worksheet

Body Movements

How it eats

Sounds it makes

Attitude

Personality clues

How it exercises

Response to insects

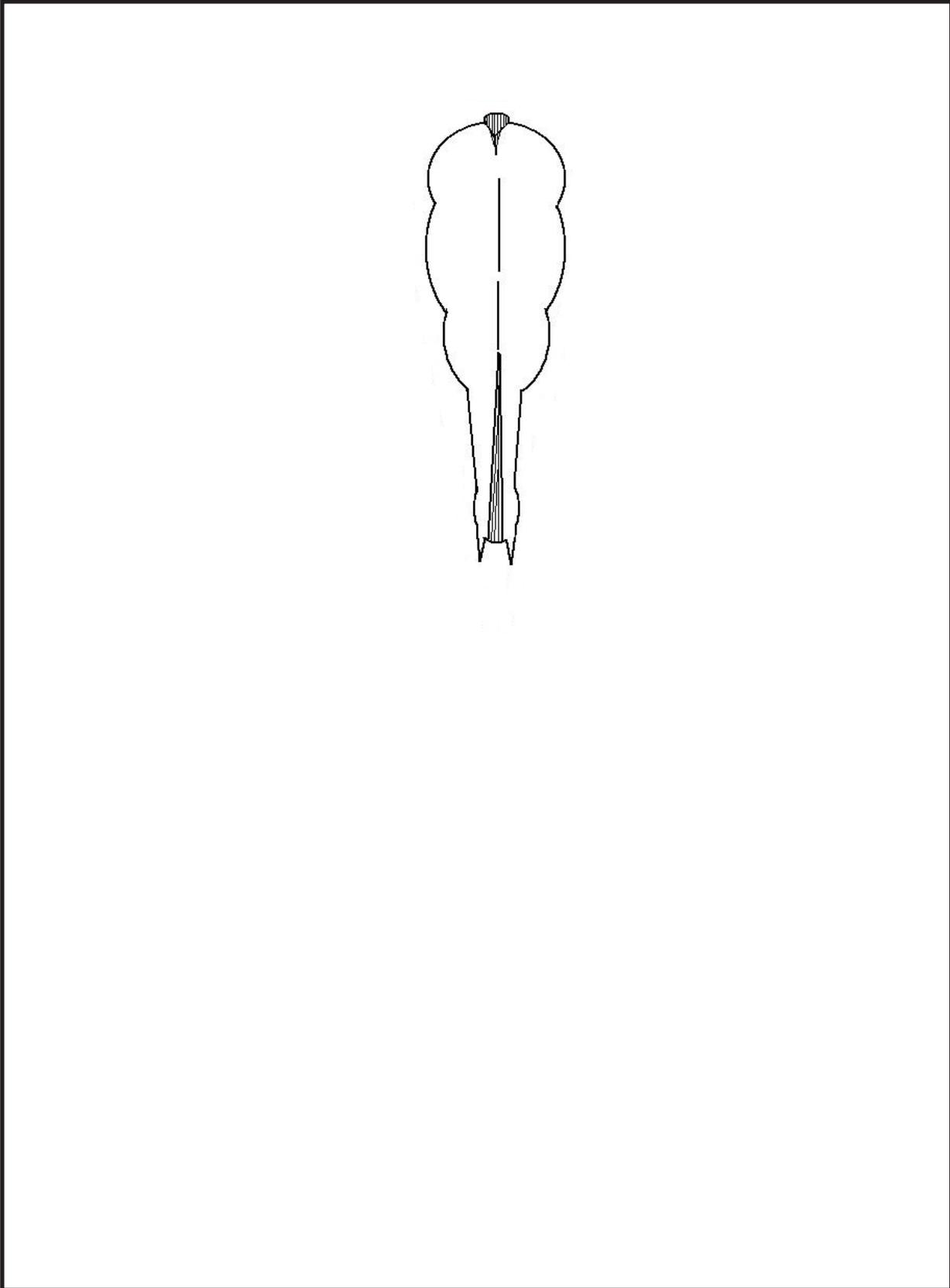
Response to humans

Response to other horses

How it grooms itself

Other

Activity #2 - Sight of a Horse



SECTION 1: GENERAL KNOWLEDGE

Activity #3 - Horse Behaviour

Activity	Horse 1	Horse 2	Horse 3
Touch the horse on its side, shoulder, leg, head and throat			
Make sounds to attract the horse's attention: <ul style="list-style-type: none"> • Call the horse's name • Clap your hands • Talk baby talk or whistle 			
Rattle a shaker can behind your back and drop it at your side			
Move something bright in colour both slowly and quickly where the horse can see it			
Rate the horse's overall behavior as responsive, nervous or shy			

SECTION 1: GENERAL KNOWLEDGE

Curious Horse Behaviour in a New Environment

How did the horse respond to the new environment? Include observations such as body language, sounds made and behaviours that the horse exhibits.

How long did it take the horse to explore certain areas or aspects?

Do you think the age of the horse makes a difference?

Do you think the gender of the horse makes a difference?

Do you think that a horse that exhibits more curiosity would tend to be a horse that would learn better during training?

How did the horse react to having a stall toy introduced to the new environment?

SECTION 1: GENERAL KNOWLEDGE

Behaviour Problems in Horses

Create a list of reasons why horses that are kept in a barn develop more behavior problems.

Create a list of solutions to help avoid these behavior problems.

SECTION 1: GENERAL KNOWLEDGE

MEETING 7: ANATOMY AND PHYSIOLOGY

Topic:

- How does the horse's body work
- The horse's vital signs

Objectives:

- To learn how the structure of horse works
- To learn about the horse's skeletal system
- To understand the horse's muscular system

Roll Calls

- Can you name two different bones that a horse has in its body that you have in yours?
- Why do you think it is important to understand the anatomy and physiology of a horse?

Sample Meeting Agenda – 2 hrs. 5 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Topic Information Discussion	Review bones, ligaments and tendons of the horse.	20 min
Public Speaking/Judging Activity	Activity #1 – Skeleton of the Horse worksheet (instructions found at the end of this meeting)	20 min
Topic Information Discussion	Review what the muscular system and vital signs of the horse.	20 min
Activities Related to Topic	Choose from Activities #2, #3 #4 and/or #5 (Pasta Skeleton of the Horse, Horse Hoof Quiz, Equine Guelph Anatomy CD and Alphabet Horse) (instructions found at the end of this meeting).	40 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 1: GENERAL KNOWLEDGE

Topic Information

Anatomy and physiology are the science of the bodily structure and function of animals. Understanding the relationship of form to function can help us to better care for and manage our animals. In this factsheet, you will learn about how the structure of the horse is held together, the skeleton of the horse and the muscular system of the horse.

The following are some terms that are important to this knowledge:

Ligaments – tough, flexible fibres that hold bones together. These bones do not have to be side by side.

Tendons – connective tissue that attach muscle to another body part, usually bone. The tendons may be short (as at the shoulder blade) or long (as in the legs).

The Front Quarters

The front legs of the horse carry 60 to 65 percent of the animal's weight. The legs of the horse are interesting because there are no muscles below the knees in the lower leg. Damage to ligaments and tendons are most likely to occur in the lower leg because they are not protected by muscle or fat. All movement is done by ligaments and tendons.

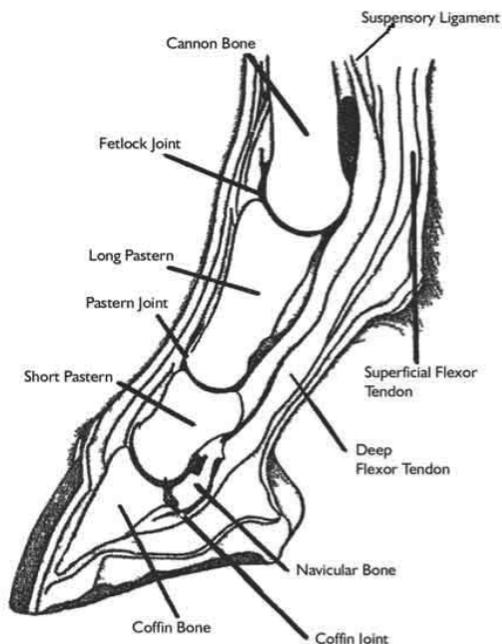
Pastern

The pastern is made up of:

- A. Long pastern bone
- B. Short pastern bone
- C. Suspensory ligament
- D. Superficial flexor tendon

The suspensory ligament is attached to the navicular bone at the back of the foot, runs up the back of the foot, runs up the back of the long and short pastern bones and reduces extension of the pastern. The suspensory ligament and flexor tendons support the angle of the pastern and together they stretch and contract as the horse moves.

The normal working condition of the ligament and tendon are affected by the angle the hoof is trimmed. Improper trimming can change the hoof angle, causing tendons and ligaments to stretch or contract further than normal. If the slope is excessive, the flexor tendon will stretch. If the pastern is too upright, the two joints will be under stress. This puts pressure on the cartilage between the bones, increasing the risk of fractures and arthritis.

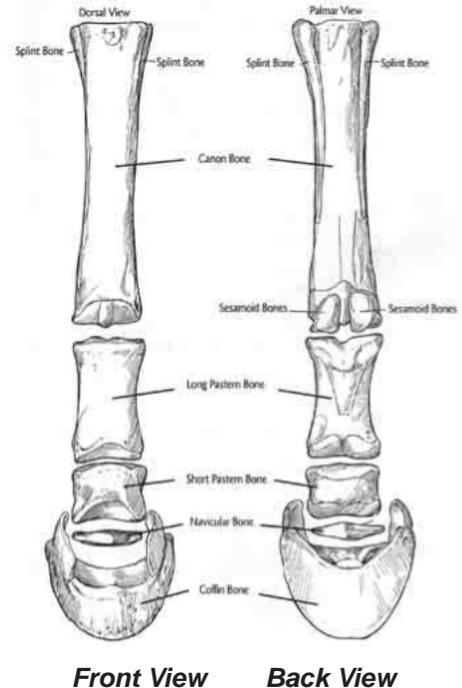


SECTION 1: GENERAL KNOWLEDGE

Fetlock

The fetlock joint includes the:

- Cannon bone
- Sesamoid bones
- Sesamoid ligaments
 - Short sesamoidian ligaments – connects the sesamoid bones to the cannon and pastern bones
 - Intersesamoidian ligament – connects the sesamoid bones together
 - Deep sesamoidian ligament – connects the sesamoid bones to the long pastern bone
- Middle sesamoidian ligament – connects the sesamoid bones to the long pastern bone.
- Superficial flexor tendons - are found in a groove between the sesamoid bones.
- Deep flexor tendons – are found in a groove between the sesamoid bones.
- Collateral ligament – connects cannon bone to pastern bone
- Suspensory ligament – acts like a sling over the other ligaments



The fetlock joint has the potential to cause many possible injuries. As well as a variety of fractures, there are many types of ligament injuries. The most common are strains, pulls and sesamoid fractures (caused by a ligament pulling free, taking the sesamoid bone with it).

Cannon Bone

The cannon bone is the longest single bone in the lower leg. Splint bones are attached on either side, even with the upper end of the cannon bone by interosseous ligaments. These ligaments eventually ossify with age, joining the cannon and splint bones. The suspensory ligament continues up the back of the leg.

Somebody put a lot of planning into the lower leg of the horse! The device that makes it possible for horses to sleep in the standing position is the check ligament at the back of the knee. While the horse is awake, a muscle holds the knee straight. When the horse goes to sleep, this muscle relaxes and the check ligament keeps the knee from buckling forward because it is attached to the deep flexor tendons.

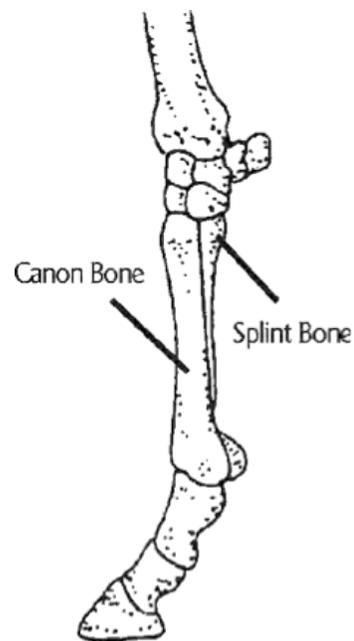
SECTION 1: GENERAL KNOWLEDGE

The lower leg is subject to a variety of stress injuries. Splint bones are easily injured because they are not firmly attached at both ends. The most common injury is caused by hitting the splint bone with the opposite hoof.

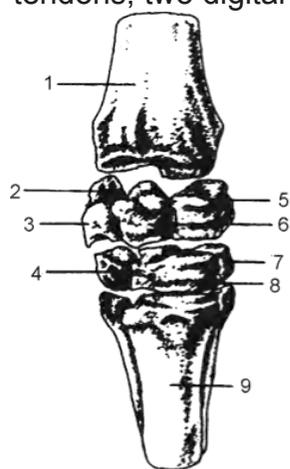
Ligaments in the front or back of the leg may be pulled. Stretching the flexor tendons and/or the tendon sheath is common in horses with long, sloping pasterns, long toes and from work on soft, heavy ground or slippery footing.

Knee

The knee (front leg) is made up of seven carpal bones located between the cannon bone and the radius. These bones are joined together by short collateral ligaments. These keep the carpal bones from separating. Longer ligaments are located on the sides to keep the layers of bones from separating. The suspensory ligament from the cannon bones is attached to the third and fourth carpal bones. The move the knee, there are two carpal extensor tendons, two digital extensor tendons and two digital flexor tendons.



Cannon Bone



Front View

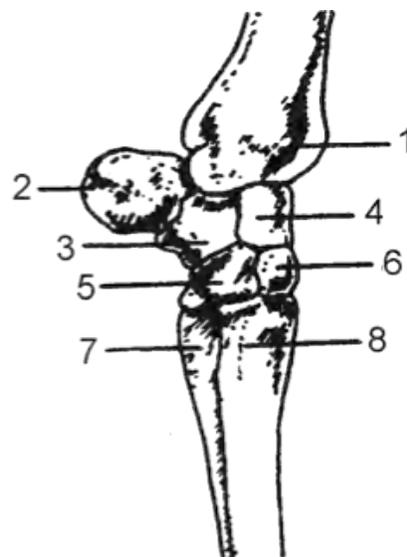
- 1. Radius
 - 2. Pisiform
 - 3. Cuneiform
 - 4. Unciform
 - 5. Scaphoid
 - 6. Lunar
 - 7. Trapezoid
 - 8. Magnum
 - 9. Cannon bone
- } Seven
Carpal
Bone

Front View of the Knee

Most knee injuries are caused by poor lower leg conformation. If the cannon bone is not centred below the carpal bones, there will be excess pressure on the carpal bones. This can cause fractures or arthritis.

Side View

- 1. Radius
- 2. Pisiform
- 3. Cuneiform
- 4. Lunar
- 5. Unciform
- 6. Magnum
- 7. Splint bone
- 8. Cannon bone



Side View of the Knee

SECTION 1: GENERAL KNOWLEDGE

Forearm and Elbow

The upper leg and elbow area made of the:

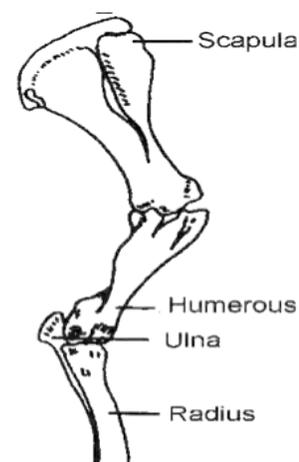
- Radius
- Ulna
- Humerus

In the upper leg, we finally see muscle. If you look at the forearm muscle, it looks short. It is longer than you see because it does a three-quarter wrap around the bone as it goes toward the body of the horse. The muscles are interesting because they can move the body forward when the horse stands on the leg or moves the leg forward when there is no weight on the leg. This area is important to the stride of the horse. The length of the humerus affects how far the leg can swing forward and upward.

Shoulder

The shoulder is made up of the scapula bone. This bone is unique in that it is not attached to the leg and body with ligaments. Instead, it depends on a large ball joint (between the scapula and humerus) and heavy muscle layers to keep it in place. The muscle connects it to the chest, spine and ribs. It is also covered by strong muscles. There is not attachment to the bones of the body of the horse. The only bone connection is with the leg.

Movement of the shoulder and upper leg is caused by muscles. These muscles allow the shoulder to flex from a 45° to an 80° angle. The muscles move the upper leg when it is unweighted to help propel the body forward when the leg is weighted.

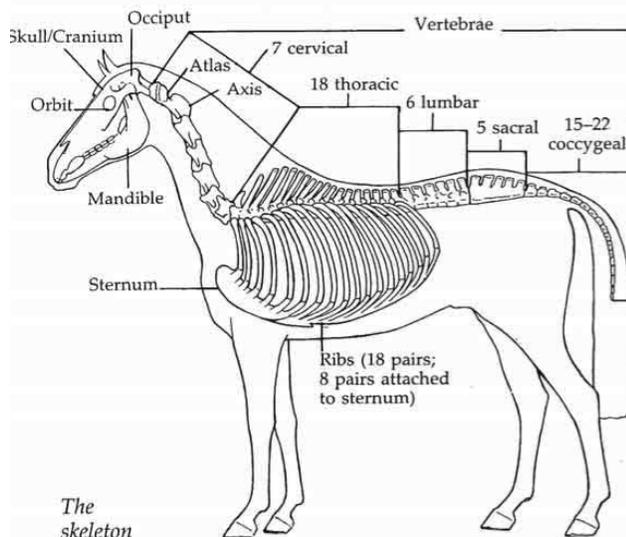
**Spine**

The spine is made of vertebrae that are held together by short ligaments. It is divided into groups of vertebrae. These are:

- A. Cervical vertebrae – neck
- B. Thoracic vertebrae – shoulder, withers, back
- C. Lumbar vertebrae – croup to dock
- D. Dsvtsl Brtyrntsr – croup to dock
- E. Coccygeal vertebrae - tailbone

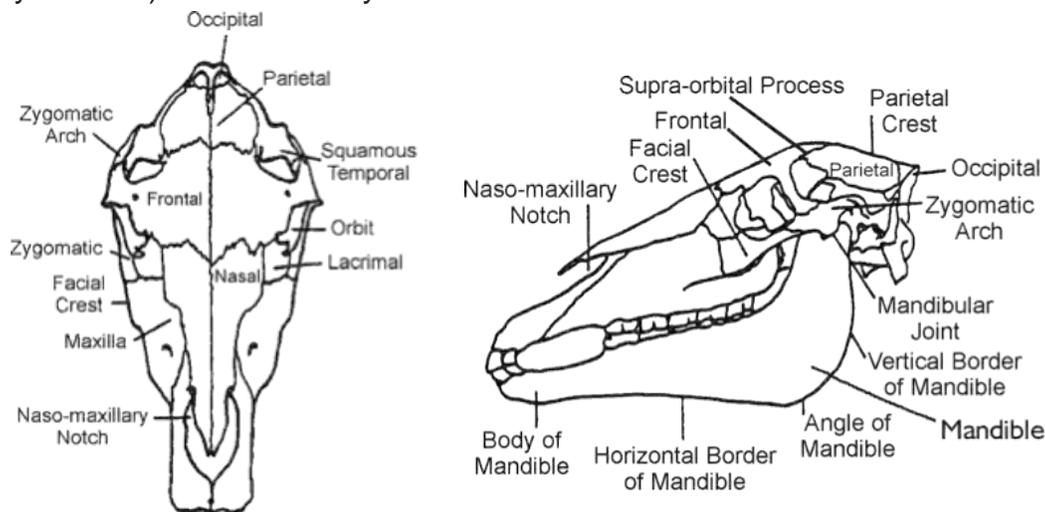
SECTION 1: GENERAL KNOWLEDGE

The flexibility of the spine is varied. Most of the movement is in the neck. It can be moved almost 180° horizontally and can be raised and lowered. As the cervical vertebrae are lowered, the thoracic vertebrae move upward, rounding the back. This is what we ask the horse to do when we rider it in a collected manner. Most of the rest of the spine has very limited flexibility. Movement can occur between the last thoracic and first three lumbar vertebrae. Rather than producing an even arc as the horse bends, the bend is at the centre of the body with the rest of the spine straight.



The Skull

The head of the horse is made up of many bones and cartilage. Unlike other bones in the body, these bones are non-moveable and are not held in place with ligaments. The shape and length of the skull are important breed characteristics. Size and depth of the orbit (eye socket) are affected by the breed of the horse.



The Hindquarters

While the hindquarters carry less percentage of the weight of a horse, it is the powerhouse for propelling the animal around.

SECTION 1: GENERAL KNOWLEDGE

Hock

The hock is made up of six tarsal bones attached to the tibia, the cannon bone and the splint bones. Ligaments found in the hock include:

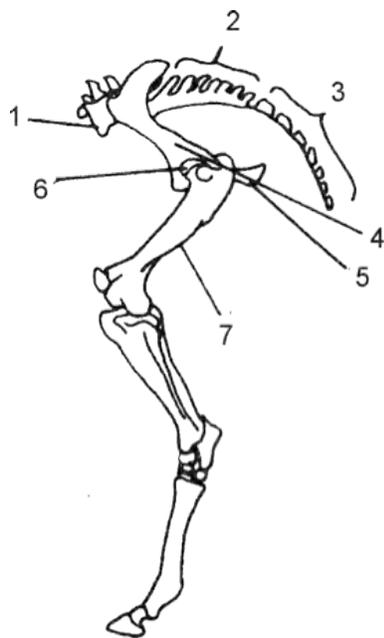
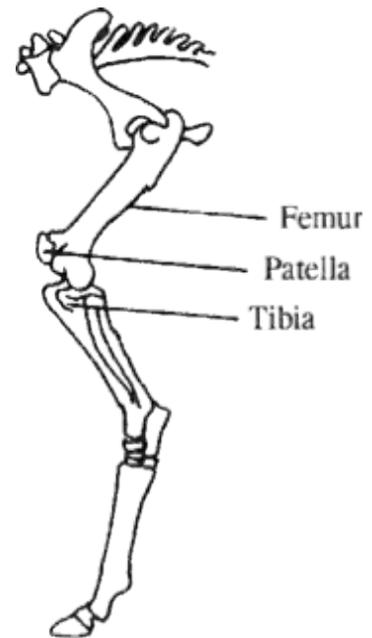
- Collateral ligaments – as in the knee, these hold the tarsal bones in place, including the tibia, cannon bone and splint bones. They keep the leg bones lined up.
- Plantar ligament – keeps the joint from buckling.

Most tendons that flex the joint in the hock are located in the front. This is because the hind leg flexes forward and extends behind the body.

Gaskin and Stifle

The gaskin and stifle are located above the hock in the hind leg. They are made up of the tibia, a cartilage disc, femur and patella. Like the hock, the stifle flexes forward.

The muscles attached in this area allow for the drive off the hind quarters needed for running and jumping. While more muscle gives the increase in strength, fatigue happens more quickly in bulky muscles.

**Hip**

The hip area is made up of the:

1. Lumbar vertebrae
2. Sacral vertebrae
3. Coccygeal vertebrae
4. Ilium
5. Ischium
6. Pubis
7. Femur

These bones form the pelvic area. It slopes away from the spine at a 60° angle. The ilium is attached to the spine by ligaments. The length of the pelvis varies with the breed of horse, but the length and width are necessary to any breed. The longer the pelvis, the more muscling is possible. Also, the greater the angle forward, the greater the forward flexion of the hind legs.

SECTION 1: GENERAL KNOWLEDGE

Muscular System

The muscles are the largest tissue mass in the horse's body. Muscles are classified as:

- Smooth muscle – this muscle type is involuntary (automatic) and is active in the digestive tract, respiratory and urogenital systems.
- Cardiac muscle – the muscle type is also involuntary (automatic) and is active in the circulatory system.

The basic principle of how all muscles work involves a period of contraction (shortening of muscle fibres) followed by a period of relaxation (lengthening of muscle fibres). Skeletal muscles have counterparts that produce opposite effects. In the leg of the horse, for example, are a group of muscles that cause flexion of a joint (flexor muscles) and an opposing group that extends or straightens the joint (extensor muscles).

Flexion – the shortening (flexing) of a muscle to bend a joint.

Extension – the lengthening (extending) of a muscle to straighten a joint.

The contractile process is a chemical reaction within the muscle that produces heat in addition to performing work. The heat of contraction and recover is important in body temperature regulation. This is why, in cold weather, horses shiver to produce heat to help them maintain their body temperature!

Muscles of the Front Leg

- Note the lack of muscles in the lower legs of the horse

Training and Muscles

Muscle is an extremely adaptable tissue, and a horse's muscles adapt in relation to the specific type of training that it receives.

Training for quick bursts of high-intensity exercise involves training for strength. This involves increasing muscle mass through high-intensity exercises for short periods of time to increase strength.

Most performance-horse events last for time periods between 30 seconds and four minutes. Repeated bouts of high-intensity, short duration exercise (sprints less than 40-45 seconds) will help to train for these types of activities.

Overexertion of a muscle, without adequate conditions, can lead to muscle fatigue. A careful conditions program, combined with proper nutrition, will prevent muscle disorders.

Other Systems that Make Up the Body of Horses

The respiratory system includes the lungs and air passages. Its primary function is to oxygenate the blood so that oxygen can be carried to the tissues. The movement of air into and out of the lungs is referred to as respiration. This system is well adapted to



SECTION 1: GENERAL KNOWLEDGE

functioning during exercise, as respiration rates are related to exercise intensity (the higher the intensity of activity, the higher the horse's respiration rate will be).

The circulatory (cardiovascular) system includes the heart and vessels and functions to pass blood through the tissues of the body. The digestive system includes the gastrointestinal tract and the urinary system.

The nervous system includes the brain, spinal cord, associated nerves and special senses. It can perceive and immediately react to changes in the external and internal environment of an animal. The nervous system also stores and associates sensations in the memory for future use.

The endocrine system includes a number of ductless glands of the body that hormones, which are transported through the circulatory system, for chemical control of the body.

The reproductive system includes the ovaries of mares, testicle (of stallions) and associated sex organs.

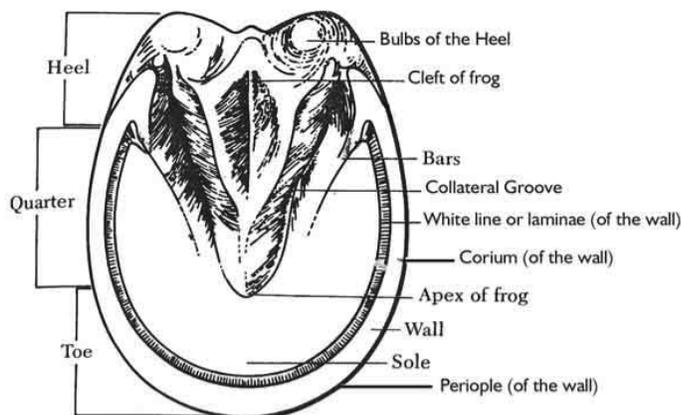
The integumentary system includes the skin and hair that covers the horse's body and forms the boundary between the animal and its environment.

The Horse's Hoof

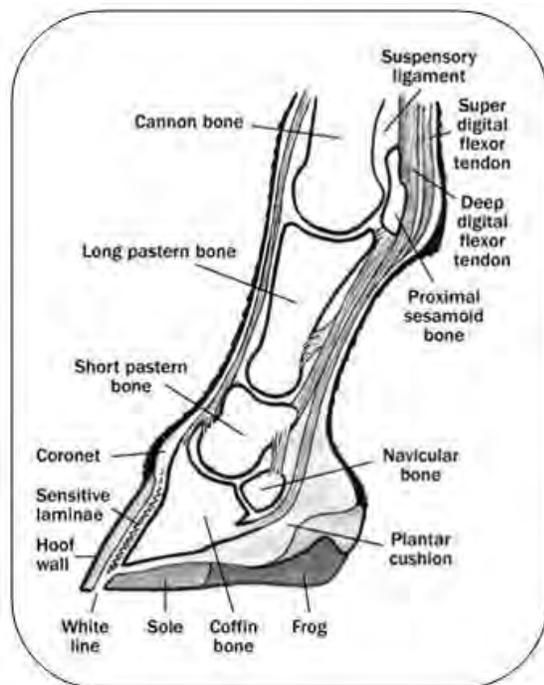
The horse's foot is completely surrounded by a substance similar to a human's finger nail to protect it against having to sustain the wear and tear of carrying one quarter of the horse's weight. The horse's foot consists of an outer layer of horn (hoof) inside which contains the pedal and navicular bones, part of the second phalanx and the deep digital flexor tendon, the end of which is attached to the pedal bone. The foot also contains the digital pad, lateral cartilages, corono-pedal joint, blood vessels and nerves.

The outer layer consists of the walls; sole, bars and frog. The hoof is an inert substance composed largely of keratin which is secreted by the coronary corium.

The hoof grows at a rate of approximately 0.5cm (0.2 inches) per month and it receives nourishment from the sensitive laminae leaf-like structures which line the pedal bone and which bind the hoof to the bone as they interlock with comparable leaves from the insensitive laminae of the hoof. The foot as a whole absorbs concussion and by its continuous growth it is able to replace the surface as this is lost by every day wear and tear.



SECTION 1: GENERAL KNOWLEDGE



*Diagram Credit: Ontario Ministry of Agriculture, Food & Rural Affairs
www.omafra.gov.on.ca*

1. Suspensory ligament
2. Super digital flexor tendon
3. Deep digital flexor tendon
4. Proximal sesamoid bone
5. Navicular bone
6. Plantar cushion
7. Frog
8. Coffin bone
9. Sole
10. White line
11. Hoof wall
12. Sensitive laminae
13. Coronet
14. Short pastern bone
15. Long pastern bone
16. Cannon bone

The Vital Signs

The heart rate, respiration rate and temperature of the horse are taken when a problem is suspected. Capillary refill time and the skin-pinch test are other helpful vital signs. You can easily do any of these procedures.

Heart Rate

The heard rate (pulse) is measured using a watch that gives seconds and/or minutes. Count the number of heart beats in 15 seconds and then multiply by four. The heart rate tells you how fast the heart of the horse is beating. A one minute timing is used. The pulse rate is affected by air temperature, exercise, excitement and age. The heart rate is faster for a young horse.

The heart rate may be taken in several places. By experimenting on a horse, you can decide which is the easiest for you. To take the pulse, find an artery near the skin surface. Most arteries are located well inside the body to reduce injury but three arteries can be used. The can be found at:

- At the margin of the jaw where it comes from the underside
- At the inside of the elbow joint
- Under the tail

SECTION 1: GENERAL KNOWLEDGE

The normal heart rate is 40 to 44 beats per minute. It can range from 32 to 44 beats per minute.

Respiration

To measure respiration, place your hand on the flank of the horse to feel the movement as the horse inhales and exhales. Count one for each inhale and exhale, not two. You can also do the count by watching the flank. In winter, you can count the number of times the horse exhales by watching the warm puffs of air coming from the nostrils. Remember that the respiration rate will also be higher after exercise, in warm weather and when the ventilation is poor. Under these conditions, the breathing will also be deeper. A rate of 8 to 16 breaths per minute is normal.

Temperature

The temperature is taken using a lubricated (veterinary) rectal thermometer. This thermometer is heavier and thicker than the ones used for humans. To prevent the loss of the thermometer into the anus, tie a string to the top end of it and never let go. To insert the thermometer, stand to the side of the horse facing away from the head. Lift the tail with one hand and slowly slide the thermometer into the anus with your other hand once the horse has relaxed. Inserting the thermometer is easier if a lubricant has been spread on it. After a minimum of three minutes, the temperature may be read. The average rectal temperature is 38°C, but anywhere from 37.5-38.3°C is considered normal. Remember to “shake down” the thermometer (if using the conventional mercury type) prior to use, in order to obtain an accurate reading. Digital thermometers do not require this step but must be reset to zero prior to reuse. A reading can generally be obtained in two minutes with this kind of thermometer. A fever of 39°C is mild, 39.5°C is moderate, 40°C is high and above 41.5°C is life threatening.

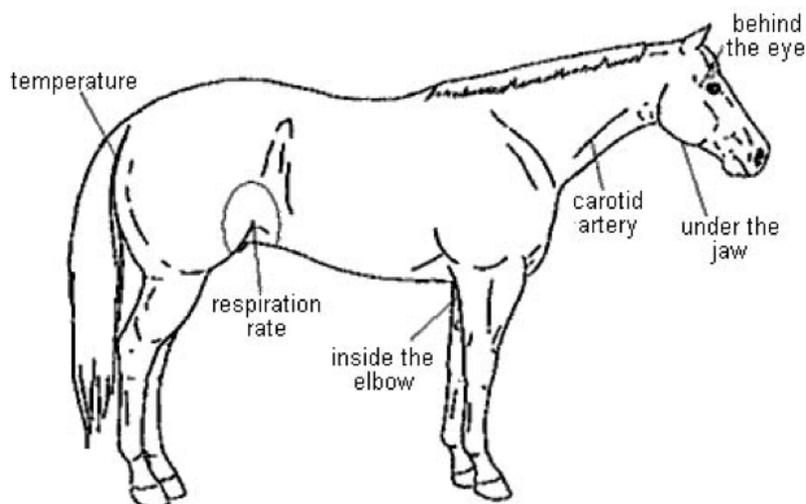


Photo Credit: My Horse University, Michigan State University
Extension <http://myhorseuniversity.com>

SECTION 1: GENERAL KNOWLEDGE

Capillary Refill Time

Capillary refill is a way of checking if the circulatory system is functioning properly. Therefore, it is a helpful measure for detecting colic. This is measured by lifting the horse's upper lip and pressing down firmly with your thumb on the gum directly above its front teeth. Remove your thumb. A white spot will appear. Count two seconds and the white spot should return to the pink colour of normal gums. If the spot takes longer than two seconds to return to normal, the circulatory system is slow, indicating a problem.



Skin Pinch Test

This test is done to check for dehydration. Horses require at least 22.5 litres per day and dehydration can be fatal. To check for dehydration, pinch the skin on the horse's neck. Wrinkles that result should return to normal appearance, lying flat against the horse's neck within two to three seconds. If the skin remains wrinkled from the pinch for longer, the horse may be dehydrated.

If the horse has been worked and is very hot, offer small amounts of cool, but not cold, water at regular intervals. Do not give large volumes of cold water to a worked horse as this can possibly cause colic. But, be sure to give small amounts until the horse cools down. Do not withhold water from a horse that has been worked and is hot. A cool horse can receive larger amounts. If the horse appears dazed or disoriented, contact your vet.

SECTION 1: GENERAL KNOWLEDGE

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Take and record a horse's temperature. Write down the temperature and bring this information with you to the next meeting and compare it with other members. Is the horse's temperature low or high compared to the others?

AND/OR

2. Perform the Skin Pinch Test on your horse or a friend's horse (after you have asked permission to do so). Pinch the skin on the neck and observe how many seconds it takes for the skin to lie flat. If possible, perform this test on multiple horses. Record your results in your Record Book.

SECTION 1: GENERAL KNOWLEDGE

DIGGING DEEPER**For Senior Members****The Muscle Movement of Horses**

Muscles control every aspect of movement both internal and external. They form the largest tissue mass in the horse's body. There are various types of muscles performing a wide variety of tasks all working in a similar way. Electrical impulses instruct the fibres to contract and shorten then relax and lengthen.

Movement is what horses are all about. It is essential to every horse's nature and even it's life--a horse that cannot move is a horse in trouble. Throughout history, man has found horses useful, beautiful, and a pleasure to ride because of the way they move.

Take a video of a horse as it runs in the pasture. Then watch the video and identify which muscles the horse is using as it runs.

Take videos or find videos online of horses as they participate in a variety of activities e.g. running at a race track, pulling in a horse pull, hitched to a cart, etc.

Be prepared to share these videos at the next meeting and describe what is happening in each video.

ACTIVITIES

Activity #1 - Skeleton of the Horse

Items Needed:

- Skeleton of the Horse worksheet (found at the end of this meeting)
- Pen/pencil
- Skeleton of the Horse Answer Key (also found at the end of this meeting)

Instructions:

1. Have members work individual or in pairs.
2. Distribute a worksheet to each member.
3. Have each member label the bones of the horse.
4. As a group, review the bones of the horse. If possible, have a live horse to point out where on the horse the bones are found to make this activity more realistic.

Activity #2 - Pasta Skeleton of the Horse

The objective of this activity is to the anatomical structure of the horse and how skeletal features correspond to movement & agility.

Items Needed:

- Pasta – various shapes and sizes
- Hot glue
- Pipecleaners and/or straws
- “googly” eyes
- Paper plates
- Adhesive labels
- Other creative resources of your choice

Instructions:

1. Examine skeletal drawings from the meeting, a textbook, the Internet, etc.) looking at multiple views .
2. Evaluate the pasta shapes that are provided.
3. Construct the frame of the animal making it as lifelike and comprehensive as possible.
4. Label the skeletal structure. Try to label at least 20 different bones.

SECTION 1: GENERAL KNOWLEDGE

Things to Keep in Mind:

1. Is the form of the skeleton correct compared to the pictures of the horse?
2. Has the skeleton been built to the right proportions of a horse?
3. Does the form show all of the flexible points on a horse?
4. Is the form stable? Can the structure support itself?
5. Does the structure show creativity and eye appeal?

Activity #3 - Equine Guelph Anatomy CD***Items Needed:***

- Equine Guelph Anatomy CD
- Computer

Instructions:

1. Have members work individual or in pairs.
2. Following the instructions on the CD, have members work through the anatomy activities.

Activity #4 - Alphabet Horse***Items Needed:***

- Blank paper for each member
- Pencil/pen
- Timer/clock

Instructions:

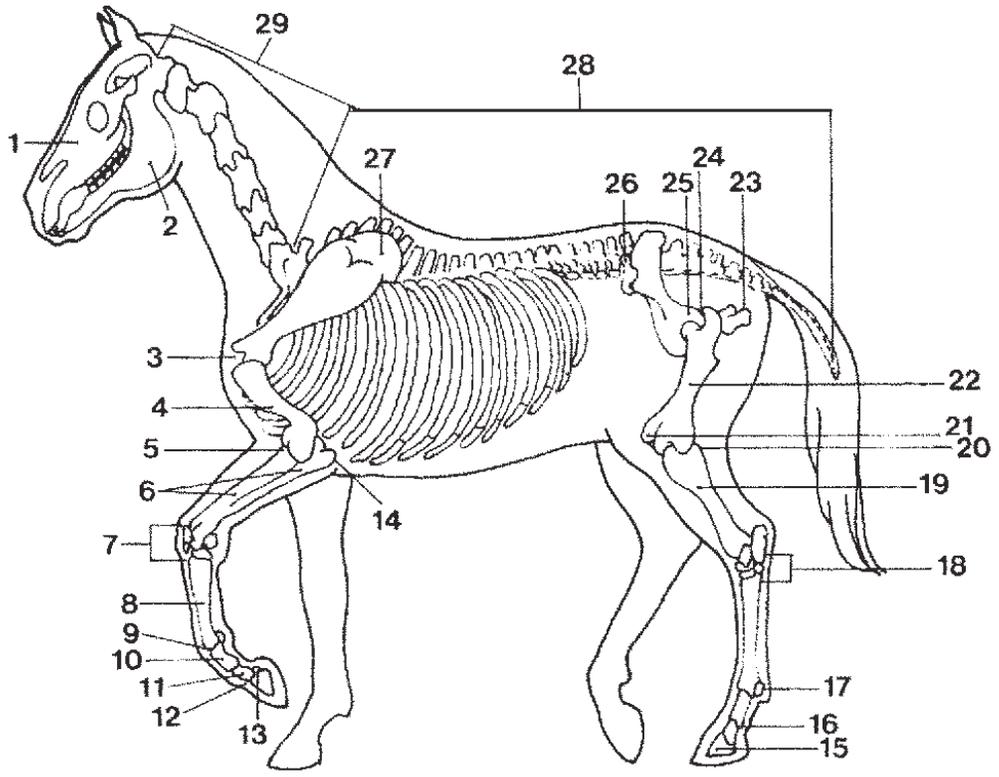
1. Have each member write the letters A to Z down the left-hand side of the page.
2. When the leader says go, ask members to write down the name of either a bone, muscle, ligament or tendon that starts with each letter of the alphabet.
3. When time is up, have members read out their answers. Members get a one point for each answer they have that no one else has. The member with the most points wins.

Skeleton of the Horse

Skeletal Structure of the Horse – Answer Key

1. Maxilla
2. Mandible
3. Premaxilla
4. Cervical Vertebrae (7)
5. Scapula
6. Humerus
7. Olecranon (elbow)
8. Ulna
9. Radius
10. Carpus (knee)
11. III Metacarpus (cannon)
12. First Phalanx (long pastern)
13. Second Phalanx (short pastern)
14. Third Phalanx (pedal, coffin)
15. Spine of Scapula
16. Ribs
17. Thoracic Vertebrae (18 but can vary)
18. Lumbar Vertebrae (6 but can vary)
19. Sacral Vertebrae (5 fused)
20. Coccygeal Vertebrae (15 to 21)
21. Ilium
22. Ischium
23. Femur
24. Patella tibia
25. Tarsus (hock)
26. 3rd Metatarsus (cannon)
27. Proximal Phalanx (long pastern)
28. Middle Phalanx (short pastern)
29. Distal Phalanx (pedal, coffin)

SECTION 1: GENERAL KNOWLEDGE



- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____
- 9. _____
- 10. _____
- 11. _____
- 12. _____
- 13. _____
- 14. _____
- 15. _____

- 16. _____
- 17. _____
- 18. _____
- 19. _____
- 20. _____
- 21. _____
- 22. _____
- 23. _____
- 24. _____
- 25. _____
- 26. _____
- 27. _____
- 28. _____
- 29. _____

MEETING 8: IDENTIFICATION

Topic:

- Understanding different ways to identify a horse

Objectives:

- Become familiar with ways to identify horses based on age, sex, characteristics, use, colour and markings

Roll Calls

- Name three things that you use to help identify a horse.
- Name a colour of a horse.

Sample Meeting Agenda – 2 hrs. 15 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Topic Information Discussion	Review Horse Terminology and Horse Height.	20 min
Public Speaking/Judging Activity	Activity #1 – Sizes (instructions found at the end of this meeting)	20 min
Topic Information Discussion	Review Colours and Markings of Horses and Characteristics of the Main Type of Horses	30 min
Activities Related to Topic	Choose from Activities #2, #3 and/or #4 (Horse Markings, Horse Terminology Word Search, Horse Colours Memory Game) (instructions found at the end of this meeting).	40 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta.

NOTE: Activities can be interspersed with Topic Information.

SECTION 1: GENERAL KNOWLEDGE

Topic Information

Horse Terminology

All horses, no matter how old they are or who owns them, belong to a certain breed or type. They are described according to the characteristics that they have that make them part of their breed. Horses are also identified by their age, their sex and their use. This meeting will talk about ways to identify horses.

Sex and Age

Some breeds of horses, regardless of their date of birth, change their age on January 1st. But, this varies from breed to breed. To find out about a particular breed, check with that breed's organization or website. Terms that are used to describe the sex and age of a horse include:

Foal – the offspring of horses, either male or female, are called foals until they are one year old

Colt – male offspring, up to four years old

Filly – female offspring, up to four years old or until the first breeding

Mare – mature female horse over four years of age or younger if bred

Yeld Mare – mature, unfoaled female horse – has not had a foal that year

Stallion – male horse that has not been castrated (gelded)

Gelding – male horse of any age that has been castrated

Yearling – one year old up to two years old

Weanling – a foal that has recently been weaned, no longer has access to its mother's milk (usually at about four to six months of age)

Aged – any horse, any sex, over ten years old

Breeding Terms

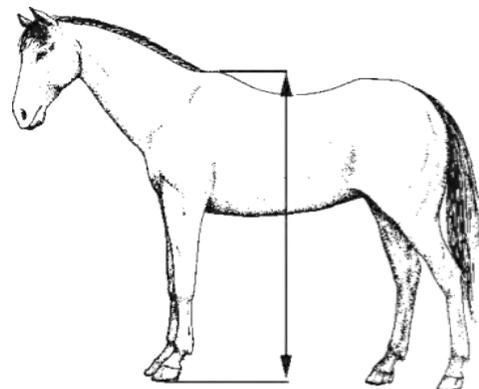
Dam – A foal's female parent

Sire – a foal's male parent

Horse Height

A horse's height is measured in "hands". It is measured from the highest point of the withers to the ground (without shoes on). Hand measurements are broken down in inches, where one hand equals ten centimetres or four inches.

1 hand = 10 centimetres (4 inches)



SECTION 1: GENERAL KNOWLEDGE

Therefore, to measure a horse, it will be necessary to convert any metric measurements into inches. To convert from centimetres to inches, multiply by 0.394. For example, a horse that measures 152 centimetres tall at the withers will be 15 hands high.

$152\text{cm} \times 0.394 = 60$ inches divided by 4 inches/hand = 15 hands

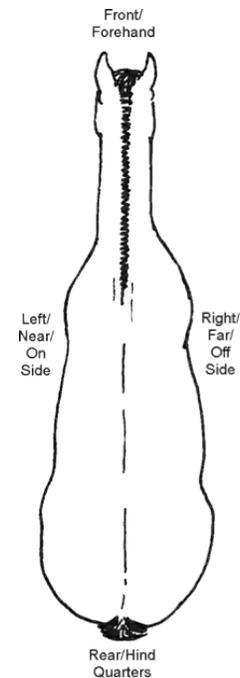
Incomplete hands are broken down using inches, so that if your horse is 148cm tall, it would be 14.2 hands (14 hands and two inches).

$148\text{cm} \times 0.394 = 58$ inches divided by 4 inches/hand = 14.5 hands

Sides of Horses

When working around horses, the right side of the horse is referred to as the far side or the off side. The left-hand side of the horse is referred to as the near side or the on side. Most activities involving horses (catching, mounting, saddling, leading, etc.) are done from the near side (left side) of the horse.

The back of the horse is referred to as the hindquarters or the haunches. The hindquarters include all parts behind and below the peak of the croup. The front of the horse is referred to as the forehead.



Colours and Markings

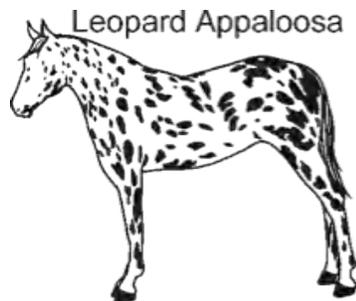
Horses come in many colours and with many different markings. Colours and markings are a useful way to tell horses apart, to identify horses that are not known to you. They are also used for registration and health papers.

Colour Descriptions

When identifying the colours of a horse, the colour of the summer coat is used. The colours of horses and their corresponding descriptions are as follows:

Albino – an animal that has no pigment in its eyes, skin, hooves or body hair. If there are dark hairs present (usually on the muzzle or flanks) then it is either grey or roan, depending on the hair colour. A true albino is white from birth and never changes colour.

Appaloosa – irregular spotting of black (or brown) and white, either over the loin and hips or the entire body. The appaloosa is a specific breed with very clearly defined colour ranges. They have mottled skin (pink and black), striped hooves and are the only breed with a white sclera (white area around the iris in the eyes). The mottled skin can be seen on the muzzle, around the eyes and under the tail. Similar colours can occur in other breeds of horses and when this occurs, the horse is called “spotted”.



SECTION 1: GENERAL KNOWLEDGE

Appaloosa Coat Patterns include:

- *Blanket* – solid or roan coloured base coat, with a large, irregular patch of white over the hindquarters
- *Blanket with spots* – like the blanket, but with scattered spots of various sizes. The spots may be the same colour as the base coat
- *Leopard* – white base coat, with dark spots scattered over the body
- *Snowflake* – dark base coat with white spots over the hindquarters and/or body
- *Roan or Frosted* – differs from normal roan in that the mixture of white hairs is not even throughout the coat. The coat often has “varnish” marks, which are concentrations of darker hairs, usually found on the flank, shoulder, neck and face.

Blanket Appaloosa



Snowflake Appaloosa



Bay – body colour ranges from tan, to red, to reddish-brown. Mane and tail are black. Lower legs and the tips of the ears are usually black.

Black – body colour is true black without any light area. Mane and tail are black.

Brown – body colour is brown or black with light areas at the muzzle, eyes, flank, and/or inside the upper legs. Mane and tail are black. Usually black on lower legs.

Buckskin – body colour yellowish or gold. Mane and tail are black or mixed. Other markings are the same as the dun with black on lower legs and ear tips. Buckskins do not have dorsal stripes.

Chestnut – body colour ranges from light to copper to reddish-brown. Mane and tail are usually the same colour as the body, but may be flaxen (straw yellow or dirty white colour caused by a mixture of dark hair in with the white). Sorrel is a shade of chestnut that is reddish or copper-red with mane and tail the same colour as the body.

Horse Fact:

Colour registries are Pinto, Palomino and Buckskin.

Dun – body colour is yellowish, reddish or gold. Mane and tail may be black, brown, red, yellow, white or mixed. Often has dorsal stripe, zebra stripes on legs and transverse stripe over withers and black ear tips.

Grey – mixture of white and coloured hairs. Usually born solid coloured or almost solid and becomes lighter with age. Always have dark skin underlying the patches of white hair. Includes horse with dappled (variegated with round spots of white) and flea-bitten (small dark spots “sprinkled” over an animal’s coloration) skin.

Grulla – body colour is mouse to dark grey (not a mixture of coloured and white hairs but rather each hair is mouse-coloured). Usually with black lower legs and dorsal stripe.

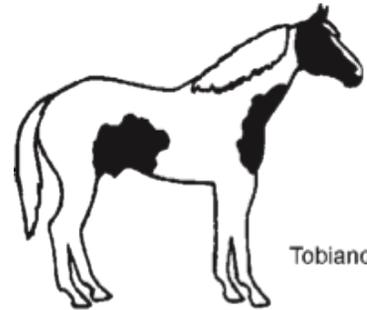
SECTION 1: GENERAL KNOWLEDGE

Horse Fact:

Appaloosa and Paint are colour breeds.

Palomino – body colour is cream to golden yellow. Mane and tail are white.

Pinto or paint – body colour dark with white. Two of the recognized patterns are:



Tobiano

Overo – white markings originate on belly and travel upward, not crossing the back. Usually smaller patches, with some shading on the edges.



Overo

The face may be white with blue eyes. Legs, back mane and tail are usually dark with white stocking.

Tobiano – white markings starting on the back or sides. Markings are generally quite large and very distinct. Legs are often mainly white. The head is usually dark.

Roan – any coat colour mixed with white hairs. Present at birth and the ratio of white to dark hairs does not change as the horse ages. Common roans include black roan (also known as blue roan), bay roan (also known as red roan) and chestnut roan (also known as strawberry roan).

White – a true white horse is born white and remain white throughout its life. A white horse has snow-white hair, pink skin and (usually) brown eyes.

Markings

A horse may have distinct markings on its body that make it stand out. While some horses might be 'original', some of these markings are so common that they've been given names.



Snip

Snip - a small white spot on the nose.

Markings of the Head

Star – a small, white mark between the eyes of a horse

Snip – a small, white spot on the nose

Stripe – a narrow mark resulting from joining of star and snip, extending vertically between the forehead and the nostrils

Blaze – a wide, white mark between the eyes down to the nostrils

Bald face – a very broad blaze, it can extend out around the eyes and down to the upper lip and around the nostrils and/or past the eyes

Combination markings – star and stripe or star, stripe and snip

A horse may any combination of the above five head markings.



Star

Star - a small white mark on the forehead

SECTION 1: GENERAL KNOWLEDGE



Stripe

Stripe - a narrow white mark down the face anywhere between eyes and nostrils.



Blaze

Blaze - a wide white mark down the face from the forehead down to the nostrils.



Bald Face

Bald Face - a very broad blaze - can extend out around the eyes and down to the upper lip and around the nostrils and, or past the eyes.

Horse Fact:

Whorls are patches of hair that swirl in the opposite direction to the surrounding hair. Often called cow licks, they can be found anywhere on the body, but are often on the forehead, neck, or in front of the stifle. They are valuable for identification purposes.

SECTION 1: GENERAL KNOWLEDGE

Markings of the Legs

<p>Distal Spots – white spots on the coronet band</p>	 <p>Distal Spots</p>	<p>Stocking – white up to the hock or knee</p>	 <p>Stocking</p>	<p>Ermine – black or brown spots within the coronet band</p>
<p>Coronet – white strip covering the coronet band</p>	 <p>Coronet</p>	<p>Coronet heel or half coronet – white spot or partial coronet</p>	 <p>Coronet Heel</p>	
<p>Half pastern – white extends up halfway on the pastern</p>	 <p>Half Pastern</p>	<p>Heel – white spot on the bulb of the heel</p>	 <p>Heel</p>	
<p>Ankle/pastern – white extends from coronet to and including the fetlock</p>	 <p>Pastern</p>	<p>Half stocking/sock – white to halfway up the cannon bone</p>	 <p>Half Stocking</p>	

SECTION 1: GENERAL KNOWLEDGE

Characteristics of the Main Horse Types

All horses fit into one of the five following body types. Each of these types has specific characteristics that separate it from the next body type. Muscling is one easily distinguishable feature. Well-defined muscling should be uniform from the front to the rear and from one side to the other side of the horse. The length and volume of muscling a horse should have is determined by the body type and the breed of the horse.

Draft Type

- Clydesdale, Shire, Belgian, Percheron, etc.
- Heavily muscled, large framed, large boned
- Used primarily for plowing, pulling, driving and other hard work
- These horses are referred to as “cold blooded”

Draft type horses require a greater volume of muscling compared to horses with other body types, because they are bred for strength and power. Thus, volume of muscling is of greater importance than length of muscling.

Stock Type

- Quarter horse, Paint, Appaloosa, etc.
- Well-muscled, deep bodied
- Used primarily for short distance racing, roping, reining, cutting, pleasure and gymkhana events

In stock type horses, length and volume of muscling are of similar importance. Volume of muscle is required for power and quick starts, while length of muscling is required for speed and suppleness. The length and volume of muscling in stock type horses is intermediate to the draft and hunter, saddle, pony types.

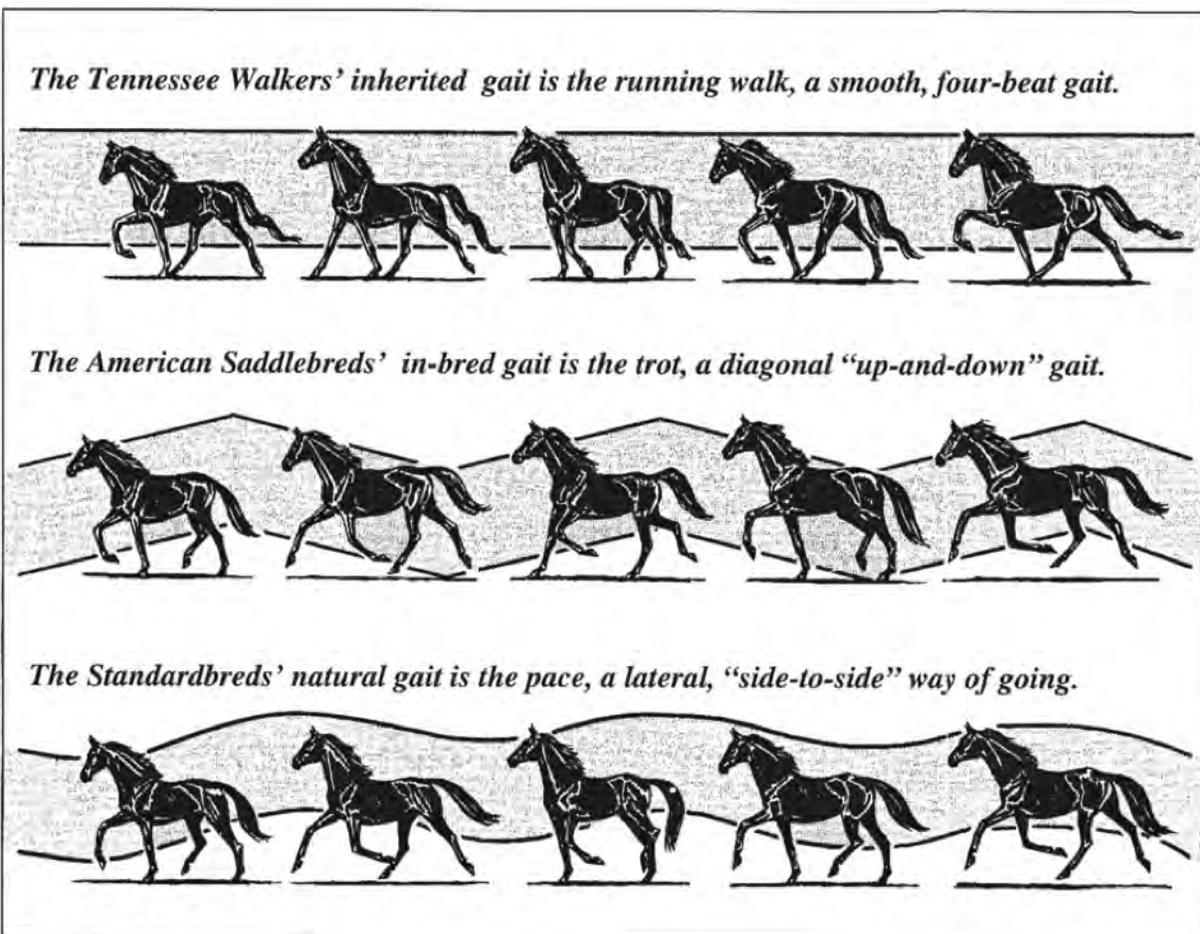
The above breeds are also being bred for English events although in a lighter frame than the traditional stock type.

Saddle (Gaited) Type

- Tennessee Walker, Standardbred, American Saddlebred, etc.
- Longer muscled, longer neck and body, more refinement, higher set arching neck, higher tail carriage, often more animated movement
- Used primarily for pleasure, park, driving, endurance and trail

This body type is among those with the least volume but the greatest length of muscling. Length is needed for speed, endurance and suppleness in these types of horses. Length of muscling is more important than volume.

SECTION 1: GENERAL KNOWLEDGE

**Sport Horse Type**

- Thoroughbred, warmbloods, etc.
- Larger, longer bodies, deeper heart girth and longer muscled
- Used primarily for long-distance racing, jumping, cross-country, three day eventing, dressage, pleasure

This body type is another with the least volume but the greatest length of muscling. Length is needed for speed, endurance and suppleness in these types of horses. Length of muscling is more important than volume of muscling.

Pony Type

- Welsh, Shetland Pony, New Forest, etc.
- Usually resemble stock type or saddle type breeds
- Generally shorter neck and body
- Used primarily for children's mounts and driving

SECTION 1: GENERAL KNOWLEDGE**BEFORE THE NEXT MEETING**

Try one of these activities at home.

1. Draw a picture of a horse including the markings it has on its body. Colour them and bring the drawing to the next meeting (outline of the horse worksheet found at the end of this meeting)

AND/OR

2. Measure the height of your horse or a friend's horse. Be sure to have an experienced horse person with you while completing this task. Include a picture of you standing with the horse that you measured in your Record Book. Write down both your horse's height and your height (in hands) beside the picture.

DIGGING DEEPER

For Senior Members

Traceability in the Horse Industry

Currently in Ontario, there is no system of traceability in horses. This could lead to many problems if there is ever a serious health outbreak as it would be difficult to contain. Many horses do a lot of travelling to shows, competition and other stables and because there is no traceability system, there is no way of knowing for sure which horses have been in contact with an infected horse.

There are traceability systems in other areas for horses. After researching other systems, design a system that could be implemented in Ontario. Amongst other factors, keep the following in mind:

- How would you identify each individual horse? Tag? Tattoo? Microchip?
- When a foal is born, what type of information will you collect about that foal?
- At what age must a foal be identified?
- How would movement of horses be recorded?
- Who would be the governing body that would enforce this system?

Put your ideas for a traceability system in your Record Book.

SECTION 1: GENERAL KNOWLEDGE

ACTIVITIES**Activity #1 - Sizes****Items Needed:**

- Long sheet of blank paper
- Tape
- Measuring stick
- Marker

Instructions:

1. Tape the blank paper to a wall.
2. Have members line up in a straight line from shortest to tallest.
3. Mark their height on the paper.
4. Discuss that, just like people, horses are different sizes.
5. Discuss that horses are measured using the measurement 'hands' and that one hand equals 10 centimetres (4 inches).
6. As a group figure out how many hands high each member is.
7. Mark on the blank paper the height of various breeds of horses (list of horse breeds and average heights below).
8. Compare the height of each member to the heights of the various horse breeds. Discuss that the height of the various breeds determines if the animal is a horse or a pony and that many breeds produce animals of similar height.

Average Height of Various Breeds of Horses

American Quarterhorse	17 hands
American Saddlebred	17 hands
Appaloosa	16 hands
Arabian	15.1 hands
Belgian	17 hands
Clydesdale	18 hands
Haflinger	15 hands
Morgan	15.2 hands
Palomino	17 hands

SECTION 1: GENERAL KNOWLEDGE

Percheron	19 hands
Shetland Pony	11 hands
Shire	21.2 hands
Standardbred	17 hands
Thoroughbred	17 hands

Activity #2 - Colour Markings**Items Needed:**

- Colour Markings worksheet (found at the end of this meeting)
- Pencils

Instructions:

1. Give each member a Colour Markings worksheet.
2. Using the information found in this meeting, have members complete the diagrams.
3. Discuss the markings and the differences between each.

Activity #3 - Horse Terminology Word Search**Items Needed:**

- Horse Terminology Word Search (found at the end of this meeting)
- Pen/pencil
- Horse Terminology Solutions (also found at the end of this meeting)

Instructions:

1. Give each member a Horse Terminology Word Search.
2. Once members have found the words, review the definition of each word.

SECTION 1: GENERAL KNOWLEDGE

Activity #4 - Horse Colours Memory Game***Items Needed:***

- Horse Colours Memory Cards (found at the end of this meeting)

Instructions:

1. Print the Memory Cards (2 of each sheet - preferably on card stock).
2. Cut out the cards.
3. Have members play the game individually or in pairs.
4. Place all of the cards upside-down in the middle of the floor (or on a table depending on the size of the group).
5. The first person (or pair) turn over two cards. If the cards match, the first person keeps the cards and turns over two more cards. This continues until two cards are turned over that do not match. The un-matched cards are then turned back down and the next person can take a turn.
6. The game is over when all cards have been matched.
7. The individual (or pair) that has the most matched cards wins the game.

Take Home Activity #1

Colour and describe the physical markings on your horse.

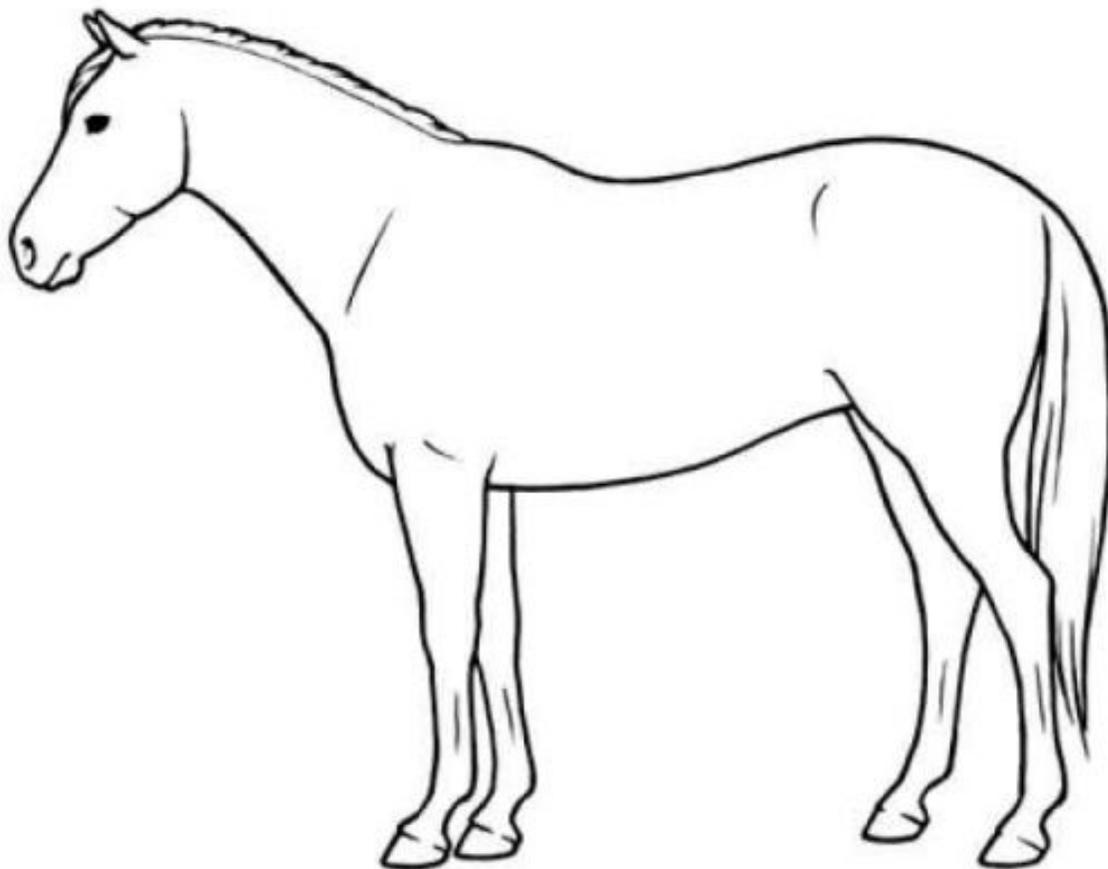


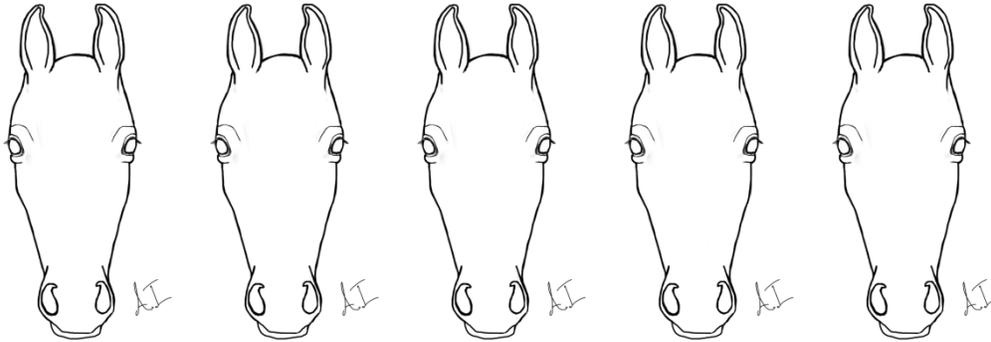
Diagram Credit: www.horsejournals.com

Describe your favourite horse:

SECTION 1: GENERAL KNOWLEDGE

Colour Markings

Colour the following illustrations with the appropriate markings.



Star

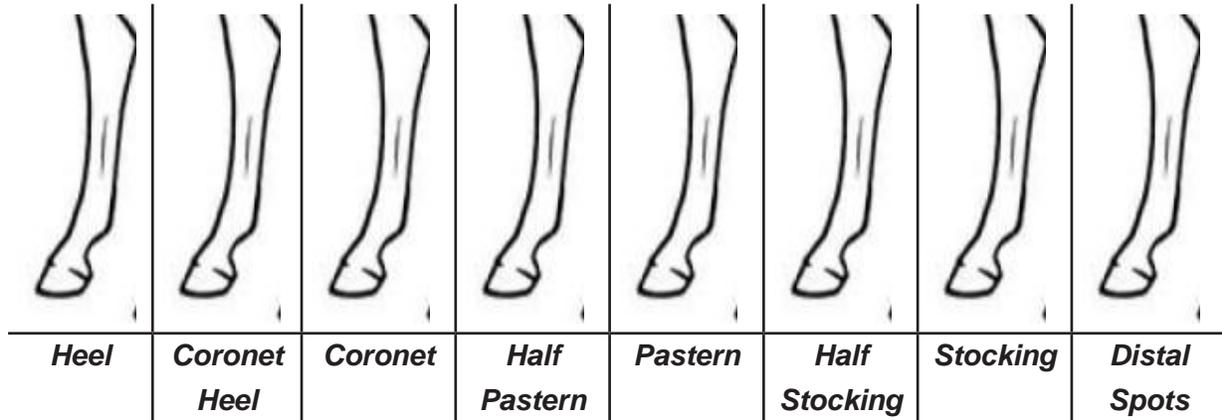
Snip

Stripe

Blaze

Bald Face

Diagram Credit: Mistyhill <http://mistyhills.deviantart.com/art/Horse-head-lineart-201309469>



Heel

Coronet
Heel

Coronet

Half
Pastern

Pastern

Half
Stocking

Stocking

Distal
Spots

SECTION 1: GENERAL KNOWLEDGE

Horse Terminology

z q m q j x x s y r n h p p y h g q m m
 d z d a t c t g n i l r a e y n i x p y
 p y k e h a y k n l y f r n i n p y y r
 n h t c l e r a m a k d y d d j w k m c
 x w o l l f m p h x f k l d y s p p o x
 i l i f a q x u h z k e f i l l y e y k
 t o j o m j j f a p g g u q v p g r g l
 n r c a m m n z v q t p p z x t k i v y
 d t r l d s x r v w e d x l d j g s l h
 t n k d d m d s b f p m w r v f l y h k
 o t p n a c o c h i o e z r m o e f o l
 g h x d m r x s o n d b l v a i i q t m
 q n t q h r e r q t m q x c r z t x h f
 c g i m k j d u d x s u f z k u w f o x
 k d m l f n u o n e f j h l i m n z g w
 f o u p n j o l q t g c x c n f m u p n
 k w f f t a q o p i a a b v g f w m b k
 c t u a x n e c y g i c u c s x f h l q
 b t e f x o y w n o j r e h h t r b p e
 k v n f j e f a n h h s a b e r k k d b

aged

colours

colt

dam

filly

foal

gelding

hands

mare

markings

sire

stallion

weanling

yearling

SECTION 1: GENERAL KNOWLEDGE

Horse Terminology – Solution

+ + + + + + S + + + H + + + + G + + +
 + + + + + + T G N I L R A E Y N + + + +
 + + + + + A + + + + + + N I + + + + +
 + + + C L E R A M + + + + D D + + + + +
 + + O L + + + + + + + L + + S + + + + +
 + L I F + + + + + + + E F I L L Y E + +
 T O + O + + + + + + G + + + + + + R + +
 N + + A + + + + + + + + + + + I + +
 + + + L + + + + + + + + + + + S + +
 + + + + + M + + + + + + + + + + + + +
 + + + + A + + + + + + + + M + + + + + +
 G + + D + + + S + + + + + + A + + + + + +
 + N + + + + + R + + + + + + R + + + + + +
 + + I + + + + U D + + + + + K + + + + + +
 + + + L + + + O + E + + + + I + + + + + +
 + + + + N + + L + + G + + + N + + + + + +
 + + + + + A + O + + + A + + G + + + + + +
 + + + + + + E C + + + + + S + + + + + +
 + + + + + + W + + + + + + + + + + + + +
 + + + + + + + + + + + + + + + + + + +

SECTION 1: GENERAL KNOWLEDGE

Horse Colours Memory Game

| | |
|----------|----------|
| Bay | Black |
| Brown | Chestnut |
| Buckskin | Dun |
| Palomino | Pinto |
| Albino | Gray |
| Grulla | Cremello |
| White | Roan |

Activity Credit: Kentucky 4-H Horse Volunteer Certification Resource Manual

SECTION 1: GENERAL KNOWLEDGE

Horse Colours Memory Game

| | |
|---|---|
| <p style="text-align: center;">Bay</p> <p>Body color ranges from tan, to red, to reddish-brown. Mane and tail are black. Lower legs and tips of the ears are black.</p> | <p style="text-align: center;">Black</p> <p>Body color is true black without any light areas – mane and tail are black. There are no brown or reddish-brown hairs around the flank, muzzle, lower leg, or girth area.</p> |
| <p style="text-align: center;">Brown</p> <p>Body color can be shades of brown or black with light areas at the muzzle, eyes, flank, and inside the upper legs. Mane and tail are black and often the same color as the body. Lower legs are black.</p> | <p style="text-align: center;">Chestnut</p> <p>Body color ranges from light copper to reddish-brown. Mane and tail are usually the same color as the body, but may be flaxen (straw yellow or dirty white color).</p> |
| <p style="text-align: center;">Buckskin</p> <p>Body color is yellowish or gold. Mane and tail are black or mixed. Horses have a dorsal stripe and can have zebra/transverse stripes, but usually, lower legs and ear tips will be black.</p> | <p style="text-align: center;">Dun</p> <p>Body color is yellowish, brownish-red, or gold. Mane, tail, and legs are a variation of body color. The identifying mark is often the dorsal stripe running down the spine. Horses also may have zebra stripes on legs and/or transverse stripes over the withers.</p> |
| <p style="text-align: center;">Palomino</p> <p>Body color ranges from cream to golden yellow. Mane and tail are flaxen or white. White markings are permitted on the legs and face, and there are no black points.</p> | <p style="text-align: center;">Pinto</p> <p>Body color is any color combined with white in a patch-type or spotted pattern.</p> |
| <p style="text-align: center;">Albino</p> <p>Body color is all white. The horse has no pigment in its eyes, skin, hooves or body hair. Eyes and skin are pink.</p> | <p style="text-align: center;">Gray</p> <p>Color is a mixture of white and colored hairs. Horses are usually born a solid color and become lighter with age. Dark skin underlies the patches of white hair.</p> |
| <p style="text-align: center;">Grulla</p> <p>Body color ranges from smokey or mouse colored to dark gray, where each individual hair is mouse-colored.</p> <p>Usually, the lower legs are dark and there is a dorsal stripe.</p> | <p style="text-align: center;">Cremello</p> <p>This is the very palest coat-color dilution that is not white – the base color is cream. The horse's eyes are blue and the skin is pink. Points can be the same color, lighter, or darker than the body.</p> |
| <p style="text-align: center;">White</p> <p>Body color is true white at birth and remains white throughout the horse's entire life. Hair is white, skin is pink, and eyes are brown.</p> | <p style="text-align: center;">Roan</p> <p>Any coat color mixed with white hairs. Colors include black, blue, red, and strawberry.</p> |

MEETING 9: BREEDS

Topic:

- Breed Associations
- Breeds of Horses
- Registering a Horse

Objectives:

- To learn about the different horse breeds
- To learn about registration of horses
- To learn about identification using tattoos

Roll Calls

- Name five different horse breeds.
- What breed is your horse?
- What is your favourite breed of horse?

Sample Meeting Agenda – 2 hrs. 10 minutes

| | | |
|-------------------------------------|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review the listing of breeds of horses. | 30 min |
| Public Speaking/Judging Activity | Activities #1 and #2 – Horse Breed Scavenger Hunt and Colour Me! (instructions found at the end of this meeting) | 30 min |
| Topic Information Discussion | Review Registering a Horse and Tattoos | 15 min |
| Activities Related to Topic | Choose from Activities #3 #4 and/or #5 (Lineage in Horses, Horse Breed Wordsearch, Horse Breeds Memory Game) (instructions found at the end of this meeting). | 30 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Activities can be interspersed with Topic Information

SECTION 1: GENERAL KNOWLEDGE

Topic Information

Breed Associations

There are approximately 20 pedigree breed associations in Canada that keep registries of pure and part bred horses. These associations keep a studbook of lineage (parentage) of individual animals of a breed. Their responsibility is to ensure that the registered animal is the animal it is said to be. They achieve this by issuing registration papers for individual animals whose lineage can be traced through their studbook and through blood typing.

Each breed registry keeps breed specific information as to what they will accept as a registered horse under their breed. Usually, it requires that both parents can be traced through their studbook and that certain criteria is met concerning breeding, colour and size.

The registration papers require information on the parents of the horse, sketches of the horse's colour and markings, measurements and so on. In Canada, breed associations are monitored according to the "Animal Pedigree Act". According to this Act, there can only be one registry per breed of animal in Canada. The "Animal Pedigree Act" also monitors the way that Canadian registries keep records and do business, to ensure that animals are correctly registered. The Act aims to support breed improvement and to protect persons who raise and purchase animals.

This differs from the U.S. and other countries where there is no such regulation. In the U.S. for example, there are restrictions on the number of registries that can be established for each breed. There are also some breeds that maintain records for horses in which only one parent can be traced through their stud book. Because they operate differently, it is important for horse owners to know that Canadian Law does not apply to foreign registries.

Colour registries are not regulated by the "Animal Pedigree Act". These include registries such as the Buckskin, Palomino and Pinto where the animal is registered strictly for its colour, with no maintenance of parentage records.

Breeds of Horses

Horses are categorized in many ways. Some are segregated as a separate breed according to their lineage. Some are segregated according to their colour.

In Europe, a classification is used whereby horses are referred to as "cold blooded", "hot blooded" or "warm blooded". Cold blooded refers to draft type horses. Hot-blooded is used to indicate horses that are Arabians or Thoroughbreds. Warm blooded indicates a cross between a cold and a hot-blooded horse. There are a number of recognized warm blooded breeds. These classifications are similar to the Draft Horse, Light Horse and Sport Horse classifications that we use here in North America.

The website: <http://www.ansi.okstate.edu/breeds/cattle/maineanjou/index.html/horses> has a great listing of horse breeds found throughout the world.

SECTION 1: GENERAL KNOWLEDGE

Appaloosa

The Appaloosa is descended from the Spanish horses bred by the Nez Perce Indians and is quickly recognized by its unique colour pattern. Also unique to the Appaloosa is the white sclera of the eye, the mottled skin and the striping on the hooves.

Arabian

Bred by the Arabs to carry them swiftly over long distances with a minimum of food and water, the Arabian horse has an unsurpassed reputation for soundness and stamina. The Arabian is very attractive, with its distinctive dished face and proud carriage. It is usually solid bay, chestnut, black or grey in colour.

Belgian

Belgians range in height from 16 to 18 hands and weigh between 2000 and 2600 pounds. In North America they are predominantly sorrel or blonde in colour with flaxen to white mane and tail. Roan is the other common colour. Originally developed in Belgium to meet agricultural draught needs, the massive and powerful Belgians are known for their patience and docility.

Buckskin

Body colour is yellowish or gold. Their mane and tail are black or mixed and they often has a dorsal stripe, zebra stripes on legs and a transverse stripe over the withers and black ear tips. They are considered a Canadian warmblood.

Clydesdale

The lightest of the draft horse breeds is the Clydesdale. It has been bred for style, power and action. The breed originated in Scotland and averages 17 to 19 hands and 1800 to 2200 pounds. The Clydesdale is usually bay or brown in colour with white markings on the legs, face and body. The breed is recognizable by the long, silky hair or feathering that covers its lower legs and hooves.

Connemara

The Connemara originated in Ireland. This performance pony is noted for its conformation, tremendous agility and jumping ability. It is an excellent riding pony, possessing great strength, free-going movement and superb balance. Spirited but sensible, courageous but kind, it is an ideal mount for children and adults alike. This pony is predominantly grey or dun in colour, but can be black, brown or bay and occasionally chestnut or roan.

Fjord

The Fjord horse is one of the national symbols of Norway. It has a dark cream body colour and a distinctive mane and tail which has black hairs down the middle and silver around the outside. This horse measures 13 to 15 hands high and weighs 1000 to 1400 pounds. Noted for its strength, soundness and quiet manner, it is used for riding and driving. Fjord horses are extremely hardy, able to thrive in poor grazing conditions and endure the harsh weather conditions of their environment.

SECTION 1: GENERAL KNOWLEDGE**Irish Draught**

The Irish Draught is a result of crossing Thoroughbreds with Irish Farm Horses. They are noted for their strength and substance, athletic ability, intelligence and kindness. Measuring 15 – 17 h. h. They are suitable for light draft, riding and driving. They may be bay, brown, chestnut or gray.

Miniature

These horses are under 34 inches high at the withers (pure miniatures are under 32 inches).

Morgan

The Morgan breed traces its beginnings to a single stallion named Justin Morgan that possessed extraordinary strength and speed. Its excellent disposition makes it the choice for police and patrol mounts. The Morgan is compact and deep bodied, its legs are fine and strong and its head is carried high on a thick crested neck. The Morgan is usually dark brown, bay, chestnut or black in colour.

Paint

The Paint horse is characterized by a two coloured coat consisting of clearly defined areas of white and either black, red brown, chestnut, grey, dun or roan. It is basically stock in type with Quarter Horse and/or Thoroughbred parentage. Colour patterns vary in percentage of white to coloured portions. They are a pedigree registry with colour specifics.

Palomino

A colour breed where the body colour is cream to golden yellow and mane and tail are white.

Paso

The Paso is distinguished by its natural, high stepping, four-beat lateral gait. The gait, known as termino, gives the rider a very smooth ride. They are tough, hardy and easy to handle. Weighing 900 to 1100 pounds, they measure 14 – 15.2 hands high. They may be bay, chestnut, black, brown or gray. This horse is ridden in all parts of South America, with the most widely known type being the Peruvian Paso.

Percheron

The Percheron stands from 16 to 18 hands high, weighs between 2000 to 2400 pounds and is usually black or grey in colour. Imported from France, the Percheron is noted for its considerable knee and hock actions and its unique walking style.

Pinto

Pintos include any horse that has a two-coloured coat consisting of clearly defined areas of white and dark.

SECTION 1: GENERAL KNOWLEDGE

Quarter Horse

The Quarter Horse combines speed, agility, intelligence and excellent temperament and inherent cow-sense, to earn a reputation as the most popular breed of pleasure horse in the world. Developed in North America, the Quarter Horse has a close-coupled and muscular conformation and an attractive head with prominent jowls. It may be of any solid colour.

Saddlebred

The Saddlebred was developed in Kentucky during the 19th century by plantation owners, who were looking for a horse that provided a comfortable ride for plantation work combined with a stylish eye-catching action in harness. With its high head-carriage and high stepping action it is extremely elegant. Although it is best known as a show horse, the Saddlebred also makes a good general riding and driving horse.

Shetland

The Shetland Pony comes from the Shetland Islands off Northern Scotland. It is thought to be descended from a “dwarf ” Exmoor type. At a maximum height of 10.2 hands it is the smallest of the native breeds yet relative to its size it is the strongest pony in the world. Its size makes it ideal for small children, though its headstrong and independent character demands firm, kind, handling to keep it under control.

Standardbred

Standard horses are used primarily for harness racing, either as pacers (moving the front and hind legs of the same side together) or trotters (moving the front leg of one side at the same time as the hind leg of the opposite side). They also make good pleasure horses.

Tennessee Walker

The Tennessee Walker horse is a gaited horse. It is most distinguished by its running walk that is a four beat gait. This even gait is fast and comfortable to ride.

Thoroughbred

The Thoroughbred horse has been bred for speed and stamina. Its long-bodied, deep chested, angular conformation enables it to run long distances at a fast speed. All true thoroughbreds are descended from just three stallions, all of which were imported to England at about 1700. These three horses were the Byerley Turk, The Darley Arabian and the Godolphin Arabian. Thoroughbreds are used in English sport.

Trakehner

The Trakehner originates from East Prussia and is descended from a cross bred with Arabian and later Thoroughbred blood to give a strong, fast horse. They are popular dressage, hunter and show jumping horses.

SECTION 1: GENERAL KNOWLEDGE**Warmbloods (Such as the Hanovarian, Oldenburg, Holstein, Westphalian, Dutch Warmblood, Trakehner, etc.)**

Developed in various parts of Europe, warmbloods are noted more for their strength than their speed, hence the many successes in dressage and show jumping. They were originally developed as all-purpose work horses. Warmbloods of all breeds are known for their clean cut lines, strong well-muscled bodies and well-formed hard hooves.

Welsh Pony

The Welsh pony is a compact, sturdy horse that is less than 14.2 hands. They have arched necks with short but very strong bodies. This pony is popular for children's dressage.

They are categorized by four sections based on height:

Section A – Welsh Mountain Pony – less than 12 h.h. (smallest)

Section B - Welsh Pony – 13 h.h. and under

Section C – Welsh Pony of Cob type – 13.2 h.h. and under

Section D – Welsh Cob – Over 13.2 h.h. (largest)

Hybrid Crosses

Hybrid crosses between horses and donkeys are popular for pack horses, trail and pleasure riding. Hybrid crosses are always sterile.

Mule – the mule is a cross between a Jack (male donkey) and a mare (female horse).

Hinny – a hinny is a cross between a stallion (male horse) and a Jenny (female donkey).

Registering a Horse

It is the responsibility of the seller of a horse to complete the transfer of ownership for registered horses. Therefore, if you sell a registered horse to someone, you must complete the forms and pay the fee to have the horse ownership transferred to the new owner(s). Similarly, if you have purchased a horse that is registered, the person you bought it from must fill out the forms and pay the fee to have the ownership transferred to your name. As the new owner, you will need to make sure that this has been done.

Tattoos

Individual horses can be marked and identified with a tattoo. A tattoo is made by puncturing the skin and rubbing dye into the wound. These are put on the inside of a horse's upper lip. These tattoos are permanent and cannot be erased. All racing horses must be tattooed for identification.

SECTION 1: GENERAL KNOWLEDGE

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Bring your certificate or registration, if your horse is registered. If it is not, find out who the sire and dam were. Bring this information to the next meeting.

AND/OR

2. Find pictures of different horses and label their breed. Put these pictures in your Record Book.

SECTION 1: GENERAL KNOWLEDGE

DIGGING DEEPER**For Senior Members****Horse Breeds of the World****Activity #1**

Take some time to reflect of the differences in horse breeds around the world. Write a reflection that answers the following questions:

1. What makes each regions' horse breeds unique?
2. What do you think is significant about the way Asian horse breeds have developed compared to European and North American horse breeds? Why?

Activity #2

Choose a breed that is not listed in this meeting and research more about the breed. Try to answer the following questions and record your findings in your Record Book:

1. Where did the breed originate?
2. How long ago did the breed originate?
3. Is the breed a combination of one or more breeds?
4. What colour markings are characteristic of the breed?
5. What are some activities that the horse is used for?
6. Any other pertinent information you find about the horse.

ACTIVITIES

Activity #1 - Horse Breed Scavenger Hunt

Items Needed:

- Horse magazines

Instructions:

1. Divide the members into groups of 2 or 3 people.
2. Give each group 2 or 3 horse magazines.
3. When everyone is ready to go, tell the group to find a 'sorrel' horse. The first group that can find the picture of a sorrel horse wins a point. Have the group show everyone else what the horse looks like that they found so that everyone can see what the particular horse that was being sought after looks like.
4. Every 5 to 6 turns, have the members rotate the magazines between each group so the everyone has a chance to look at different pictures.
5. The team at the end with the most points wins the Scavenger Hunt.

Activity #2 - Colour Me!

Items Needed:

- Colour Me! Worksheet (found at the end of this section)
- Crayons/pencil crayons

Instructions:

1. Give each member a Colour Me! Worksheet.
2. Using magazines, textbooks and/or by looking online, have members research what each breed looks like.
3. Have members colour each horse according to the breed's colours.
4. Review the breeds by showing pictures of each breed.

SECTION 1: GENERAL KNOWLEDGE

Activity #3 - Lineage in Horses**Items Needed:**

- Plain paper
- Pen/pencils
- Horse registration papers

Instructions:

1. Have members work in pairs.
2. Have them walk through the barn and come up with alternative show names for all of the horses in the barn. Include other animals in the barn as well such as dogs and cats.
3. Pull out the registration papers for one of the horses and have members do research into the lineage (history) of the horse.
4. Have members create a diagram showing the lineage of the horse back as many generations as possible.

Activity #4 - Horse Breeds Wordsearch**Items Needed:**

- Horse Breeds Wordsearch (found at the end of this meeting)
- Pencil/pen

Instructions:

1. Give each member a Horse Breeds Wordsearch.
2. Have members find the various breeds of horses within the wordsearch.
3. Review the various breeds and characteristics of each breed.

Activity #5 - Horse Breeds Memory Game

Items Needed:

- Horse Breeds Memory Cards (found at the end of this meeting)

Instructions:

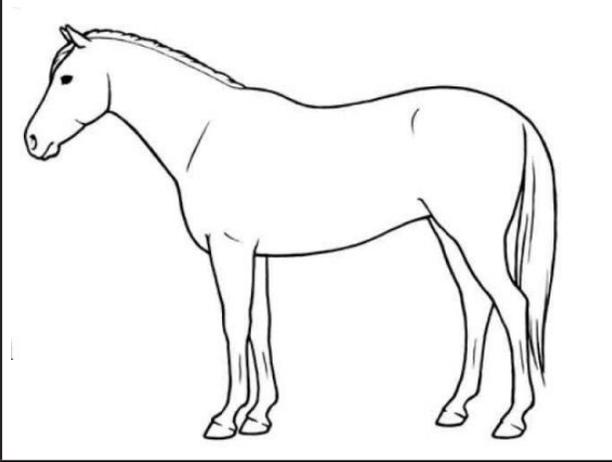
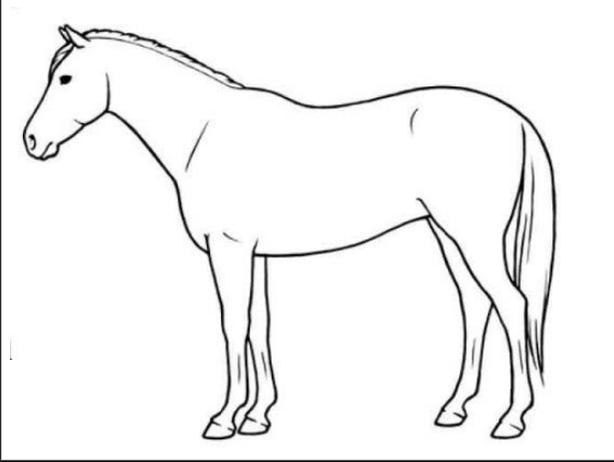
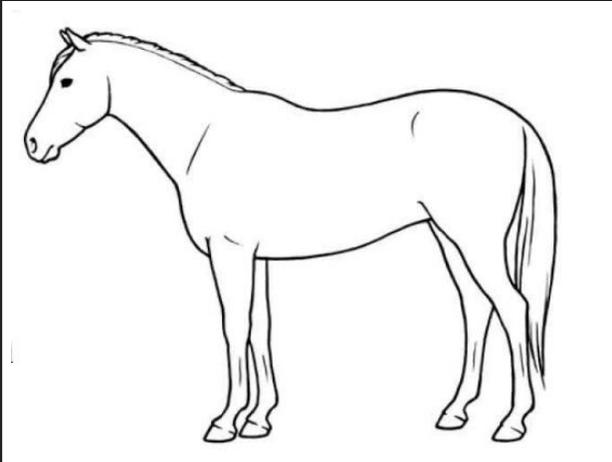
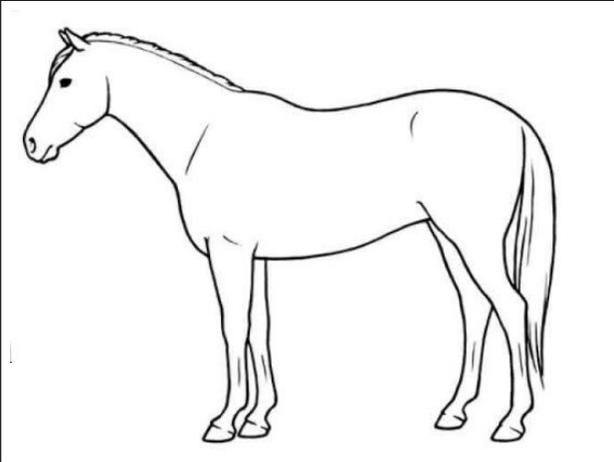
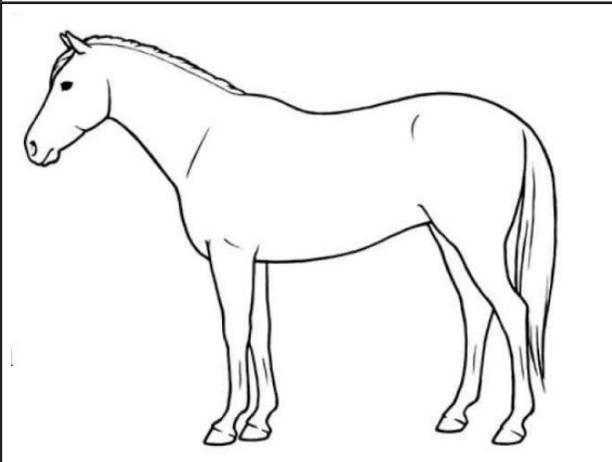
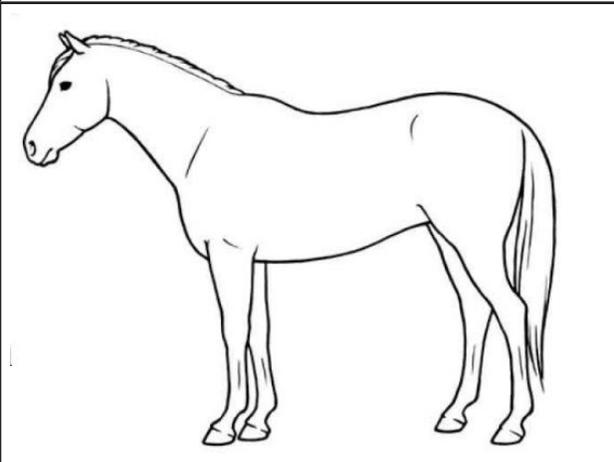
1. Before the meeting, print out the Horse Breed Memory Card pages, preferably on cardstock and cut out each square. If possible, print the squares in colour to make the activity a bit easier.
2. Mix the squares (game pieces) up and place them on a table or the floor, upside down.
3. Have participants sit in a circle around the game pieces.
4. Player #1 turns over two squares. If the squares match, the player can pick them up and set them in front of them and take another turn. If the squares do not match, they are turned back down and the next player takes a turn. This continues until all of the squares have been matched.
5. Each participant counts up how many game pieces they have in order to determine the winner.

Photo credit for Memory Game pictures: Oklahoma State University <http://www.ansi.okstate.edu/breeds/horses/fleuve/index.html/horses>

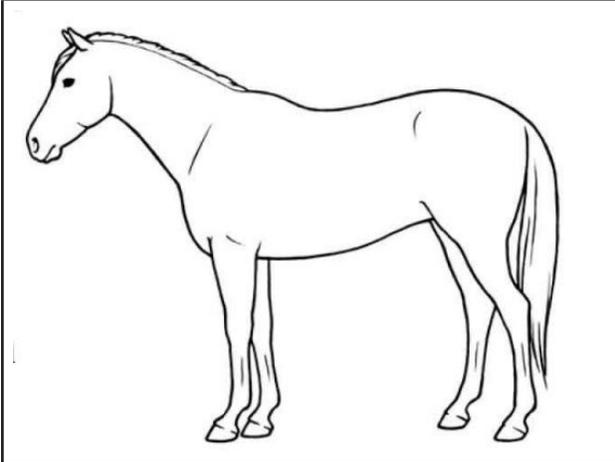
SECTION 1: GENERAL KNOWLEDGE

Colour Me!

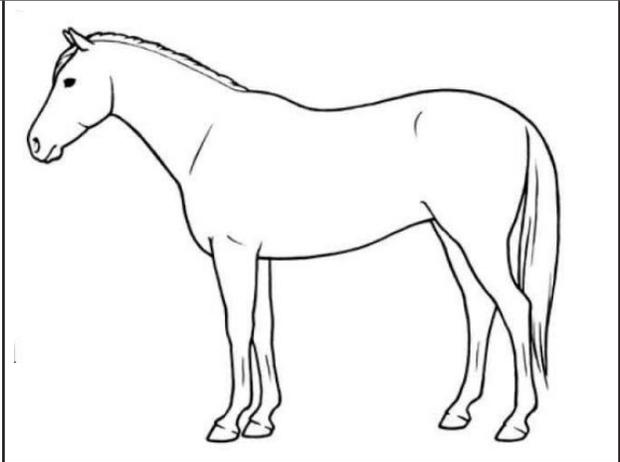
(NOTE: conformation of breeds will be different than the outline of the horse. This exercise is to focus on the markings of each breed)

| | |
|---|--|
|  |  |
| Arabian | Belgian |
|  |  |
| Buckskin | Clydesdale |
|  |  |
| Paint | Palomino |

SECTION 1: GENERAL KNOWLEDGE



Percheron



Quarter Horse

SECTION 1: GENERAL KNOWLEDGE

Horse Breeds Wordsearch

M D E C C W J V H K S N H Q M J Y G C P
 O I E T N I A P L D C U I N G Q G D Q E
 N A N R V S K N N C R H W K O P W X W R
 I L G I B A R A M E N N O C S T F M F C
 M J A C A D L H H V C S H B R K N X M H
 O Q K O Z T R R V X A J M D E T C I E E
 L K V U E Z U A E P W X O E J L G U P R
 A F I H V C G R D R T O R R H K G D B O
 P W S O O H X B E N N G G B W Y L I V N
 A P P A L O O S A E A E A H Z P P J A J
 A R A B I A N D N T L T N G M P W F T N
 E S R O H R E T R A U Q S U X T I I F S
 D E I J K P G A D F H E N O U O M J I K
 Y X Q X M L K S P O U T E R P Z O T T K
 H C L M Q E E C H N V X Z O L R M W L D
 Q G D Z H D H L X H F Z T H D M W T V M
 J U D N Y J S L Q N S A D T S K L R U F
 D S E L V A L E I T C O J M V F L I E R
 P R C Q G U E U S D S B X Y I N B G M Z
 A L A P T U W Q U F J F N A N I O V G Z

APPALOOSA

ARABIAN

BELGIAN

BUCKSKIN

CLYDESDALE

CONNEMARA

FJORD

MINIATURE

MORGAN

PAINT

PALOMINO

PASO

PERCHERON

PINTO

QUARTERHORSE

SHETLAND

STANDARD BRED

THOROUGHBRED

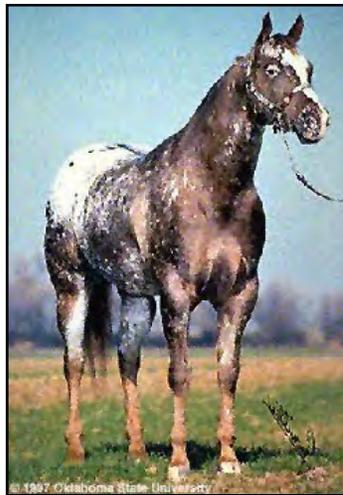
TRAKEHNER

WELSH

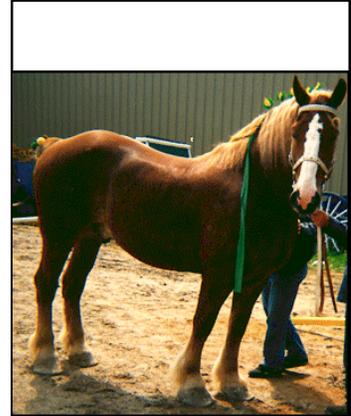
SECTION 1: GENERAL KNOWLEDGE



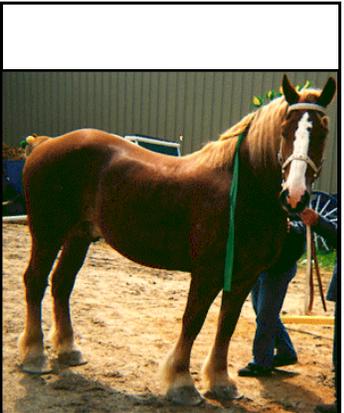
Appaloosa



Appaloosa



Belgian



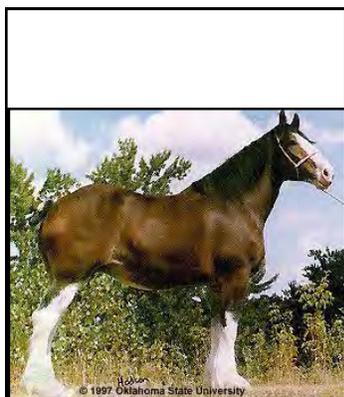
Belgian



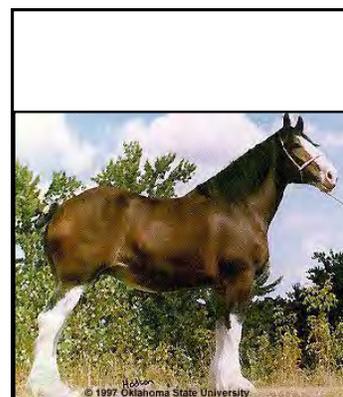
Buckskin



Buckskin



Clydesdale

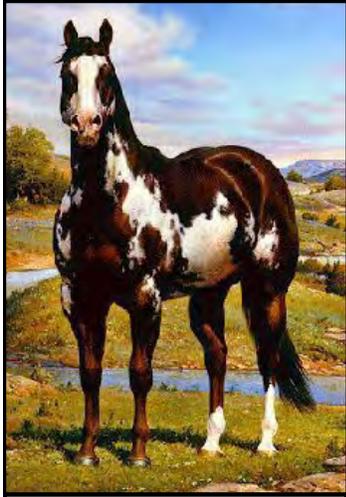


Clydesdale

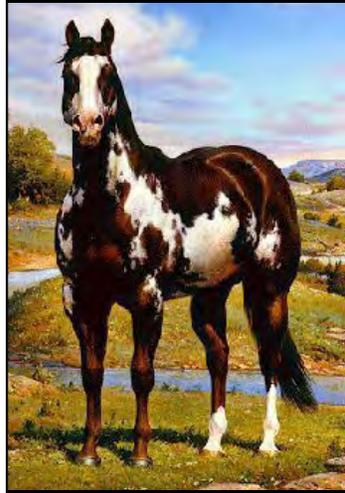


Irish Draught

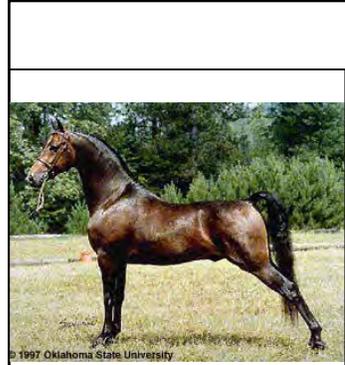
SECTION 1: GENERAL KNOWLEDGE



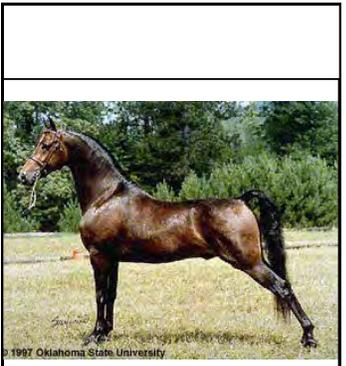
Paint



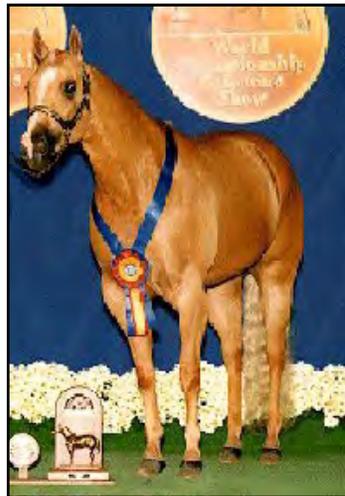
Paint



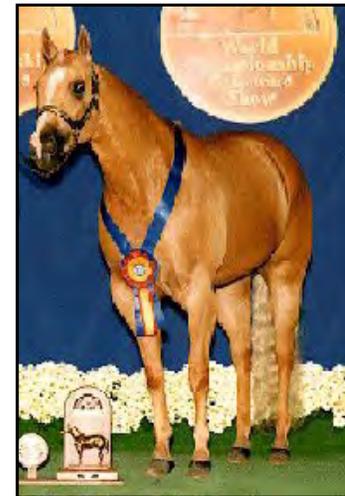
Morgan



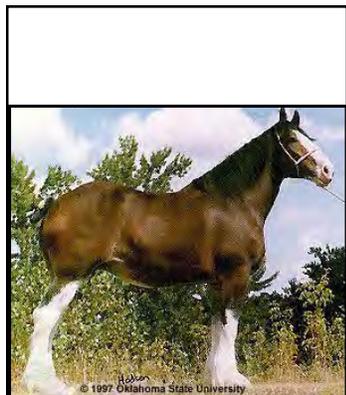
Morgan



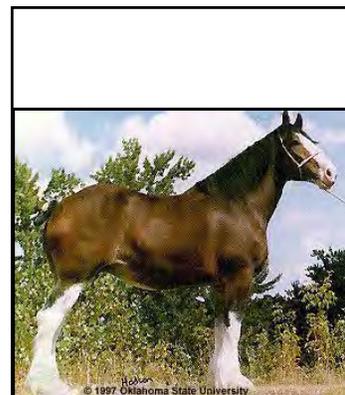
Palomino



Palomino



Clydesdale



Clydesdale



Irish Draught

SECTION 1: GENERAL KNOWLEDGE



Photo by Stuart Vesty Photography

Tennessee Walker



Photo by Stuart Vesty Photography

Tennessee Walker



Photo by Lina Olsson, Sweden

Shetland



Photo by Lina Olsson, Sweden

Shetland



© 1997 Oklahoma State University
Provided by Jamie A. Wilson

Trakehner



© 1997 Oklahoma State University
Provided by Jamie A. Wilson

Trakehner



Welsh Pony



Welsh Pony



Arabian

SECTION 1: GENERAL KNOWLEDGE



Quarter Horse



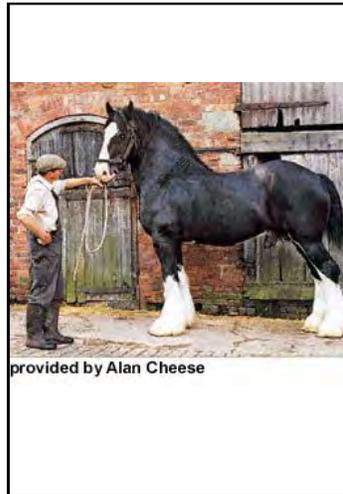
Quarter Horse



Fjord



Fjord



Shire



Shire



Connemara



Connemara



Arabian

MEETING 10: SOUNDNESS AND BLEMISHES

Section 1 - General Knowledge - Soundness & Blemishes

Topic:

- The different problems or injuries that make a horse unsound

Objectives:

- To learn unsoundness and blemishes in horses
- To understand the difference between a blemish and unsoundness

Roll Calls

- Does your horse have any blemishes? What are they?
- Name three types of blemishes on a horse.

Sample Meeting Agenda – 2 hrs.

| | | |
|-------------------------------------|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review 'Is This Horse Sound?' | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Tag the Blemish or Unsoundness on the Horse (instructions found at the end of this meeting) | 30 min |
| Topic Information Discussion | Review what Quality and Refinement of the Horse | 15 min |
| Activities Related to Topic | Choose from Activities #2 and/or #3 (Soundness & Blemishes Crossword, Blemishes vs. Unsoundness) (instructions found at the end of this meeting). | 30 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

SECTION 1: GENERAL KNOWLEDGE

Topic Information

Is this Horse Sound?

This question does not refer to the noise a horse makes! “Sound” describes a horse that has no problems or injuries that affect its movement or usefulness. **Soundness** is extremely important because the efficiency in a horse’s performance is dependent upon its ability to move. When you look at a horse, it is very important that you watch for unsoundness and blemishes. The difference between these two terms is in how they affect the horse. A **blemish** is an injury or imperfection that affects the value of the horse, but not its usefulness (for example, wire cuts, rope burns, etc.) **Unsoundness** is an injury or abnormality that affects both the value of the horse and its usefulness. They may cause lameness or, in some other way, affect the horse so that it cannot be used. So, while blemishes may not look nice, they do not affect the horse’s usefulness. If a horse has an ‘unsoundness’, it may often be lame or it might be restricted in the way you can use it.

The following is a list and description of some common **unsoundnesses (U)** and **blemishes (B)** to watch for when selecting or judging horses. Some are classified as B and U because a blemish may also be an unsoundness, depending on its severity.

Blindness (U) - a complete lack of vision in one or both eyes which may be caused by injury or disease. Blind horses will not react to quick motions near the affected eye(s). Blindness is hereditary.

Bog spavin (B, U) - a soft filling of the natural depression on the front and inside of the hock joint, usually due to faulty conformation or injury. This rarely causes lameness.

Bone spavin (Jack spavin) (U) - a bony enlargement on the inside and front of the lower hock where the hock tapers into the cannon bone, usually due to faulty conformation or injury. This usually causes lameness.

Bowed tendon (B, U) - an enlargement of any or all of the tendons and ligaments behind the cannon, caused by excess stretching of the tendon due to stress or faulty conformation. This occurs most commonly in the forelegs.

Bucked tendon (B, U) - an enlargement of any or all of the tendons and ligaments behind the cannon, caused by excess stretching of the tendon due to stress or faulty conformation. This occurs most commonly in the forelegs.

Bucked shins (B, U) - inflammation of the periosteum or bone covering on the front side of the cannon bone. This is characterized by a painful swelling along the front of the cannon bone. The horse will usually try to rest the affected leg(s). It is seen most frequently in young horses that are subjected to hard, fast work. Lameness is usually temporary if the horse receives adequate rest.

Capped elbow (Shoe boil) (B) - a soft, fluid-filled or firm swelling at the point of the elbow.

SECTION 1: GENERAL KNOWLEDGE

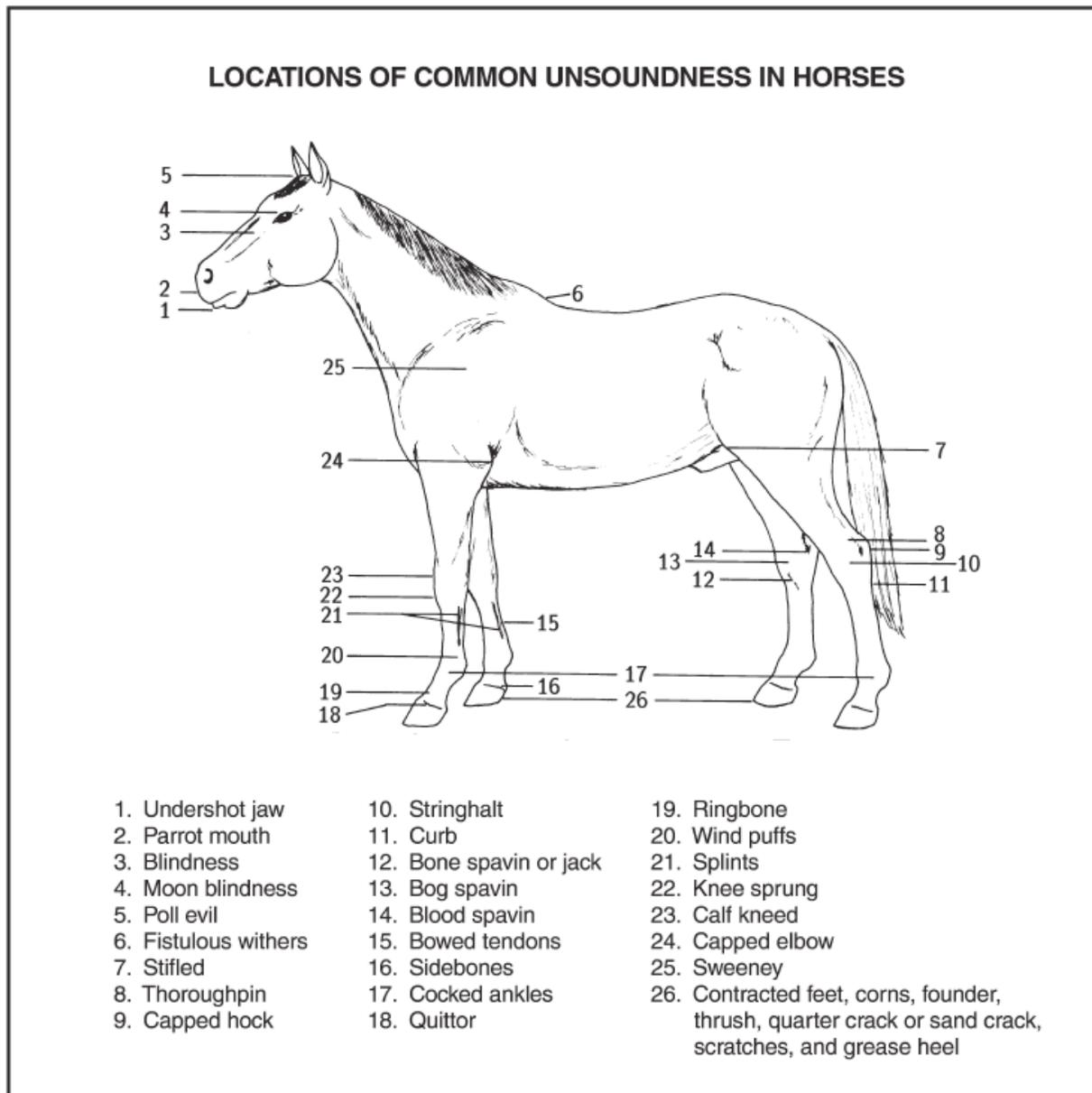


Diagram credit: www.birdvilleschools.net/ Blemishes and Unsoundness of Horses Lesson

Capped hock (B,U) - a firm enlargement on the point of the hock, due to injury. This can, but rarely does cause lameness.

Contract heels (B) - the hoof is narrower than normal (contracted), especially at the heels. This is most common in the forelegs and is often due to improper shoeing. This may be an indication of founder or navicular syndrome (U).

Cresty neck (B) - the crest of the neck is thickened by excess fat deposits. This condition increases the weight carried on the forelegs and may be an indication of laminitis.

Curb (B,U) - an enlargement of the ligament found on the upper rear part of the cannon below the hock (the planter ligament). This is caused by injury or faulty conformation and may cause lameness.

SECTION 1: GENERAL KNOWLEDGE

Fistulous withers (B,U) - an inflammation of the withers, usually caused by bruising due to poor fitting saddles.

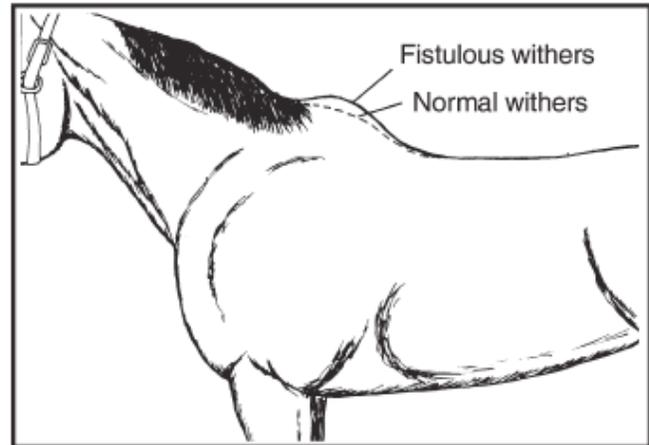


Diagram credit: www.birdvilleschools.net/
Blemishes and Unsoundness of Horses Lesson

Founder (Laminitis) (U) - an inflammation of the sensitive laminae of the foot. It is often characterized by horizontal “founder rings” in the hoof wall and is usually more severe in the front feet. In severe cases, the horse may stand camped out in front to relieve pressure on the front feet.

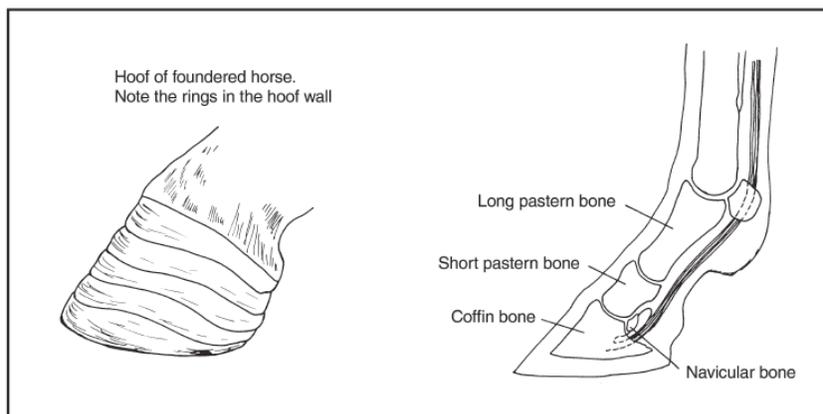


Diagram credit: www.birdvilleschools.net/ *Blemishes and Unsoundness of Horses Lesson*

Heaves/broken wind (U) - difficulty in forcing air out of the lungs due to a loss of elasticity in the lungs. This is usually more noticeable after exercise as the horse contracts abdominal muscles forcibly to expel air. This is usually accompanied by a chronic cough, abdominal heave line and most often occurs in older horses. The horse is unsound for strenuous work.

Hernia (U) - the protrusion of any internal organ through the body wall, usually seen in the abdominal, umbilical or scrotal areas.

Monkey mouth (U) - a hereditary condition in which the lower jaw is longer than the upper jaw.

Mutton withers (B,U) - low, wide withers. This type of withers are prone to injury if the saddle slides forward.

Navicular syndrome (U) - a chronic degenerative process of the navicular bone, navicular bursa and deep flexor tendon. The primary causes are strenuous work, concussion and poor conformation, e.g. small feet, steep pasterns and shoulder. It rarely affects the hind feet. The horse may “point” the most affected foot to relieve the pain or stand with the forefeet extended forward. The horse will try to land toe first when travelling to avoid frog pressure and concussion, making the stride short and choppy. No cure exists but drugs, corrective shoeing and some surgery may be helpful to ease pain. This condition is often seen in Quarter Horses.

SECTION 1: GENERAL KNOWLEDGE

Osselets (B,U) - an enlargement, either fluid-filled or bony, on the front side of the fetlock joint, generally slightly off centre of the front of the leg. The horse may travel with a short, choppy stride. It is usually caused by stress and concussion from hard work or faulty conformation. Lameness is usually temporary unless the bone growth interferes with joint mobility.

Parrot mouth (U) - a hereditary condition in which the lower jaw is shorter than the upper jaw.

Poll evil (U) - an inflamed area between the ears, usually caused by a bruise in the poll region.

Popped knee (water on the knee) (B,U) - a swelling of the front of the knee, usually caused by injury or concussion.

Quittor (B,U) - a deep seated inflammation of the hoof which drains pus through the coronary band. This is caused by a direct injury such as puncture wounds, cuts, interference, etc. It is usually only a temporary lameness if treated early.

Ringbone (U) - bony enlargement(s) on one or more bones and, or joints of the pastern region. It is most common in the forelegs and is caused by injury or faulty conformation.

Roaring (U) - characterized by a whistling or roaring sound occurring with respiration, especially with increased respiration or from exercise. This is caused by paralysis of the muscles of the larynx, often due to a lengthy respiratory infection. This can sometimes be fixed by surgery.

Sand cracks (B) - cracks in the hoof wall. They may start at the coronet and go down or at the bottom of the hoof wall and go up. This is usually caused by injury or interference, improper hoof care and alternating wet or dry conditions.

Sidebone (B,U) - bony enlargements(s) above and to the rear of the hoof, a result of ossification of ligaments. It is most common in the forelegs and is usually caused by concussion due to faulty conformation.

Splint (B,U) - a calcification (bone growth) on the inside or outside of the cannon bone, at the junction of the cannon bone and the splint bones. It is most commonly found inside the front cannon and is usually due to injury or faulty conformation. It rarely affects the horse after the initial lameness has disappeared.

Stifled (U) - also known as Upward Fixation of the Patella. It occurs when the stifle is fully extended. The patella (which corresponds to the kneecap in the human) becomes displaced and locks in place above the stifle joint. It may release on its own or may require manual manipulation. This is seen most frequently in post-legged horses and once this occurs, the ligaments are stretched and the horse will be prone to stifling again. It can be surgically corrected.

Stringhalt (U) - an involuntary flexion of the hock during movement, it may affect one or both hind legs. The cause is unknown and the action is accented when the horse is turned or backed. It is most noticeable after the horse has rested. Severe cases may be corrected surgically.

SECTION 1: GENERAL KNOWLEDGE

Sway back (B) - a weak topline. This restricts the ability of the horse to pull its legs forward beneath its hindquarters.

Sweeny (B,U) - atrophy or shrinkage of the shoulder muscles. In advanced cases, the shoulder appears flat and the shoulder blade or scapula is readily visible. It is caused by a direct injury to the suprascapular nerve, which serves the shoulder muscles. The nerve does not regenerate, so the performance ability of the horse is limited.

Thoroughpin (B) - a puff swelling of the hollow above the hock joint. It is moveable by hand pressure from one side of the hock to the other and is usually due to injury or faulty conformation. It rarely affects the horse after the initial lameness has disappeared.

Thrush (B,U) - fungal infection of the frog of the hoof characterized by a black, foul smelling discharge. It is an anaerobic condition (meaning that it thrives on a lack of oxygen) and usually results from wet conditions. It can be treated by cleaning the hoof and keeping it dry.

Quality and Refinement

Refinement is a general lack of coarseness. The factors closely associated with quality and refinement are:

- A refinement of body parts - the horse should be smooth and clean-cut, not coarse.
- Tendons and joints should be well defined, not fleshy.
- Short, shiny haircoat.
- Tight, thin skin.
- Hard, smooth, durable hooves.
- Obvious gender character

The more refined the horse is, the more desirable the horse is.

SECTION 1: GENERAL KNOWLEDGE

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Find a horse in your neighborhood, a picture from a magazine or online, or a horse on a video that has an unsoundness or a blemish. If possible, bring the picture or video to the next meeting and discuss with your leaders and club members what, if anything, can be done to correct the problem. Record your findings in your Record Book.

AND/OR

2. Choose one of the blemishes or unsoundness issues listed in this meeting that you do not know anything about. Using the library or the Internet research this blemish or unsoundness and answer the following questions:
 - Is it a blemish or unsoundness?
 - Does this affect the horse's ability to live normally day to day?
 - Can it be corrected? Is there a cure?
 - Is it a hereditary condition?
 - What does it look like? (include a picture if possible)

Record your findings (and picture if possible) in your Record Book.

SECTION 1: GENERAL KNOWLEDGE

DIGGING DEEPER

For Senior Members

Evaluating Unsoundness

It is important for a horseperson to be able to recognize common blemishes and unsoundnesses, know their causes, and understand their effects on a horse's serviceability. Any one or a variety of the following may cause unsoundnesses:

- an inherited weakness
- stress and strain far beyond the capability of normal tissue to handle
- accident and injury
- nutritional deficiencies.

Create a checklist to be used when examining any horse. Have the checklist reviewed by a veterinarian or an experience horse person. Then, use the checklist on a horse you have never seen before and see how it rates. Be sure to have permission of the horse owner first. If time permits, use your checklist on a number of horses. Take a picture of the horse to accompany your checklist to help you better remember the horse(s) you examined.

Record your findings in your Record Book.

ACTIVITIES

Activity #1 - Tag the Blemish or Unsoundness on the Horse

Items Needed:

- A quiet horse (or outline of a horse on large mural paper)
- Sticky notes (or note cards with masking tape)
- Hat

Instructions:

1. Write out each blemish/unsoundness feature listed below on sticky notes. NOTE: only write the name of the blemish or unsoundness. The location each listed is for the information of the leader running the activity.
2. Divide the members into two teams.
3. Team #1 choose a sticky note out of a hat and places it on the horse in the spot where that particular blemish/unsoundness is found.
4. If Team #1 gets it correct, they receive one point and can continue the game by choosing another note from the hat. If they get it incorrect, then Team #2 can have a chance to place the sticky note in the right spot.
5. If Team #2 gets the sticky note in the right spot, they receive a point and can continue the game by choosing another sticky note.
6. If neither team gets the correct spot on the horse, review the blemish/unsoundness and show both teams the correct spot on the horse.
7. Once all sticky notes have been placed, the game is finished and the team with the most points wins.

Blemishes/Unsoundness for Sticky Notes

Blindness (eyes)

Bog Spavin (front & inside of hock joint)

Bone Spavin (inside & front of the lower hock where the hock tapers into the cannon bone)

Bowed Tendon (behind the cannon bone)

Bucked Shins (front side of the cannon bone)

Capped Elbow (point of the elbow)

Capped Hock (point of the hock)

Contracted Heel (hoof – especially at the heels)

Cresty neck (crest of the neck)

Curb (upper rear part of the cannon below the hock)

Fistulous Withers (withers)

SECTION 1: GENERAL KNOWLEDGE

Founder (laminae of the foot)
Heaves (lungs)
Hernia (abdominal, scrotal or umbilical areas)
Monkey Mouth (jaw)
Mutton Withers (withers)
Navicular Syndrome (navicular bone, navicular bursa and deep flexor tendon)
Osselets (front side of the fetlock joint)
Parrot Mouth (jaw)
Poll Evil (between the ears)
Popped Knee (front of the knee)
Quittor (hoof)
Ringbone (pastern region)
Roaring (lungs)
Sand cracks (hoof)
Sidebone (above and to the rear of the hoof)
Splint (inside or outside of the cannon bone)
Stifled (patella (knee cap))
Stringhalt (hock)
Sway back (topline)
Sweeny (shoulder muscles)
Thoroughpin (hollow above the hock joint)
Thrush (frog of the hoof)
Windpuffs (top of the fetlock joint)

Activity #2 - Soundness & Blemishes Crossword**Items Needed:**

- Soundness & Blemishes Crossword (found at the end of this meeting)
- Pens/pencils

Instructions:

1. Give each member a copy of the Soundness & Blemishes Crossword.
2. Using the information from the this meeting, have members complete the crossword.
3. Review the answers and discuss the definition of each answer.
4. Remove the cloth and check their memory.

Activity #3 - Blemishes vs. Unsoundness

Items Needed:

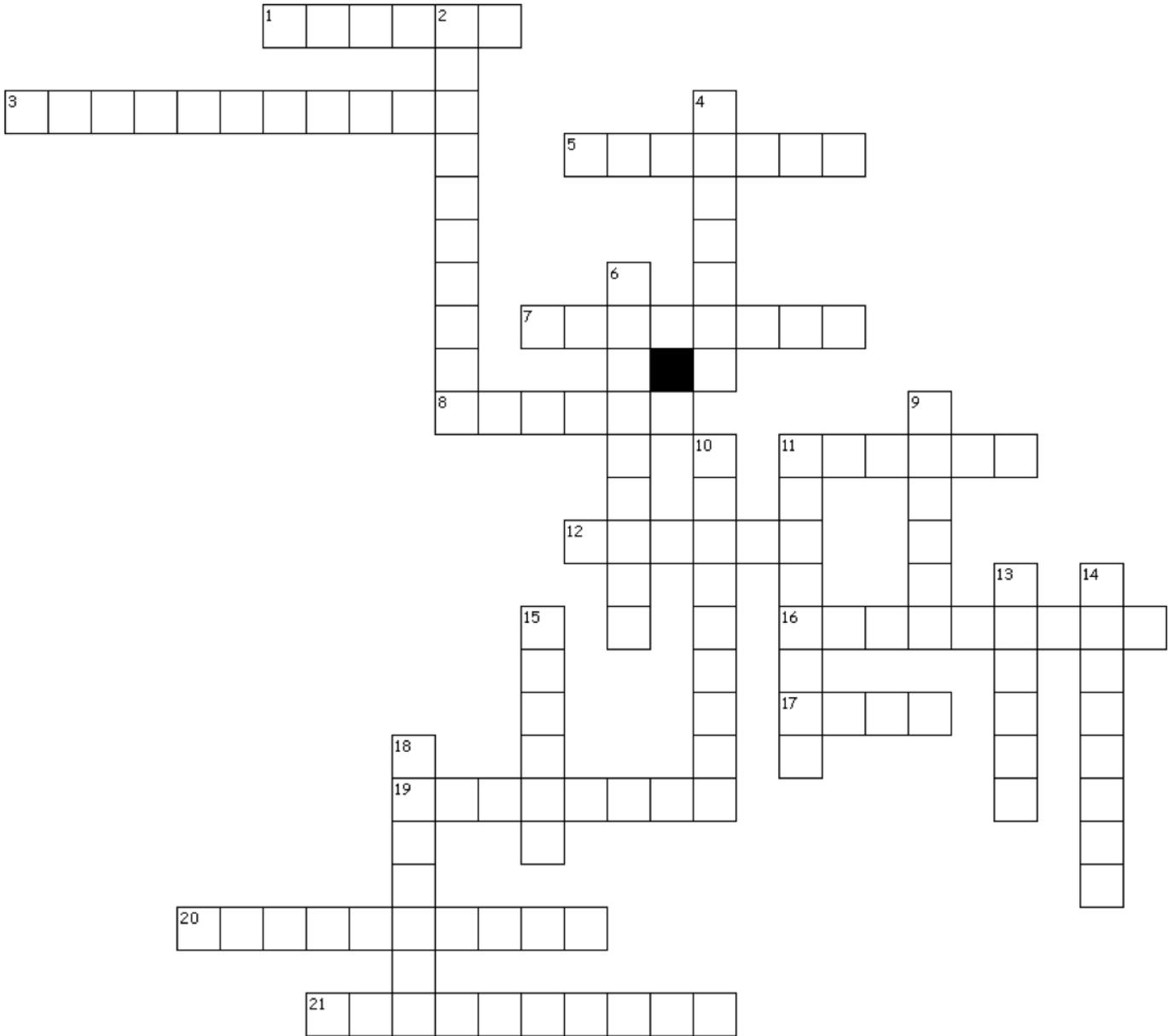
- Blemishes vs. Unsoundness worksheets (found at the end of this meeting)
- Pen/pencil

Instructions:

1. Give each member a worksheet.
2. Using the words in the word bank, determine if the problem causes a horse to be unsound or is only a blemish issue. Write the word and define the term in the corresponding box.

SECTION 1: GENERAL KNOWLEDGE

Soundness and Blemishes



SECTION 1: GENERAL KNOWLEDGE

Across

1. Fungal infection of the frog of the hoof
3. Puffy swelling of the hollow above the hock joint
5. A deep seated inflammation of the hoof which drains pus through the coronary band
7. An inflamed area between the ears, usually caused by a bruise in the poll region
8. A bone growth on the inside or outside of the cannon bone
11. Atrophy or shrinkage of the shoulder muscles
12. The protrusion of any internal organ through the body wall
16. A soft filling of the natural depression on the front and inside of the hock joint
17. An enlargement of the ligament found on the upper rear part of the cannon bone below the hock
19. An enlargement, either fluid-filled or bony, on the front side of the fetlock joint
20. A firm enlargement on the point of the hock, due to injury
21. An involuntary flexion of the hock during movement

Down

2. Crack in the hoof wall
4. Also known as Upward Fixation of the Patella
6. A complete lack of vision in one or both eyes
9. Difficulty in forcing air out of the lungs
10. Puffy, fluid-filled swellings at the top of the fetlock joint
11. A weak topline
13. Condition in which the lower jaw is shorter than the upper jaw
14. Bony enlargements on one or more bones and/or joints of the pastern region
15. Condition in which the lower jaw is longer than the upper jaw
18. An inflammation of the sensitive laminae of the foot

SECTION 1: GENERAL KNOWLEDGE

Soundness and Blemishes - Answers**Across**

1. Thrush
3. Thoroughpin
5. Quittor
7. Poll evil
8. Splint
11. Sweeny
12. Hernia
16. Bog spavin
17. Curb
19. Osselets
20. Capped hock
21. Stringhalt

Down

2. Sand cracks
4. Stifled
6. Blindness
9. Heaves
10. Windpuffs
11. Sway back
13. Parrot (mouth)
14. Ringbone
15. Monkey (mouth)
18. Founder

SECTION 1: GENERAL KNOWLEDGE

Blemishes vs. Unsoundness

Using the words in the word bank, determine if the problem causes a horse to be unsound or is only a blemish issue. Write the word and define the term in the corresponding box.

Word Bank

- Parrot mouth
- Poll evil
- Sweeny
- capped elbow
- founder
- wind puff
- quarter crack
- bowed tendons
- cribbing

| Unsoundness | Blemish |
|--|---|
| Effects the movement and/or health horse | No effect on horse's ability to do work |
| | |

Activity Credit: 2015 Youth HORSE Training Program (Horse Ownership Responsibility Safety & Education) Trainer's Guide, Rebecca Bott, Assistant Professor & SDSU Extension Equine Specialist, courtesy of iGrow.org

SECTION 1: GENERAL KNOWLEDGE

Blemishes vs. Unsoundness – Answer Key**Word Bank**

- Parrot mouth
- capped elbow
- quarter crack
- Poll evil
- founder
- bowed tendons
- Sweeny
- wind puff
- cribbing

| Unsoundness | Blemish |
|---|---|
| Effects the movement and/or health horse | No effect on horse's ability to do work |
| <ul style="list-style-type: none"> • Parrot Mouth - lower jaw is shorter than upper jaw • Poll Evil - inflamed swelling of poll between ears • Sweeny - decrease in size of a single muscle or group of muscles • Founder - turning up of hoof • Wind Puff - puffy swelling occurring at either side of tendons above the fetlock or knee • Bowed Tendons - enlarged, stretched tendons behind the cannon bones | <ul style="list-style-type: none"> • Capped Elbow - soft, flabby swelling at the point of the elbow • Quarter Crack - vertical splint in the wall of the hoof • Cribbing - bad habit, horses chew on wood or metal gates and wear down teeth |

Activity Credit: 2015 Youth HORSE Training Program (Horse Ownership Responsibility Safety & Education) Trainer's Guide, Rebecca Bott, Assistant Professor & SDSU Extension Equine Specialist, courtesy of iGrow.org

SECTION 2: FEEDING & NUTRITION

MEETING 11: DIGEST THIS!

Topic:

- The Digestive System of the Horse
- Measuring the Horse's Weight

Objectives:

- To learn about the horse's digestive system
- To learn how to measure a horse's weight

Roll Calls

- How can you tell that the horse is a one-stomached animal?
- Name one part of the horse's digestive system.

Sample Meeting Agenda – 2 hrs. 10 minutes

| | | |
|---|--|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Horse Digestion. | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Horse Digestive System Word Search (instructions and Word Search found at the end of this meeting) | 15 min |
| Topic Information Discussion | Review How to Weigh a Horse. | 30 min |
| Activities Related to Topic
Public Speaking/Judging Activity | Choose from Activities #2, #3 #4 and/or #5 (Horse Digestive System, Pin the Tag on the Horse, Horses vs. Cattle, Build a Horse's Digestive Tract) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 2: FEEDING & NUTRITION

Topic Information

Horse Digestion

The horse has a different digestive system than other farm animals. Although the horse has a single compartment stomach (like people, pigs and dogs), the horse can utilize roughage like the cow or sheep which are ruminants (animals that use four stomachs to break down forages). This is possible because the horse has a unique type of large intestine.

| Part | Primary Purpose |
|-----------------------|--|
| Teeth | Grind |
| Tongue | Moves food and mixes with saliva |
| Pharynx | Muscles force food down |
| Esophagus (oesphagus) | Constrict and move food downward |
| Stomach | Adds digestive fluids (acids and enzymes) to breakdown fat and protein |
| Small intestine | Further breakdown and absorbs through hairs (villi) on the walls |
| Cecum (caecum) | Water storage tank, breaks down roughage and absorbs nutrients |
| Large colon | Further breakdown of roughage to carbohydrates (energy) |
| Small colon | Most of the fluid reabsorbed here |
| Rectum | Feces formed here, about 25% solid and 75% water |
| Anus | Feces passed out here |

The principle organs of digestion include salivary glands and teeth, stomach, small intestine, caecum, large colon, small colon and rectum. The liver and pancreas also contribute to the digestive system. The total length of the system is about 27 metres and the capacity is about 227.25 litres. The complete digestive process, from time of eating until the expulsion of feces takes three to four days.

SECTION 2: FEEDING & NUTRITION

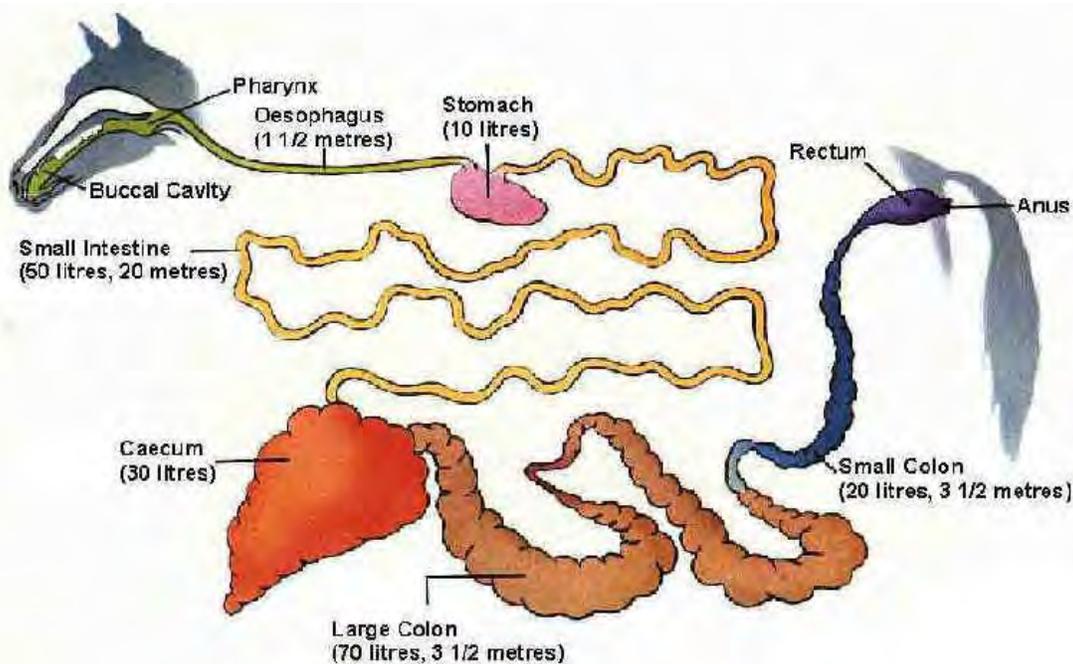


Image Source: *Equine Digestive System* www.horsecoursesonline.com

Salivary Glands and Teeth

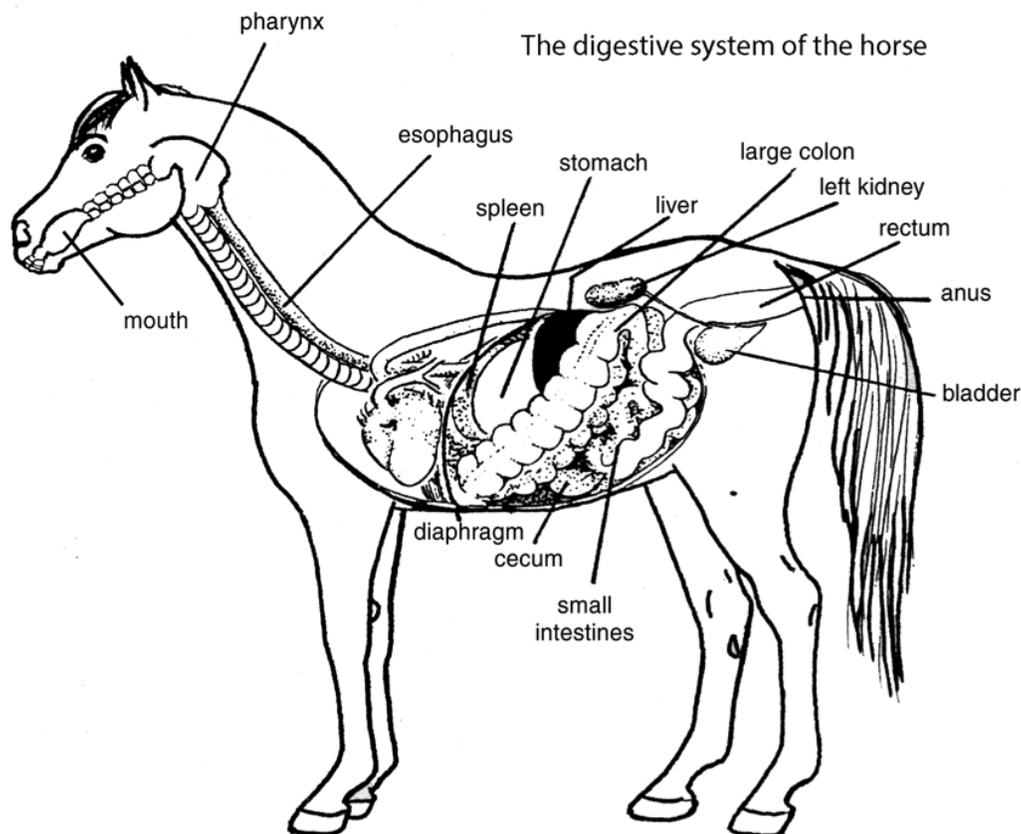
The digestive process begins in the mouth where the food is ground up by the molars and mixed with saliva. Saliva is discharged into the mouth from ducts located inside the cheeks, on the floor of the mouth and under the tongue. Saliva facilitates swallowing and helps convert the starches in the food into sugar. The rate of flow of the saliva is determined by the moisture content of the feed. Grinding is accomplished by the lateral (side to side) movement of the lower jaw against the upper jaw. If the horse has difficulty eating grain or is not doing well, check its teeth. Their molars (grinding teeth) may have sharp points which can damage its tongue or cheeks. Floating or rasping (a veterinary procedure) of the horse's molars and pre-molars as necessary will improve digestion.

After the food has been ground and thoroughly mixed with saliva, it is moved to the back of the mouth where the muscles of the pharynx force the food into the esophagus and into the stomach. Food moves down through the esophagus by successive waves of muscular constriction. These muscles only allow movement in one direction and prevent the animal from vomiting. Because horses cannot vomit, they often colic.

Stomach

In the stomach, glands located over about half of the lining secrete gastric juices which are added to the saliva-soaked food. Gastric juices consist mainly of water, 0.3 percent hydrochloric acid and enzymes (pepsin). The action of the enzymes breaks down vegetable fats and changes proteins into a form that can be absorbed by the body. As the food warms up to body temperature, combined with the fluid conditions inside the stomach, the food begins to break down. The enzymes work best when the stomach is less than full.

SECTION 2: FEEDING & NUTRITION



Small Intestine

The small intestine is suspended from the underside of the backbone by a membrane called the mesentery. The intestine, like the stomach, secretes digestive juices through intestinal glands. Enzymes from the liver (bile) and pancreas are also secreted. The rate at which the food is broken down is sped up. The food breaks down into small molecules that are absorbed through hair-like “villi” that cover the wall of the intestine.

Caecum

The caecum is the first part of the large intestine. It is a unique structure that allows the horse to utilize roughage because of micro-organisms that help to break down woody material. It is also known as the “water gut” because it has the capacity of about 36 litres. In addition to digesting roughage and absorbing nutrients, it serves as a reservoir for storing water for the system.

Large Colon

In the large colon, the bacterial action continues to break down the fibrous portion of the food, releasing carbohydrates. This action can take several days, which is the reason that the large colon is so large: three to four metres long, about 25 centimetres in diameter and can hold about 91 litres.

Small Colon

In the small colon, much of the fluid content is re-absorbed into the horse’s body.

SECTION 2: FEEDING & NUTRITION

Rectum

When the residue of the food moves into the rectum, it is pressed into the shape that characterizes horse droppings. The droppings of a health horse consist of 25 percent solid material and 75 percent water. The feces from a horse can often be a very good indication of its health. Check the manure often for undigested grain (it is normal for some whole oats to pass through) and any sudden change in consistency, colour, odour or amount. Any of these conditions could be the first symptoms of a more serious problem.

Measuring the Weight of the Horse

Most people do not have a scale large enough to weigh a horse. You can approximate the weight of a horse by measuring the heartgirth and length of the horse from the chest to the rump, then applying these measurements to the following formula:

$$\text{weight (kg)} = (\text{girth} \times \text{girth}) \times \text{length (cm)}$$

$$V (V=11900) \text{ cm}^3/\text{kg}$$

Another quick and reliable method of determining the weight of the horse is by means of a weight tape. They are available at most feed stores or tack shops. Simply place the tape around the barrel of the horse at the firth line and pull until it is just snug. Read the weight on the tape. Knowing the weight of a horse is essential for determining weight gain or loss and for determining dose rates for medicines or dewormers.

Horse Tip:

A horse does not have a gall bladder.

SECTION 2: FEEDING & NUTRITION**BEFORE THE NEXT MEETING**

Try one of these activities at home.

1. Have a veterinarian or an experienced horse person show you the teeth in a horse. Are there any teeth that need floating or rasping? What do they look like? If so, watch carefully as the veterinarian or horse person floats (or rasps) the teeth. Check back in a week to see if this improved digestion in the horse. Record your findings in your Record Book.

AND/OR

2. With some help, use the method described in this meeting to measure the weight of a horse. Record how you did the procedure and your results (the weight of the horse) in your Record Book. If possible, take pictures of how you measured the horse's weight.

DIGGING DEEPER

For Senior Members

A Closer Look

Ask your local veterinarian if it would be possible to be present during an autopsy of a horse. Tell the veterinarian that you would like to see the digestive system in particular.

Depending on the situation, ask the veterinarian if it's possible to remove the digestive system from the horse. Take the following measurements and record them in your Record Book:

1. Length of the esophagus
2. Length of the small intestine
3. Length of the large colon
4. Diameter of the large colon
5. Length of the small colon

If you are comfortable with taking pictures of the digestive system, put these pictures in your Record Book. Label the pictures with the names of the various parts of the digestive system.

Depending on the age and maturity of the 4-H members in your club, bring the digestive system to the next meeting (be sure to do the dissection only a day or two before your meeting or have a cool spot to store the digestive system). If possible stretch it out and show members which measurements you took.

SECTION 2: FEEDING & NUTRITION

ACTIVITIES**Activity #1 - Horse Digestive System Word Search*****Items Needed:***

- Horse Digestive System Word Search (found at the end of this meeting)
- Writing utensils (pens/pencils)

Instructions:

1. Give each member a Horse Digestive System Word Search page.
2. Have members work individually to find the words.
3. Review the words to ensure all members have found the words and know what their function is.

Activity #2 - Horse Digestive System***Items Needed:***

- Horse Digestive System worksheet & Answer Key (found at the end of this meeting)
- Writing utensils (pens/pencils)

Instructions:

1. Give each member a Horse Digestive System worksheet.
2. Have members work individually or in pairs to fill in the blanks.
3. Review the answers to ensure that all members have the correct answers.

Activity #3 - Pin the Tag on the Horse***Items Needed:***

- A quiet horse (or the outline of a horse cut out and taped to a wall)
- Masking tape
- Permanent marker

Instructions:

1. Write out the parts of a horse digestive system on pieces of masking tape (list found below).
2. Using a quiet horse (or the outline of a horse taped to a wall) have members match the masking tape word to the part of the horse.

SECTION 2: FEEDING & NUTRITION

NOTE: this activity could be completed as a game by dividing the members into two teams and timing each group to see how long it takes them to place each tag on the horse.

Digestive System Parts:

- Mouth
- Pharynx
- Esophagus
- Spleen
- Stomach
- Liver
- Large colon
- Kidneys
- Rectum
- Anus
- Bladder
- Small intestines
- Caecum
- Diaphragm

Activity #4 - Horses vs. Cattle***Items Needed:***

- Picture of the bovine digestive system
- Paper
- Writing utensils (pens/pencils)

Instructions:

1. Using the Internet, or the library, find a diagram of the bovine (cattle) digestive system.
2. Have members work in pairs or in small groups.
3. Compare the digestive system of the horse (found in this meeting) to the diagram of the bovine digestive system.
4. List three differences between the two digestive systems.
5. Have each group present their differences to see how many differences can be listed as a group.

SECTION 2: FEEDING & NUTRITION

Activity #5 - Build A Horse's Digestive Tract

Obtaining a digestive tract from a horse can be difficult unless a veterinarian agrees to save one the next time they have to destroy a horse. An alternative learning activity is to have members build a full scale model of the horse's digestive tract. The size of the full scale model will surprise them!

Items Needed:

- Garbage bags
- Polyethylene tubing (often used as temporary run-offs for down spouts)

OR

- Balloons – various shapes and sizes

Instructions:

1. Using the guide in this meeting, have members determine the size of each part of the digestive tract.
2. Have members, using garbage bags and the polyethylene tubing, create a full scale model of the digestive system.

OR

3. Have members, using various shapes and sizes of balloons, create a full scale model of the digestive system. The balloons, after being spliced together, could be placed into a large garbage bag to represent the horse's body.
4. Members could also name the parts and give the characteristics of each part.

SECTION 2: FEEDING & NUTRITION

Horse Digestive System Word Search

X J C H S O Y B M U L X O G Y I U P H T
 D B Q V P X V L G K R G B R E O P E L X
 R H O K Z G A A A B G E A M E N C U P V
 K B N S G L C D R D Z V U S J A V G K I
 K L P T D J U D H R I F A T E A N N W U
 S T O M A C H E P L G S S C N I N O Y H
 B C G Q O G W R A H K I U U X J Y T B I
 W P Z X D T U S I C A M S G C O J J G L
 M U T C E R N E D V L R L P A T E E T H
 L O Q E C P Y E C Q I V Y Q Q H Y S H B
 I V U Y I E E Y E D C Z J N W H P O I U
 V D G T N Z F F J L Y P F T X N T O H I
 E W W D H C W L X V P B W Q U Z Z F S T
 R L I Y O E Z X V A Z S T A L V A B D E
 Q K G V P Y M W U Z Z T Z U J J C Y T X
 U I I I K F B F O O W O N R Q C N Z Z R
 K B W W L C Q G O I I E T Y F Q P E K P
 H O B G R Q O B R O Z F A L A K Y M U S
 M Q F W V L P Q Y A H P M O Q Z W Q N B
 V K N K W I Z S G R V S B D X I T N O H

ANUS

PHARYNX

BLADDER

RECTUM

CAECUM

SALIVARY

DIAPHRAGM

SPLEEN

ESOPHAGUS

STOMACH

KIDNEY

TEETH

LIVER

TONGUE

MOUTH

SECTION 2: FEEDING & NUTRITION

Horse Digestive System

Use the word bank to fill in the blanks.

| | | |
|--------------|----------------|-----------|
| Concentrates | Mouth | Work |
| Saliva | Microorganisms | Little |
| Often | Non-worried | Water |
| Caecum | Four | Succulent |
| Salt | Mesentery | Three |

1. Increase the amount of _____ if you increase the amount of work being done.
2. Feed _____ and _____ because a horse has a small stomach for his size.
3. A rider should never _____ his horse after a full feed.
4. A _____ such as a carrot or apple should be fed once a day if possible.
5. Digestion begins in the _____ where _____ is mixed with the food.
6. The first part of the large intestine is known as the _____.
7. _____ in the caecum and colon are responsible for the synthesis of the B vitamins.
8. The complete digestive process, from time of eating until the expulsion of feces takes _____ to _____ days.
9. You should provide free-choice _____ and _____.
10. The small intestine is suspended from the backbone by a membrane called the _____.

SECTION 2: FEEDING & NUTRITION

Horse Digestive System – Answer Key

1. Increase the amount of concentrates if you increase the amount of work being done.
2. Feed little and often because a horse has a small stomach for his size.
3. A rider should never work his horse after a full feed.
4. A succulent such as a carrot or apple should be fed once a day if possible.
5. Digestion begins in the mouth where saliva is mixed with the food.
6. The first part of the large intestine is known as the caecum.
7. Microorganisms in the caecum and colon are responsible for the synthesis of the B vitamins.
8. The complete digestive process, from time of eating until the expulsion of feces takes three to four days.
9. You should provide free-choice salt and water.
10. The small intestine is suspended from the backbone by a membrane called the mesentery.

SECTION 2: FEEDING & NUTRITION

MEETING 12: FEEDING YOUR HORSE

Topic:

- Nine good feeding rules
- Horse nutrition
- Balancing horse rations
- Feeds to avoid in winter and for a sick horse

Objectives:

- To learn about how and what to feed horses
- To become aware of the importance of a proper diet for the horse's health

Roll Calls

- Name three things that you feed a horse.
- Have you ever had to make special meals for your horse?

Sample Meeting Agenda – 2 hrs. 20 minutes

| | | |
|---|--|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review the Rules to Follow when Feeding a Horse and Where to Feed. | 20 min |
| Activity Related to Topic | Activity #1 – Horse Feeds Word Search (instructions and worksheet found at the end of this meeting) | 15 min |
| Topic Information Discussion | Review Horse Nutrition, Judging the Quality of Hay Products, Energy Foods, Weight of Feed, Winter Feeding of the Horse, Feeds the Horse Should Not Receive and Feeding Problems. | 40 min |
| Activities Related to Topic Public Speaking/Judging | Choose from Activities #2, #3 #4 and/or #5 (Feed Storage, What Goes In Must Come Out, Judging Hay, Horse Feed Labels) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 2: FEEDING & NUTRITION

Topic Information

Every horse owner takes pride in the appearance, well-being and health of his or her horse. The first step is to make sure that the horse is properly fed. A horse depends on you to feed it. Watch a horse's temperament, eating habits, weight and condition carefully to ensure that the horse is receiving the nutrition that it needs, in a consistent manner.

Rules to Follow When Feeding a Horse

There are ten basic rules of good feeding for horses:

- 1. If possible, feed smaller amounts more often (imitate the natural feeding patterns of horses).** Grazing is the natural way that a horse eats. A horse grazes (eats grass) a little at a time throughout the day and night. It often seems as if a grazing horse never stops eating! This is because the horse has a small stomach for its size. Therefore, a horse needs a little food in the stomach at all times to allow for proper digestion.

The best way to imitate a natural feeding pattern is to feed at least three times per day. Ideally, stabled horses should be fed four times a day. The first feed should be early in the morning and the last in the late evening. The other feeds should be spaced evenly between these two. Half of the horse's daily hay should be reserved for the last feed so that it can be consumed during the night. The grain may be divided equally for each feeding.

When feeding twice a day, provide half of the daily grain at each feeding and perhaps two thirds of the roughage at the evening feeding. When horses are putting in a full day's work and you are feeding three times a day, providing $\frac{3}{8}$ of the grain and $\frac{1}{4}$ of the hay in the morning, the same at noon and $\frac{1}{4}$ of the grain and $\frac{1}{2}$ of the hay at night has been a good general rule. For both schedules, most of the hay is fed at night when horses have ample time to digest roughage and it helps to offset the boredom of the long, relatively inactive nighttime hours.

The number of times you feed your horse will depend on the type and amount of feed the horse requires to do the work expected of it. Horses should never be fed more than 1.8kg (4 pounds) of concentrate (grain) per feeding.

- 2. Feed plenty of bulk food.** Hay is the main source of bulk food for a stabled horse. It ensures, as with grazing, that the digestive organs are well filled and functioning properly. Successful digestion cannot take place without adequate bulk. Forage is the basis of all horse diets. Forage can be provided as hay, pasture or high fibre feed. When feeding straight forage, allow approximately 2 – 2 $\frac{1}{2}$ % of body weight per day. When concentrated feeds are included in the diet, make sure they get at least 1% of their body weight of forage per day.
- 3. Feed according to work done.** This is especially important for concentrated foods (grains). Increase the amount of feed if work is increased, reduce if the horse is doing less work. Grain is used to increase the energy in the diet if hay will not meet the needs of the horse or if the activity requires less bulk in the diet.

SECTION 2: FEEDING & NUTRITION

4. **Make no sudden changes.** Changes in the type of food or the feeding routine must be gradual. Alter it gradually over a 7 to 10 day period. This includes putting horses out on pasture in the spring. Do it gradually so that their digestive system will adjust.
5. **Keep the same approximate feeding times.** Horses are creatures of habit and a slipshod feeding schedule can affect their disposition. On the other hand, if too much routine is causing your horse to become impatient and demanding, you may need to vary feeding times.
6. **Feed only clean and food quality hay.** Mouldy, musty or dusty hay can have a bad effect on a horse's health and well-being. Feed only mould-free hay and grains, and make every effort to minimize dust. Lightly watering hay and soaking grains will help reduce dust in some hay. Keep feed tubs, water buckets and mangers clean. Saliva, feed particles and warmth provide an excellent environment for bacterial growth.
7. **Provide free choice access to salt.**
8. **Do not work your horse hard immediately after a full feed.** When the stomach is full, it affects the working of the lungs and heart. How long between the feeding time for your horse and his work depends upon how hard he will be working and what you are asking him to do. For example a race or roping horse should finish eating four hours before the competition. However, an endurance horse would eat hay right up to the competition to help store water. In general, allow at least 1 hour after feeding before working a horse and do not feed afterward until he is cool.
9. **Provide free choice water at all times and in all seasons.** An adult horse will consume an average of 10 - 14 gallons daily; hot weather, hard work and lactation can nearly double this amount. If water is not available at all times, horses should be watered three times per day before feedings. Eating snow is not sufficient to satisfy horses water requirements. Horses will drink more from a waterer in the winter than from an ice cold dugout or creek.
10. **Feeding the Senior Horse** – Start feeding the elderly horse a highly digestible ration *before* he starts declining in health. Once an older horse has lost condition, putting weight back on him is often difficult. A horse's ability to digest feed, especially protein, fibre and phosphorous declines as he reaches and exceeds 20 years of age. Feed a ration that is at least 12 – 14% protein. An ideal ration would be good quality grass/alfalfa hay, a vitamin supplement and free choice clean water and salt. Many feed companies make a complete ration designed for the older horse.

Remember, every horse is an individual and adjustments must be made according to how he responds to feed.

SECTION 2: FEEDING & NUTRITION**Where to Feed**

Feeding in a feeder or pail will help to prevent waste and mess, thus reducing the hay requirements and feed costs. This is also preferred because it will help prevent your horses from reinfesting themselves with parasites as quickly as if they were fed on the ground. Make sure the aggressive horse(s) are not keeping the others away from the feed. If this is happening, it may be necessary to feed in 2 or more places.

Introduce lush grass slowly to your horse. Let their feces be your guide. If diarrhea occurs feed hay until normal manure re-occurs. Managing pastures used by horses is important. Deep hoof prints will tend to kill the roots of seedlings as well as disfigure the terrain. As pasture grasses mature, their nutritional value will decrease and may need to be supplemented with hay and mineral blocks.

Horse Nutrition

Feed can be divided into five main types of essential nutrients. Each type has a different job in the horse's body. The five types are:

- Water
- Energy nutrients (carbohydrates and fats)
- Protein
- Vitamins
- Minerals

If one of these is provided in a limited amount, it will be responsible for limiting the functions of the others even though the others are provided in adequate amounts. Energy is sometimes referred to as Total Digestible Nutrients (TDN). Some nutrition references will measure energy in calories or megacalories.

Water

Horses need a reliable supply of fresh, clean water in all seasons for their bodies to function properly. Horses drink an average of 30 litres of water per day. A horse's water consumption will vary with temperature and activity level. Lactating mares will need additional water.

Energy (carbohydrates and fats)

Energy can be defined as the calories needed to enable the horse to do the work required of him. This "work" can range from standing in a stall to regular riding. Other types of work may be growth, a mare creating a foal during gestation and the work that is necessary for the mare to produce milk during lactation.

The level of energy that is required for the horse will change depending on the types and the amount of activity that the horse is involved in, the conditions in which it is living (such as temperature) and the stage of development (age) it is at.

SECTION 2: FEEDING & NUTRITION

Protein

Protein is highly complex. During the digestion, proteins are broken down into amino acids. These are absorbed from the intestine into the blood stream and carried to all parts of the body. They are recombined to form body tissue and eventually become muscle, internal organs, bone, blood, skin, hair, hooves and many other parts of the body.

Minerals

The mineral content in feed can be determined by chemical analysis. Because the quality and type of hay available to horses changes throughout the year, make sure your horse always has an available supply of horse mineral supplements and salt on a free choice basis. The main concerns are calcium, phosphorus and salt. Cattle minerals and salts are not always suitable for horses.

| Minerals Required by Horses for the Maintenance of Good Health | | |
|---|--|--|
| Name | Source | Function |
| Calcium and Phosphorous (especially important in growing horses) | Hay, oats and mineral supplements | <ul style="list-style-type: none"> • Metabolism • Development of bones |
| Copper and Iron | Hay, oats and mineral supplements | <ul style="list-style-type: none"> • Oxygenation of circulatory system • Also required by digestive system |
| Iodine | Iodized (red) salt (rarely available in sufficient amounts in forages) | <ul style="list-style-type: none"> • Metabolism |
| Sulphur, Manganese, Magnesium and Potassium | Hay and oats, mineral supplements | <ul style="list-style-type: none"> • Metabolism |

Vitamins

Horses only need vitamins in small amounts. They are also essential to the normal body functions and the lack of these may cause diseases. The vitamins are A, C, D, E and the B complex. Most of the vitamins will be received in adequate amounts if the horse is provided with the proper amount of quality feed. The vitamins that is often lacking in the horse's diet is Vitamin A. Vitamin A is made by the horse's body from carotene in green pasture and green leafy alfalfa hay.

Sunshine and sun-cured hay are good sources of vitamin D. Vitamin D is manufactured in the skin by exposure to ultraviolet radiation. Several hours outdoors in the sunlight should enable a horse accumulate adequate supplies.

SECTION 2: FEEDING & NUTRITION

| Vitamins Required by Horses for the Maintenance of Good Health | | |
|--|---|---|
| Name | Source | Function |
| Vitamin A | Converted by the body from the carotene in green forage. Also found in vitamin supplements. | <ul style="list-style-type: none"> Necessary for reproductive, digestive and respiratory systems and for metabolism and growth |
| Vitamin B Complex | Green, leafy grass or hay | <ul style="list-style-type: none"> Metabolism |
| Vitamin D | Sunlight and vitamin supplements. Sun-cured hay. | <ul style="list-style-type: none"> Assists in the assimilation of nutrient calcium and phosphorous for the production of sound bones and teeth |

Judging the Quality of Hay Products

Palatable

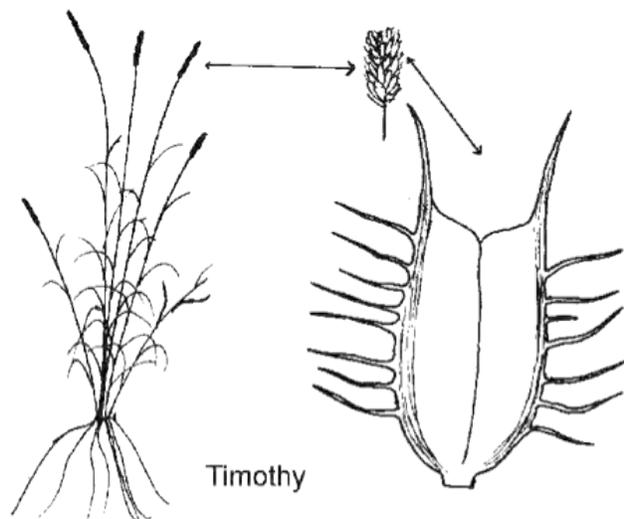
Palatable is a term used to describe feed that is agreeable to the taste of horses. Some feeds are not appetizing to some horses, while they are to others (for example, not all horses like carrots). Some foods are not palatable to any horses because of their taste and/or texture. Make sure the feeds you are offering are palatable to your horse. If he won't eat it, it's not nutrition!

Cleanliness

Hay should not be dusty or mouldy (musty). Smelling the hay can help one to detect this properly. Hay can be broken into two categories; legumes (alfalfa, clover, trefoil and sainfoin) and grasses (orchard, brome, fescue, and timothy). Hay used in Canada



Alfalfa



Timothy

is often grown in mixtures consisting of varying proportions of legumes and grasses. The three most common types of hay for horses in Alberta are Alfalfa, Timothy and Brome grasses. Other types include Crested Wheat, Fescues, Rye Grasses and Orchard Grasses.

SECTION 2: FEEDING & NUTRITION

*Brome grass***Leaf to Stem Ratio**

There should be a greater ratio of leaves to stems. Leaves provide the majority of nutrients so it is important that hay contains a high ratio of leaves.

Purity

It should contain minimal foreign plants such as weeds and other undesirable grasses.

Colour

Hay should be a clean green colour, not brown or black. Green colour signifies that the hay was harvested at the correct growth stage, moisture content and that it was properly stored. It also is an indication that it was able to cure without rainfall

which can reduce the quality of nutrients.

Energy Foods

The grazing horse meets all its energy requirements by eating grass. However, when a horse is kept in a stable and/or put to work, it needs concentrated food in the form of hay and grain to meet its energy requirements. In Canada the conventional grain for horses is oats.

Corn, barley, bran, beet pulp and linseed are sometimes used to supplement the diet.

Feeding too much carbohydrate can cause a horse to get fat or too excitable.

Unless you are going to have your grain mix pelleted, do not grind your horse feed. It is an unnecessary expense. Ideally, corn should be cracked and oats crimped but no more. Ground feeds become dusty, unpalatable and may cause digestive disturbances for your horse. There is no advantage to having grain crushed or rolled.

Oats

Oats can be consumed and digested in larger amounts than any other grain without special preparation and without upset to the digestive system. It is the preferred grain for horses.

In Canada, oats are graded according to: weight per bushel, the variety, the standard of quality, and the content of wild oats and other grains and seeds. These standards are, in order of descending feed values: 1, 2 and 3 Canadian Western and 1, 2 and 3 Feed.

Choosing the grade to use requires consideration of feed value and costs. The recommended grades for horse owners to feed is Number 3 Canadian Western or Number 1 Feed.

*Tall Fescue*

SECTION 2: FEEDING & NUTRITION

Corn

Corn is lower in protein and minerals than other feed grains but energy content is higher. Corn may be fed shelled or cracked.

Barley

Barley is not used widely for feeding horses because it is “*too hot of a feed.*” It has a higher energy content so greater care must be taken to ensure the proper ration is given.

Beet Pulp

Beet pulp is an excellent source of digestible fiber, protein (8 – 12%) and energy. Therefore it is useful for all horses, especially older horses and “*hard keepers*”. It also provides calcium. It is usually fed at about two to five pounds per day, but introduce it slowly. Also, provide adequate water as it is in the form of pellets that need to be rehydrated.

Bran

Bran is the outer layer of the wheat germ and is a by-product of flour milling. It is used to add bulk to grain rations and to influence the horse to chew more thoroughly. It is also a source of thiamine (Vitamin B). In its dry form, one or two handfuls may be added to each feed. As a mash it is mixed with boiling water to produce a heavy thick porridge. Salt is added and it is allowed to cool before feeding.

Flax or Linseed

Linseed is the seed of the flax plant. It is high in protein and oil. Be cautious not to use too much - horses stomachs cannot tolerate high levels of fat. Introduce it slowly to the horse's diet and never feed more than two cups per day (based on an average mature horse.) It is used to put weight on thin horses and adds gloss to the coat. Because of its toughness, linseed must be boiled so that the horse can digest it. It may be soaked for 24 hours and then boiled slowly with frequent stirring until the grains are soft. After boiling the result is a jelly-like substance.

Weight of Feed

Feed all ration ingredients on a weight basis.

It is important that you know how to feed your horse to adequately meet its needs. Ration is the term used for the amount of feed a horse receives. Each horse is different and requires a different ration. The size and age of a horse, the temperature and weather conditions under which the horse lives, and the amount of work it will be doing affect the size of the ration a horse requires. To ensure proper amounts of a balanced ration, feed according to animal weight.

Horse Tip:

A simple rule of thumb for feeding the average saddle horse is to provide about 2.2 percent of the horse's body weight in feed on a daily basis.

Hay or pasture is sufficient feed for a horse that is ridden very little. With increased

SECTION 2: FEEDING & NUTRITION

work, an equal amount of grain should be added as an equal amount of hay is taken away.

For pregnant mares and growing horses, it will be necessary to provide grain even though they are not being worked.

If the horse is getting fat, increase the hay portion and decrease the grain portion. If the horse is a wasteful eater, it needs its teeth checked. If the horse's work load is increased, the grain portion should be increased and the hay portion decreased.

Getting a feed analysis done will allow you to balance your horse's ration based on nutrient requirements for the horse's size and use.

Salt and Minerals

Salt is required for many body functions. A salt block or loose salt lick in your horse's pen or pasture will allow the horse to have as much salt as it needs. The iodine requirements can

be satisfied by using salt blocks that are iodized. Loose salt is recommended for the winter as horses won't lick enough from a block. Horses require additional balanced calcium and phosphorus so a 1:1 livestock mineral should be fed.

Feeding Horses in Light Work

Horses ridden for pleasure, basic equitation or trail riding 3 to 5 times a week are considered to be horses in "light" work. YOU can often meet the additional nutrient requirements of horses in light work simply by increasing the amount of food quality hay you feed, without adding grain to the diet (Table 1 Ration1). Alternatively, some horses may do better with a small amount of grain added to the diet (Table 1 Ration 2 or 3).

Table 1: Examples of Feeding Programs for 1100-lb (500-kg) Horses in Light Work

| Feed | Ration 1 | Ration 2 | Ration 3 |
|--------------------------|--------------|------------------|------------------|
| Alfalfa/Grass Hay | 20 lbs (9kg) | 14 lbs (6.5kg) | -- |
| Grass Hay | -- | -- | 16 lbs (7.25kg) |
| Oats | -- | 3-4 lbs (1.75kg) | -- |
| 12% Grain Mix | -- | -- | 3-4 lbs (1.75kg) |
| 18:18 Mineral | 1 oz. (28g) | 1 oz. (28g) | 1 oz. (28g) |
| TM Salt | free choice | free choice | free choice |

Horse Tip:

Most families have a small scale for measuring portions or use a bathroom scale. If you do not have a small scale, take a plastic bucket and weigh it on a bathroom scale. Take the total weight of the bucket and divide it to get your estimated weight per feeding.

Always recalculate your feed weights when changing batches of feed, feed types or feed suppliers.

SECTION 2: FEEDING & NUTRITION

Feeding Horses in Moderate Work

“*Moderate*” work includes barrel racing, ranch work, team penning, cutting, and jumping, amongst other activities. Horses in moderate work usually require additional grain to the diet, because they may not be physically capable of eating all the hay needed to provide adequate energy in the diet (Table 2).

Table 2: Examples of Feeding Programs for 1100 lb. (500kg) Horses in Moderate Work

| Feed | Ration 1 | Ration 2 | Ration 3 |
|-------------------|---------------|-------------------|------------------|
| Alfalfa/Grass Hay | 25 lbs (11kg) | 15-17 lbs (7-8kg) | -- |
| Grass Hay | -- | -- | 18 lbs (8kg) |
| Oats | -- | 5-7 lbs (2-3kg) | -- |
| 12% Grain Mix | -- | -- | 3-4 lbs (1.75kg) |
| 18:18 Mineral | 1 oz. (28g) | 1 oz. (28g) | -- |
| TM Salt | free choice | free choice | free choice |

Feeding Horses in Intense Work

Horses competing in Quarter horse, Thoroughbred or Standardbred racing, endurance riding, or polo are performing “*intense*” work. These hard working horses usually require large amounts of grain to meet increased energy needs (Table 3). A dietary fat source should be considered for horses in heavy work. Substituting some of the grain with a vegetable oil (corn, canola, soy, etc) can reduce the amount of grain required, thereby decreasing the risk of colic and laminitis associated with high-grain diets.

Table 3: Examples of Feeding Programs for 1100-lb (500-kg) Horses in Intense Work

| Feed | Ration 1 | Ration 2 | Ration 3 |
|----------------------------------|-------------------|-------------------|-------------------|
| Alfalfa/Grass Hay | 15-17 lbs (7-8kg) | -- | -- |
| Grass Hay | -- | 17-19 lbs (8-9kg) | 17-19 lbs (8-9kg) |
| Oats | 10-11 lbs (5kg) | -- | -- |
| 12% Grain Mix | -- | 10-11 lbs (5kg) | 8.5-9.5 lbs (4kg) |
| Oil
(corn, canola, soy, etc.) | -- | -- | 1 cup (250mL) |
| 18:18 Mineral | 1 oz. (28g) | 1 oz. (28g) | 1 oz. (28g) |
| TM Salt | free choice | free choice | free choice |

SECTION 2: FEEDING & NUTRITION

Winter Feeding of the Horse

Cold weather can take the joy out of riding so the horse is often forgotten during the winter. Many horses are turned out on old pasture or cropland to forage for the winter. Watch your horses to make sure they are not losing weight. If they begin to, increase their feed.

There are a number of things we can do to make our horses more comfortable. A horse that is well fed does better for several reasons. The body has the nutrients it needs to maintain itself and produce body heat. If the weather becomes very cold increase

the amount of feed to provide extra energy to keep the horse warm.

Horse Tip:

A useful rule of thumb to use when calculating the feed a horse needs when it is cold is for every degree below minus 15 degrees Celsius, increase feed by 2 ½ percent (or ½ pound per degree for the average horse).

For winter maintenance, it is best to feed increased hay, as it gives off more heat during digestion than grain does. Increase the hay until it is no longer practical, then add grain if necessary. This will be in the 2 ½ to 3 percent of body weight and will depend on the quality of the hay.

Horses must have clean free choice water to drink. The water should be warmed slightly (two to three degrees Celsius). A horse eating snow will feel the cold more than a horse that has water supplied daily. The interior heat from its body will have to be used to melt and warm the snow - using more energy (feed). A horse on dry feed during the winter must have access to water, not just snow.

Feeds a Horse Should NOT Receive

Not all feeds found on farms are safe for horses. Here are some things to avoid:

- Urea (non-protein nitrogen supplement)
- Rumensin (an additive found in prepared livestock feeds. It causes death in horses)
- Added Selenium
- Frozen silage
- Commercial cattle and chicken feed or any feeds formulated for other types of livestock
- Mouldy hay (particularly clover)
- Salt water
- Mouldy grain
- Treated grain that will be used for seed

SECTION 2: FEEDING & NUTRITION

- Hay containing blister beetles or known poisonous weeds
- Large amounts of bread
- Poisonous plants (Japanese yew; white snakeroot; leaves from black walnut; red maple, apricot, oak and apple trees; some fescue grasses, bracken fern, horsetail, deadly nightshade, poison hemlock, larkspur, milkweed, jimson weed, rhubarb leaves, ragwort and oleander).
- Don't let a horse lick old fertilizer bags (ammonia poisoning), old paint, pesticide containers (arsenic poisoning) and discarded batteries (lead poisoning).
- Feed additives, such as growth stimulants and antibiotics, have not been proven beneficial to the horse. Feeds containing these products should be avoided.

Feeding Problems

Most feeding problems are prevented by ensuring that good feed management practices are followed. However, some problems may occur. Be observant and feed each horse as an individual. No two horses have the exact same needs. A good horse person should know the signs of a well-fed, healthy horse and any signs to the contrary should be a warning and corrected.

Bolting Feed

Bolting feed (grabbing at the feed and swallowing without adequately chewing it) can be a serious problem. Feeding horses with this habit at the same time every day and offering some hay before grain can help to reduce nervous energy. Spreading grain out thinly at the bottom of a large manger or putting large (softball-sized) rocks in the manger can help slow the horse down in its eating habits.

Feeding a Horse with Heaves

Dampen all hay and loose grain to reduce any dust or feed the horse a pelleted ration. Keep the horse outside as much as possible, away from dusty pastures and areas.

Feeding a Horse That is Prone to Colic

Maintain a constant de-worming program. A non de-wormed horse needs at least 10 percent more feed daily to maintain condition; this can add up to between \$35 to \$70 per year. An even more serious consideration is that internal parasites predispose a horse to colic. Have the veterinarian perform a fecal exam to ensure the cause of the colic's frequency. Bran mashes and small amounts of hay are safe for a horse susceptible to colic.

Feeding a Horse That is Prone to Stocking Up

Cut down the grain amount of $\frac{1}{3}$ or $\frac{1}{4}$ of the usual ration. This type of horse must have regular exercise and not be kept in a stall 24 hours a day.

SECTION 2: FEEDING & NUTRITION

Feeding a Sick Horse

Offer small quantities of food at frequent intervals. The food should be easily digestible, nutritious, laxative and easily swallowed. If the horse has a fever, avoid feeding legume hays that are high in nitrogen.

For respiratory infections, feed low to the ground to encourage nasal discharge. For diarrhea, feed alfalfa hay because it binds with water. Consult with your veterinarian.

Common Foods for Sick Horses Include:

Bran Mash - Add boiling water to half a pail of bran. To increase palatability, add molasses, ½ tablespoon (7mL) of salt and some oats. Mix well and cover for 1 to 2 hours. Feed when cool. Remove uneaten portions after an hour because a bran mash will sour quickly if allowed to remain in the bucket.

Bran and Linseed Mash - Mix one pound of flax to three quarts of water and boil for two hours. Add two pounds (900g) of bran and one ounce of salt. Stir and allow cooling before feeding.

Hay Tea - Fill a bucket full of good quality hay. Pour boiling water over the hay, cover the bucket and allow it to steep until cool. Remove the hay and offer the “tea” for the horse to drink.

Scalded Oats - Pour boiling water over three pounds (1.35kg) of rolled oats. Allow the mixture to stand for twenty minutes. Pour off any excess water and feed the oats to the horse.

SECTION 2: FEEDING & NUTRITION**BEFORE THE NEXT MEETING**

Try one of these activities at home.

1. Practice making one of the horse “remedies”. Feed it to a horse, even if it isn’t sick. It might appreciate the special treat!

AND/OR

2. Look in your kitchen at several different kinds of packaged foods to look at the nutritional information of the food you eat.

DIGGING DEEPER I

For Senior Members

Design Your Own Horse Caecum Model

Using a five gallon (20L) plastic water jug (it can be obtained from a drinking water company), create a replica of the horse's caecum.

Add a mixture of hay, water and bacteria (obtain the bacteria by adding some fresh horse manure) to the jug. Cap the jug using a secondary fermentor stopper (used in beer production) to allow the carbon dioxide to escape while keeping oxygen out.

Take pictures of your Caecum replica and take notes as to what happened each day. Research, either on the Internet or at the library, as to what reactions are taking place inside the jug. Record your findings in your Record Book.

DIGGING DEEPER II

For Senior Members

Why Do Horses Need Pollinators?

Many crops need pollinators including crops that horses eat. Without pollinators, a horse's diet would look quite different.

Make a list of feeds that a horse would eat throughout its lifetime. Then, find out if those feeds self-pollinate or if they require some other type of pollination in order to produce.

Once your list of crops and how they are pollinated is made, try to create a balanced ration for a horse using only crops that self-pollinate (i.e. they don't use wind, water, bird or insect pollination). Present this ration, if you are able to create once, at your next meeting.

SECTION 2: FEEDING & NUTRITION**ACTIVITIES****Activity #1 - Horse Feeds Word Search*****Items Needed:***

- Horse Feeds Word Search (found at the end of this meeting)
- Writing Utensils (pens/pencils)

Instructions:

1. Give each member a Horse Feeds Word Search.
2. Have members work as individuals or in pairs to find the list of words.
3. Review where each word was found in the word search and how the word plays a part in the nutrition of a horse.

Activity #2 - Feed Storage

Horse owners are careful to buy the best hay and concentrates for their animals. They also spend a lot of money on feed for their horses. However, many fail to plan how they will store feed to keep it from spoiling. Horses will not eat spoiled or dusty feed as it is unpalatable and may cause health problems. One way to solve potential problems is to conduct experiments to see what the best solution might be.

Items Needed:

- Four one-cup (250mL) samples of four grains (you will have a total of 16 grain samples)
- Four samples of each of two different types of hay (you will have a total of 8 hay samples)
- 24 re-sealable sandwich bags
- Feed Storage Findings worksheet (found at the end of this meeting)
- Writing utensils (pen/pencil)

Instructions:

1. Place each sample in a bag and sort one of each sample into four sets. Prepare each set according to the following directions:
 - Set 1: Wet/dry samples - cover with water, drain, seal, label and store in a dark room
 - Set 2: Wet/sun samples - cover with water, drain, seal, label and store in the sun
 - Set 3: Frozen samples - cover with water, drain, seal and store in the freezer
 - Set 4: Control group - label and store in a clean, dry, cool place. Do not cover or seal.
2. After two, five, seven and ten days, examine each of the samples and record changes in appearance, smell and texture of each sample set.

Activity #3 - What Goes In Must Come Out

Items Needed:

- Horse
- Penning
- Horse feed & feeding bucket
- Weigh scales

Instructions:

1. Place a horse in confinement for one day.
2. Weigh food intake and fecal output for one day to estimate how efficient the horse is in digesting food. This will provide a rough estimate as some of the undigested feed is expelled through the horse's urine.

Ask members the following questions:

- What was the difference in food intake minus fecal output?
- Is the horse very efficient in digesting food?
- What do you think happened to the digested food that wasn't expelled as fecal material?
- Do you think if the horse ate a different diet, if there would be a different result?

Activity #4 - Judging Hay

Items Needed:

- 4 samples of hay
- Judging Scorecard (found at the end of this meeting)
- Pen/pencil

Instructions:

1. Discuss criteria for what you are looking for in an ideal sample of hay, based on the desired qualities of hay discussed during this meeting.

Palatable
Clean
Leaf to Stem Ratio
Purity
Colour
Smell

2. Have four samples of hay labelled 1, 2, 3 and 4.

SECTION 2: FEEDING & NUTRITION

3. Using the Judging Card, found at the end of this meeting, have members judge the samples of hay, writing down their placing of the hay and their reasons for their placings.
4. Have senior and/or experienced members give oral reasons for their choices.

Discussion/Comments - Discuss the importance of judging in regards to assessing quality.

A set of reasons is meant to compare the differences in the items that were judged, in this case horses. Your reasons explain why you placed the class the way you did. The most important reasons should be first and the least important last. Make sure you aren't just describing the articles. You must compare them. Try to have a least two or three points for each comparison. This will ensure that you stay within any time limits. As you gain confidence and experience, you may wish to add more reasons

Activity #5 - Horse Feed Labels**Items Needed:**

- Labels from various types of horse feed

Instructions:

1. Obtain a number of feed lables from various horse feeds (or have members bring labels from home or obtain them from a local feed store).
2. Have members compare the dietary information on the labels. Make sure they compare energy (carbohydrates), protein, mineral and vitamin levels between the various labels.

Ask members the following questions:

- Which feed label has the most energy? Protein? Vitamins? Minerals?
- Which feed would be best for a horse that is intensely worked? Moderately worked? Not worked at all?
- Which feed would be best for a pregnant mare?
- Which feed would be best for a senior horse?

SECTION 2: FEEDING & NUTRITION

Horse Feeds Word Search

J V G W W J V S S V P B E F E P Z S B P
 Q I N G F G E D T N G E Q T M F U L A H
 Q L O U W S G V I A I D L G W P Y A R B
 I K L P S U E V U Y O M A L P T N R L L
 R P S A Z X T O B O N H A L E V G E E E
 L C L Q T Q A N C E S P E T Y T U N Y L
 Y O N J E V B R F A U M T Z I K S I L E
 M K Z G I U L O M S E P A L N V B M C G
 O Y V C Y C E C G N R E T A W N J H Z O
 X X L F U Z O X T A L F A L F A D M P Z
 L H E B S E I S T H D R Y V O U S E K R
 Y A E Q B T L Y F S G Q U Z K G X B F W
 B S X C J I U L P E B P O I Z A A C B N
 M B K C C N M S Z U A L A H G Y I D I Y
 T Y D G Y A H S S A R G V S B Y P G J P
 G O N A M R A E M R F F T Y P Z V O F Q
 L J L M R Q V C V O J V X S X J Z U Z O
 J Q O U H N J B N R J X U Z K A U C F S
 X O M Z B N N I T I U S I Q X M S P X Y
 B M Q Y Z J K S T D B B Z V C U K B F G

ALFALFA
BARLEY
CORN
CUBES
GRASS HAY
MASH
MINERALS

MOLASSES
OATS
PELLETS
SUPPLEMENTS
VEGETABLE OIL
VITAMINS
WATER

SECTION 2: FEEDING & NUTRITION

Feed Storage Findings

| Sample | Day Two | Day Five | Day Seven | Day Ten |
|--------------------|---------|----------|-----------|---------|
| Set 1: Wet/Dry | | | | |
| Set 2: Wet/
Sun | | | | |
| Set 3: Frozen | | | | |
| Set 4: Control | | | | |

SECTION 2: FEEDING & NUTRITION

Judging Hay

Judging Card

Criteria:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Giving Reasons:

I place this class of _____, _____, _____, _____.

I place _____ first because.....

I place _____ over _____ because.....

I place _____ over _____ because.....

I place _____ over _____ because.....

I place _____ 4th because.....

For these reasons, I place this class of _____, _____, _____, _____.

Official Placing _____.

MEETING 13: CHEW ON THIS

Topic:

- Caring for a horse's teeth
- The relationship between age and teeth

Objectives:

- To learn about the different teeth a horse has
- To become aware of good practices to look after a horse's teeth
- To age a horse based on its teeth

Roll Calls

- What should you do to take care of a horse's teeth?
- How are a horse's teeth different from our teeth?

Sample Meeting Agenda – 2 hrs. 5 minutes

| | | |
|---|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review information about horse's teeth. | 40 min |
| Public Speaking/Judging Activities
Activities Related to Topic | Choose from Activities #1, #2, #3 #4 and/or #5 (Horse Teeth, Model Teeth, Whose Teeth Are Better?, Horse Teeth Crossword Puzzle) (instructions found at the end of this meeting). | 60 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 2: FEEDING & NUTRITION

Topic Information

Teeth

The front biting teeth of the horse are called incisors. Incisors are broken down into central incisors, lateral incisors and corner incisors.

The rear, grinding teeth of the horse are called molars. Between the molars and incisors, there is a gap called the interdental space or bars. On a mature horse, behind this space are the six molars on each side that are used for grinding feed. The front molars are called premolars. The molars grind feed by lateral movement of the lower jaw against the upper jaw.

Caring for a Horse's Teeth

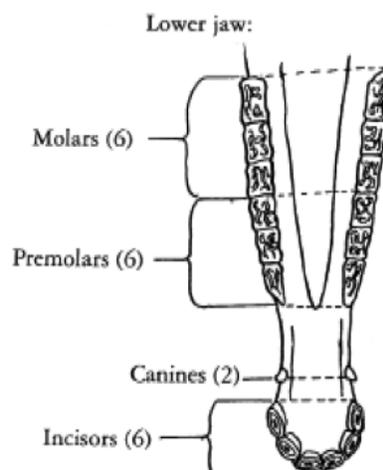
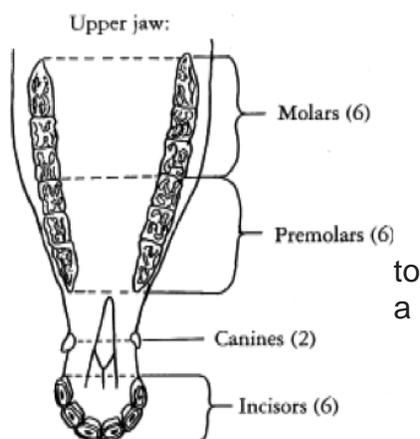
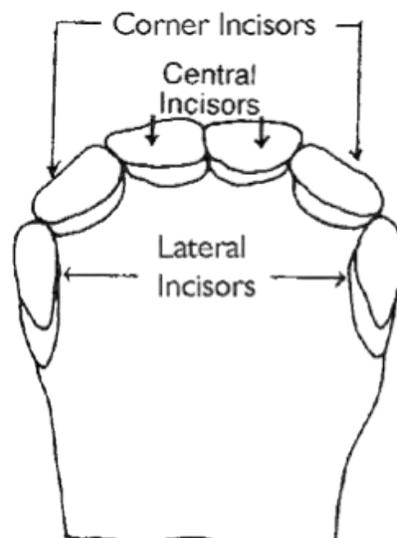
It is important watch that the first step in horse's digestive system is working properly. The teeth must grind the feed adequately for digestion to occur.

Horses use their back molars for grinding feed. Grinding is accomplished by side to side movement of the lower jaw against the upper. Problems occur when this lateral movement is inadequate or tooth surfaces are uneven. The sharp edges may become unduly long and frequently interfere with the horse's chewing. Signs that a horse may need some dental work include:

- Mounds of partially chewed food are found in the manger
- A large number of unbroken oats are found in the manure

It will cock its head, spill food from its mouth and obviously have a hard time eating.

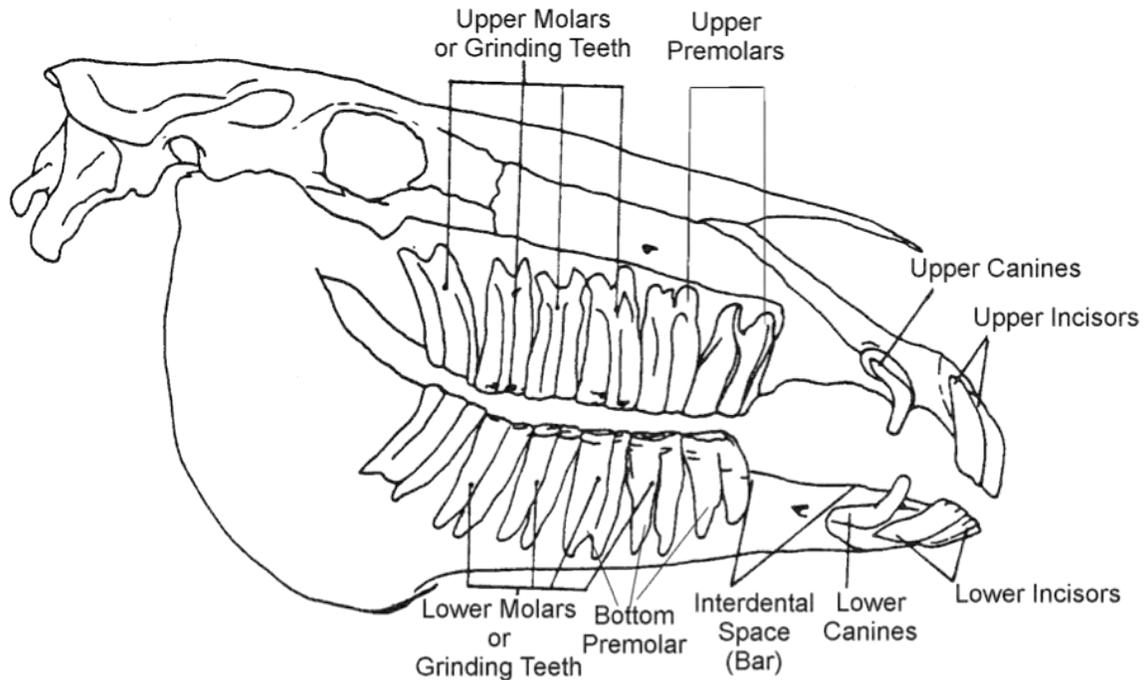
If these signs are found, have the teeth examined by your vet. If there is a problem, your vet will recommend having the horse's teeth floated to remove any sharp edges. Once the horse's teeth have been floated, the horse will be able to utilize the grinding surface more efficiently. A horse's teeth need to be examined once a year. A good time to do it is when you are vaccinating or deworming.



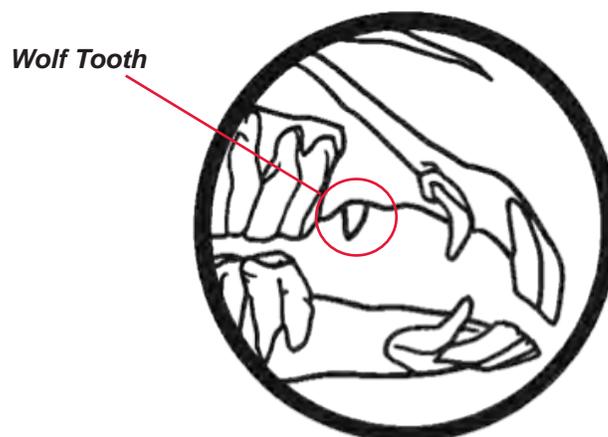
SECTION 2: FEEDING & NUTRITION

Canines (Tushes or Bridle) Teeth

These are all commonly used terms to describe the smaller teeth that grow about halfway between the premolars and the incisors in the interdental space. Geldings and stallions only develop these teeth at about four years of age. They are not removed but they may require occasional trimming to keep them shorter than the incisors so that they do not interfere with bridling. Mares do not usually get bridle teeth.

**Wolf Teeth**

Wolf teeth are very small rudimentary teeth that sometimes develop in front of the premolars. They usually grow in at one to two years of age and both colts and fillies can have them. They are more commonly found on the upper jaw, but can develop on the lower jaw as well. They should be removed because they can break easily and cause problems with bridling.



SECTION 2: FEEDING & NUTRITION

Number of Teeth

Some identifications can be made by the number of teeth a horse has:

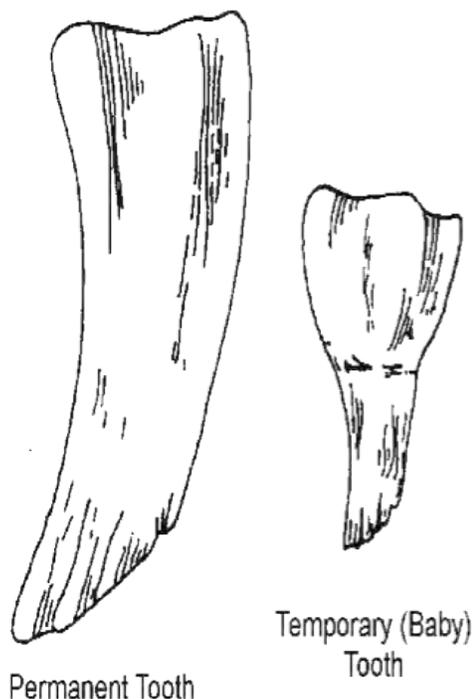
| | | | | | |
|----------|-------------|----------|-------------|----------------|------------------|
| Foal | 12 molars | Mature | 24 molars | Mature | 24 molars |
| | 12 incisors | Mare | 12 incisors | Stallion/ | 12 incisors |
| <hr/> | | <hr/> | | <u>Gelding</u> | <u>4 canines</u> |
| 24 teeth | | 36 teeth | | 40 teeth | |

Teeth and Age

Teeth can be used to determine the age of a horse. In time, the teeth of the horse change according to a known pattern. The method is reasonably accurate, but it may be affected by the type of feed the horse eats and the habit of cribbing.

When a foal is first born, it has no incisors. The first two central incisors (upper and lower) appear within ten days. The next incisor (corner) on each side will appear up to six weeks later. The lateral incisors grow in when the horse is six to ten months of age.

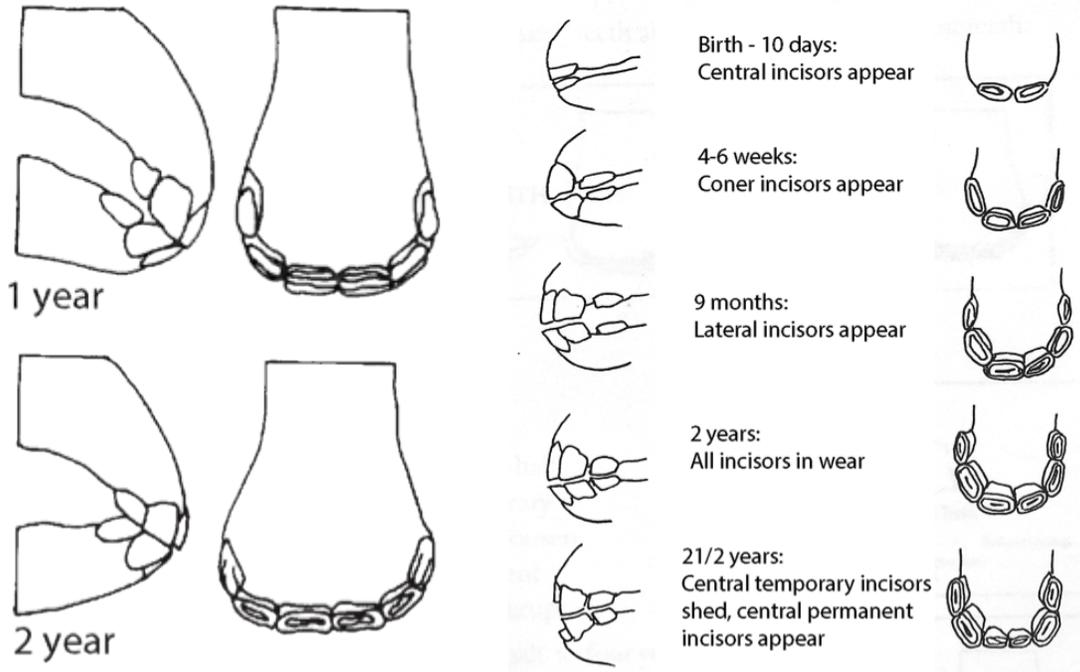
In a young horse, it is easy to identify baby teeth and permanent teeth. Baby teeth are round, white and have a narrow base. Permanent teeth are yellow and are an even width from top to bottom.



SECTION 2: FEEDING & NUTRITION

First Period

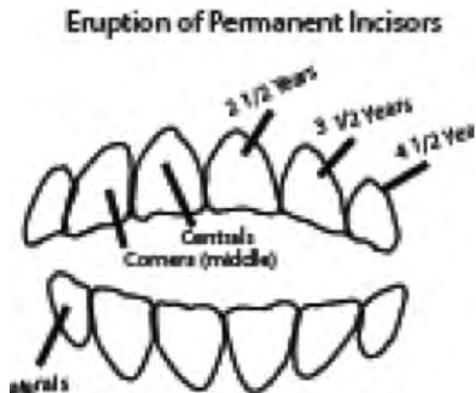
This period covers the growth and use of “baby” teeth. The “baby” teeth all appear and are being used by 2 years. Temporary “baby” teeth are replaced with permanent teeth.



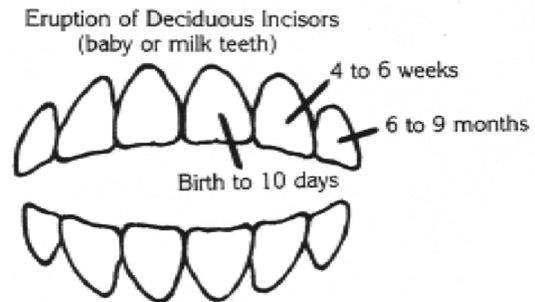
Foal To Two And A Half Years

Second Period

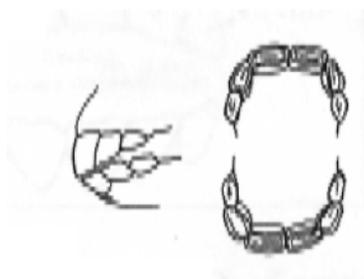
- After two and a-half years the temporary central incisors loosen and the permanent central incisors erupt.
- Three and one-half to four years, the permanent corner incisors erupt.
- Four and one-half to five years, the permanent lateral incisors erupt.



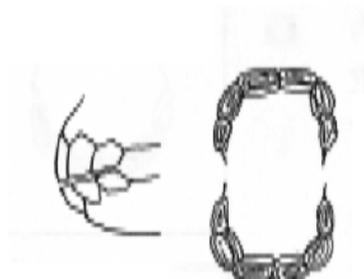
Appearance and Wear of Permanent Teeth



SECTION 2: FEEDING & NUTRITION



**3 years: Permanent
centrals in wear;
permanent corners
appear**



**4 years: Permanent
corners in wear;
permanent laterals**



**5 years: "Full
mouth"; all
permanent teeth in
wear**

Third Period

This is the period noted by the wearing of the lower incisors and the disappearance of the cup.

- Six years of age is estimated by the size, shape and disappearance of the cup of the tooth. The cup will be gone by the time the horse is 10 to 12 years old. The cup does not disappear from all of the incisors at the same time. At age six, the cup disappears from the lower central incisors.
- By eight, the cups have disappeared from the central, corner and lateral incisors of the bottom jaw.

All the cups of the top and bottom incisors will be gone by the time the horse is 10-12 years old.

SECTION 2: FEEDING & NUTRITION

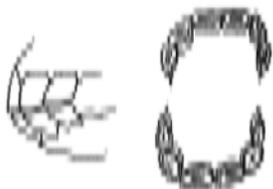
6 years: Cups gone in lower central incisors



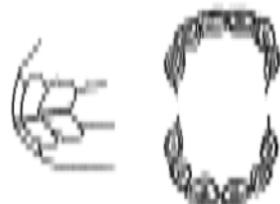
7 years: Cups gone in lower corners, hook on upper lateral



8 years: Cups gone in all lower incisors; dental star appears



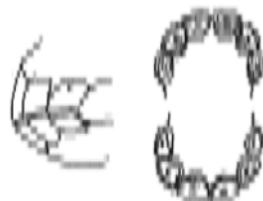
9 years: Cups gone in upper centrals; dental stars present



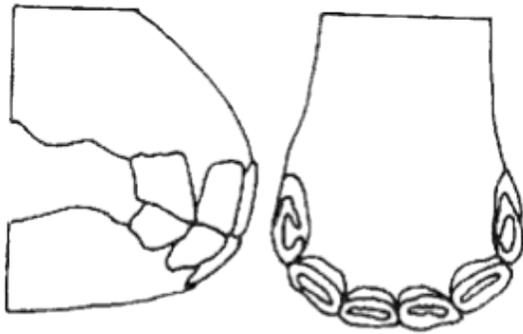
10 years: Cups gone in upper corners; Galvayne's groove appears



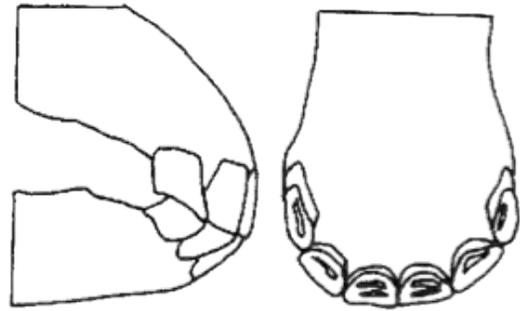
11-12 years: All cups gone; "smooth mouth"



SECTION 2: FEEDING & NUTRITION



6 years

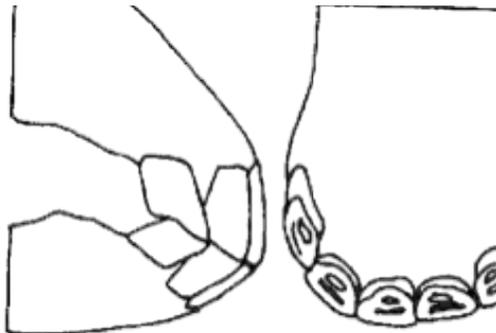


8 years

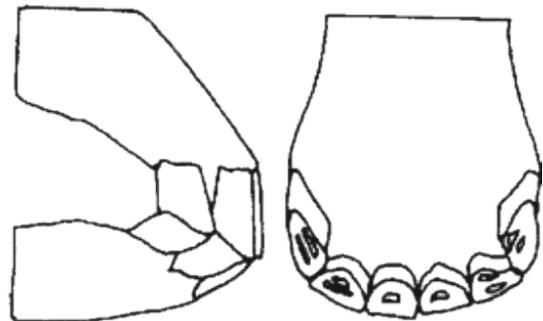
Fourth Period

This period is noted by further wearing of the teeth, including the upper incisors and the angle of the teeth.

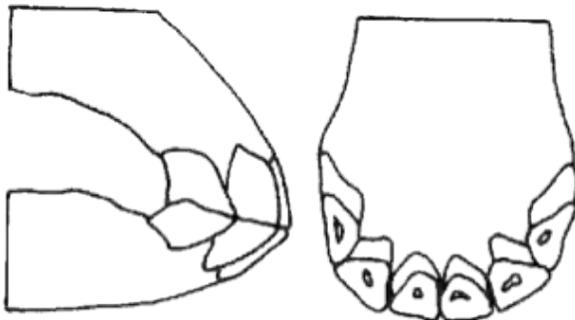
- After nine years it is difficult to age a horse accurately by its teeth. The most noticeable change is in the tooth angle which slants outward further as the horse ages. By 12 years of age, the dental cup disappears in the upper incisors and the horse has what is called a “smooth mouth.”
- At 15 years the dental star is smaller, but centred and clearer.
- After 20 years of age, the teeth may become shorter. Space between the incisors may increase. The angle of the tooth from the gum to the crown slants further.



10 years



12 years



15 years

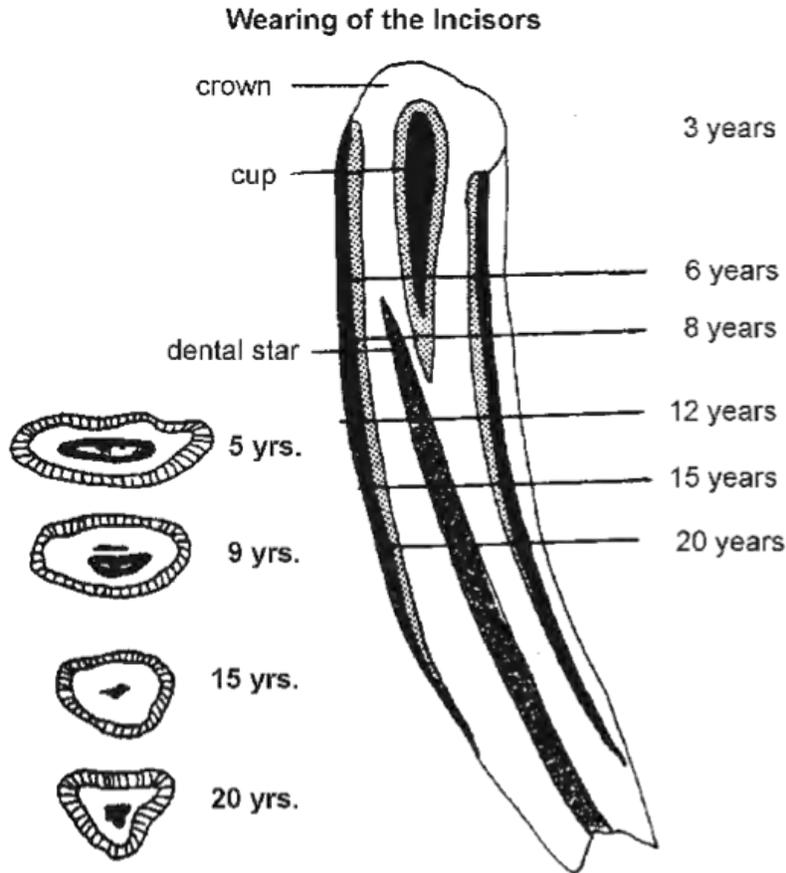
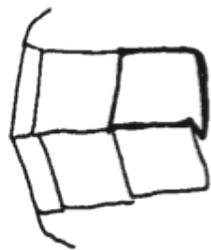


19-20 years

SECTION 2: FEEDING & NUTRITION

Other Clues to a Horse's Age

As a horse uses its front teeth, they wear. The diagram shows how, after 5, 9, 15, and 20 years, the crown, cup and dental star wear down.

**Changes in the Upper Corner Incisors**

7 year hook

Seven Year Hook

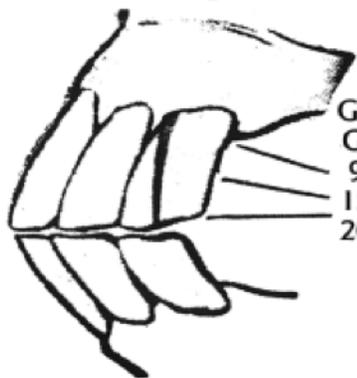
At seven years of age, a hook appears on the edge of the upper corner incisor. This hook disappears by eight or nine years of age.

Galvayne's Groove

Galvayne's Groove is a groove that appears on the outer surface of the upper lateral incisor teeth. It appears at about nine to ten years of age at the top of these teeth and develops down the tooth as the horse ages. At 15 years, it will have developed more than a half of the way down the upper lateral incisors. By 20 years it reaches the bottom of the lateral incisor teeth. After 20 years old, the Galvayne's groove gradually disappears from the top down and cannot be seen in a thirty year old horse.

SECTION 2: FEEDING & NUTRITION

Galvayne's Groove

| | |
|---|---|
|  <p><i>Starts at 9 to 10 years old</i></p> |  <p><i>Half way down at 15 years of age</i></p> |
|  <p><i>Full length at 20 years of age</i></p> |  <p><i>Begins to recede from gum line at 20 years</i></p> |
|  <p><i>Half way gone at 25 years of age</i></p> |  <p><i>Completely gone at 30 years of age</i></p> |
|  <p>Galvayne's Groove at
9 years
15 years
20 years</p> | |

SECTION 2: FEEDING & NUTRITION

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Take a good look at a horse's teeth. What kind of shape are they in? Does it have the "right number of teeth" for its age?

AND/OR

2. Have either a veterinarian or an experienced horse person show you how they administer a dental exam for a horse. If possible, take pictures of the horse's mouth, put the pictures in your Record Book and include notes about what the person administering the dental exam had to say about the teeth.

SECTION 2: FEEDING & NUTRITION**DIGGING DEEPER****For Senior Members****Horse Dentistry**

Regular dental checkups by a veterinarian should be included in every horse's health care program and horses need to have their teeth floated on a regular basis. Floating means removing and/or repairing any irregularities that may have developed with a horse's teeth to make it easier for your horse to chew his food.

Horses live by their ability to chew. Badly chewed food leads to poor absorption of the critical calories, minerals and other nutrients a horse needs to maintain weight, keep a balanced metabolism, have energy and generally stay healthy. Horses are also at risk for many other health problems resulting from the condition of their teeth and mouth.

Investigate what the process is for properly floating a horse's teeth, how often it should be done and what the costs are associated with having your horse's teeth floated.

Record your findings in your Record Book and be prepared to share the information you have found with the members of your club at the next meeting.

ACTIVITIES

Activity #1 - Horse Teeth

Items Needed:

- Teeth worksheet (found at the end of this meeting)
- Writing Utensils (pens/pencils)

Instructions:

1. Have members work individually or in pairs.
2. Using the material in this meeting, and doing further research online or using books, have members fill in the chart.
3. Review the chart, ensuring that all members have the chart filled in correctly.

Activity #2 - Model Teeth

Items Needed:

- Red and white play dough
- Paper plate

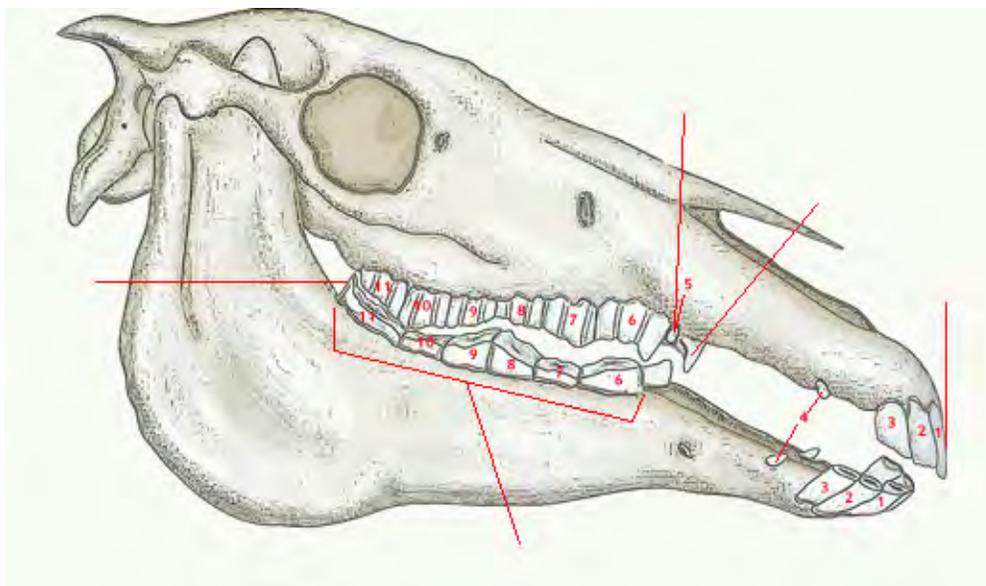


Diagram courtesy of <http://www.omegafeeds.com.au/blog/importance-of-dental-care>

Instructions:

1. Have members work individually or in pairs.
2. Using information from this meeting and the diagram above, have members create a model of the teeth found in an adult horse.

SECTION 2: FEEDING & NUTRITION

3. Use the red play dough to create the jaw/gums.
4. Using the white play dough to create the teeth.

Activity #3 - Whose Teeth Are Better?***Items Needed:***

- Apples
- Kid's wading pool (2)
- A hungry horse!

Instructions:

1. Fill each wading pool with water and apples.
2. Have members circle around one of the wading pools and let the horse have the other wading pool.
3. Have the members (holding their hands behind their backs) and the horse bob for apples and see who can pick up an apple first!

Ask members the following questions:

- If the horse got an apple first, why do you think the horse was so quick? (larger teeth (incisors), hungry horse)
- Why is it harder for humans to pick up food with their teeth?
- Do you think horses like apples? (yes, horses like succulent foods)

Activity #4 - Horse Teeth Crossword Puzzle***Items Needed:***

- Horse Teeth Crossword Puzzle worksheet (found at the end of this meeting)
- Writing Utensils (pens/pencils)

Instructions:

1. Give each member a Horse Teeth Crossword Puzzle worksheet.
2. Have members complete the worksheet using the information from this meeting.
3. Review the questions and answers that members came up with to ensure all members have the correct answers.

SECTION 2: FEEDING & NUTRITION

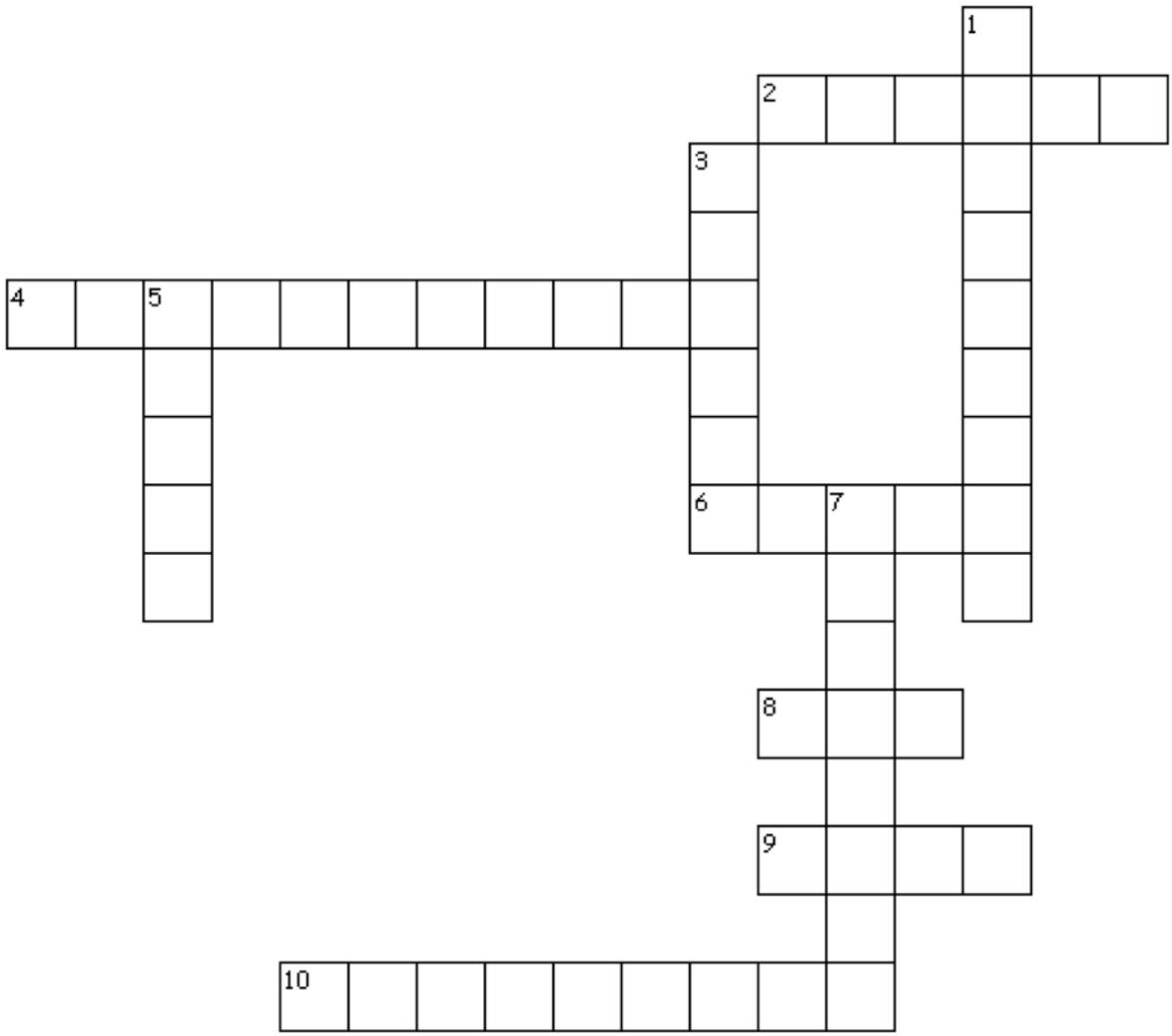
Teeth

How many teeth do the following horses have?

| Horse | # of Molars | # of Incisors | # of Canines | Total # of Teeth |
|---------------------|-------------|---------------|--------------|------------------|
| Foal | | | | |
| Mature Mare | | | | |
| Stallion or Gelding | | | | |

SECTION 2: FEEDING & NUTRITION

Horse Teeth



Across

- 2. The rear grinding teeth of the horse
- 4. The name of the space between the molars and incisors
- 6. The colour of baby horse teeth
- 8. The number of molars on each that are used for grinding feed
- 9. When a horse is seven years old, this appears on the upper corner incisor
- 10. The name of the front molars

Down

- 1. The name of the groove that appears on the outer surface of the upper lateral incisor teeth at about ten years of age
- 3. The colour of permanent horse teeth
- 5. This can be used to determine the age of a horse
- 7. The front biting teeth of the horse

SECTION 3: HORSE HEALTH & CONCERNS

MEETING 14: GENERAL HEALTH

Topic:

- Physical appearance and attitude
- Body functions and conditions
- Injections and vaccinations

Objectives:

- To learn how to look for signs of good and ill health.

Roll Calls

- Name three things that you must do to maintain a horse's health.
- Name one physical characteristic of horse that is not feeling well.
- Name a disease that a horse might be vaccinated for.

Sample Meeting Agenda – 2 hrs. 10 minutes

| | | |
|-------------------------------------|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Physical Appearance and Behaviour of Horses. | 15 min |
| Public Speaking/Judging Activity | Activity #1 – Horse Behaviour Memory Game (instructions found at the end of this meeting) | 20 min |
| Topic Information Discussion | Review what Body Functions, Vital Signs in Horses, General Condition, Working Condition and Vaccinations. | 30 min |
| Activities Related to Topic | Choose from Activities #2, #3, #4 and/or #5 (Horse Observation, Horse Health, Fecal Collection Demonstration, Fecal Judging) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Activities can be interspersed with Topic Information.

SECTION 3: HORSE HEALTH & CONCERNS**Topic Information**

You feed and care for a horse because you want it to maintain a physical condition so that it feels good and works well. This seems simple, but there are many things that affect the well-being of a horse.

An important part of health in the horse is to learn what is considered normal. After that, it will be easy for you to spot an abnormal health condition. Knowledge of the signs of good health as well as ill health in the physical appearance of the horse, attitude and body functions is very important.

Physical Appearance

It is possible to look at a horse and determine its health. The old saying “*bright eyed and bushy tailed*” can easily be applied to horses.

The ears should be forward and the eyes should have brightness to them. The membranes surrounding the coloured portion of the eye should have a healthy, pinkish colour and appear moist. During an illness the eyes may appear to sink back into the skull, usually due to dehydration.

Colour of Mucous Membranes

The colour of the horse’s gums, the lining of the eyelids and the nostrils can provide information about a horse’s overall condition and circulatory function.

- Glistening, pink gums indicate healthy, normal
- Very pale or white gums indicate anemia or blood loss. They can also indicate poor blood circulation such as during shock
- Bright pink and inflamed gums indicate a lack of moisture
- Bright red gums indicate a toxic condition
- Gray or blue gums indicate severe shock
- Bright yellow gums are linked with liver problems

Skin Condition

The condition of the hair and skin can tell us many things. A horse with parasites may have a rough, dull coat. Poor nutrition will also dull the hair and a fever will cause the hair to stand up. A horse in good condition will have a shiny, soft coat of hair. The summer hair coat will lie smoothly.

Skin health will affect the hair coat, since the oil that gives the hair its shine comes from oil glands on the skin. The skin should have a slightly shiny appearance with a minimum of dry, flaking skin. Dandruff and skin irritations will damage hair in that area of the body.

The skin should also have an elastic quality. If you pinch a fold of skin along the neck and release it, it should spring back into place immediately. Poor body condition or

SECTION 3: HORSE HEALTH & CONCERNS

dehydration can leave a wrinkle that is slow to disappear. This is called 'tenting' of the skin.

Skin Pinch Test

This test is done to check for dehydration. Horses require lots of water and dehydration can be fatal. To check for dehydration, pinch the skin on the horse's neck. The pliability and resiliency of the skin is a good indication of the level of hydration. To determine if a horse is dehydrated, perform the pinch test.

To perform a pinch test:

Pick up a fold of skin in the shoulder or neck region and then release it. It should return to its flat position almost instantaneously, within a second or two. If the skin remains peaked for more than two seconds, this is termed a "standing" tent and indicates some degree of loss of body fluid. If the standing tent is 5 to 10 seconds or longer, the horse is suffering from moderate to severe dehydration and needs immediate veterinary attention.

Capillary Refill Time

The capillary refill time is a way of checking if the circulatory system is functioning correctly. Therefore, it is a helpful measure for detecting colic. This is measured by lifting the horse's upper lip and pressing down with your thumb on the gum directly above its front teeth. When you remove your thumb, a white spot will appear. Count two seconds and the white spot should disappear and the depressed spot should look normal. If the spot takes longer than two seconds to return to normal, the circulatory system is slow.

Behaviour

The behavior of the horse is the best indicator of how the horse feels because often behavior will change before other signs of illness are visible for diagnosis. In general, the horse should show an interest in any new activity it sees or hears. The horse should be alert but relaxed under normal conditions. This will vary from horse to horse depending on individual disposition.

When an animal is feeling ill, it will change its behaviour. Some deviations from normal behavior/appearance that may be observed include:

1. Droopy appearance, acting lethargic (head down)
2. Off feed and water. Healthy horses are always interested in feed. A lack of interest is often one of the first visible signs of serious illness.
3. Dull eyes, watery eyes
4. Coughing
5. Nasal discharges
6. Loss of weight
7. Change in breathing

SECTION 3: HORSE HEALTH & CONCERNS

8. Flared and/or inflamed nostrils
9. Limping or posturing (standing in an unusual way)
10. Diarrhea or does not pass manure for more than twelve hours
11. If your horse seems in pain, gets up and down repeatedly, rolls often, kicks at his belly or bites at his side, he may have colic

The horse is a social animal with a herd instinct. Poor health can change this. It is common for a sick animal to leave the group completely or maintain a distance from the herd. In some cases, the horse will be unable to keep up to the herd and becomes separated. This is different from chronic problems such as lameness or poor eyesight. With these types of problems, horses will often pair off for company.

Body Functions

Body functions are always affected when a horse becomes ill. It is only after these changes that we are able to diagnose a health problem. Areas affected are the heart, lungs, digestive tract and nervous system.

Digestion

The digestive tract can be affected by any number of problems. Under normal conditions, feces and urine are passed without problems. Neither one should contain blood, mucus or pus. In a horse with a normal digestive system, you should be able to hear the stomach digesting when you place your ear next to its belly. The abdomen usually produces sounds indicating roughage and fluids are moving in the intestines. If you cannot hear any gut sounds when you press your ear to your horse's abdomen you usually have a problem. A horse with an internal or digestive problem will often stand with its loin rounded and appear roach-backed.

The condition of the horse's feces can indicate the health of the horse. Slimy, mucus-covered droppings may an irritation in the horse's intestines. Hard droppings may indicate a lack of water, a lack of exercise or too much dry or indigestible feed. Very soft or watery droppings may indicate too much hard work, too much grazing or a slight irritation of the intestines. Whole grain in the feces may indicate that the teeth need floating or that the horse eats too rapidly (bolts). The type of feed and water affects the firmness and shape of the feces.

Digestion will also affect the ability of the horse to maintain its body weight when fed a constant volume. Sickness, stress and parasites can cause weight loss or prevent weight gain (when feed is increased).

Vital Signs in Horses

The heart rate, respiration rate and temperature of the horse are taken when a problem is suspected. It is a good idea to take your horse's vital signs when it is healthy and resting and write them down. Use these vital signs as references. Capillary refill time and the skin-pinch test are other helpful vital signs.

SECTION 3: HORSE HEALTH & CONCERNS

Normal ranges for vital signs in horses when at rest and relaxed:**Adult horses**

| | |
|--------------------|------------------------------|
| Heart rate | 28-44 beats per minute |
| Respiration rate | 10-14 breaths per minute |
| Rectal temperature | 37°C-38.5°C (99.5°F-101.3°F) |

Foals

| | |
|------------------------------|---|
| Heart rate | 60-110 beats per minute |
| Respiration rate | 25-60 breaths per minute |
| Rectal temperature (resting) | Increases for the first 4 days and plateaus at 37.2°C-38.6°C (99°F-101.5°F) |

Pulse (Heart Rate)

The heart rate (pulse) is measured using a watch that gives seconds and/or minutes. Time for 15 seconds then multiply by 4.

The heart rate tells you how fast the heart of the horse is beating. A one-minute timing is used. The pulse rate is affected by air temperature, exercise, excitement and age. The age of your horse will affect the pulse rate in beats per minute.

The heart rate may be taken in several places. By experimenting on your horse, decide which is the easiest for you. To take the pulse you need to find an artery near the skin surface. Most arteries are located well inside the body to reduce injury but three arteries can be used. They may be found:

- At the margin of the jaw where it comes from the underside.
- At the inside of the elbow joint.
- Under the tail.

How To Take A Horse's Pulse

Hold your index and middle finger over the artery (if you use your thumb, you risk getting your own reading confused with the horse's). Once you have located the artery, be sure you can feel the pulse clearly and count the beats per minute, or if the horse is not still, you can count for 15 seconds and multiply by four.

Respiration

To measure respiration, place your hand on the flank of the horse to feel the movement as the horse inhales and exhales, count one for each inhale and exhale, not two. You can also do the count by watching the flank. In winter, you can count the number of times the horse exhales by watching the warm puffs of air coming from the nostrils. Remember the respiration rate will also be higher after exercise, in warm weather and when the ventilation is poor. Under these conditions the breathing will also be deeper. A rate of 8-16 breaths per minute is normal.

SECTION 3: HORSE HEALTH & CONCERNS

Temperature

The temperature is taken using a lubricated (veterinary) rectal thermometer. A digital thermometer is safer and easier to use. To prevent the loss of thermometer into the anus, tie a string to the top end of it and hold it. To insert the thermometer, stand to the side of the horse. Lift the tail with one hand and slowly slide the thermometer into the anus with your other hand once the horse has relaxed. Try to slide the thermometer gently on the top or bottom of the rectal opening, as opposed to down the center of the tract, which may contain feces, which can cause an inaccurate reading. Inserting the thermometer is easier if a lubricant has been spread on it. After a minimum of three minutes the temperature may be read. The average rectal temperature is 38° C (100.5°F), but 37.5° to 38.3° C (99.0° - 101.5° F) is considered normal. An abnormally high temperature reading may be false and should be checked again in ten minutes. Make sure the mercury is shaken down before reusing the thermometer.

General Condition

It is important to observe animals often to detect changes in their general condition. A healthy horse won't look either fat or skinny. You should be able to feel the ribs, but not see them. The withers will be fairly angular rather than rounded, and the neck will not be crested with fat nor wasting away at the base (ewe-necked). You use six areas on the horse to determine the condition score of the horse. On the chart following you see the points used. Regulatory bodies use this system North America wide to enforce animal welfare regulation.

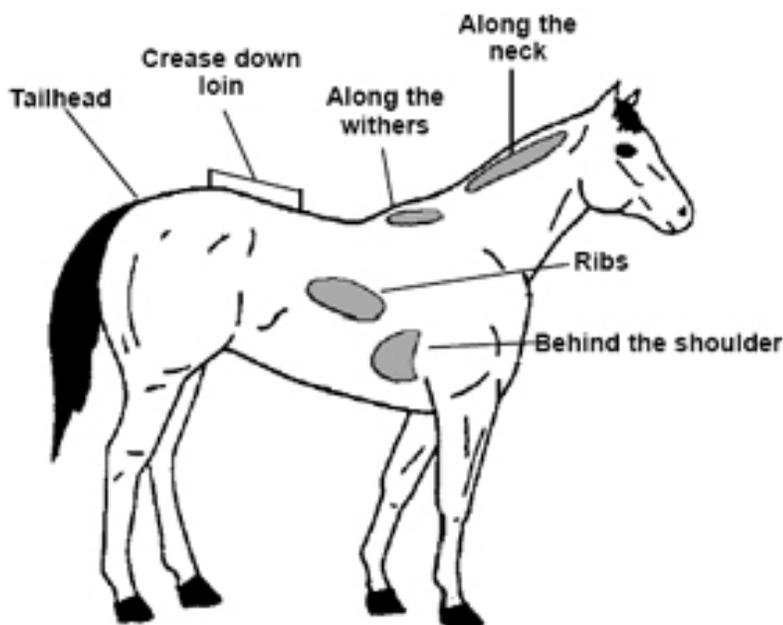


Diagram Credit: University of Maine <http://umaine.edu>

Visually observe and/or feel the fat cover on the six body sites. Make adjustments in your feed volume based on the condition score and what you are using your horse for. You should be able to *feel* the ribs, not see them. The withers will be fairly angular rather

SECTION 3: HORSE HEALTH & CONCERNS

than rounded and the neck will not be crested with fat, nor wasting away at the base (ewe-necked).

A horse in good condition will have a shiny coat, while a horse in poor condition will have a coarse coat and seem apathetic. When a horse has difficulty shedding out winter hair, this is a sign of poor condition. The healthy winter coat will be thick. On a cold morning, the hairs will be standing straight out with the extra-long guard-hairs touched with frost.

Working Condition

Working condition is part of a horse's general condition. When working with a horse, be aware of its breathing. Signs of illness may be extremely labored breathing or breathing that has a raspy or roaring sound.

Body Scoring

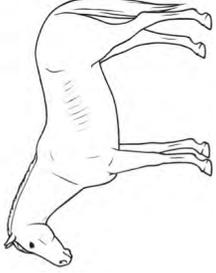
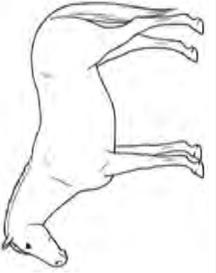
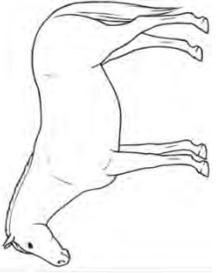
Body condition scoring (BCS) is a tool for determining if an animal is too thin, too fat or in ideal condition. In order to be done correctly, BCS involves both a physical palpation and visual assessment of specific anatomical sites that are most responsive to a change in body fat. If you see a horse that

SECTION 3: HORSE HEALTH & CONCERNS

Body Condition Scoring (BCS) for Horses

| Body Score | Whole Body | Neck | Withers | Back | Tail Head | Ribs | Shoulder | |
|------------|---|--------------------------|-----------------------------------|--|--|---|----------------------------------|--|
| 1 | Poor Condition
Extremely emaciated
No fat tissue felt | Bone structure visible | Bone structure easily visible | Spinous processes project prominently | Tail head, point of the buttocks and point of the hip project prominently | project prominently | bone structure easily noticeable |  |
| 2 | Very thin
Emaciated | Bone faintly discernible | Bone structure faintly noticeable | Spinous processes prominent
Slight fat covering over base of spinous processes
Transverse processes of lumbar vertebrae feel rounded | Prominent | Prominent | Faintly discernible |  |
| 3 | Thin | Accentuated | Accentuated | Fat build up halfway on spinous processes, but easily discernible | Prominent but individual vertebrae can't be visually identified
Point of the hip rounded, but easily discernible
Point of the buttocks not distinguishable | Slight fat cover
Individual ribs discernible | Accentuated |  |

SECTION 3: HORSE HEALTH & CONCERNS

| Body Score | Whole Body | Neck | Withers | Back | Tail Head | Ribs | Shoulder | |
|------------|------------------------|-------------------------------|--------------------------------|--|--|---|--|---|
| 4 | Moderately thin | Not obviously thin | Not obviously thin | Negative crease along back | Prominence depends on conformation
Fat palpable
Point of the hip not discernible | Faint outline discernible | Not obviously thin |  |
| 5 | Moderate consideration | Blends smoothly into body | Rounded over spinous processes | Back is level | Fat around tail head beginning to feel spongy | Individual ribs can be felt; but not visually distinguished | Blends smoothly into body |  |
| 6 | Moderately fleshy | Fat beginning to be deposited | Fat beginning to be deposited | May have slight positive crease down back | Fat around tail head feels soft | Fat over ribs feels spongy | Fat beginning to be deposited
Point-of-shoulder not discernible |  |
| 7 | Fleshy | Fat deposited along neck | Fat deposited along withers | May have positive crease down back, behind | Fat around tail head is soft | Individual ribs can be felt
Noticeable fat fillings between ribs | Fat deposited behind shoulder |  |

SECTION 3: HORSE HEALTH & CONCERNS

| Body Score | Whole Body | Neck | Withers | Back | Tail Head | Ribs | Shoulder | |
|------------|---|-------------------------------|------------------------------------|-----------------------------------|-------------------------------|-----------------------------------|---|---|
| 8 | Fat
Fat deposited along inner buttocks | Noticeable thickening of neck | Area along withers filled with fat | Positive crease down back | Tail head fat and very soft | Difficult to feel individual ribs | Area behind shoulder filled in, flush with body |  |
| 9 | Extremely fat
Fat along inner buttocks may rub together
Flank filled in flush | Bulging fat | Bulging fat | Obvious positive crease down back | Building fat around tail head | Patchy fat appearing over ribs | Bulging fat |  |

Information & diagrams credit: Canadian Equine Code of Practice <http://www.nfacc.ca/codes-of-practice/equine>

SECTION 3: HORSE HEALTH & CONCERNS

Vaccinations

Many horse illnesses are transmitted from horse to horse by shared feed bunks, buckets or watering troughs. Vaccinations for the common diseases are inexpensive and effective and should be administered on a yearly basis. Vaccines are made from inactive forms or the organism that causes the disease you are trying to prevent. After you vaccinate your horse, his immune system will make antibodies to fight that disease. There are many opinions on how often vaccinations should be given, how long they will remain effective and at what age they should begin.

Check with your vet and put the horses on a regular schedule. Yearly vaccinations that should be given include:

1. Tetanus
2. Encephalomyelitis (sleeping sickness) Eastern and Western
3. Influenza (lasts for four (4) months)
4. Rhinopneumonitis
5. West Nile

Giving Injections

Vaccinations are given intramuscular (in the muscle) in the pectoral (chest) muscle, neck or buttock muscle. Injections given on the top of the rump should be avoided, as there is a danger of striking a nerve. Some medications may need to be given subcutaneously (under the skin).

Vaccinations and medications should be administered to a horse by a veterinarian or an experienced horse person.

Remember:

1. a horse's immune system takes a minimum of 2 weeks to accumulate the antibodies needed.
2. always vaccinate at least 3-4 weeks before likely exposure to a disease.
3. the best time for annual vaccinations is in the spring time before insect season starts.

SECTION 3: HORSE HEALTH & CONCERNS**BEFORE THE NEXT MEETING**

Try one of these activities at home.

1. Spend some time before the next meeting discovering what a horse looks/acts/sounds like when it is healthy. Find out what its normal heartbeat and respiration rate are. Study its coat and eyes as well as watching its eating habits and behaviour. Write all of these things down so that you have them for the future. Do this for a number of horses and collect the data on the Health Indicator Chart found at the end of this meeting.

AND/OR

2. Does your horse receive any vaccinations? Ask a parent or the person you work with when looking after your horse and find out which, if any, vaccinations your horse has received. If you don't have your own horse, ask a horse owner which vaccinations they use on their horses or ask a veterinarian which horse vaccinations they would recommend. Record your findings in your Record Book.

SECTION 3: HORSE HEALTH & CONCERNS**DIGGING DEEPER****For Senior Members****To Vaccinate or Not to Vaccinate**

While many horses receive vaccinations against various diseases, some people do not believe in giving vaccinations for a variety of reasons.

If possible, interview someone who does not vaccinate their animals (It doesn't necessarily have to be horses. It could be someone who does not vaccinate their dog) and who is willing to discuss this topic. The following questions could be asked during the interview:

- Why did you choose not to vaccinate your animals?
- Is it all of your animals or only some species of animals that you chose not to vaccinate?
- Have you noticed any adverse health effects because your animals are not vaccinated?
- How have your animals benefited from not being vaccinated?
- Have you received any backlash from someone who thought your animals should be vaccinated?

Interview a veterinarian who routinely gives horses vaccinations. The following questions could be asked during the interview:

- Why do you feel it is important for horses to be vaccinated?
- Which vaccines do you feel are the most important for horses to receive?
- Are there any specific vaccines that a horse should receive because of the geographic area that you live in?
- What benefits do horses receive by being vaccinated?
- If someone does not want to vaccinate their horse, would you try to convince them that they should? If so, what would you tell them to try and convince them?

Record your findings in your Record Book.

SECTION 3: HORSE HEALTH & CONCERNS**ACTIVITIES****Activity #1 - Horse Attitude Memory Game**

A horse should be relaxed and alert under normal conditions but when an animal is feeling ill, it will change its behaviour. Watch for the change of behaviour while participating in the Horse Attitude Memory Game.

Items Needed:

- Memory Game cards (found at the end of this meeting)
- Scissors

Instructions:

1. All members sit in a circle.
2. Place the game pieces face down in the centre of the circle.
3. The first player gets to turn over two game pieces. If the game pieces match, the player gets to keep those pieces and it counts as a point. The first player then gets to turn over two more game pieces. If the game pieces match, the player continues. If the game pieces do not match, the pieces are turned back down and the next player gets to turn over two game pieces.
4. This continues until all of the game pieces have been matched up.
5. The player with the most matches wins the game.

Activity #2 - Horse Observation

Although it isn't pleasant to think about, unfortunately horses get sick from time to time. The best way to be able to help a horse is to know the signs to look for so that the horse can receive treatment as quickly as possible for the best chance of recovery.

Items Needed:

- A farm/veterinarian with a sick horse that is willing to have a group look at the horse
- Paper
- Writing Utensils (pen/pencil)

Instructions:

1. Have members observe a horse that is not feeling well. **REMINDE MEMBERS TO BE QUIET AROUND THE HORSE AS THEY SHOULD NOT BE ADDING ANY STRESS TO THE HORSE AS IT IS ALREADY UNDER STRESS FROM BEING SICK.**
2. Ask members to write down their observations as to what physical characteristics

SECTION 3: HORSE HEALTH & CONCERNS

the horse is displaying to indicate that it is sick. Members are not to get close to the horse or touch the horse.

3. Have the owner/caretaker of the horse discuss why the horse is sick and what measures have been taken to treat the horse.
4. Review the member's observations of the horse.

Ask members the following questions:

- What characteristic was most obvious to indicate that the horse is sick?
- Do you think the horse is mildly sick or very sick?
- Do you think it is a good idea to work the horse? (e.g. go riding, hitch it to a cart)
- Do you think it is a good idea to get into the stall with the horse?

Activity #3 - Horse Health***Items Needed:***

- Horse Health worksheet (found at the end of this meeting)
- Writing Utensils (pen/pencils)

Instructions:

- Give each member a Horse Health worksheet.
- Have members work individually or in pairs to complete the worksheet.
- Review the answers with the entire group.

Activity #4 - Fecal Collection Demonstration

Knowing how to properly collect a fecal sample from a horse is very important.

Items Needed:

- Computer with Internet access
- Website: <https://www.youtube.com/watch?v=gxTWIz8i4e4&feature=youtu.be>

Instructions:

1. Have members watch the video created by Equine Guelph on the proper way to collect a fecal sample.

SECTION 3: HORSE HEALTH & CONCERNS**Activity #5 - Fecal Judging**

The condition of a horse's feces can indicate the health of a horse. Review the various types of feces that can be expelled by a horse to determine the healthiest looking type of feces.

Items Needed:

- Horse feces samples (4)
- Judging Sheet (found at the end of this meeting).
- Writing utensils (pens/pencils)

Instructions:

1. Discuss criteria for what you are looking for in an ideal sample of horse feces, based on the information provided during this meeting.
 - Is the feces soft, firm or hard?
 - Does the feces contain any blood, pus or mucus?
 - Is the sample watery?
 - Does the feces contain whole grain?
 - What shape is the sample?
2. Have four samples of horse feces labelled 1, 2, 3 and 4.
3. Using the Judging Card, found at the end of this meeting, have members judge the samples, writing down their placing of the samples and their reasons for their placings.
4. Have senior and/or experienced members give oral reasons for their choices.

Discussion/Comments:

- Discuss the importance of judging in regards to assessing quality.
- A set of reasons is meant to compare the differences in the items that were judged, in this case horses. Your reasons explain why you placed the class the way you did. The most important reasons should be first and the least important last. Make sure you aren't just describing the articles. You must compare them. Try to have a least two or three points for each comparison. This will ensure that you stay within any time limits. As you gain confidence and experience, you may wish to add more reasons

SECTION 3: HORSE HEALTH & CONCERNS

Health Indicator Chart

| | My Horse | Horse #1 | Horse #2 | Horse #3 | Horse #4 | Horse #5 |
|-----------------------------------|----------|----------|----------|----------|----------|----------|
| Name | | | | | | |
| Height (hands) | | | | | | |
| Weight (kgs) | | | | | | |
| Pulse (/min) | | | | | | |
| Respiration (/min) | | | | | | |
| Capillary Refill (seconds) | | | | | | |
| Temperature (°C) | | | | | | |
| Condition (Body Score 1-9) | | | | | | |

How do the horses compare?

How healthy is my horse?

Horse Attitude Memory Game

| | |
|---------------------------------|---------------------------------|
| Lethargic | Lethargic |
| Off Feed &
Water | Off Feed
& Water |
| Dull
Eyes | Dull
Eyes |

Horse Attitude Memory Game**Coughing****Coughing****Nasal
Discharge****Nasal
Discharge****Loss of
Weight****Loss of
Weight**

Horse Attitude Memory Game

| | |
|----------------------------|----------------------------|
| Change in Breathing | Change in Breathing |
| Flared Nostrils | Flared Nostrils |
| Inflamed Nostrils | Inflamed Nostrils |

SECTION 3: HORSE HEALTH & CONCERNS

Horse Health

Give three examples of how you can tell an unhealthy horse just by looking at it.

What colour should the membranes surrounding the eyes be?

What are the vital signs to check on a horse when it is sick?

What is the normal temperature of a horse (range)?

What is the normal respiration rate of a horse (range)?

SECTION 3: HORSE HEALTH & CONCERNS

Judging Horse Fecal Samples

Judging Card

Criteria:

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____

Giving Reasons:

I place this class of _____, _____, _____, _____.

I place _____ first because.....

I place _____ over _____ because.....

I place _____ over _____ because.....

I place _____ over _____ because.....

I place _____ 4th because.....

For these reasons, I place this class of _____, _____, _____, _____.

Official Placing _____.

SECTION 3: HORSE HEALTH & CONCERNS

MEETING 15: DISEASES

Topic:

- Common horse diseases

Objectives:

- To learn about the common diseases that affect the health of horses

Roll Calls

- Name a disease that a horse can suffer from.
- Have you ever had to help to treat a horse for disease? If so, what treatment was the horse given?

Sample Meeting Agenda – 2 hrs. 25 minutes

| | | |
|---|--|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Discussion Information | Review the topics of Colic, Choke and Grain Overload | 30 min |
| Public Speaking/Judging Activity | Activity #1 – The Basics of Infection Control (instructions found at the end of this meeting) | 20 min |
| Topic Information Discussion | Review Other Diseases & Injuries | 30 min |
| Public Speaking/Judging Activities
Activities Related to Topic | Choose from Activities #2, #3 and/or #4 (Horse Disease & Injuries Word Search, Veterinary Clinic Visit, Veterinary Tools ID Quiz) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Activities can be interspersed with Topic Information.

SECTION 3: HORSE HEALTH & CONCERNS**Topic Information****Horses Diseases & Disorders**

Beyond the typical sprains and strains that a horse might have... there are more dangerous diseases that can cause death.

Colic

A horse with colic has a severe stomachache. Colic, a gastro-intestinal disorder, has various causes, some of which are sudden changes of diet, worms or overeating. Colic is the most common digestive problem in horses. Some horses (often young horses) tend to get colic more often than others. As a horse owner, it is important to recognize the symptoms of colic in a horse. The symptoms develop slowly, so the earlier it is noticed, the better the chance of treatment. The horse will show signs of discomfort by:

Early Warning Signs:

- The horse will be uninterested in food (he won't eat at all or picks at his feed)
- A change in your horse's attitude (he seems depressed – doesn't greet you or doesn't have any interest in the things around him and doesn't seem to have his usual energy)
- A change in the appearance, consistency and amount of your horse's manure. It may be loose and watery, hard and dry or altogether absent depending on what's going on in his body.

Signs That Colic Has Arrived:

- The horse may be alternately listless and restless, first standing apart from other horses, then pacing or lying down and rolling repeatedly
- Pawing
- Looking at his flank
- Touching the sore spot with their nose
- Kicking at their belly with a hind leg
- Sweating
- Stretching
- Rolling
- Lying on their back (cast) – this may relieve the pressure on the digestive tract
- Sitting on hindquarters, supported by front legs
- The horse's resting heartbeat is consistently higher than 50 beats per minute
- The respiratory rate is higher than 30 breaths per minute
- The horse has either no gut sounds or hyperactive gut sounds

SECTION 3: HORSE HEALTH & CONCERNS

The reaction of the horse depends on the amount of pain it is experiencing. The stretching, rolling, lying cast or sitting on hindquarters indicate that the horse is in considerable pain.

A common cause of colic is worms. Worms can cause colic by blocking a main blood vessel to the digestive tract. This will affect the health and movement of the digestive tract. Worms can also cause an infection in the digestive tract. Colic can occur when a large number of worms migrate through the digestive tract at the same time because of natural causes or from the application of a de-wormer. Consult your veterinarian to determine the severity of the problem and to treat the horse.

Colic can also be caused by:

- An impaction caused by feed (poor quality, low digestibility, low fibre)
- An impaction caused by sand or foreign materials
- The gut twisting (may be caused by worms or the gut being displaced)
- A length of the gut folding inside itself (intussusception)
- Infection of the digestive tract (may be secondary to another illness)
- A rupture of the digestive tract, usually from pressure with an impaction
- Eating too quickly
- Gas
- Stress

Colic can be fatal. If you suspect colic, check vital signs and listen for gut sounds. Leading the horse around and keeping it from rolling will help to prevent further problems, such as twisting an intestine or injuring itself but be careful. This can be dangerous because the horse is in pain and its behaviour is unpredictable. The horse could drop or run without any warning. If you have a horse with colic, walk it for 20-30 minutes. This will usually help the mild cases. If the horse is not improving, make it comfortable in a box stall and call your veterinarian. Use a blanket to keep it warm and prevent shock. Because of the number of causes, diagnosis is difficult even for a veterinarian. Treatment must be done to relieve the visible symptoms and stress on the horse.

The veterinarian will check the pulse rate and temperature and listen for normal bowel sounds. A tube may be inserted through the nostril and down to the stomach to check for fluid or gases. Mineral oil or fecal softeners may be given through the tube to help move a suspected blockage. Often the horse will be given antibiotics, muscle relaxants, pain relievers and, or sedatives to make it more comfortable. Other treatments may be done by your veterinarian as well.

The twist or torsion type of colic is most difficult to treat because it has the same early symptoms as the less serious colic. The lack of any gut sounds is often an indication of a twist or complete blockage. It is rarely diagnosed before the horse goes into shock and dies. Surgery is the only way this colic can be treated although the success rate is not high.

SECTION 3: HORSE HEALTH & CONCERNS***The Worst Case Scenario***

Deaths are the most common with the twist, torsion and the severe impaction. The horse may die of shock. This is the final stage in a chain of events that take place in the body of the horse. The stress causes the horse to dehydrate (lose water). This causes chemical changes in the cells of the body and keeps it from getting the correct messages. When this happens, the horse will not get enough blood to the brain, heart, kidney and liver. The cells in these organs start to die. Next, the body increases its acid production and the acid level in the blood increases. The pulse rate will increase from 40 beats per minute to 80 or 90 beats per minute. Blood will not be sent to all of the areas that need blood. If you are watching the horse, you will see a loss of pink colour in the membranes around the eyes and the gums. Nothing can be done for the horse at this stage.

Death by blood poisoning may also occur.

Fortunately most colic cases respond well to treatment. After a horse has had colic, it should get special treatment for a few days. Feed the horse a bran mash and good hay and limit the amount of grain. The bran and hay are bulky and are easier to pass through the digestive tract. Make sure that the horse has clean, fresh drinking water. If the horse is watered from a pail, supply fresh water several times a day.

Choke

Choke is a frightening experience for the horse and owner because the reaction is so violent. An object getting lodged in the esophagus causes choke. The esophagus is the muscular food tube that begins at the back of the mouth and ends in the stomach. It is not the airway. In the adult horse it is approximately 4 feet long. Depending on the location of the blockage, the horse may shake, gag or retch. Because the horse is unable to swallow, saliva and food may come out of the nose and mouth. Partial choke can also happen. Your horse will have raspy breathing, a drooped head and neck and will cough in an effort to dislodge the obstruction.

There are several causes of choke. The most common are grains, hay, grass or fruit and vegetables. A greedy or startled horse may swallow some feed before it is fully chewed or swallow large amounts at one time. The feed is not mixed well with saliva, so it is too dry to be swallowed. This dry ball sticks in the esophagus. If choke is left untreated, horses can quickly dehydrate and the obstruction becomes harder to remove. Do not let your horse put anything else in his mouth. Remove all feeds, water and bedding from the area around him.

Most horse owners do not have the experience to deal with choke. If choke is caused by hay, grain or pellets, saliva being swallowed will loosen the blockage. A large object causing the blockage requires veterinary treatment. Incorrect home treatment can cause pneumonia (from food and water entering the lungs) or death. If pneumonia occurs, the horse will probably develop a fever 24 to 48 hours after choking.

Choke does leave the throat irritated. Be careful feeding the horse after this happens. Take feed away from the horse for three to four hours. If the horse suffered a severe case of choke, feed a bran mash or soaked beet pulp or soaked hay cubes, and avoid dry feed for several days.

SECTION 3: HORSE HEALTH & CONCERNS**Grain Overload**

Try to estimate how much grain the horse has consumed. If it's only a normal meal amount, put the horse back in its stall or out in its pasture and observe it for several hours. If the grain consumed has been excessive:

1. Remove feed
2. Call the vet
3. Cool horse's feet
4. Periodically move horse to stimulate circulation

Treatment is most effective within 48 hours. Laminitis and colic can be likely results of a grain overdose.

Other Diseases, Disorders & Injuries**Edema**

Edema is a buildup of fluid in the body tissues. Normally, fluid passes in and out of the capillaries. With edema, the process is incomplete. Fluid buildup may occur in the peritoneal cavity, scrotum, udder, and legs or around a wound. It may be caused by parasites, nutrition, heart problems, kidney problems or infections.

Horses do not often get edema. It can be seen in the legs of some stabled horses that do not get enough exercise (stocked-up). High protein feeds will sometimes cause edema in the lower legs of young horses and performance horses. (For edema in the lower legs or related to wounds, pressure by wrapping may be used to reduce fluid build-up.)

Pregnant mares may get edema. A serious case may include swelling in the legs, the udder and along the underside of the belly. There will be pain in the udder if edema occurs. The problem is increased in this case because milk production has slowed or stopped. A mare that gets edema once may have edema or other problems during future pregnancies because of the stress on the heart and kidney.

Edema can be very uncomfortable for the horse. If the swelling is in the pastern joint, movement may be a problem until circulation increases. Good feeding practices and exercise are helpful. Adding diuretics to the water supply may help remove excess water.

Equine Infectious Anemia (Swamp Fever)

Equine infectious anemia or swamp fever is a viral disease found in horses. The disease is most often transferred by biting insects, usually horseflies or deerflies. It has also been spread by repeated use of needles, dental floats or other contaminated equipment. There is no vaccination against or cure for Swamp Fever.

This disease is a reportable equine disease regulated by law for border crossings. The Coggins Test, a blood test, is used to identify infected horses. Infected animals have a

SECTION 3: HORSE HEALTH & CONCERNS

very low count of red blood cells.

A horse that tests positive is allowed one retesting. Other illnesses can produce similar results. Foals under 6 months may have a positive test because of the passive antibodies received in colostrum. If the horse tests positive two times, it must be quarantined permanently in a fly-proof area or be destroyed. Other horses at the same location are quarantined until the first results come back. If no other horses test “*positive*” the quarantine is lifted and the herd is tested regularly for the next year.

A horse exposed to swamp fever may show the symptoms 14 days to several months later. The symptoms may last for three to 20 days, and may recur. The mortality rate ranges from 30 per cent to 70 per cent. The disease may be in the acute, subacute or chronic form.

The *acute form* results in the death of the horse during the first attack of the disease. The symptoms are:

- Rapid onset of fever (104° - 108°F) (40° - 42°C)
- Weak pulse, irregular heartbeat
- Thirst
- Poor appetite
- Depression
- Edema (fluid buildup) of the underbelly, legs and sheath.

The *subacute form* is a recurring case. This is what we call a relapse. The horse appears to recover, then gets sick again. Symptoms are the same as for the acute case. The horse may show a gradual weight loss and have pale mucous membranes. The horse may die during a repeat attack.

The *chronic case* occurs after the main attack. This attack may not be obvious. Anemia may be noticed. Animals who survive the initial attack may go unnoticed and become carriers. They may infect other horses through blood transferred by biting insects (usually horse or deer flies) or by vaccination needles. The virus is not killed by heat, cold, disinfectants, antiseptics or sterilization. There is no vaccination against, or cure for this disease at this time.

- Do a Coggins Test on all of your horses. Have new horses tested *before* they arrive at your farm/stable.
- Have autopsies performed on any horse that dies suddenly.
- Use disposable needles for vaccinations. Only use one needle per horse. Do not re-use needles!

SECTION 3: HORSE HEALTH & CONCERNS

Heaves

Heaves is the common name for **Chronic Obstructive Pulmonary Emphysema**. The illness causes chronic coughing, difficulty breathing and exercise intolerance.

Heaves is caused by the air sacs in the lungs losing their elasticity. Problems appear when the horse exhales. The horse inhales the proper amount of air, but is unable to force all of the air out when it exhales. To remove the remainder of the air, the abdominal muscles contract. If you watch the horse's flank, it will appear that the horse exhales twice for each time it inhales. In long lasting cases, the horse may develop a barrel chest because the diaphragm muscles have enlarged. They will develop a heave line, which is a line of extra muscling upwards to flank. The horse can only be used for light riding because it tires quickly.

Heaves has a variety of causes. In some cases it may be an allergy. Since it rarely occurs in pastured horses, dust and mold in dry feed are suspected. **Never feed Dusty or Moldy Feeds.** The use of pelleted, high moisture, and cubed feeds will reduce dust in the rations. Respiratory infections may also be a cause. Heredity may also play a role. Some families of horses appear to have a greater tendency to the problem. This is similar to you having the same allergies as your parents. If the dam or sire of your horse develops emphysema, take precautions with your horse. There is no cure for heaves. Consult your veterinarian for medications to help relieve symptoms.

Rabies

Rabies is a problem in Ontario. Horses may contract it as a result of a bite(s) from infected wild animals. You should have all horses vaccinated.

Symptoms of rabies may not appear for three weeks to three months after the bite. A problem with rabies in horses is that they often become dangerous. They may fall and bite themselves and other objects around them. Most horses with rabies do not fit our picture of a rabid animal. It can be mistaken for sleeping sickness, tetanus, lead poisoning or botulism.

When you find a bite on the pastern or fetlock of a horse, wash it with soap or detergent and disinfect it with iodine. Consult your veterinarian if rabies is suspected. (i.e. did you notice a fox or skunk around the horses or near the stables?)

Rabies is fatal. Contact your veterinarian for consultation.

Hernia

A hernia is a protrusion of normal stomach cavity contents through a natural or abnormal opening in the body wall. Many hernias are hereditary; a few are caused by injury or strain. All hernias should be examined by a veterinarian.

A **reducible hernia** can be gently pushed back into the body cavity. A common reducible hernia is the umbilical hernia, where a portion of the intestines passes through the navel area. Many of these will correct themselves as the horse's intestines grow and it becomes impossible for them to protrude through. Surgery is not needed unless the hole is larger than two fingers in diameter or heat is felt in the areas. Foals often have reducible hernias.

SECTION 3: HORSE HEALTH & CONCERNS

An **irreducible hernia** will not go back into the body cavity because of attachments between contents and the sac surrounding the hernia. A scrotal hernia can be an irreducible hernia. It will not close. These are serious because a portion of the intestine can slip down and become strangled (meaning the blood supply is cut off). If this happens, that section of intestine will become necrotic (die). Membrane infection will occur and the horse could die. This type of hernia requires surgery.

Rhinopneumonitis (Equine Herpes Virus I and EHV IV)

“*Rhino*” is often mistaken for strangles or influenza in the horse. It is an upper respiratory infection which resembles a cold. It usually produces coughing and a nasal discharge and is accompanied by a fever. There may be some loss of appetite and a dullness of appearance. Occasionally silent infections (that show no signs) occur. Because it is transmitted by nasal discharges and in the air, it is very contagious; 96 per cent of the horses exposed will contract it. There will not be any symptoms for seven to ten days after exposure. Once they appear, symptoms will last approximately two weeks. Secondary symptoms such as a fever and swollen glands may appear. The horse should not be worked when it has any of the symptoms.

“*Rhino*” becomes a problem if you have pregnant mares. A mare may show little or no sign of the infection, but the fetus may be damaged. The infection can cause enough damage that the fetus will not be able to function 3-12 weeks after it was exposed. When this happens, the foal is aborted. Abortion in the ninth month of pregnancy is common. Some infected foals will be carried to the end of the pregnancy then die after birth.

As with any other respiratory disease, isolate new arrivals and sick animals. Keep pregnant mares separated from traveling stablemates who may bring home the virus.

A less common form of Rhino is the neurological form (EHV 3). It attacks the brain and usually the horse will eventually die. It may occur alone or with the respiratory form.

A vaccine is available for rhinopneumonitis. The vaccine may be given to horses over three months of age. Pregnant mares should be vaccinated at five, seven and nine months. The initial two doses should be given four to six weeks apart. Make sure to use the right vaccine for the type of Rhino you are trying to protect against (or a combination of 1 and 4).

Sleeping Sickness (Encephalomyelitis)

Sleeping sickness is a virus carried by biting insects that affects the central nervous system of the horse and man. The horse and man are the final host in the life cycle of the sleeping sickness virus. The virus starts in birds, rodents and reptiles, then it is passed on to biting insects. The number of cases of sleeping sickness that occur each year is affected by the size of the bird and mosquito population.

There are different strains of sleeping sickness. We are mainly concerned with the Eastern and Western strains in Western Canada. People often question the value of vaccinating for sleeping sickness. However, the mortality rate for Western Sleeping Sickness is 30 per cent and 80 per cent for Eastern Sleeping Sickness. Horses that

SECTION 3: HORSE HEALTH & CONCERNS

do survive may have permanent brain damage, leaving them disabled. Multiple vaccines against both strains are available. They should be given several weeks before mosquitoes become a problem. Immunity is not immediate, so it is several weeks before it will be effective. Because immunity is short lasting in the first vaccination, a second vaccination (booster) is given three weeks after the first vaccination. After that, one vaccination per year is given.

A horse with sleeping sickness will show some of the following symptoms:

- persistent fever
- eyesight problems
- inability to swallow
- depression
- paralysis
- drooping lower lip
- loss of coordination (may cause circling)
- pneumonia - secondary infection due to the low resistance level of the horse to infection
- seizures and/or head pressing
- coma
- death

Strangles

This is a highly contagious bacterial infection. It is spread by coughing and through nasal discharge. Strangles is more of a problem in young horses. Strangles is very often improperly referred to as Distemper. The Strangles infection can cause:

- A runny nose
- Lumps under the jaw
- High Fever (more than 40°)
- Coughing
- Depression
- Loss of Appetite

Penicillin is only effective if given during the first 24 hours. As the infection continues, antibiotics become less effective and may actually slow the recovery time by limiting the development of natural immunity. Consult your veterinarian for treatment.

There is a vaccination available for strangles. Always administer according to label directions and **never** inject the nasal form.

SECTION 3: HORSE HEALTH & CONCERNS**Tetanus**

Tetanus is also called “Lockjaw”. Horses can become infected through cuts and wounds. The bacteria that cause tetanus are found in the soil and on rusty metal. This is one reason that wounds can be serious problems.

The infection causes muscle spasms (mostly of the head and neck), contractions and shaking. The horse will often hold its head high with the ears very stiff and upright. The tail will be held straight out behind the horse. As the horse loses other muscle control, it will stiffen and have trouble moving. Symptoms usually appear in 7-14 days. The mortality rate for severe cases of tetanus is 80 per cent. If the horse does recover, it will take one to two months. Even after this length of time most horses are still nervous and sick.

A vaccine is available for tetanus. It is available as a toxoid, which is given once a year (one shot, plus a booster the first year) or as an antitoxin, which is given after surgery or a wound. Pregnant mares should have a tetanus toxoid vaccination one to three months before foaling to provide the foal with some immunity to tetanus at birth. The antitoxin may be given to three to four month old foals if the mare was not immunized. Tetanus can also be treated with penicillin.

West Nile Virus

It is a virus carried by birds (mostly of the crow family - crows, ravens, magpies and blue or gray jays). Mosquitoes bite the infected birds, then pass the virus on. It does NOT spread from one horse to another. It affects the central nervous system (brain) because it causes a brain infection. Symptoms include lethargy, weakness, stupor, ataxia, hypersensitivity to sound, muscle tremors, blindness and seizures, ranging in severity from being extremely mild to severe and often fatal. Only about 25% of infected horses show fever.

Intravenous fluid therapy and physical support (slings) to prevent injury are the current treatment protocol. Antibiotics are not effective. The death rate in horses has been reported as 25-40%. Initial vaccination is two injections three to six weeks apart then annually prior to mosquito season. You may wish to vaccinate your horse every 6-months if travelling to high-risk areas such as the USA, where mosquito populations survive year-round. Also, stress of travel and competition may compromise some animal's immune systems. Check vaccine instructions prior to vaccinating.

Ringworm

Ringworm may also be called girth itch, fungus itch or Spanish itch. Ringworm is a fungus infection. It appears as one or more hairless patches anywhere on the body and is not always round. It may be covered with scaly, grayish skin or be crusted and oozing serum. It may be itchy but usually is not. Ringworm is contagious to other animals and humans by direct rubbing contact. Brushes, and clippers or borrowed cinches, halters or saddle blankets spread it.

To treat ringworm apply iodine, or any fungal medication recommended by your vet to the hairless area and surrounding area. Soak grooming equipment and clipper blades overnight in a 10% bleach solution and wash tack in disinfectant. To prevent ringworm

SECTION 3: HORSE HEALTH & CONCERNS

avoid borrowing or lending grooming equipment or tack.

Rain Rot

Rain Rot (also known as dermatophilosis, rainscald and streptothricosis) is a common skin disease in horses that is caused by *Dermatophilus congolensis*. It is characterized by the formation of crusty scabs, which peel off along with clumps of hair, leaving bare spots on the skin. Rain rot appears on the parts of the body exposed to rain; the top of the head, neck and back. It rarely occurs on the legs or belly. It is seen most frequently in regions where warm temperatures, high humidity, heavy rainfall and insects create ideal growing conditions for the bacteria.

Warts and Sarcoids

Warts are caused by the body trying to wall off a viral infection. They are most common on the face, lips and inner ears of young horses. A common wart will disappear in about six months.

A wart-like growth that does not go away or spread may be a sarcoid. It begins small but may grow rapidly. It is a non-malignant tumor usually found on the head, shoulders, legs or midline of the horse but can appear anywhere. They can be small and smooth or large and lumpy or scaly. They bleed if bumped or rubbed. They do not hurt the horse but may become infected or interfere with tack or look bad. A veterinarian can remove sarcoids through surgery (freezing, laser or radiation), but they may reoccur.

Medical Terms

| At the Beginning or Ending of Words | Means | Example |
|-------------------------------------|----------------------|--|
| A, an | Without, loss of | • Anorexia (loss of appetite) |
| Dys | Difficult | • Dystocia (difficult birth) |
| Hem, hema, hemo | Blood | • Hemoglobin (part of blood) |
| Hyper | Excessive | • Hyperthyroidism (excess thyroid secretion) |
| Hypo | Deficient | • Hypoglycemic (low blood sugar) |
| Myo | Muscle | • Myocardium (heart muscle) |
| Neuro | Nerve | • Neuronal (tumor on a nerve) |
| Nephr, nephro | Kidney | • Nephritis (inflammation of the kidney) |
| Emia | Blood | • Anemia (lacking red blood cells) |
| Gram | Picture, measure | • Cardiogram (measurement of heart activity) |
| Graph | Recording instrument | • Electrocardiograph (graph of heart activity) |
| Itis | Inflammation | • Bronchitis (inflammation of the bronchial tubes) |
| Oma | Tumor | • Melanoma (cancer of the pigment producing cells) |
| Otomy | Surgical incision | • Desmotomy (the cutting of ligaments) |
| Rhage | Discharge, flow | • Hemorrhage (bleeding) |

SECTION 3: HORSE HEALTH & CONCERNS**BEFORE THE NEXT MEETING**

Try one of these activities at home.

1. Find out if your horse, or one that you know, has ever had one of the diseases discussed in this meeting. What was done to treat it? Does it have any lasting effects? Record your findings in your Record Book.

AND/OR

2. Rabies is a problem in Ontario in many different types of animals including horses. Find out how much a rabies vaccine costs for one horse, including the cost for a veterinarian to give the vaccination. Record your findings in your Record Book.

DIGGING DEEPER

For Senior Members

Wobbler's Syndrome

What is Wobbler's Syndrome and how does it affect horses?

A neurological disease, it is something that no horse owner wants to hear about their horse. But, having an understanding of the clinical signs, medical testing and possible successful treatment and prevention of the Wobbler Syndrome can help you to make an informed decision about your horse's future.

Talk to a veterinarian, an experienced horse person, a veterinary college or by doing research at a library or on a trusted website, find out more information about Wobbler's Syndrome including some of the following questions:

- What signs does a horse with Wobbler's Syndrome exhibit?
- What happens medically to a horse with Wobbler's Syndrome?
- How does a veterinarian diagnose this disease? What tests need to be done?
- What types of treatment are available?
- What is the prognosis for a horse diagnosed with this disease?
- Are there alternative surgeries that can be done?

Record your findings in your Record Book.

SECTION 3: HORSE HEALTH & CONCERNS**ACTIVITIES****Activity #1 - The Basics of Infection Control*****Items Needed:***

- Computer with Internet access
- Website: <https://www.youtube.com/watch?v=gxTWIz8i4e4&feature=youtu.be>

Instructions:

1. Have members watch the video created by Equine Guelph. This unique 'whiteboard video' is all about the basics and answers the following questions:
 - What are the differences between bacteria and viruses?
 - How are they spread?
 - What can you do to prevent them?

Activity #2 - Horse Diseases & Injuries Word Search***Items Needed:***

- Horse Diseases & Injuries Word Search (found at the end of this meeting)
- Writing utensils (pens/pencils)

Instructions:

1. Give each member a Horse Diseases & Injuries Word Search.
2. Have members work individually to complete the word search.
3. Review each of the diseases and how they affect horses.

Activity #3 - Veterinary Clinic Visit

Visit a local veterinary clinic and ask a veterinarian to give a tour of the clinic. Ask the vet to go through the steps of what happens to a horse if it is brought in to the clinic for treatment. Additionally, have the vet review what tools and medications are used in the vet clinic to treat the horse.

SECTION 3: HORSE HEALTH & CONCERNS

Activity #4 - Veterinary Tools ID Quiz

This activity may require borrowing items from a veterinary clinic or could be done while visiting a vet clinic.

Items Needed:

- Various veterinary tools used to administer medication, vaccinations, etc.
- Small pieces of paper with numbers on them
- Blank paper
- Writing utensils (pens/pencils)

Instructions:

1. Lay out veterinary tools on a table and place a number beside each tool
2. Have members write out numbers on the page equaling the number of veterinary tools sitting out.
3. Have members try to identify each tool.
4. Review the name of each tool and see how many names that members got correct. If desired, have a prize for the member that got the most answers correct.

SECTION 3: HORSE HEALTH & CONCERNS

Horse Diseases & Injuries Word Search

e v o d i c q z s l g y l l r s k f p s
 h n g j o l w s k t g u e f u a f t w t
 e n c l w t j b h q r p a n p k b a k k
 r g i e a c y v b y x a a x b j m i o j
 n c r u p h e a v e s t w d o p e s e z
 i f h u x h b e i f e o u t f m l e t s
 a q i p r y a i d t q o x e h t i v o e
 z v n y f j k l e v w t v o n p n v d u
 y e o z z p a c o o d e t k m f t g y b
 c w p m m q f m f m r a m e d e s d z t
 u c n a r x q x p h y l f e p u e o g f
 j l e s u o f m z z c e x u o k w d c w
 b w u d e w w f x t a f l p t w l v p x
 a n m p z v j g t y x k v i h h c r i t
 g u o g e o h v n y f r z r t r n z d z
 v r n l a x y o i i l l z r w i s p p y
 l c i l l v g g n o r r m r r s s h q x
 v u t s e l g n a r t s a e u u n j p r
 d f i j m s w m h z b c a k e v c r z r
 u e s e h k v s l e h o p w b w y e h c

colic
 edema
 encephalomyelitis
 heaves
 hernia
 rabies
 rhinopneumonitis

ringworm
 strangles
 swampfever
 tetanus
 warts
 westnile

SECTION 3: HORSE HEALTH & CONCERNS

MEETING 16: LAMENESS

Topic:

- What is lameness
- Different causes of lameness
- Diagnosing lameness

Objectives:

- To understand what causes lameness and how to diagnose it

Roll Calls

- Have you ever seen or had to deal with a lame horse? Why was it lame? What did you do?
- Have you ever had someone do a pre-purchase exam on a horse you or your parents were thinking of buying?
- Name one type of lameness that can affect a horse.

Sample Meeting Agenda – 2 hrs. 25 minutes

| | | |
|---|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Lameness and Diagnosing Lameness | 20 min |
| Activity Related to Topic | Activity #1 – Lameness LAB Healthcare Tool - Causes (instructions found at the end of this meeting) | 30 min |
| Topic Information Discussion | Review Injuries and/or Causes of Lameness | 30 min |
| Activities Related to Topic/
Public Speaking/Judging
Activities | Choose from Activities #2, #3 and/or #4 (Lameness LAB Healthcare Tool – Video Challenge, Lameness LAB Healthcare Tool – Spin The Wheel, Horse Observation) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 3: HORSE HEALTH & CONCERNS**Topic Information****Lameness**

Lameness is a sign that there is something wrong with the structure or function of the horse. For every lameness there is a cause. Strain is the most common cause of lameness. Like kids and athletes, horses can hurt themselves at play and work. When a horse is lame, it will favour one or more legs, not allowing it to touch the ground or limping so that it doesn't place its full weight on it.

Sometimes it is easier to hear a lameness than to see one (rhythm of feet hitting the ground). Lameness is most readily seen at a trot. The horse's head will bob up and down most often, indicating a sore foot or leg in the front. Lameness can be caused by numerous factors. Look for swelling and heat in the lame leg or foot. If your horse is limping, it is important that you find out the cause of the limp so that you can remedy the situation before it gets worse.

Diagnosing Lameness**Methods to Help Diagnose Lameness:**

Observe the horse at rest. The stance position can indicate where lameness is. Watch for the horse doing any of the following:

1. "Pointing" of front foot indicates pain in the limb, usually in the heel area.
2. "Pushing back" with weight on the heels indicates pain in the toe area.
3. Hind limbs camped under the body if both front legs are affected.
4. Shifts weight from one leg to another if both front and hind feet are affected.

Observe the horse in motion. Note the gait and how the horse carries its head. Observe the horse walking and trotting directly away from and towards you, as well as from both sides.

1. Lameness in **one** FRONT leg:
 - a. Note the horse's gait and how the horse carries its head.
 - b. Head raises sharply as the animal steps on the lame leg
 - c. Usually a horse will step shorter with the lame leg.
2. Lameness in **one** HIND leg:
 - a. Hip raises sharply as the unsound or lame leg strikes the ground.
 - b. Head bobs down sharply as the unsound or lame leg strikes the ground.
 - c. Tail carried to one side.

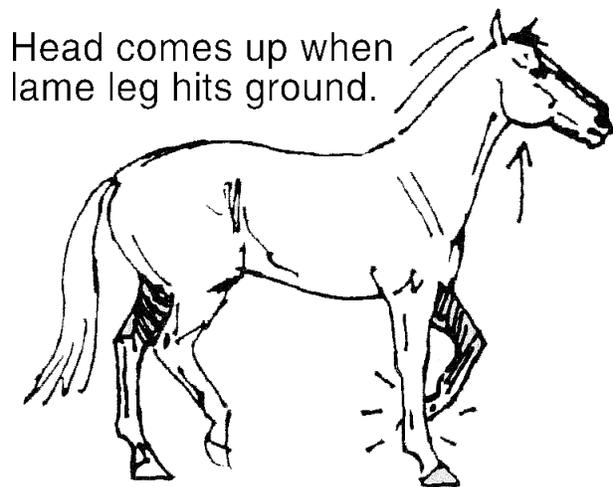
SECTION 3: HORSE HEALTH & CONCERNS

3. Lameness in **both** FRONT legs:
- Stiff, stilted action ("potter" gait)
 - Short stride
 - Appears stiff in the shoulders
 - Head is carried high without nodding
 - Hind feet carried farther under the body.

Lame leg takes a short step.



4. Lameness in **both** HIND legs:
- Short stride
 - Awkward gait
 - Lowered head
 - Front feet raised higher than rear feet
 - Difficult or impossible to back



Head comes up when lame leg hits ground.

Front leg lame.

Note the progression of lameness.

You may want to lunge the horse in both directions to observe this.

- "Warms out" (progressively sounder) - may indicate arthritis, bursitis, and so on.
- Progressively becomes lamer with use - may indicate tendons, ligaments, and so on.

Examine the leg closely using palpations and manipulating joints.

- Start with the foot. Clean it out and check. Progress upward.
- Compare suspected limb and foot with sound one(s).
- Look and palpate for:
 - Cracks in the hoof or coronet or in the cleft of the frog
 - Wounds
 - Swelling

Hip carried higher on lame side.



Hind leg lame.

SECTION 3: HORSE HEALTH & CONCERNS

- d. Pain
- e. Heat
- f. Irregular pulse

Lameness is usually seen in the forelegs. This is because they support 60 - 65 per cent of the weight of the horse. The injury can occur from the shoulder down. A lameness in the hind legs is less common. If a horse does develop a hind leg lameness, the injury is usually in the hock or stifle area.

Injuries and/ Or Causes of Lameness

Injuries, inflammation, and soundness problems are often described as acute or chronic. Acute means that the problem is happening now but will heal. Chronic means that the problem will not go away. Any lameness that has been present for more than one month may be considered chronic.

Abscess

Pocket of infection with swelling and pain. An abscess is often caused by the presence of a foreign object.

Arthritis

Horses, like people, can develop arthritis. The problem usually appears as the horse ages. It can be a primary problem or secondary (develops at the joint of an old injury.). With arthritis, the joints enlarge as they become inflamed. As the disease progresses, the cartilage becomes discoloured and small pieces can slowly break away. Arthritis cannot be treated, but in many cases it can be managed. This condition is often an inevitable change as a horse grows older and often is the reason for a horse to be retired from riding.

Bruises

Bruises on the sole of the foot are quite common. Sole bruising is simply the result of an impact to the sole of the foot or frog without causing a puncture. Horses with flat feet, thin soles or hoof walls that are too short causing the horse to walk on the osl of the foot are more likely to be injured. Bruises can be serious because they may be as deep as the coffin bone. A deep bruise may abscess. To correct this, the horse needs to be kept on soft ground until shoes can be applied..

Bog Spavin

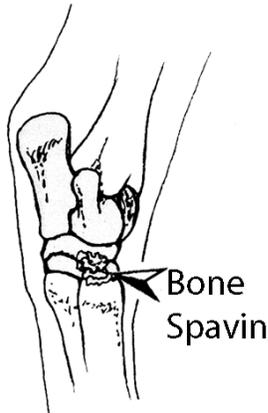
Bog spavin is a swelling at the front of the hock, usually not hot or painful; it seldom causes lameness. This swelling may also be seen at the outside and inside of the hock. Bog spavin can occur from various causes; stress, conformation faults, strain, as well as poor nutrition in young horses.



Bog Spavin

SECTION 3: HORSE HEALTH & CONCERNS

The amount of swelling may vary. It is soft enough that applying pressure to one area will reduce the enlargement at that point and increase swelling in other areas. The horse may not show any signs of lameness unless the spavin is caused by an injury. Not all cases of bog spavin can be treated. Only those caused by injury (bone chips) or poor nutrition can be treated to reduce swelling. In some cases excess fluid can be drained.



Bone Spavin

Arthritis in small bones of the hock. A bone spavin usually produces a hard swelling low down on the inside of the hock joint. More common in horses that put extra strain on their hocks. Cow hocks, bowed hocks and very straight hocks are more prone to develop bone spavins. Generally horses with bone spavins are lame. Sometimes referred to as "Jack Spavin".

Bowed Tendon

The simplest way to describe a bowed tendon is a tendon that has been stretched so that it cannot return to its original length and shape. A bowed tendon appears as a bulge down the back of the leg behind the cannon bone above the fetlock. The injury is usually found on the foreleg. It happens when the leading foreleg has all of the body weight on it as the horse lands or takes off during a canter, lope or gallop.



The most common cause is an over extension of the leg while the horse is being worked. Other factors that can cause this type of injury are forced training procedure, fatigue caused by speed and exertion, toes that are too long, improper shoeing, long weak pasterns and horses that are too heavy for their tendon structure. Soft or slippery footing can increase the chances of an injury. A bowed tendon takes a long time to heal and is considered a serious injury.

Contracted Heels

A horse with contracted heels has a narrower heel than normal. The horse may not show any signs of lameness. The problem may be caused by a lack of frog pressure on the ground due to incorrect shoeing or chronic lameness.

A number of changes take place in contracted heels. The foot becomes narrower at the heel as



Normal Hoof



Contracted Heel

SECTION 3: HORSE HEALTH & CONCERNS

the frog dries and shrinks (becomes recessed and atrophied) up against the sole of the foot. If the problem continues for a long time, the bars of the foot may touch each other. Contracted feet may be slowly corrected by trimming and shoeing. This correction may take a year or more.

Cracked Hooves

Hoof cracks are a common cause of lameness. Quarter and heel cracks are usually more serious than toe cracks. The animal may or may not be lame. Foreign material entering a crack may cause an abscess. The horse becomes lame if the crack is so deep that it enters the sensitive area (laminae) of the hoof. Once the coronet band is damaged the crack is permanent. Moisturizer can be used on the hoof to prevent and/or treat this condition.

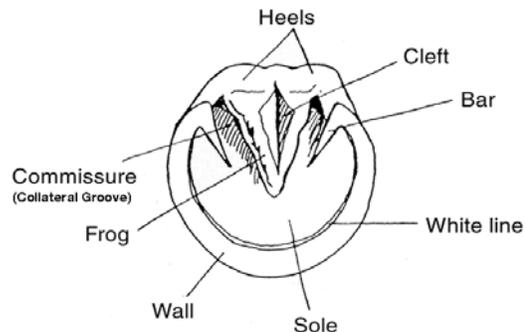
Corn

A corn is a bruise on the sole of the foot between the main wall and the bar of the heel. It can be caused by poor or improper shoeing or when the shoe is left on too long, or by poor hoof conformation (flat footed, shallow feet or narrow boxy feet, or low heels).

There are three types of corns a horse may get. They are the dry corn, moist corn and suppurating corn.

- The dry corn is common. Unless it causes a lameness, it may go unnoticed. It usually causes red or blue coloured stains on the sole of the foot. It is generally found in the area of the bars. Proper trimming (and shoeing) of the foot that will help the foot spread as it makes contact with the ground will help. For corns near the toe, a protective pad on the bottom of the foot may be used.
- A moist corn is caused by a severe injury to the sole.
- A suppurating corn is a corn that has become infected. It may lead to the death of cells in some of the inner structures of the foot and lameness will be noticeable.

Ground surface of unshod hoof



Curb

Curb is a swelling of the back of the hind leg below the hock. This swelling is caused by an inflammation (heat and swelling) and thickening of the plantar ligament. New bone growth may occur. Depending on the type of damage, a curb may not be permanent.

Curb may be due to conformation problems or an injury. Horses that have sickle hocks and are cow-hocked are more likely to have curbed hocks because of stress on the plantar ligament. Horses with normal conformation can get curb by violently attempting to straighten the hocks.

SECTION 3: HORSE HEALTH & CONCERNS

If a curb has been caused by an injury, treat the leg to reduce the swelling. It does not usually cause lameness.

Laminitis (Founder)

Laminitis or founder is lameness caused by pressure on the laminae of the hoof. This happens when the laminae swell with blood in response to chemical changes in the body. Pressure increases because the outer layers of the hoof wall and the inner structures of the hoof are not able to provide room for the expanding laminae.

Laminitis has a larger number of causes. These are:

- **Grain founder** – this is caused by the horse eating more grain than it is accustomed to. This could be due to accidental excess (getting into the grain bin), or the symptoms might suddenly appear in a horse that has been eating a large amount of grain every day. The symptoms often do not show up for 12-18 hours after eating the grain. The symptoms are milder for oats than with other grains.
- **Water founder** – cold water being consumed while the horse is hot.
- **Road founder (concussion)** – this is more common in horses with thin walled and soled feet. Working a horse fast, or for a long time on a hard surface can cause road founder.
- **Grass founder** – grass founder is common in overweight horses and ponies that are kept on pasture. The chance of founder is increased if the roughage mixture contains alfalfa and clovers.
- **After foaling** – the laminitis is a secondary reaction by the body as a result of an infection caused by a retained placenta or a general uterine infection (acute).
- **Secondary infection** – in some cases, a horse may founder if they are extremely sick with a virus or a systematic infection (acute).

Laminitis can occur in two main forms. It can be acute or chronic.

- A horse with acute laminitis may have all four feet affected. If this happens, the horse may lie down for long periods of time to relieve the pressure. When the horse is standing, it tries to reduce the amount of weight on its front legs. It does this by standing with its forelegs ahead of its body and the hind legs forward to support more weight. Their front legs may be close together, and the weight will be on the heels.
- Chronic laminitis is a long lasting case of laminitis (over one month). More deformities of the foot are noticeable. In most



Normal Anatomy:
Developmental Stage
(Exposure)

SECTION 3: HORSE HEALTH & CONCERNS

cases, the sole of the foot drops and becomes flat, and the coffin bone is visible. Because of this, the horse travels so that it lands on its heels (normally the horse lands first on its toe). Heavy horizontal rings can be seen around the hoof because the coronary band has been affected. Without proper care, the toe can curl up as it grows longer.

Laminitis should be treated by a veterinarian. Treatment is more successful if the problem is recognized in its early stages. As the laminae swell, they produce heat over the hoof wall, sole and coronary band. The horse becomes less active and may drag its toes as it walks.

A major problem with laminitis is that it can cause structural change in the foot. The hardness of the hoof wall prevents outward expansion of the laminae. Instead, the layer extends against the inner structure of the foot. The pressure pushes the front of the coffin bone down toward the sole. If this happens, the bone can be seen 10 days after the illness. Most veterinary and farrier care is done to try to prevent this. In severe cases of laminitis, the hoof wall may slough off.

In general, most cases of laminitis are treated with antihistamines. The antihistamines reduce the blood movement to the feet. This reduces the swelling temporarily.

Treatment of the horse is basically as follows:

- **Grain founder** – this is usually discovered because it is an accident. Your veterinarian will use oil or drugs to clean the grain out of the digestive system and prevent the absorption of endotoxins produced by the grain. The horse will be given antihistamines. Because circulation is a problem, the horse should be walked, and the legs will be helped by applying cold packs to the feet or standing the horse in a cool stream.
- **Water founder** – treat with antihistamines and care for the feet by proper trimming.
- **Road founder** – the horse is treated with antihistamines and may need shoeing with pads to protect the foot.
- **Grass founder** – the horse is treated with antihistamines. Like grain founder, the horse should be walked. The feed intake of the horse should be reduced for at least three days, and the horse fed good quality grass hay.
- **After foaling** – the mare needs to be treated for infection and laminitis. If laminitis occurs once at foaling, it is likely to occur each time the mare foals after that. Exercise is needed.



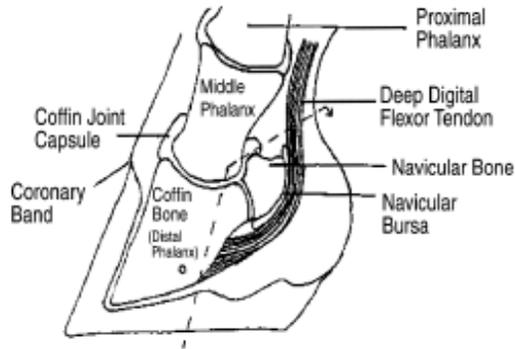
Acute Stage



Chronic Stage with Rotation

SECTION 3: HORSE HEALTH & CONCERNS

After a horse has foundered, you should consult with a veterinarian or farrier before you ride it again. If the horse did not founder too badly, pads and shoes can be put on the affected feet. Ride in an area that has soft footing. Ride for about 15 minutes and see how the horse reacts. For more serious cases of founder, a long rest period is advised.



Navicular

The term “*navicular*” refers to a condition due to poor conformation or injury that causes changes to the navicular bone. It begins as an inflammation between the deep flexor tendon and the navicular bone. In time the surface of the bone becomes pitted and sharp and the deep flexor tendon is destroyed.

Navicular is usually found in the front legs.

Horses with faulty conformation (small feet, upright pasterns/shoulders) are sometimes subject to this condition. Strenuous work, repeated concussions on hard surfaces and/or poor shoeing may be contributing factors. These factors lead to broken hoof-pastern axis, long toes and underslung heels.

Many lamenesses induce obvious signs, such as toe first landing, stumbling, head nodding or limping. Because navicular syndrome does not induce head bobbing initially, the disease often progresses to its chronic stage before it is caught.

With navicular syndrome, the horse may stand with one or both feet planted slightly more forward than normal to relieve pressure.

You generally cannot cure or reverse navicular syndrome, but you can often manage it. Between a farrier and a veterinarian, navicular can sometimes be minimized to make the horse useful.

Puncture Wounds

Puncture wounds are fairly common. Puncture wounds often occur to the sole or frog of the foot and to the legs. Punctures can occur from objects such as nails, sticks or glass. The wounds are often hard to find, but they will look like a black spot on the sole. A puncture to the frog is harder to find because of its colour and texture. A puncture caused by a shoe nail driven into the sensitive part of the foot will cause great pain. The location of the puncture will affect how the horse puts the foot down.

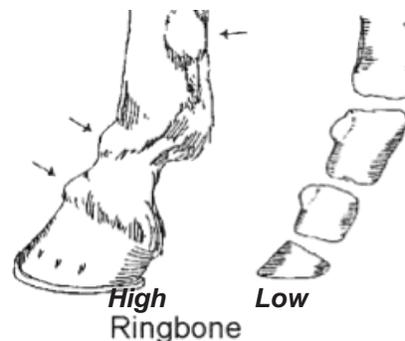
Puncture wounds may not drain on their own. If your horse has a puncture wound call your veterinarian. The horse should also be treated for tetanus. The area must be kept clean. Use hydrogen peroxide and pack it with an iodine solution. Bandage the foot. If a puncture wound goes unnoticed and an infection occurs, treatment will become more complicated.

SECTION 3: HORSE HEALTH & CONCERNS

Ringbone

Ringbone is an arthritic change in the pastern joint caused by pulling of the ligaments, direct blows or wire cuts. This causes a buildup of bone around the joint. The injury will cause heat and pain. As it heals, the heat will disappear. The horse will travel like a horse with laminitis.

Ringbone is more common in horses with base narrow conformation, and horses with upright pasterns. It can occur in the front or hind legs.

**Scratches**

Scratches is a chapped skin condition of the back of the pastern which can become infected. It is very difficult to treat. Another name for scratches is greasy heel, or mud fever.



Scratches

Sidebone

Sidebone is caused by the calcification (cartilage turning to bone) of ligaments on either side of the bone above the hoof. These look like boney ridges. The problem is most common in base narrow horses. The horse may have lameness.

Splints

Splints are usually described as a problem of young horses (between two and five years old). It is usually found on the inside of the front legs in the form of a strain or tear in the ligament between the splint bone and the cannon bone. It may be caused by hard training, poor leg conformation, poor nutrition (mineral imbalance) or any type of stress. A swelling will form over the area, caused by calloused bone and ligament.



Sidebone



Splints

If the splint bone is injured or strained the ligament between the cannon and the splint bone becomes sore. It heals by creating a calcium deposit to weld the splint bone to the cannon bone. A healed splint bone does not affect soundness unless it is high enough to affect the action of the joint.

Lameness caused by a splint will be most obvious at a trot or if the horse is worked on hard ground. Swelling at the location is always present. The amount of heat and pain will depend on the cause of the injury and how recently it took place.

Splints caused by stress may cause little or no pain. Many horses do have reoccurring splints that will appear with a small amount of stress to that area.

SECTION 3: HORSE HEALTH & CONCERNS

Sprains & Strains

Sprains and strains involve the tendons, ligaments, muscles and are caused by over-work and poor conformation. Cold hosing will give some relief, especially if done soon after injury occurs. Consult a vet regarding proper bandaging and how much time off is required.

Sweeny

Sweeny is shrinking of the shoulder muscles. This can occur in any muscle but is most common in the shoulder. The muscles over the shoulder blade and shoulder joint waste away. It is most often caused by a blow to the point of the shoulder. It may be treatable depending upon the severity.

Thoroughpin

This is usually caused by stress or strain on a weak hock, especially a sickle hock. The tendon sheath produces extra fluid and stretches, causing a soft, cool swelling in the upper part of the hock. It does not usually cause lameness.



Thoroughpin

Thrush

Thrush is a fungus infection of the frog and sole of the foot. It can be seen around the frog. Thrush is caused by overworking of the glands that keep the frog moist. This secretion breaks down and causes a distinctive odour. The area can get raw and painful causing lameness.

Thrush often is worse if rotting manure or bedding is not cleaned from the frog area. Overgrown frogs are more susceptible to thrush because material is harder to remove from the area. To reduce the chances of thrush, clean the feet on a daily basis. Use soap and water to clean a thrush infected area. Use bleach or Koppertox to disinfect.

Windpuff

Windpuffs are a swelling of the joint capsule, tendon sheath or bursa in the fetlock area. It is usually seen in horses that are in heavy training. It seldom causes lameness.

Windgalls

An old windpuff that has become more dense and fibrous is sometimes referred to as a windgall.

SECTION 3: HORSE HEALTH & CONCERNS**BEFORE THE NEXT MEETING**

Try one of these activities at home.

1. Conduct an interview with a veterinarian in your area about lameness. Write down the contents of your interview. Report on your visit to the club at the next meeting. Record your findings in your Record Book. Ask questions such as:
 - Which type of lameness do you see most often?
 - Which type of lameness is the hardest to treat?
 - Do they see lameness in horses very often?
 - Are certain breeds of horses more prone to having lameness issues?
 - What can horse owners do to lower the number of horses who come up lame?

AND/OR

2. Find out the answers to the following questions:
 - What is the outer layer of the hoof called?
 - What does the periople do?
 - Where is the hoof wall the thickest?
 - What are four categories of lameness?
 - What is chronic lameness

Record your answers in your Record Book. Be prepared to discuss these answers at the next meeting.

SECTION 3: HORSE HEALTH & CONCERNS

DIGGING DEEPER

For Senior Members

Role of Technology in Equine Treatments

Lameness is not only sometimes painful for the horse but it can be costly for high performance horses who, in their own right, are athletes. Early and quick diagnosis is key in getting these horses back performing and competing.

Technology is currently and will in the future play an important role in diagnostic and therapeutic treatments of the equine athlete. Although many of the veterinary technologies parallel and overlap human medicine technologies, their derivations may start in one field and then crossover into other fields. Although the majority of diagnostics and treatments depend on a doctor's analytical mind and training, the technologies are an important tool to help pinpoint a definitive diagnosis. Available technologies vary from a million dollar MRI unit used to diagnose a difficult problem, to a new acupuncture procedure to treat a sore back. New medical technologies are being introduced very rapidly making veterinary practice very exciting and rewarding.

Excerpts taken from: Equine Sports Medicine <http://www.equine-sportsmedicine.com/technology.html>

Talk to an equine veterinarian or research on the Internet or in the library to find out what latest technology is currently being used to help diagnose and treat lameness in horses. If possible, visit an equine research centre, such as the Ontario Veterinary College to find out what new technologies are being explored. Record your findings in your Record Book.

SECTION 3: HORSE HEALTH & CONCERNS**ACTIVITIES****Activity #1 - Lameness LAB Healthcare Tool - Causes****Items Needed:**

- Computer(s) with Internet access
- Website address: http://www.equineguelph.ca/Tools/lameness_lab.php

Instructions:

1. Depending on the number of available computers/laptops, divide members accordingly or work together as one large group.
2. Work through the first 3 sections of the Lameness LAB Healthcare Tool – Causes, Checklist and Call the Vet?

Activity #2 - Lameness LAB Healthcare Tool – Video Challenge!**Items Needed:**

- Computer(s) with Internet access
- Website address: http://www.equineguelph.ca/Tools/lameness_lab.php

Instructions:

1. Depending on the number of available computers/laptops, divide members accordingly or work together as one large group.
2. Work through the four video challenges presented on the website.
3. If members are working in smaller groups, take time at the end of this activity to discuss what they saw, and if necessary, review the videos again as a group.

Activity #3 - Lameness LAB Healthcare Tool – Spin The Wheel!**Items Needed:**

- Computer(s) with Internet access
- Website address: http://www.equineguelph.ca/Tools/lameness_lab.php

Instructions:

1. Depending on the number of available computers/laptops, divide members accordingly or work together as one large group.
2. Have members play Spin The Wheel to test their knowledge about lameness.

SECTION 3: HORSE HEALTH & CONCERNS

Activity #4 - Horse Observation

The activity can be completed with a healthy horse or a horse that is suffering from some type of lameness.

Items Needed:

- Horse
- Horse Observation worksheet (found at the end of this meeting)
- Writing utensil (pen/pencil)

Instructions:

1. Give each member a Horse Observation worksheet.
2. Have members observe a horse at rest and in motion.
3. Have members work individually or in pairs to answer the questions on the worksheet by observing the horse.
4. Review the answers as a group, using the horse to point out various answers to the questions.

SECTION 3: HORSE HEALTH & CONCERNS

Horse Observation Worksheet**Horse at Rest:**

1. Is the horse standing squarely on their hooves? Is either front foot pointed in a different direction? Is the horse standing with their weight on their heels?

2. Are the hind limbs cramped under the body?

3. Is the horse shifting weight from one leg to another?

Horse in Motion:

1. Does the horse's head nod or sink when their hoof touches the ground?

2. Does the hip sink or rise sharply when their legs touch strike the ground?

3. Does the horse have a stiff, stilted or awkward gait?

4. Does the horse appear stiff in the shoulders?

5. Are the horse's strides short?

6. Is the horse carrying its head high without nodding?

7. Is the horse raising its front feet higher than the rear feet?

If you answered yes to any of the questions, then there may be a lameness issue with the horse.

SECTION 3: HORSE HEALTH & CONCERNS

MEETING 17: PARASITES

Topic:

- Internal and external parasites
- Controlling parasites

Objectives:

- To learn about the different parasites in horses and how to control them

Roll Calls

- How do you prevent parasites in a horse?
- Name one internal or external parasite that can affect a horse

Sample Meeting Agenda – 2 hrs. 5 minutes

| | | |
|-------------------------------------|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Internal Parasites. | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Dewormer Demonstration (instructions found at the end of this meeting) | 30 min |
| Topic Information Discussion | Review External Parasites | 20 min |
| Activities Related to Topic | Choose from Activities #2, and/or #3 (Internal or External?, Parasites Crossword Puzzle) (instructions found at the end of this meeting). | 30 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 3: HORSE HEALTH & CONCERNS

Topic Information

Parasites

A parasite is an animal that lives off of another animal (host). The parasite uses the host to provide it with a home and food. It may eat the same food as the host or use fluid from the animal's body (often blood). It is not in the best interest of the parasite to be present in large numbers; this can make the host unhealthy and it may die. If the horse is dying from parasite damage, large numbers of parasites will migrate out of, or off the body of the horse before it dies.

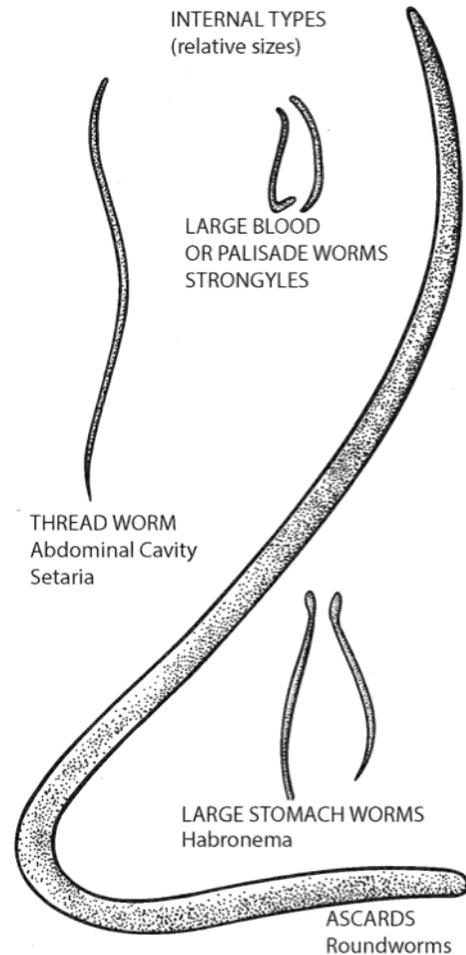
The horse is the host to a variety of parasites. Susceptibility to parasites varies. Young horses from birth to two years old are the most likely to show symptoms. Young horses tend to eat manure and dirt. Older animals usually do not have as much of a problem as young animals unless they are kept in a badly infested area. In older horses more parasites will go through the body, but will not stay.

In order to control parasites we need to be able to recognize parasite infestation. While not all parasites can be seen, they produce changes to the body of the horse. It is important to rid your horse of parasites to prevent irreparable damage to internal organs (lungs, liver, arteries and intestines).

Internal Parasites

Internal parasites (worms) live in the body of the horse. Most of them can be found in the digestive tract, the lungs, the body cavity and in the muscle. The same parasite may be found in several places in the body. This is because they are at different stages in their development (life cycle). There are more than a dozen different kinds of worms. They can produce hundreds of thousands of eggs a day. It is often difficult to recognize when a horse has internal parasites. The changes take place very slowly. Some characteristics are:

- A rough dull coat
- The horse sheds out later in the spring than the other horses
- A thin horse with a potbelly
- Thin, even though the horse is being fed well and the horse is no longer growing
- Frequent colic or diarrhea



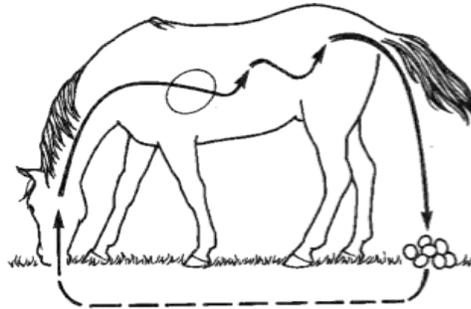
SECTION 3: HORSE HEALTH & CONCERNS

- Stunted growth
- Poor bone and muscle development in young horses
- Pale membranes of the eyes and mouth
- Actually finding worms or eggs.

While extremely heavy parasite infestation can cause these visible signs it is the internal damage that you can't see that can kill your horse.



Larvae of the bot fly



Pinworms

Internal Parasite Prevention and Control

Making the horse a domestic animal has increased the parasite problems. The horse is forced to live in an area of limited size. Since feces are the main source of parasite infection, it is easy to see how the problem increases even in well-kept stalls. Pasture rotation, not grazing large numbers of horses in small areas, and not overgrazing the pasture will help control internal parasites. Horses are exposed to new parasites everyday regardless of how clean you keep the stall or pasture. Eggs such as those of the roundworm can remain active in a pasture for up to 10 years.

Most parasites are picked up from the ground but bot flies lay their eggs during summer and late fall on the hair of horses, primarily around the forelegs, shoulders, chest and flanks. When horses lick their hair, the eggs enter their mouths. One way to control the numbers of this parasite in your horse is to scrape the little yellow eggs off the hair of your horse using a bot knife, before the horse ingests them.

There are always parasites in the body of the horse, so it is nearly impossible to eliminate them from the environment of the horse. Good deworming practices will help control parasite numbers. Depending on the conditions in which your horse is kept, it may need to be de-wormed every few months. If horses have a lot of space, spring and fall treatments may be enough. In the colder climates, we have an advantage. Freezing temperatures kill most parasites and their eggs during winter. Consult your veterinarian to determine the best deworming schedule for your horse.

If you suspect a large worm problem in a horse, a small dose of dewormer may be given to the horse several days before it is given a full dose. This removes a small number of the worms from the digestive tract. When the horse is then given a full dose of dewormer it is less likely to suffer an impaction. A young horse is more likely to get an impaction from worms because of the smaller diameter of its intestines.

SECTION 3: HORSE HEALTH & CONCERNS

Dewormers

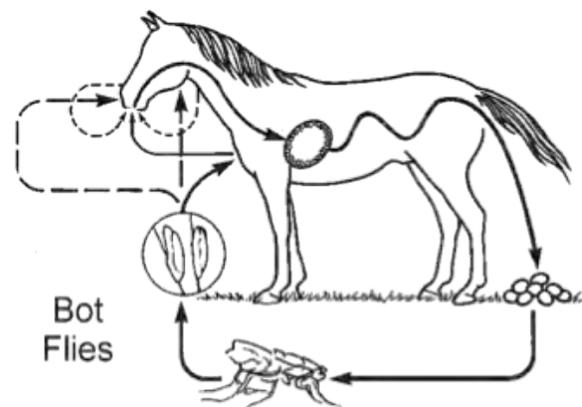
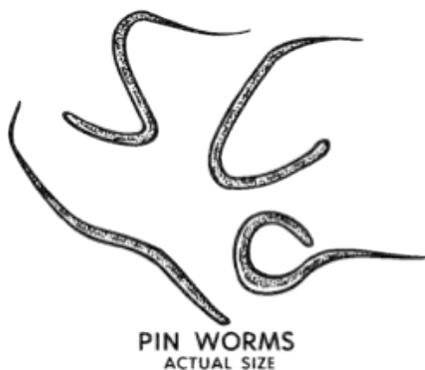
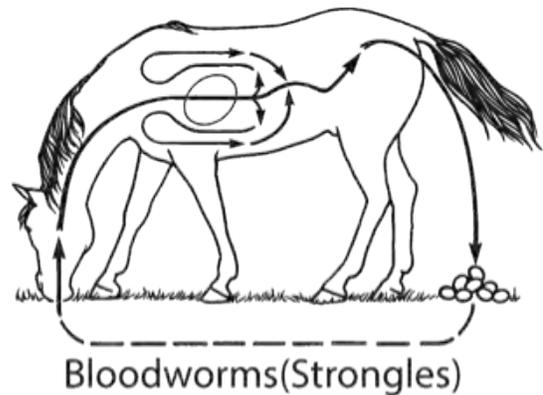
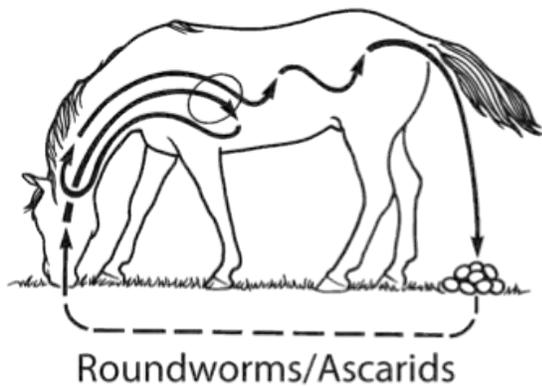
Dewormers can be given in various forms (paste, gel, powder, granules or liquid). Consult your veterinarian as to what is appropriate for your horse and your location. Deworming is a VERY important part of your horse's health routine.

Internal Parasites

| Parasite | Where Found | Size | Number of Eggs | Method of Infection | Location and Lifecycle | Signs |
|-------------------------------|---|--|----------------|---|---|--|
| Large roundworm (ascarid) | Small intestine | 12.5-55cm (5-22 inches) | 1,000,000/day | Swallowed with feed and water | <i>Eggs</i> - stomach and intestine

<i>Larvae</i> – go through gut wall into the bloodstream, through liver, heart and lungs, migrate up the trachea and pharynx and are swallowed | Colic, diarrhea, rough hair coat, pot-bellied, delayed growth |
| Bots | Hairs of lips, throat, migrate through stomach-lining. rectum | 1.8cm (3/4 inch) | 150-300 eggs | Horse rubbing eggs with lips | One year cycle. Larvae enters and grows in mouth. Pass to the stomach and intestines. Pass out with feces. Bots can attach to the rectum for several days. | Yellow eggs are attached to the hairs of the horse, generally legs. Colic, digestive upset, excitement, thin, low energy level. Poor coat and loss of condition. |
| Strongyles (large bloodworms) | Small intestine, caecum, colon, blood | 5cm (2 inches) | Large numbers | Swallowed with food and water, on pasture and in pens | Pass through three stages on the ground after hatching. Go through walls of the small intestine, caecum, colon into the arteries and through the circulatory system. | Loss of appetite, rough coat, sunken eyes, colic. Can cause thrombosis or aneurysms (blockages that may cause death through gangrene or heart failure) |
| Pinworms | Rectum, large intestine | Very small eggs may be anchored in anus. One species produces live young | | Swallowed with food and water | Mature in the colon. Pass out with feces and anchor in the anus | Tail rubbing, irritation of the anus. Broken hairs and bare patches around the tail and buttocks |

SECTION 3: HORSE HEALTH & CONCERNS



External Parasites

Horses are also the host to a number of external parasites. In many cases “*external parasites*” means that the horse is bothered by insects. Frequent symptoms are irritation, scratching and restlessness, changes in hair and skin conditions. Any time you are out with the horses in the summer, your horse will be bothered as much by the mosquitoes and flies as you are. Unfortunately for your horse there are added problems.

Biting insects spread the diseases **Equine Infectious Anemia (Swamp Fever)**, **Equine Encephalomyelitis (Sleeping Sickness)** and **West Nile Virus**. All of these can cause death. These can be detected by blood testing.

Most parasites have many stages in their life cycle. For example the fly is just one stage of its parasite’s cycle. While the flies do not do direct damage, they do bother the horses. Irritation caused by lice can cause hair loss. Mange mites produce a specific contagious disease known as mange (or scabies, scab or itch). These minute parasites live on/in the skin of horses. Horses with lice or mites may have rough coats, poor condition, and may rub fences etc. due to the irritation. Tick problems are especially prevalent in the foothill and mountain areas. Infestations run in cycles. Use tweezers or needlenose pliers to remove ticks because the ticks have strong mouths that clamp onto the horse.

SECTION 3: HORSE HEALTH & CONCERNS

External Parasites

| Parasite | Life Cycle | Symptoms | Location | Treatment |
|---|---|---|---|--|
| Lice
(sucking and biting)

(most common external parasite) | Eggs attached to hairs (hatching takes 2 weeks)

Lay eggs after 2 weeks and die | Severe itching. Hair rough and thick, may have scabs. Heavy dandruff. Greasy skin. | -base of tail

-inside of the thigh

-neck and mane shoulders | Consult veterinarian for best treatment |
| Mites
(4 kinds) | Will live 2 or 3 weeks when removed from the body

15 day cycle to hatching | Cause a hairless, scaly appearance because they feed on cells and lymph. Itching and irritation. Pimple-like eruptions. Dandruff and hair loss. | -skin

-neck

-withers

-mane and tail | Consult veterinarian for best treatment |
| Ringworm | Caused by mold or fungi | Round, scaly areas with bumpy rough grey powdery appearance. Loss of hair from infected patches. Mild itching. | -outer layer of skin. All animals and humans are susceptible. | Clip hair. Remove scabs, wash with surgical soap. Paint with iodine. |

External Parasites Prevention and Control

External parasites can be controlled with insecticides. There are a number of insecticides that may be used on horses. Most come in spray or liquid forms that can be sprayed or wiped on to the horse's coat. When you are buying an insecticide consider the disposition of your horse. Some horses will not stand to be sprayed from an aerosol or pump type spray container. In this case put the insecticide on a cloth and wipe it onto the horse. Always use a cloth on your horse's face. Never spray near its eyes or nose. A roll-on insecticide can also be used around the ears, nose and below the eyes. Never apply a roll-on insecticide above the eyes. Watch skin and hair conditions for reactions to the insecticide. Some horses with sensitive skin cannot tolerate strong sprays. Insect strips or granules can be used to control insects in barns.

SECTION 3: HORSE HEALTH & CONCERNS**BEFORE THE NEXT MEETING**

Try one of these activities at home.

1. Look through a horse's "medicine chest" and see if you have any parasite prevention sprays, pastes or powders. Bring them to the next meeting and explain to the rest of the club how you, or someone you have worked with, have used them and what the success rate was.

AND/OR

2. Investigate the cost of dewormers for horses. Find out which ones control the most parasites and which ones give the most value for their money. Record your results in your Record Book.

SECTION 3: HORSE HEALTH & CONCERNS**DIGGING DEEPER**

For Senior Members

Prevention is the Best Medicine

There are always parasites in the body of the horse so it is nearly impossible to eliminate them from the environment of the horse. But, there are steps that can be taken in the horse's living environment to help control and possibly eliminate the incidence of parasites.

Investigate best practices for parasite control (and possible elimination) in a horse barn. Come up with a plan for your barn (or a fictitious horse stable) that could be implemented for parasite control.

Record your findings in your Record Book and be prepared to share your plan with the club.

SECTION 3: HORSE HEALTH & CONCERNS

ACTIVITIES**Activity #1 - Dewormer Demonstration*****Items Needed:***

- Veterinarian or an experienced horse person
- Quiet horse that is due to receive dewormer
- Dewormer

Instructions:

1. Have a veterinarian or experienced horse person talk about the importance of deworming horses and then have them demonstrate how to properly give dewormer to a horse.
2. Review various dewormers available on the market and what each dewormer is formulated to kill.

Activity #2 - Internal or External?***Items Needed:***

- Internal or External Worksheet (found at the end of this meeting)
- Writing utensils (pens/pencils)

Instructions:

1. Give each member an Internal or External worksheet.
2. Have members work individually or in pairs to complete the worksheet.
3. Review each parasite and whether it is internal or external.

Activity #3 - Parasites Crossword Puzzle***Items Needed:***

- Parasites Crossword Puzzle (found at the end of this meeting)
- Writing Utensil (pen/pencil)
- Answer Key (found at the end of this meeting)

Instructions:

1. Give each member Parasites Crossword Puzzle
2. Have members work individually or in pairs to complete the puzzle.
3. Review the answers to make sure they are correct.

SECTION 3: HORSE HEALTH & CONCERNS

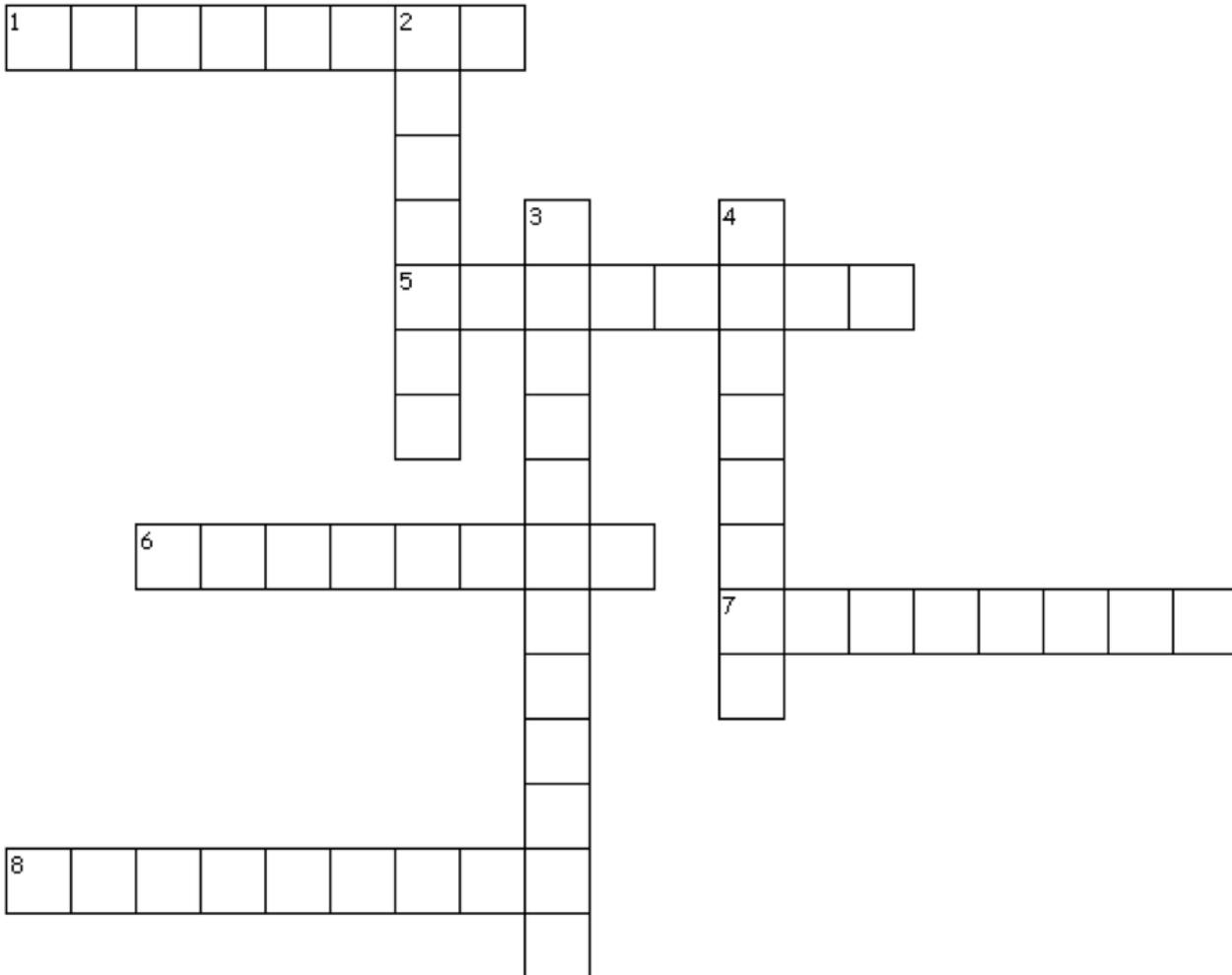
Internal or External?

Check off whether the following parasites are internal or external.

| Parasite | Internal | External |
|--------------------------|-----------------|-----------------|
| Ascarids (roundworms) | | |
| Bots/Bot flies | | |
| Flies | | |
| Lung worms | | |
| Mange (mites) | | |
| Mosquitos | | |
| Pin worms | | |
| Strongyles (blood worms) | | |
| Stomach worms | | |
| Tapeworm | | |
| Ticks | | |
| Lice | | |

SECTION 3: HORSE HEALTH & CONCERNS

Parasites Crossword Puzzle



Across

1. The type of parasite that lives in the body of a horse.
5. External parasite caused by a fungus.
6. The name of an organism that lives off of another animal.
7. The type of parasite that lives on the outside of a horse's body.
8. Another name for blood worms.

Down

2. The scientific name for roundworms.
3. Used to control external parasites.
4. This parasite lays eggs on the hairs of horses during the summer and late fall.

SECTION 3: HORSE HEALTH & CONCERNS

Parasites Crossword Puzzle – ANSWER KEY

Across

1. The type of parasite that lives in the body of a horse. INTERNAL
5. External parasite caused by a fungus. RINGWORM
6. The name of an organism that lives off of another animal. PARASITE
7. The type of parasite that lives on the outside of a horse's body. EXTERNAL
8. Another name for blood worms. STRONGYLE

Down

2. The scientific name for roundworms. ASCARID
3. Used to control external parasites. INSECTICIDES
4. This parasite lays eggs on the hairs of horses during the summer and late fall. BOT FLIES

MEETING 18: FACILITIES

Topic:

- Housing needs of horses
- Potential Hazards
- Riding surfaces
- Stable Vices

Objectives:

- To learn about the different housing conditions that horses need

Roll Calls

- Name three things that are dangerous to have in the area where your horses are kept.
- Name one reason why it is important to regularly clean manure out of horse stables.

Sample Meeting Agenda – 2 hrs. 5 minutes

| | | |
|-------------------------------------|--|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Housing/Shelter and Winter Care | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Horse Barn Visit (instructions found at the end of this meeting) | 30 min |
| Topic Information Discussion | Review what Manure Management, Potential Hazards and Stable Vices | 20 min |
| Activities Related to Topic | Choose from Activities #2, and/or #3 (Popsicle Horse Barn/Stable, Potential Hazards for Horses – Beach Ball Style!) (instructions found at the end of this meeting). | 30 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 4: HORSE CARE

Topic Information

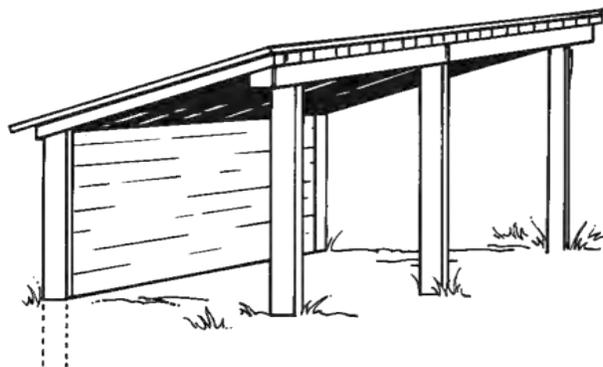
Horses are housed in all types of facilities; ranging from pastures and corrals to elaborate stables with individual box stalls. Horses do well in any of these conditions, but there are some important things to look for, no matter where you keep your horse.

Three items that every horse requires and that should be available at all times in their pen or pasture are:

- Shelter
- Water
- Salt

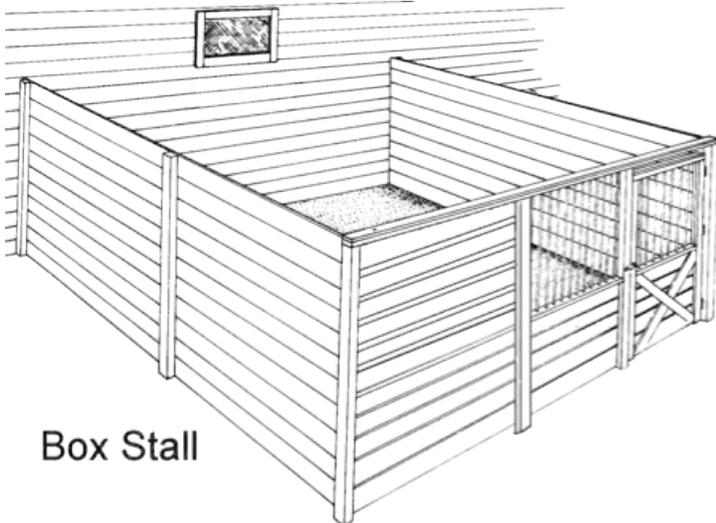
Housing/Shelter

Shelter is important to allow your horse protection from the hot sun, wind or stormy weather or from biting insects. It should provide room for your horse, (about 3 metres by 3 metres (10 feet x 10 feet)) and plenty of ventilation but no drafts. If you are keeping more than one horse the shed must be big enough so the “boss” horse won’t keep the others out. Also clean the manure out regularly.



Inspect the area where your horse is kept for loose boards, nails, wire and any projections that may cause injuries. Keep all wire and baler twine picked up. If you keep your horse in a pasture make sure all your fences, barbed, smooth or electric are kept tight and in good repair.

If you use a box stall, it should house your horse comfortably. The size of the stall will depend on the size of your horse, but the standard stall should not be less than 3 metres by 3 metres (10 feet by 10 feet.) Walls should be at least 1.7 metres (five feet) high and the door should be 1.3 metres (four feet) wide.

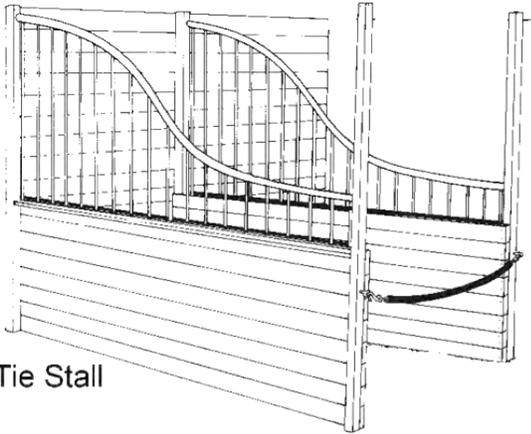


Box Stall

If a standing stall is used, there are some important considerations to make regarding the well-being of your horse. Each tie stall should be 1.3 to 1.7 metres (four to five feet) wide so that a horse may lie down comfortably and 2.7 to 3.4 metres (9 to 11 feet) long. Included in the length would be the manger and hay rack. To help prevent horses from fighting, side walls should be

SECTION 4: HORSE CARE

2.1 metres (seven feet) high at the front of the stall where animals are tied and taper down to about 1.4 (four and one-half feet) and solid all the way to the floor to prevent a horse from becoming caught under the wall.



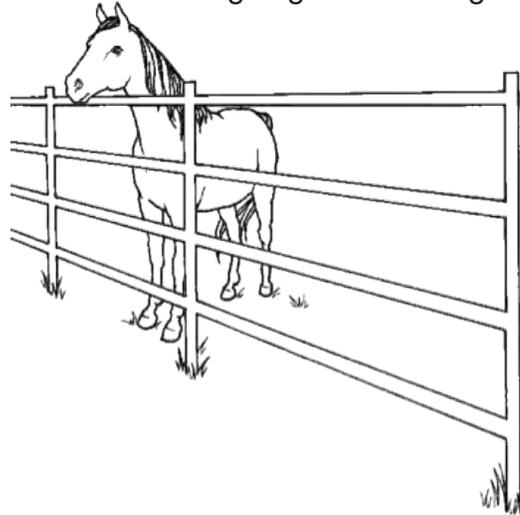
Tie Stall

A horse is tied in a stall with a rope that passes through a ring fastened to the wall with just enough slack in the rope that the horse may lie down. Take care to tuck away the ends of the halter shank to prevent it from hanging in a loop that the horse may get caught in. It is always a smart idea to tie the horse with something that can break.

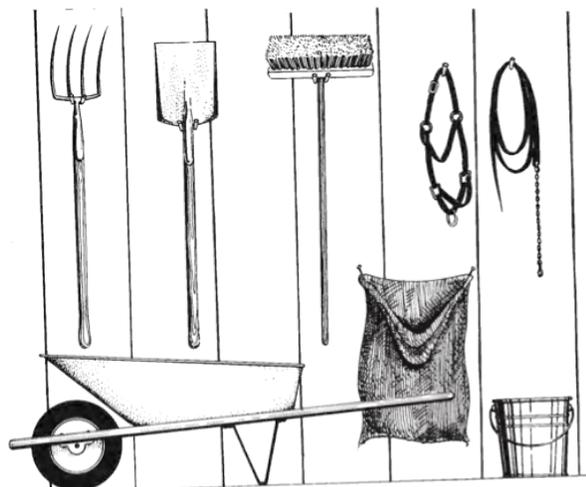
If your horse is housed in a stable with little room to roam, it is important that it receives regular exercise.

There are a few basic considerations that must be made when designing and building such facilities. These include:

- The materials used to build a stable must be strong and durable to withstand the abuse that horses may place on it. Kicking, pushing, pulling and scraping are all forces that horses commonly exert inside a stable. They also may have bad habits like pawing and chewing wood. Be sure to have a non-slip floor.
- To help with drainage, a stable should be located on higher ground.
- Facilities should be easily accessible for transporting hay and manure disposal.
- The width of the main passage should be wide enough to turn a large horse (minimum of eight feet).
- Ventilation is very important for supplying fresh clean air and to help keep the humidity down. Windows work well when large enough and well-placed, but in some instances fans may be required.
- Grains should be stored where horses cannot get access to them.
- Mangers or hay racks, and grain, salt and mineral holders should be included in each stall.
- If possible, storage for bedding and hay should not be included in the stable because of the risk of fire. If kept outside it should be covered.
- Having a tack room right in the stable, with low humidity and a constant



SECTION 4: HORSE CARE



temperature, for safe and careful storage of equipment is preferred.

Fences constructed of pipe, poles or boards provide maximum safety for your horse. Wire fences, especially barb wire, may cause injuries and are discouraged. If you do use wire fences, be sure they are tight, well attached to posts and no loose wire is lying around. A smooth top wire may reduce injuries. A board or pole fastened to the top of the fence may also help reduce injuries and prevent stretching of the wire. Electric fences need to be checked often to make sure they are maintaining their current.

Winter Care

Take extra care when riding the horse in winter. The footing is not always solid. This makes slow gaits the safest. Even a horse in good condition will sweat. Horses with a heavy haircoat may overheat if exercised extensively. Do not turn the horse out until it is dry. If the horse is turned out damp it may catch a chill.

Horses do not need to be kept inside during the winter, but they do need shelter from the wind. Wind is a problem because it cools the horse down faster than cold temperatures alone. For horses being kept on pasture, trees, bush and hills are good protection. Open front shelters are also excellent since not everyone has barn space for horses. Some people do keep their horses in the barn for the winter. These need to be turned out for exercise. Horses that are turned out during the day after being kept in a heated barn should be blanketed. The only problem with blanketing is that if the horse sweats under the blanket it may possibly become chilled because it takes so long to dry, so check your horse regularly and remove the blanket on warm sunny days. Always be sure to keep the blankets clean and mended.

Manure Management

It is your responsibility to provide your horse with a clean place to live. Stalls should provide drainage so that your horse is not standing in urine and spilled water.

Clay, concrete, wood, or asphalt floors with wood chips or straw as bedding are good. Rubber mats make softer stall footing. Straw is good for foaling.

Bacteria and parasites grow and thrive in organic wastes. Flies, insects and vermin also carry disease and thrive in filthy conditions. Keeping the stalls clean removes the source for some diseases to survive and reduces the chance of your horse getting ill. A strong ammonia odor can cause your horse to become ill.

One horse can produce as much as 95kg (210 pounds) of manure each week. Stalls should be mucked out daily of manure and soiled bedding. The entire stall should be cleaned out periodically (once or twice per week depending on the habits and volume of

waste from each horse).

Manure is an excellent environment for stable flies and while feeding on manure, flies can ingest the eggs of some parasitic worms. These can then be deposited by the fly around the muzzle of the horse, in wounds or when it bites the horse. Eggs may be also deposited on the hair of the legs and the body. When the horse scratches itself with its teeth, the eggs enter the mouth.

Harrowing pastures will help break up manure so the elements can destroy the worm eggs and larvae.

Odour is another concern regarding manure disposal. The cleaner a stall is maintained, the less the odour that will develop.

Cleaning a Stall

We usually do not strip the stall bare each time we use it; we just take out the manure, soiled bedding and all wet bedding.

1. Remove any obvious piles of manure with a manure fork if bedding with straw or a shavings fork if bedding with shavings.
2. Find the areas that appear to be clean. Lift the bedding with the fork and make sure it is clean and dry. These are now your stock piling spots for clean bedding. Once you have cleaned a stall or two, you can tell by the weight whether or not the bedding is clean or dirty.
3. The dirty goes in the wheelbarrow or muck bucket. The clean goes on the clean pile. Find the wet spot. If your horse has not urinated overnight, be a bit concerned. This is not normal. Completely expose the wet area and clean up excess moisture and any remaining manure using a fork, broom and shovel. Leave the wet area open to dry before re-bedding.

Manure Storage

Some options for manure storage are:

Bunker

Put the manure in a bunker that is disposed of at least once a week. This bunker may be close to the stall but must have a lid to keep flies out. It must be large enough to contain the manure that will accumulate between disposals.

Piled

Pile the manure in a pile as far away from the stable and house as is practical. Consider composting to produce a more useful product once this pile is disposed of. Composting involves regular turning of the pile, with a front end loader or other equipment to control the amount of moisture and oxygen in the pile.

Composting can provide a product for spreading on fields or selling for gardens, and so on. Composting can reduce the number of weed seeds that will germinate for some

SECTION 4: HORSE CARE

species. Composting kills parasite eggs and larvae, properly composting the manure before spreading can reduce the potential for recontamination of the area and ingestion of parasites by the horse.

If spreading raw manure on pasture, apply during the growing season (May to September) when grasses are actively growing. Keep in mind that spreading fresh, un-composted manure on pastures may carry the risk of re-infesting your horse with intestinal parasites. Harrowing the manure clumps after it has been spread may allow the heat of the sun to penetrate the manure and kill the larvae. Harrowing should be done only during hot, dry weather and, ideally, horses should be removed from the pasture for two to four weeks after harrowing.

Settling a New Horse in a New Home

Introduce a horse to its new environment by leading it around the perimeter. Separate strange horses until they have a chance to become accustomed to each other. It is advisable to introduce a horse to its new surroundings in the daylight. Take your cues from the horse. If it is very nervous, go slowly.

Never turn a new horse out with an established group of horses, even if it is an old friend of the herd that has been separated for some time. The settled horses may gang up on the newcomer and injuries are possible. Put the new horse into a small paddock or corral in sight of the group. Gradually move the new horse closer to the pasture until it is next to the group of horses. Permit the new horse to sniff and nuzzle the members of the herd with a non-wire fence barrier between them. When all the preliminary kicks and squeals are done, put the horse into the group situation, in a pen with no tight corners with enough room that they can get away from each other if necessary. Stand by and watch the proceedings. Check your horse daily.

Feed a light ration until the horse is comfortable with its new surroundings and different feed. The change in feed needs to be made *gradually* to avoid colic or other gastric upsets.

Spend time with the new horse. Don't jump on and ride immediately. Catching, brushing and handling the horse in the new territory will help it feel more comfortable. You will start to develop trust between you and your horse that will help keep things more relaxed and safer on your first ride.

Housing Horses Together

When horses are housed in pairs or in groups, they develop bonds and a pecking order. This order is established based on dominance and affects how the herd operates. Dominant horses will often be the first to the feed and will fight other horses off. Therefore, it is important to provide feed in two or three places so that all members of the herd have equal opportunity to eat.

The amount of space that is provided for a group of horses is the most critical. If the horses are getting into a lot of trouble, they may not have enough space where you are keeping them.

Horses can get into trouble in a herd because they have a tendency to want to improve their position within the herd. Some horses also think it is fun to constantly peck at other horses. Consequently horses in herds can wear a lot of scars.

Potential Hazards

Hazards are anything that can hurt a horse. We find them in any yard and it is important to watch out for them and avoid them with your horse. Some common ones are mentioned below, along with a description of what problems may arise from the hazard and how to avoid it.

SECTION 4: HORSE CARE

Potential Yard Hazards and Preventions

| Potential Hazards around the yard | Problem | How to Prevent |
|--|---|---|
| Broken Planks | <ul style="list-style-type: none"> • Tears • Puncture (with or without wood left in the horse) | Keep fences in good repair. |
| Barbed Wire | <ul style="list-style-type: none"> • Deep cuts or skin cuts | <p>Maintain fence. Use where horse population is low. Use tight high tensile or electric fence as an alternative.</p> <p>Don't have horses across from each other separated by wire.</p> |
| Smooth Wire (Barbless, High Tensile or Electrical) | <ul style="list-style-type: none"> • Strangulation • Wrapping around legs | Often used for electrical fencing. Maintain carefully to ensure it is well secured to the fence and very tight. |
| Loose Wire | <ul style="list-style-type: none"> • Wrapping around legs • Deep cuts | Tighten the wire. |
| Hog Wire | <ul style="list-style-type: none"> • Feet will go through and get cut • Cuts • Strains | <p>Use a size too small for a foot to fit</p> <p>through or very large (shoes may still get caught). Use 30 cm off of the ground.</p> |
| Hinges, latches, bolts | <ul style="list-style-type: none"> • Cuts • Punctures | Should not stick out from a wall or around the edges |
| Roof Overhangs | <ul style="list-style-type: none"> • Cuts | Protect any sharp edges. Should be high enough so doesn't cause a problem. |
| Metal Scraps, glass, wire, nails | <ul style="list-style-type: none"> • Cuts • Punctures • Ingestion | Pick up garbage around the yard. |
| Gates <ul style="list-style-type: none"> - Metal gates - Open gates | <ul style="list-style-type: none"> • Cuts • Bruises • Broken bones | <p>Cover sharp edges. Set high enough that if the horse falls under, it can get</p> <p>its legs free. Gates should open against a fence so an animal cannot be caught behind, pinned in a corner, or run into it when it is open.</p> |

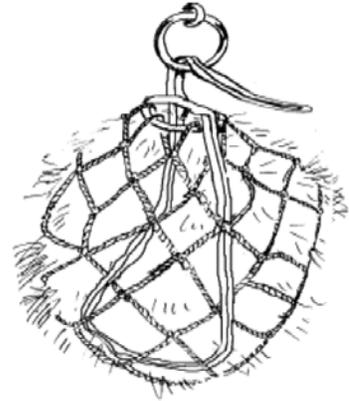
SECTION 4: HORSE CARE

| | | |
|--|---|---|
| Stored Equipment <ul style="list-style-type: none"> - Wheelbarrow - Pitch forks - Rakes - Shovels | <ul style="list-style-type: none"> • Cuts • Strains • Broken bones • Punctures | <p>Put all equipment away when it isn't being used. Be sure it is stored safely and away from the animals.</p> |
| Metal feeders or water tubs | <ul style="list-style-type: none"> • Cuts | <p>Cover sharp edges. Keep in good repair.</p> |
| Hay feeders | <ul style="list-style-type: none"> • Suffocation • Strains • Cuts • Broken bones • Strangulation | <p>Place high up or on the ground with an open top and sides so it cannot cut the horse.</p> |
| Stall walls | <ul style="list-style-type: none"> • Cuts • Tears • Broken bones • Suffocation • Horse becoming cast | <p>Remove or flatten nails. Cover holes. Level bottom of the stall so the horse cannot get caught in a depression. Stall walls should be so that a hoof cannot fit through, to prevent casting.</p> |
| Hay nets | <ul style="list-style-type: none"> • Strangulation • Injury from legs being tangled | <p>Hang high and thread back up through itself. Remove at night or when you are away for long periods of time. Suggest not using if possible.</p> |
| Tying Improperly | <ul style="list-style-type: none"> • horse spooks and pulls object loose then runs into other objects • tying by reins hurts the mouth and will break the reins or bridle • tying too long, rope can get over the head or wrap around the leg and break or rope burn • tying too low, horse can step over rope and get tangled • tying with the wrong knot makes it difficult to untie in an emergency situation | <p>Tie to a solid object that cannot be pulled loose. Tie with a bowline or quick release knot so the horse can be freed easily.</p> <p>Tie with a leather halter and strong shank. Don't tie too long or short. Horse should have enough rope that it can reach its feed (if in a tie stall) but not paw (legs over) the rope.</p> <p>Horse should be tied high (with height or higher).</p> <p>Tie horse with a quick release knot.</p> |

SECTION 4: HORSE CARE

Hay Net

Bring excess ties through bottom of hay net before tying in position.



| Potential Hazards around the yard | Problem | How to Prevent |
|---|---|--|
| Barn wiring, lights, electric stockwater | <ul style="list-style-type: none"> • Electrocution • Cuts • Strangulation | Wiring should be enclosed and out of reach where it is free from moisture accumulation. Cover lights or recess them into the ceiling. Use only CSA approved equipment. |
| Machinery | <ul style="list-style-type: none"> • Cuts • Punctures • broken bones • Strains | Do not leave where horses are kept. |
| Batteries, used oil | <ul style="list-style-type: none"> • horses may lick or drink acid from batteries • skin corrosion • death | Keep them stored away from horses. Dispose of old batteries and oil at Hazardous Waste sites. |
| Grain bins, grain piles | <ul style="list-style-type: none"> • laminitis • colic • possible death, gorging, grain founder | Close bins. Securely fence grain piles and do not allow horses into the field with them. |
| Paint and wood Preservatives | <ul style="list-style-type: none"> • poisoning | Do not use where the horses are kept. |
| Black walnut wood shavings | <ul style="list-style-type: none"> • extremely poisonous to horses | Only use wood shavings sold for bedding; do not use leftovers from a lumberyard or carpenter. |

SECTION 4: HORSE CARE

Potential Hazards Around the Trailer and Preventions

| Potential Hazards around the trailer | Problem | How to Prevent |
|---|---|---|
| Tying (inside) | <ul style="list-style-type: none"> • horse rears and gets its front legs caught in the rope or feed box • cannot untie in case of an accident | <p>Tie short enough that the horse cannot turn its head more than a few inches past the edge of the feed box.</p> <p>Use a quick release knot. Use a trailer tie with a breakaway snap or carry a sharp knife.</p> |
| Tying (outside) | <ul style="list-style-type: none"> • cuts from trailer fenders, license plates, frame light supports, lights, trailer hitches, latches, escape hatch | <p>There are a lot of hazards around a trailer and tying your horse to a trailer should be avoided. If you need to, be sure your horse is quiet and give horses space (only one horse to each side of a two horse trailer).</p> |
| Escape hatch | <ul style="list-style-type: none"> • cuts to the head • leg injuries from trying to jump through the space • major injuries or death of young horse from falling or jumping out of moving vehicles | <p>Keep the escape hatch closed unless you are using it to feed or tie and untie horses in the trailer. Check that all doors are properly latched each time you leave a location.</p> |

SECTION 4: HORSE CARE

Potential Hazards In and Around the Trailer and Preventions

| Potential Hazards around the trailer | Problem | How to Prevent |
|---|---|--|
| Loading | <ul style="list-style-type: none"> • hits head on roof • leg cuts • broken legs from falling under the back bumper of the trailer (usually horses not trained to load in a trailer) | <p>To avoid rearing, do not pull hard on the halter shank or try to hold onto the horse if it spooks. Let the horse back.</p> <p>Use shipping boots</p> <p>Rubber bumper at the back of the trailer</p> <p>Teach horse to load properly.</p> <p>Place a log under the trailer bumper to fill the gap from the edge to the ground, or back into a low spot.</p> |
| Doors | <ul style="list-style-type: none"> • the horse can fall out and be dragged while the trailer is moving • cuts when horses are tied outside the trailer | <p>Use a rump chain or bar. Check that the latches are properly closed before you start travelling.</p> <p>Close all doors when horses are tied outside of the trailer and tie far enough from latch that they can't get halter or lead hooked on latch.</p> |
| License Plate | <ul style="list-style-type: none"> • cuts | <p>Relocate the license plate so it is against a flat surface with no space above or below. Do not tie the horse to that side of the trailer.</p> |
| Flooring | <ul style="list-style-type: none"> • damaged foot from going through floorboards with the foot being dragged on the road • slips or falls and gets down in the trailers • eye injuries from bedding blowing around | <p>Check floor boards regularly for damage. If using rubber mats, remove manure after every use and lift mats so that the floor boards can dry.</p> <p>Use rubber floor mats or sand to prevent slipping. Some types of straw are very slippery and should not be used (especially oat straw). It also blows up into the horse's eyes.</p> |

SECTION 4: HORSE CARE

| | | |
|---------------|--|---|
| Window | <ul style="list-style-type: none"> • cuts • strangulation • neck strains • bruises | Tie the horse so it cannot put its head out the window when travelling. If windows are wide or large, use heavy metal screening or metal bars over the window so it can be opened safely. |
|---------------|--|---|

Riding Surfaces

When working your horse, be aware of the footing. Problems occur when

the footing is too hard, rocky, uneven, frozen or sunbaked. Depending on the condition of your horse's hooves, do not ride an unshod horse for any great distance on hard or rocky ground. Even some grassy surfaces can be surprisingly hard and slippery. If riding an unshod horse on hard ground, pay close attention to the way your horse travels and how the hooves are being affected by the surface. Slowing down reduces impact.

Riding surfaces can also be too soft and deep. This occurs when hard rain reduces riding areas to mud, the base becomes too soft and the weight of the horse causes the foot to be sucked down, making it more difficult for the horse to lift its foot. This is particularly hard on tendons and ligaments. Deep sand can cause leg strain and deep wet snow can also be hard on tendons. At some temperatures snow will ball on the sole of the foot, causing a very icy, dangerous situation.

Slippery surfaces such as snow, ice, pavement and wet grass should be avoided.

Pleasure riding in pastures and on the trail can be fun, but be very cautious of holes. If a pasture has a lot of holes and rocks, you should avoid riding at fast speeds.

Most riding arenas have a dirt base with sand and fine shavings mixed in. It is important that the arena does not get dusty, as this may lead to respiratory problems in the horse. Keeping the surface damp and mixing some fine wood shavings into the dirt may help to reduce dust.

Stable Vices

Cribbing

Cribbing is a bad habit that some horses develop because of stress. This is also called windsucking. The horse grabs a projecting object (top of a door, manger, fence, etc.) with its incisor teeth, arches its neck and gulps. Besides wearing down the teeth, the horse may be hard to keep weight on. To try to control a horse from cribbing, put a cribbing strap on your horse. The strap goes around the neck just behind the jowl and poll. This strap tightens when the horse tries to crib and makes the cribbing action uncomfortable.

SECTION 4: HORSE CARE**Wood Chewing**

The habit of chewing wood is hard on your facilities. Smearing a commercial anti-chewing mixture on possible chewing spots may also help. These mixtures are flavoured with something that makes them undesirable to the horse. Some home remedies that some people use include Vaseline mixed with either hot-peppers, cayenne pepper or Tabasco sauce. Fences can be reinforced with metal edging, or made of plastic or metal to keep horses from chewing.

Weaving

Weaving is another stable vice which is extremely hard to cure. This condition is when a horse swings its head from side to side. The horse may lose condition rapidly.

Boredom in a box stall seems to be the major cause of weaving. Give the horse lots of exercise and pasture time.

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Take a picture or sketch the area where you house your horse (or where you would house a horse). Include your picture in your Record Book and bring it to the next meeting to show the club.

AND/OR

2. Examine your yard for potential hazards and for evidence of any stable vices that your horse(s) might have picked up. Record your findings in your Record Book.

SECTION 4: HORSE CARE

DIGGING DEEPER

For Senior Members

The Cost of Building A Horse Barn

Building anything isn't cheap these days and horse barns are no exception. Contact a local construction company that specializes in livestock facilities and find out approximate costs for various types and sizes of horse barns.

Record your findings in your Record Book and be prepared to share your findings at the next meeting

DIGGING DEEPER II

For Senior Members

Manure Management Plans

Having a horse barn means having a plan for what to do with all of the manure generated by the horses. Make a plan for a barn that houses 25 horses a year, keeping in mind that each horse will produce 95kg (210 pounds) of manure each week. Make sure to answer the following questions in your plan:

- How are you going to clean out the horse stalls?
- What type of storage are you going to have for manure, especially in the winter months?
- How large does the manure storage facility have to be to store manure for the entire winter?
- What type of equipment will you purchase to spread the manure in the spring?
- How much land do you need for 25 horse to spread the manure on?

Put your Manure Management Plan in your Record Book.

ACTIVITIES

Activity #1 - Horse Barn Visit

Items Needed:

- Horse Barn willing to host a group of 4-H members
- Horse Barn owner or veterinarian willing to speak about the facilities and potential hazards
- Horse Barn Tour worksheet (found at the end of this meeting)
- Writing utensil (pens/pencils)

Instructions:

1. The best way to learn about proper horse facilities and the potential hazards that horses can face is to visit a horse barn.
2. Give each member a Horse Barn Tour worksheet.
3. Have members tour a horse barn and ask questions so they can complete their worksheet.
4. After the tour, review the worksheet to ensure members have the correct answers.

NOTE: to test member's observation skills, a few potential hazards could be placed/set up in the barn to see if member's notice the hazards and if they can come up with any potential solutions

Activity #2 - Popsicle Horse Barn/Stable

After visiting a horse barn/stable or by looking at pictures of horse barns, members can design their own model of their ideal horse stable. Let members show their creativity by creating a stable of their choice.

Designs can be similar to the one pictured here, or can be a totally revolutionary design, keeping the best interest and safety of those horse and handlers in mind.

Items Needed:

- Paper
- Writing utensils (pens/pencils)
- Popsicle sticks
- Glue
- Any other craft items that might be of use



Photo Credit:

<https://www.pinterest.com/pin/409475791091291563/>

SECTION 4: HORSE CARE***Instructions:***

1. Have members draw what they envision their horse facility will look like.
2. Once their drawing is complete and they can explain why they have chosen the design they have drawn, members can start at building their design out of popsicle sticks.
3. Once completed, the designs can be used for displays at Awards Night, for displays at local fairs, etc.

Activity #3 - Potential Hazards for Horses - Beach Ball Style!***Items Needed:***

- Beach ball with a variety of coloured spots
- Permanent marker

Instructions:

1. Before the meeting, using the permanent marker, write a potential hazard on each coloured spot on the beach ball, e.g. hay nets, used oil, barbed wire, flooring, etc.
2. Have members stand in a circle.
3. Start the game by throwing the beach ball to a member standing in the circle.
4. When the member catches the beach ball, they need to look at the coloured spot where their right hand is. They need to read, out loud, what the hazard is that is written on that spot.
5. The member then needs to give one reason why the potential hazard could be a problem.
6. The person on the right hand side of the member who caught the ball needs to give one solution that helps to prevent or fix the hazard.
7. Once a problem and solution have been given for the potential hazard, the member who caught the ball then throws the ball to someone else in the circle and the game continues.
8. If a member is struggling to come up with an answer, have the member on either side help to come up with an answer.

SECTION 4: HORSE CARE

Horse Barn Tour

What types of housing does the horse barn provide for horses?

Are the box stalls large enough for a standard-size horse?

When the horses are outside, do they have a shelter from the sun, wind, stormy weather and biting insects? If so, what does the shelter look like?

What materials are the fences made out of? Are they tall enough?

How does the barn handle manure removal?

What type of manure storage does the barn have?

Do you see any potential hazards in the barn? If so, what are they and what could be done to correct the problem?

MEETING 19: GROOMING AND HOOF CARE

Topic:

- The basics of grooming:
 - The equipment
 - How to groom
 - Grooming difficulties
- Importance of hoof care
- Bathing a horse
- Clipping a horse

Objectives:

- To learn about the different equipment and techniques used to groom horses
- To learn how to look after the horse's hoof
- To learn about various types of clips for a horse

Roll Calls

- Name one tool that you use for grooming a horse.
- If you have a horse, what part of the grooming process does your horse like the most?
- How often do you clean your horse's hooves?

Sample Meeting Agenda – 2 hrs. 10 minutes

| | | |
|-------------------------------------|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Grooming, The Grooming Kit and Grooming Your Horse | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Grooming Tools Mix & Match (instructions found at the end of this meeting) | 15 min |
| Topic Information Discussion | Review Picking Up The Feet, The Importance of Hoof Care, Bathing Horses, Grooming Problems, Clipping and Various Types of Clips for Horses. | 30 min |
| Activities Related to Topic | Choose from Activities #2, #3 and/or #4 (Catalogue Race, Grooming Gab, Grooming Demonstration) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 4: HORSE CARE

Topic Information

Why Groom?

Regular grooming improves a horse's appearance, helps increase circulation and stimulates the oil glands which make the horse's coat look shiny. Grooming also provides an opportunity to check for injuries, skin irritations or other health problems. The amount of grooming a horse needs will depend on how much you ride and where the horse is kept. A horse that is in a barn and/or blanketed needs to be groomed every day.

Constant handling, grooming and patient care will work wonders to develop trust and confidence between a horse and handler. You will develop a positive relationship and your horse will stand more quietly and safely the more you work with it.

Pasture horses do not need thorough daily grooming because they self groom. However, every horse should be groomed before and after each ride.

The Grooming Kit

Every horse owner should have a grooming kit. The amount of equipment you need will vary, but for a basic grooming kit you will need:

- A hoof pick
- A plastic or rubber curry comb
- A dandy brush (has fairly long stiff bristles)
- A body brush (has softer bristles)

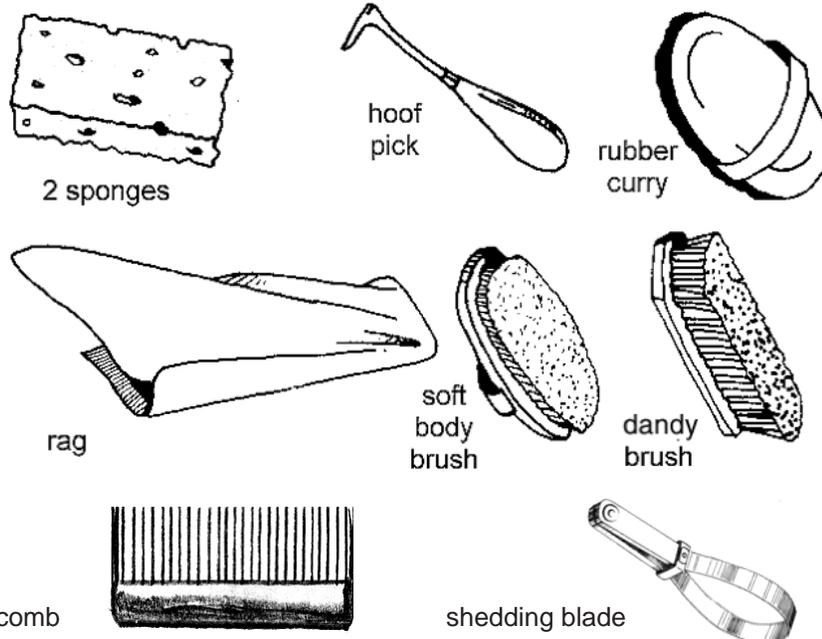
- Two sponges or two washing rags (different colours) for the different ends of the horse

- A long comb (metal is not recommended)

- A shedding blade (used to help remove winter hair)

- A sweat scraper (used to scrape away water after bathing a horse)

- Grooming cloth



SECTION 4: HORSE CARE

Grooming Your Horse

When you are grooming a horse before riding, take care to brush the withers, back and girth areas well. Bedding and dirt left in these areas can be irritating to the horse's skin when saddled or being ridden.

The results of a good grooming job are worth the effort. Any horse can have the shiny, healthy looking coat that we like to see.

Coat, mane and tail care specific to your interest. Ask someone who specializes in the specific discipline you are in to show you the current trends.

1. Tie your horse securely using cross-ties or a lead shank with a quick release knot. Make sure your horse is standing at a 90 degree angle to where it is tied, allowing a safe space for you to work. If your horse doesn't stand still, you will need to put in some extra hours working with it until it learns to stand calmly and safely while you work with it.
2. Place your grooming kit nearby, but not so near that it gets in the way. Do not place it where the horse will step on it.
3. Before you begin grooming, run your hands quietly and gently over your horse's entire body and look for lumps, scrapes or insect bites that may need attention. Feel the lower legs and hooves, looking for any differences in temperature or swelling.
4. Clean out the hooves of your horse. When you are picking up the feet of your horse, carry your hoof pick in a safe place that you can easily reach. Begin cleaning each hoof at the back of the hoof on each side of the frog where there is a groove. Push the pick down into the corners of the cleft and bars to pick out any mud or dirt. Scrape down and away from the heel, right to the tip of the frog. Scrape away any debris found elsewhere on the hoof, always cleaning from heel to toe. If you clean from the toe towards the heel and your horse jerks its foot from your hand, it may get a puncture if it steps on the hoof pick in this position. Continue picking in this way until there are no stones or dirt left in the grooves of the hoof.

While you are cleaning the feet, inspect for loose shoes, foreign objects and thrush. When you are finished, gently set the hoof on the ground with your hand and return your hoof pick to your pocket, ready to move on to the next hoof.



5. Start on your horse's coat with the rubber or plastic curry comb, at the neck and back area. Rub the curry comb over the horse's coat, using small circular motions. The circular motion loosens dirt and mud and stimulates circulation and oil production. Only use the curry comb on the body of the horse, not on the head area, nor below the forearm and gaskin. The curry comb can be cleaned by banging it on a solid, stationary object.

Curry Comb



SECTION 4: HORSE CARE

6. Next, use the dandy brush (the hard bristled brush) in short flicking motions over the entire body except the head and legs. This removes mud, sweat and dirt. As you get to the end of each short stroke, flick the brush up and out, throwing off the dirt. This gets the bristles deep into the hair to remove dirt and dandruff, and also stimulates circulation. To clean the dandy brush as you use it, you can hold the curry comb in one hand and the dandy brush in the other. Then, as you flick off the dirt and before your next stroke, rub the curry comb's teeth against those of the dandy brush to brush any dirt off the bristles of your dandy brush.



dandy brush

7. Now that you have removed the dirt from your horse, the body brush (soft brush) is used to bring out the shine of your horse's coat and for removing the scurf (dead dry flakes of skin) that lies near the skin. This is the only brush that may be used on the whole body. Throw the mane over to the opposite side of which it normally lies. Use the body brush to brush the roots clear of scurf. Over the entire body of your horse, brush with the body brush, using long smooth strokes and pressure on the brush. This cleans off surface dust and spreads oils over the whole coat. Clean the body brush as you use it, using the curry comb held in the opposite hand to rub the bristles of the body brush clear of dirt. Once the body is cleaned, clean the legs of your horse. Then clean your horse's head by untying your horse, removing the halter and fastening it around the neck, near the poll. Use your free hand to steady your horse, placing it just above the nostrils. Brush the head, taking care not to bang the bony projections with the wooden edge of the brush. Replace the halter and retie your horse.



soft bristles

8. Next, use the comb to comb out the mane and tail. It takes months and years to replace the longer hairs which might be accidentally pulled out or broken. Work carefully to prevent hair loss. Take a small lock of hair at a time. Separate the hairs first with your fingers. Begin untangling from the bottom and work your way up to the base of the mane and to the tail bone. To groom the tail, stand to the side of your horse and pull the tail around to the side to get the tough knots out. Comb through the tail as it lies against the hip (to support it). Conditioner or a moisture detangler helps to comb out badly tangled hair.



9. Now, using one of your sponges or washing rags (designated for washing around the head), clean the eyes and nostrils. Wet the sponge in warm water and wring it out. Untie and hold your horse, and back it away from the fence. Using one corner of the sponge, wipe the near eye and then use another corner to clean the far eye. Using the other end of the sponge, use one corner to clean the near nostril and use the final corner to clean the far nostril. Using a different spot on the sponge or rag for each part of the face will help to avoid contamination from one eye to the other or from one nostril to the other. Retie your horse.



SECTION 4: HORSE CARE

10. Wet and wring out your other sponge or rag (designated for cleaning the dock area) and wipe the dock area under the tail. Remember to stand at the horse's side, not behind it.
11. Now use your grooming cloth, and beginning at the face, wipe the whole body with this clean, soft cloth.



Grooming Cloth

Safety Tip

It's good practice to wear your helmet while grooming your horse!

Picking Up The Feet

When holding the hooves, always keep your knees bent in order to avoid undue stress on your back. Keep your body and your feet parallel to your horse.

Front

When you are picking up the feet of a strange or young horse start with the front left foot. Most horses are used to being handled from this side and are not as sensitive about the front as the back. Make sure the horse is standing with its weight evenly distributed.

Pick up the front foot by rubbing the leg up high and by gently working down to the fetlock. Lean into your horse's shoulder to shift its weight off the leg you want to pick up. If the horse will not lift its foot, squeeze the tendon behind the cannon bone with your thumb and forefinger, or pinch the chestnuts or press on the coronet band at the outside quarter with your hoof pick. Once the foot is up, grasp the pastern with your left hand and place your right hand on the hoof, just below the coronet band. Then switch your left hand to where your right hand is, making sure your left hand is to the inside of the hoof and your left arm is behind the knee joint, not in front of it. Reach back with your right hand for your hoof pick and you're ready to clean the hoof.

Hind

To pick up the left hind foot, approach the horse from the front and place your left hand on its hip. In this way you can feel for tenseness of muscles as you move your hand to the inside of the cannon bone. Proceed as above, leaning your shoulder into the horse's thigh. Make sure your left arm is behind the hock. Stand as close to the leg as possible. If you stand very close and the horse strikes out at you, the kick will merely push you away.

To pick up the feet on the far side use these same procedures but reverse hand positions.

Remember to be considerate of the horse when you have the foot up. Don't hold it too

SECTION 4: HORSE CARE

far away, too long a period of time, nor too high, making it uncomfortable. Pick it up for short periods, keeping the leg close to the horse and don't forget to reward your horse.

The Importance of Hoof Care

The value and lifespan of the horse depends on its ability to perform work. Without four sound feet it will be unable to do the things you want it to do. The most important details in the care of horse's feet are to:

1. Clean them frequently.
2. Trim them so they retain a proper shape and length.

Ideally, the feet of a horse should get daily care. Each day, clean the feet of horses that are shod, stabled or used.

Thrush

Thrush is a degenerative condition of the frog of the hoof, characterized by a pungent odour. There is usually a blackish discharge in or along the frog. Thrush is caused by a bacterial infection which can be brought on by unclean conditions such as standing in manure or wet conditions. It decays the tissues of the frog. The main reason horses get thrush is because of poor management. It is easy to prevent by cleaning your horse's feet daily and by keeping the stalls clean and dry.

In cases that are recognized early, treatment is simple. First, eliminate the cause by cleaning and drying the horse's pen. Clean the foot well and apply a thrush remedy to the frog and sole. There are numerous remedies available. If the condition persists, lameness and permanent damage to the elasticity of the frog can result. If you see these problems, consult your veterinarian.

Horses that do a lot of showing should be shod. Horse with shoes on that are on pasture should wear corks.

Hoof Moisture

Hooves can become dry and brittle which can lead to splitting and lameness. In dry hooves, the frog loses its elasticity and loses some of its effect as a shock absorber. If it isn't corrected, the frog may shrink and the heel contracts. Dry hooves can be prevented by keeping the ground wet around the watering tank. If you do use a hoof dressing, rub it well into the coronary band, bulbs of the heel and liberally onto the frog and the clean sole of the foot. This can also be applied over the hoof for a shiny look. The most effective way to improve the condition of the hoof is through the horse's diet, by providing it with proper nutrition and supplements.

Hoof Length

A healthy hoof grows from 3/4 to 1 cm (3/8 to 1/2 inch) per month. If you do not care for the hoof and keep it trimmed it will either break away as it grows or it may grow disproportionately in the heel and toe and alter the horse's way of going.

Safety Tip

Stay alert for signs of anxiousness while handling the horse's hooves.

Trimming

The frequency of trimming depends upon how the horses are used and on what footing they are worked or kept. Usually from six to ten weeks is about the appropriate interval for trimming. All horsemen should be able to recognize a properly trimmed hoof.

Signs that a Horse Needs its Hooves Trimmed

- If the hoof wall is more than 0.6cm (1/4) inch longer than the sole.
- If the hoof has chips, cracks, flares or a long toe.
- If the hoof is longer on one side than the other or the feet do not match.

Common Faults Corrected by Trimming

Regular trimming will alleviate strain on the tendons and help prevent deformity, improper action and unsoundness. Some minor conformation faults such as splayfoot or pigeon toe may be corrected through proper trimming at an early age. Hoof problems such as quarter crack and contracted heels may be helped with proper trimming and hoof care.

Shoeing

Shoeing is not for every horse. If you are working horses on a sandy loam, free of stones, or they are spending a good bit of time in the pasture and their feet are in good shape, there is no reason for incurring the additional expense of shoeing. The foot and leg are designed to minimize shock and road concussion, without shoes.

Horses that are used on hard surfaces, such as roads or rocky terrain, should be shod to prevent the wall from wearing down to the sensitive tissues beneath. Some equine activities require shoeing for safety or to perform to a satisfactory level.

Shoeing always should be done by an experienced farrier. Shoes should be made to fit the foot, not the foot to fit the shoe. Re-shoe or reset at four to eight week intervals although some horses may need to be re-shod more often. Shoes left on too long cause the hooves to grow out of proportion or cause lameness. Mark shoeing dates on your calendar.

Reasons for Shoeing

Shoes protect the hoof from wear when a great amount of work or traction is required. Shoes may be used to correct hoof problems and change the gaits and action of a horse. They can be used to help cure disease and correct defective hooves. They also may be used to relieve pain from injured parts such as hoof-wall cracks and bruised soles, making it possible to ride an otherwise unsound horse.

Horseshoe Types

1. Plain
2. Heels & Toes - for traction on soft ground

SECTION 4: HORSE CARE

3. Rims
 - a. high on inside - for traction on grass.
 - b. high on outside - for traction on fast turns.
 - c. high on both sides - for traction on turf (racing)
4. Sliding plates - wide and flat to slide on
5. Corrective - many different shapes to relieve pressure from specific parts of the hoof

To Remove a Shoe

Wearing the same shoes too long can cause problems. Since the hoof wall grows perpendicular to the coronary band, the horse's base of support actually grows out from under him (the legs become set too far in front) if shoes are left on too long. This puts more strain on the tendons. If a horse loses one shoe, either front or back the other front or back shoe should be removed.

- Shoe removal should be done by a farrier if inexperienced improper removal of a shoe, can cause damage to the hoof.
- First, remove all the clenches (the turned down part of the horseshoe nail visible on the hoof wall. These can be removed by clench (nail) cutters, a chisel and hammer, or with a rasp.
- Next, lift the foot and support it with your knees.
- Place a large pair of pliers, shoe puller or a clench cutter under the heel of the shoe, beginning on the side that is most loose.
- Use a downward prying motion aiming toward the toe to raise the shoe off the wall.
- Work on alternate sides of the shoe until you have only the toe nails remaining.
- To remove the final toe nails, use a sideways rocking action.
- Check to see that no nails are remaining in the hoof.

Bathing Horses

Washing horses, either with or without soap, removes dirt, stains and sweat that cannot as easily be removed by grooming. Shampooing too often, however, can remove protective oils from the skin. Use a livestock shampoo or a mild non-detergent soap to avoid removing natural oils.

Wet the animal thoroughly all over. If your horse spooks at a hose, use a bucket and a sponge to wet and wash one section at a time. Use a sponge on the head, pinching the ears shut to keep water out. Shampoo may be applied directly to a stain but is best mixed in a bucket, before applying to the horse. Scrub with a sponge, wash mitt or grooming mitt.

SECTION 4: HORSE CARE



It is important to rinse the horse thoroughly to remove all the soap. Wipe off excess water with a scraper or the smooth side of a shedding blade. Do not scrape the head or legs. Dry with towels or a cool air dryer. You can put on a fleece cooler. Do not bathe a horse in cold weather.

Grooming Problems

My horse rubs its mane. First check the feed area to make sure the fence or feeder is not rubbing the mane. Check the hair roots to find possible dermatitis or external parasites and treat the area

accordingly if they are found. Some horses are very sensitive in the mane area to dead skin or hair. Thoroughly wash the horse with a recommended shampoo, being sure to rinse the horse well. Apply a lanolin product to the afflicted area to help prevent dry skin. Applying a mild disinfectant may also help.

My horse rubs its tail. Check the dock or anal area for signs of pinworms and then worm your horse if you suspect that this is causing the tail rubbing. Check for lice or other external parasites and treat accordingly. Keep the dock area as clean as possible. It may be necessary to apply a mild disinfectant. There are products on the market to aid in hair regrowth that can be applied to the area.

My horse tears at its blankets and bandages. Check for fit or irritation. Make sure the horse is not too hot. Painting a foul tasting and/ or smelling paste onto the bandages, like hot peppers and Tabasco sauce (if the skin is not chaffed or broken) may help stop the tearing. Be sure to regularly clean and rinse bandages and blankets.

My horse's mane won't fall to one side. The shorter you make the mane the thinner it needs to be to lie flat. To help train the mane to all lay on one side try the following methods:

- Braid it and place it over to the desired side. Wet the mane and keep the braids in for two days then remove them. Keeping braids in a mane for a prolonged period will tend to damage the mane hair.
- Dampen the mane with diluted hair conditioner. Place a hood over dampened mane, with the mane all lying on the desired side, but inspect daily
- Use hair spray or gel on the mane as it lays on the correct side.
- Rinse out all products when done to avoid irritation and attracting dirt.

Clipping

The pleasure horse owner will do some clipping, but less is needed than if you are planning to show your horse. Most people like to have the bridle path cut to make bridling and haltering easier.

SECTION 4: HORSE CARE

To clip a horse you can use scissors, hand clippers or electric clippers. Electric clippers work best, but they are expensive. Unless you do a lot of trimming you do not need them. Some horses will not tolerate the sound of electric clippers. Be careful when you are trimming. It is easy to cut a horse if it moves while you are working.

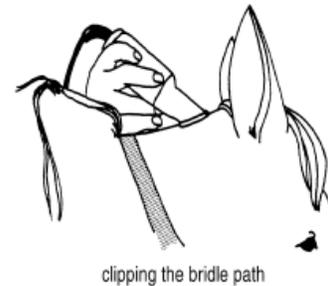
Give yourself lots of time and use a lot of patience.

- A. Let your horse smell the clippers.
- B. Without turning clippers on rub them all over the horse's body.
- C. To get the horse used to the sound of the clippers turn them on and slowly approach the horse.
- D. Using the back of the clippers, move the clippers slowly to an area where the horse is least sensitive, for example the shoulder and touch the animal until the horse is comfortable with the vibration.
- E. Slowly advance to more sensitive areas making sure the animal is relaxed.
- F. Once your horse is relaxed clip from the least sensitive (legs) to most sensitive areas (ears & muzzle).

If you have difficulty clipping your horse get experienced help.

Clipping the Bridle Path

The area of the mane that lies directly behind the ears where the bridle or halter lies is the area that is trimmed to create a bridle path. This is done to make haltering and bridling easier and make the throat latch look thinner. The length of the bridle path depends on why you are doing it (the discipline), the breed of horse, the length of the horse's neck and the thickness of the throat latch.



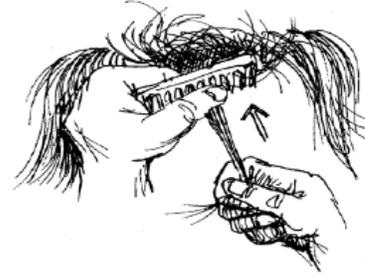
Procedure

- Comb the forelock forward, and comb the mane to the side out of the way.
 - Using scissors trim the section you want as the bridle path down to 1 cm (1/2 inch) or less starting behind the poll.
 - Clip the hair in the bridle path down to nearly skin level with scissors or clippers.
 - To make the area smoother, clip the hair vertically along the sides of the bridle path.
1. After combing the mane out, grasp the longest hairs at the underside of the mane firmly between the fingers and thumb of one hand.

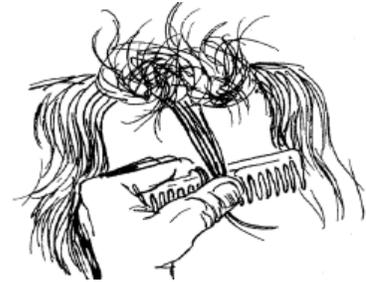


SECTION 4: HORSE CARE

2. With the fingers of the other hand or with a small metal pulling comb, push the other hairs toward the neck - like teasing hair.



3. Wind the few long hairs around your fingers or around the pulling comb.



4. Pull out the long hairs with a swift, downward and outward jerk. The hairs should pull out, not be broken off, as this thins the mane as it shortens it.



Pulling Mane

The mane should not be clipped or trimmed with scissors. If you want to shorten the length or thin your horse's mane, you should pull the mane. This will prevent it from becoming thicker and unmanageable. If you need to shorten an already thin mane, use thinning shears.

If you pull only a few hairs at a time, you will not hurt the horse. Horses do not have a nerve ending in each hair root, as people do. If too many hairs are pulled at once, the horse may become irritated.

Roaching the Mane (Hogging): Roaching the mane means that you completely shave the mane except for the wither area and forelock. If you plan to roach or shave your horse's mane, consider that if you grow it out again, it will probably grow back thicker and more disoriented than ever. It may take you up to two years to train the mane to lie correctly.

Clipping the Face

For showing, your horse will look neater if its face is trimmed. Remove the long hairs under the throat and jaw by running the clippers (with the grain of the hair) down the sides of the jaw, cheek and throat. Clip against the grain under the jaw, cheek and throat. Try to make the job look as natural as possible. Careful consideration must be given before you trim the eyes, ears and muzzle. Only trim as much as necessary, as the long "guard" hairs around their eyes and muzzles are used as "feelers" to judge

SECTION 4: HORSE CARE

distances and keep them from bumping into things. If your horse lives outside, the hair on the inside of their ears should never be removed as this hair protects the inside of their ears from biting insects and dirt.

Clipping the Legs

Fetlock hairs and heel areas should be trimmed in the spring to keep them from collecting mud and remaining damp which may lead to scratches (greasy heel). Trimming legs also gives your horse a better appearance for showing. Run the clippers (with the grain of the hair) down the sides of the horse's lower legs and under the fetlock. Use a comb to hold long fetlock hairs away from the leg as you run the clippers up the leg. For an extra neat look, trim the hairs that cover the coronet band at the top of the hoof.

Various Types of Clips for Horses

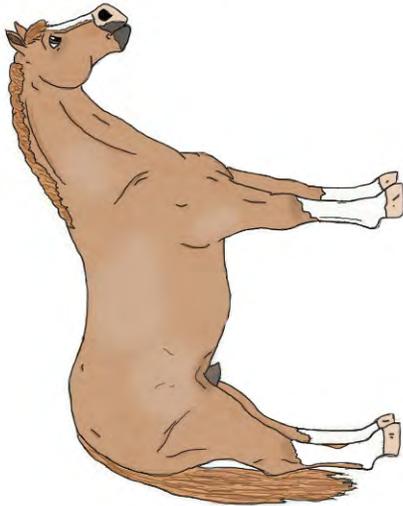
There are many different horse clipping styles and designs. When considering the types of horse clips, you should think about the following:

- Whether your horse will be stables
- Whether your horse will be turned out during the day
- How much work your horse is going to be doing
- How much your horse sweats
- The extent to which your horse feels the cold
- If your horse has been clipped before – if it's the first time, do a bib clip to build his confidence

Excerpts taken from Horze, it's a Lifestyle <http://www.horze.eu/types-of-horse-clip/types-of-horse-clip.html>

SECTION 4: HORSE CARE

TYPES OF CLIPS

**Full Clip**

Hard work with limited to no turnout

For this clip all of the horse's coat is removed. This clip even removes the hair on the face, legs, muzzle and ears. Extra care must be taken to keep a horse with this clip warm in the winter. Turn out blankets with hood attachments are often used as well as quarter sheets when the horse is being ridden.

**Hunter Clip**

Medium to hard work

For this clip all of the horse's coat is removed except for the hair on the legs and the saddle area. Sometimes the hair is left in a square shape rather than a saddle shape, however the traditional way of clipping in this fashion is the first option. Horse's must be kept warm through careful blanketing and stable management, the same as when caring for a fully clipped horse.

**Blanket Clip**

Medium work with day turnout

For this clip all of the horse's coat is removed except for the hair on the legs, the blanket area on the haunches and the face. This clip removes hair from the areas where horses sweat the most, keeping the sweating to a minimum.

SECTION 4: HORSE CARE

**Chaser Clip**

Medium work with day turnout

This clip is very similar to the blanket clip, except the hair is completely removed from the face but left on the top of the neck for warmth.

**Trace Clip**

Moderate work with day turnout

For this clip half of the hair on the horse's neck is removed, as well as the hair on the stomach. The hair on the horse's face can either be left on, partially removed or completely removed with a trace clip.

**Irish Clip**

Light work with day turnout

For this clip the hair on the stomach is completely removed, as well as the hair on the face and neck. This type of clip reduces sweating because it eliminates hair on the neck and armpits - where most sweat is found.

**Bib Clip**

Light work with 24/7 turnout

For this clip the hair on the bottom of the neck and chest is removed. Horses with this clip should still be blanketed

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Make up a grooming chart for a horse(s). How often will you wash it? How often will you wash it? How often will you clean its feet? Will you use the currycomb every day? Bring the chart/schedule with you to the next meeting. Practice clipping a horse to go to a show. If you or someone else has a horse whose mane is hogged, ask if you can practice your clipping skills by trimming it.

AND/OR

2. Make a list of the grooming supplies you will need to properly groom a horse. Using the Internet or by taking a visit to a Tack Supply store, find out how much each grooming item will cost. Add up the costs of all of the items you will need. Record your findings in your Record Book.

AND/OR

3. The next time your farrier is scheduled to put new shoes on your horse, ask if you can remove the old shoes. Do this with supervision. Keep the shoes for good luck!

SECTION 4: HORSE CARE

DIGGING DEEPER**For Senior Members****Safety When Grooming & Caring for Hooves**

Grooming can be therapeutic and enjoyable for both the horse and the person doing the grooming. But, safety also has to be kept first and foremost in mind for the horse, the person doing the grooming and those nearby the horse. By taking a few precautions and paying attention to your horse, grooming can be both fun and productive.

Create a list of safety tips that help both the groomer and the horse to keep the experience both productive and pleasurable. The list should include at least five tips.

Create a second list of safety tips for caring for the hooves for both the groomer and the farrier.

Record the list in your Record Book and be prepared to share the list at the next meeting.

ACTIVITIES

Activity #1 - Grooming Tools Mix & Match

Items Needed:

- Grooming Tools Mix & Match worksheet (found at the end of this meeting)
- Writing Utensils (pens/pencils)

Instructions:

- Give each member a Grooming Tools Mix & Match worksheet.
- Have members work individually or in pairs to match the picture with the description of each grooming tool.
- Review the answers to ensure everyone has the correct answers.

Activity #2 - Catalogue Race

Items Needed:

- Variety of old catalogues/flyers from a horse tack show
- Scissors
- List of items to be found
- Stopwatch (optional)

Instructions:

1. Put members into groups of 3 or 4 depending on the number of members in the club and the number of available catalogues and/or flyers.
2. Give members a list of items to find in the catalogue. Teams must cut out the item when they find it.
3. The first team to find them all wins the race.
4. For an added challenge, put a time limit on the race.

List of items to find

| | |
|---------------------------------|----------------|
| Curry comb | Comb |
| Hoof pick | Clippers |
| Dandy Brush | Shedding blade |
| Sponge | Sweat scraper |
| Grooming Cloth | |
| Body Brush (soft bristle brush) | |

SECTION 4: HORSE CARE

Activity #3 - Grooming Gab**Items Needed:**

- Quiet horses
- Volunteer for each horse
- Grooming materials
- Questions on grooming materials with tape (optional)

Instructions:

1. Using one horse, quickly show the group how to groom a horse using a variety of grooming tools.
2. Split the group up into pairs or small groups. Each pair is assigned to a horse, along with a leader/volunteer for each horse.
3. One partner stands on each side of the horse. They will be given each grooming tool in order and each one comes with a “get to know you” question. When you are holding the brush, it is your turn to talk. So, the first person to get the grooming tool will answer the question as they groom their side of the horse, then pass the brush to the other person who answers the question as they groom their side.
4. Use the following questions for each grooming tool you have available:
 - What is your favourite thing to do?
 - What always makes you laugh?
 - What is your favourite and least favourite foods?
 - Who do you look up to and why?
 - If you could have dinner with anyone, dead or alive, who would it be and why?
 - How have you changed in the past year?
 - Which 4-H club have you taken that has been your favourite and why?
 - If you could change one thing about yourself, what would it be and why?
 - If you could take any 4-H club, what club would you take and why?

Activity #4 - Clipping Demonstration

Items Needed:

- Experienced horse groomer

Instructions:

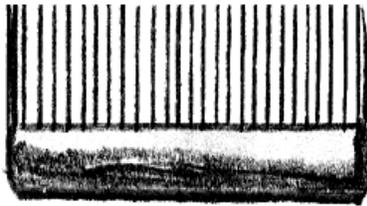
1. Ask an experienced horse groomer to demonstrate the proper way of clipping a horse.
2. Have the demonstrator explain why specific parts of a horse need to be clipped for showing and how to properly care for the mane and tail.

NOTE: Demonstrations could also be given for Hoof Care and/or Bathing a Horse.

SECTION 4: HORSE CARE

Grooming Tools Mix & Match

Match the grooming tools up with the correct description.

| | |
|---|--|
|  | <p>Beginning at the face, use this to wipe the whole body.</p> |
|  | <p>Use this tool in a circular motion to remove dirt and mud and to loosen hair.</p> |
|  | <p>Use this brush in short flicking motions over the entire body except the head and legs.</p> |
|  | <p>Use a different part of this tool for each part of the face to help avoid contamination from one eye to the other or from one nostril to the other.</p> |
|  | <p>When using this tool, stand to the side of your horse and pull the tail around to the side to get the tough knots out.</p> |
|  | <p>This is the only brush that may be used on the whole body.</p> |

SECTION 4: HORSE CARE

Grooming Tools Mix & Match – Answer Key

Match the grooming tools up with the correct description.

| | |
|---|--|
|  | <p>Comb. When using this tool, stand to the side of your horse and pull the tail around to the side to get the tough knots out.</p> |
|  | <p>Sponge. Use a different part of this tool for each part of the face to help avoid contamination from one eye to the other or from one nostril to the other.</p> |
|  | <p>Grooming Cloth. Beginning at the face, use this to wipe the whole body.</p> |
|  | <p>Soft Bristle Brush. This is the only brush that may be used on the whole body.</p> |
|  | <p>Dandy Brush. Use this brush in short flicking motions over the entire body except the head and legs.</p> |
| <p>Curry Comb</p>  | <p>Curry Comb. Use this tool in a circular motion to remove dirt and mud and to loosen hair.</p> |

MEETING 20: FIRST AID

Topic:

- A first aid kit for horses
- First aid treatments
- How to control breeding and other concerns
- Bandaging

Objectives:

- To learn what you need in a first aid kit for horses
- To learn basic first aid for a horse

Roll Calls

- What is in your first aid kit? What should be in a horse's first aid kit?
- Why do you think it is important to know first aid for horses?

Sample Meeting Agenda – 2 hrs. 5 minutes

| | | |
|-------------------------------------|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Horse First Aid Kit. | 20 min |
| Public Speaking/Judging Activity | Activity #1 – First Aid Alphabet (instructions found at the end of this meeting) | 20 min |
| Topic Information Discussion | Review what Types of Wounds, First Aid Treatment and First Aid Conditions. | 20 min |
| Activities Related to Topic | Choose from Activities #2, #3 and/or #4 (First Aid Scavenger Hunt Relay, Horse Hazards Walk, Equine First Aid Courses for Youth) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Activities can be interspersed with Topic Information.

SECTION 4: HORSE CARE

Topic Information

Horse First Aid Kit

All horse owners should keep a basic first aid kit. Most of the items are easy to find at home.

The following is a list of items you may need. Other medications or equipment may be needed under some conditions.

- Antiseptic hand cleaner (so infection isn't passed with your hands)
- Sterile gloves
- Tweezers (for removing splinters, ticks, etc.)
- Saline solution (useful for cleaning out wounds in delicate places like around the eyes)
- Flashlight (to help see wounds in a gloomy stall late at night)
- Duct tape (useful in any emergency and especially good for hoof wraps as its water resistant, moldable and fairly durable)
- Bandages - Various: knit, elastic and self-sticking
- Cool - Cast Bandages (for swellings – e.g. bowed tendons)
- Liniment
- Adhesive Tape and Duct Tape
- Cotton balls
- Safety Scissors (with rounded edges so you don't accidentally cur your horse if you're snipping off a bandage)
- Small, sharp scissors for suture removal
- 10, 20 & 60 cc Syringes and 18 & 20 gauge needles
- Mineral oil (should only be administered by a professional)
- Clippers
- Cotton gauze
- Antiseptic wound dressing (spray & powder)
- Polysporin Ointment
- Epsom salts (mix with warm water to soak an abscessed foot)
- Vaseline (for the thermometer and for protecting the tender skin of your horse's heels from chapping)
- Sponge
- Koppertox or bleach
- Peroxide (peroxide's bubbling action is useful for cleaning dirt out of fresh

Horse Tip

It is a good idea to have a portable first aid kit to take to shows or on trail rides.

SECTION 4: HORSE CARE

wounds and for dealing with thrush – don't use it routinely though as it will inhibit the healing process)

- Rubbing Alcohol (good for sterilizing instruments)
- Germicidal soap
- Thermometer (plastic digital kind is safer than glass and gives faster readings)
- Disinfectant (sterile solution)
- Syringe to rinse out deep wounds
- Boric acid
- Clean bucket

Whenever there is a serious wound, call a veterinarian. First aid is the treatment given as soon as an injury or illness is observed. This is done to relieve the distress of the animal and prevent further injury while waiting for the vet.

SECTION 4: HORSE CARE

Types of Wounds

Different kinds of wounds include:

Abrasions - multiple superficial scratches that do not penetrate the full thickness of the skin.

Incisions - clean cut wounds caused by a very sharp object.

Lacerations - wounds that penetrate the full thickness of the skin and are caused by a less-sharp object, resulting in both cutting and tearing of skin.

Punctures - wounds caused by a more or less pointed object (which may or may not remain embedded in the wound).

Avulsions - wounds characterized by tearing of skin to cause a loose flap.

First Aid Treatment

When a serious wound occurs, the two most important duties, until the vet arrives, are:

1. Stop the bleeding.
2. Prevent infection by keeping the wound clean.

Since wounds are painful, be prepared to restrain the horse before you treat the wound. **Never put yourself in a situation where you risk your own safety.**

You can get a good idea of how serious the injury is by looking at the bleeding. If the blood is slowly oozing it usually means only the outer area is affected. Blood from a damaged vein may be slow or rapid, depending on the injury. Arterial bleeding will be bright red and rapid. Deep wounds involving tendons or exposed bone will often cause moderate to heavy bleeding

Control of Bleeding

- Try to keep the horse calm.
- Bleeding may be arterial (the spurting of bright red blood), venous (oozing of dark red blood) or sometimes both. **Do not wipe a wound that has stopped bleeding.** This will dislodge the clot. **Do not pour peroxide on a fresh wound.** This will make the bleeding more difficult to control.
- If a horse is bleeding profusely from a wound, apply pressure to the wound with sterile gauze or a clean towel (disposable diapers or feminine napkins work great!). Apply pressure with your hand to the wound for 15 minutes to help stop the flow of blood. Large, deep wounds require a veterinary surgeon.
- Most minor wounds can be treated by their owner. Wash the wound with cold water, unless there will be further blood loss by washing. Cold water hosing of a wound will also help reduce any swelling. Remove foreign objects if it is not a puncture wound. Trim the hair from around the wound. Rinse and dry with sterile

SECTION 4: HORSE CARE

gauze. Apply a medication. Once the bleeding has been controlled, apply only mild antiseptic ointments to keep the wound from drying out in case stitches are required.

- For large wounds apply a towel or lint free gauze to the wound to try and control the bleeding. (You may have to restrain the horse with the help of another person and/or a twitch). Only after the bleeding is controlled, gently cleanse the wound by flushing with clean water or a sterile saline solution, and try to remove any dirt or contamination if possible. Gently remove any dirt on the surface but *do not attempt to remove any imbedded materials*. Leave this to your vet. Only cleanse the wound if you can do so without causing it to bleed again. Rinse by directing the water above the cut and letting it flow gently down over the wound. **Do Not** direct forceful streams at the wound, as this may cause debris to become embedded. **Do Not** apply a wound ointment or first aid spray before the vet arrives. Ask your vet before giving any pain reliever or antibiotic drugs.
- Wounds can be bandaged or left open, depending on their location. Bandaging provides an advantage of protecting the wound from dirt, manure and the constant irritation of flies. Wounds around the head and the upper body are difficult to bandage and do not benefit greatly from being covered. Bandaging is most effective for wounds on the extremities. If you are going to bandage a cleaned and treated wound, first apply a non-stick sterile gauze and close with a bandage. When you wrap a bandage around a treated wound on a leg, you must always wrap the other leg (both front or both rear legs). This is to prevent strain on the uninjured (supporting leg). **Never leave bandages in place for more than 24 hours**, unless otherwise instructed by a veterinarian. To learn more about applying bandages, refer to the “**Equipment**” chapter.
- Most wounds heal with minimal scarring if they do not become infected and if they are protected from flies. Monitor wounds daily and keep them clean and keep flies away from them. If a wound becomes infected, cleanse it with a three percent hydrogen peroxide solution or surgical soap. A syringe may be used to flush out a deeper wound.

Swelling - Allow rest and use cold applications (water, cool-cast, etc.) to reduce heat and inflammation. Liniment can also be applied to help reduce the swelling. Do not put liniment on open wounds.

First Aid Conditions

First Aid conditions can include Choke, Colic and Grain Overload. These conditions are included in Section 3 – Horse Health & Concerns – Diseases and should be reviewed as part of this meeting.

SECTION 4: HORSE CARE

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. After watching a demonstration of bandaging a horse's leg, practice bandaging your horse's leg. Come to the next meeting prepared to demonstrate this skill to your club.

AND/OR

2. Check your Horse First Aid kit. Do you need to replace or add anything? Be prepared to show your kit at the next meeting. If you don't have a Horse First Aid kit, start working at putting one together. Keep track of the cost of the kit and record your findings in your Record Book.

DIGGING DEEPER

For Senior Members

Flushing a Horse's Eyes

Flies, allergies, dirt and other debris can cause a horse's eyes to become irritated and weep. Flushing the eye will help to make your horse more comfortable. Flushing can also allow you to get a clearer look at the eye to determine if there's a more serious condition causing your horse's eye to weep.

If you are going to be working with horses, learning how to flush an eye is a must. To learn the proper technique, consult with your veterinarian or an experienced horseperson. If possible, watch how they flush out an eye and record the following:

- What solution did they use for the eye?
- What other equipment and veterinary supplies did they use?
- What steps did they take to flush the eye?
- Did they do anything to help calm the horse?
- Did they require a second person to help?

The above could be recorded in a variety of ways – writing it down, taking pictures, creating an instructional video, etc.

Be prepared to present this at an upcoming meeting, Achievement Program or any other event as determined by you and your club leaders.

NOTE: This activity could be completed with a number of other First Aid procedures such as wound management, bandaging, etc.

SECTION 4: HORSE CARE

ACTIVITIES**Activity #1 - First Aid Alphabet*****Items Needed:***

- Blank paper
- Writing utensil (pens/pencils)

Instructions:

1. Have members write the alphabet down the left side of the page.
2. Working either individually or in pairs, have members make a list of items found in a first aid kit starting with each letter of the alphabet A-Z. Depending on the abilities of the group, a time limit will make this a more competitive activity.
3. Once time is up, members get one point for each word they have that no one else has. The member/pair with the most points wins.

Activity #2 - First Aid Scavenger Hunt Relay***Items Needed:***

- Clean muck buckets (4)
- A number of first aid items from the list at the beginning of this meeting (2 of each item)
- A number of items that are not First Aid related (2 of each item)
- Stopwatch
- Horses (optional)

Instructions:

1. Divide the members into two teams.
2. Put items in a bucket (both first aid and non-first aid related items)
3. Have teams line up behind a line.
4. When the game starts, the leader calls out a first aid item. The first person on each team runs to the other end to find the item in the bucket. When they find it, they have to run back and drop it in an empty bucket along the way back to the team.
5. Once the first player returns to the team, the second player runs to the bucket to find the next item that the leader has called out.
6. The game continues until all team members have had a turn.
7. The team to have all members complete the game first wins the game.

NOTE: to add to the excitement of this activity, it could be completed on horse back with players having to ride down the bucket, dismount, find their item, get back on the horse and ride back to the team.

Activity #3 - Horse Hazards Walk

Items Needed:

- Horse Paddock/Pasture Field/Barn
- Paper and writing utensils

Instructions:

1. Have members go for a walk through a horse paddock and/or pasture field and/or barn to find various hazards in these areas that could harm a horse. Remind the members to look for anything that could cause a wound, lameness, etc.
2. Have members make a list of any hazards that they find.

NOTE: leaders may need to place various hazards around these areas so that there are things for members to look out for. Be sure to pick them up afterwards before turning horses back into these areas.

Activity #4 - Equine First Aid Courses for Youth

Offered by Equi-Health Canada, this course will provide the basics of First Aid to youth. More information can be found at: <http://www.equestequinefirstaid.com/> Note: there is a fee involved with taking this course.

MEETING 21: EQUIPMENT

Topic:

- Equipment used with horses
- Caring for the equipment

Objectives:

- To learn about the different equipment you need when working with horses

Roll Calls

- Name three different pieces of horse related equipment that you might use each week.
- Have you ever used a piece of horse related equipment that did not work the way you thought it would? What happened?

Sample Meeting Agenda – 2 hrs. 10 minutes

| | | |
|-------------------------------------|--|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review what basic equipment is required for working with horses. | 10 min |
| Public Speaking/Judging Activity | Activity #1 – Horse Tack Show & Tell (instructions found at the end of this meeting) | 20 min |
| Topic Information Discussion | Review halters, bridles, bits, mechanics of the bit and reins. | 30 min |
| Activities Related to Topic | Choose from Activities #2, #3 #4 and/or #5 (Bridle Break-Up, Feel the Vice! Bit Severity) (instructions found at the end of this meeting). | 45 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 5: FUN WITH HORSES

Topic Information

Equipment You Need

The basic equipment required for 4-H members is a saddle, saddle pad or blanket, bridle, bit, halter and lead rope. If riding in competitions, it is the responsibility of the rider to check for rules regarding equipment.

The use of other equipment will depend on your horse and the type of riding you do.

When buying equipment be sure that it is well made of the best materials and fitted to you and your horse. It does not need to be fancy or flashy and it does not need to cost a lot. Good, well fitted, functional equipment that is well taken care of is what is most important. When buying new tack made of leather, examine the leather carefully. Feeling and smelling the leather can help to determine the quality of it. Leather that is well tanned and processed will have a characteristic pleasant smell and will not feel greasy. English (European), French and North American leather is most desirable. Leather from India is less desirable because it comes from the hides of water buffalo and is more coarse, weaker and poorly constructed. Don't jeopardize comfort and safety for inferior, lower cost, poorly tanned and sewn tack.

Horse Fact

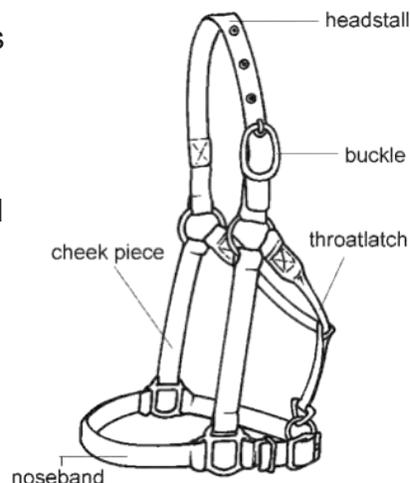
When fitting tack to your horse, remember that each horse is an individual and requires individual adjustments. Pay careful attention to make sure your equipment is adjusted properly. It will work better, make your horse more content and will be safer.

Halter

The strongest halters are the flat nylon web halters, with double or triple strength (thickness) with large, heavy but smooth buckles. Avoid single strength (layer) halters with thin, sharp buckles.

Make sure the halter is the right size for your horse's head and fits it correctly. A halter that is too big will be dangerous and one that is too small will rub and irritate your horse.

Adjusting the halter to fit properly will normally require simply adjusting the crownpiece. This adjustment is determined by the position of the noseband. The noseband should fall approximately two inches below the bony point of the cheek. If the noseband is too high it will rub and irritate the cheek and the chin strap will be pulled too high under the jaw (restricting jaw movement). If the noseband is too low, it may restrict breathing and your horse may easily rub the halter off. If the noseband and chin strap are adjustable, they should be set so two large fingers (two inches) may be placed under the noseband. If the throat



Parts of a Halter

SECTION 5: FUN WITH HORSES

latch can be adjusted, check that it is correct by flexing your horse's nose to its chest. If there is still space, it is correctly adjusted.

A halter is correctly adjusted and fits if:

- You can fit four fingers (sideways) under the throatlatch.
- There is a two finger (sideways) clearance between the metal buckles on the noseband and the cheekbones.
- You can fit two fingers sideways between the noseband and the nose.

The leadrope should be at least two meters with a spring or trigger clip fitted to one end for fastening to the chin ring of the halter. It is safest to fasten them with the opening facing away from the horse's head. It should be strong so that if the horse pulls, it will not snap. Leadropes used for everyday should not have a chain on them.

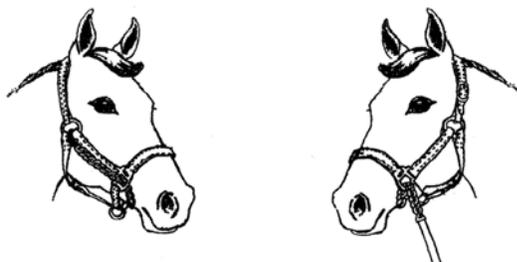
Chains are common on leadshanks used for showing, but are not strong enough nor safe for daily use.

Proper Use of a Lead Shank with a Chain

Chains on lead shanks may be used for showing as described below, but it is suggested that they only be used if the member and the horse have had the proper training in using a shank with a chain.

The snap is passed through the left cheek ring of the halter from the outside to the inside, passed under the horse's jaw, though the right cheek ring from the inside to the outside and then up to the top ring on the right side of the halter where it is snapped directly to the ring. (Note that the chain does NOT pass through the bottom ring of the halter under the horse's jaw.)

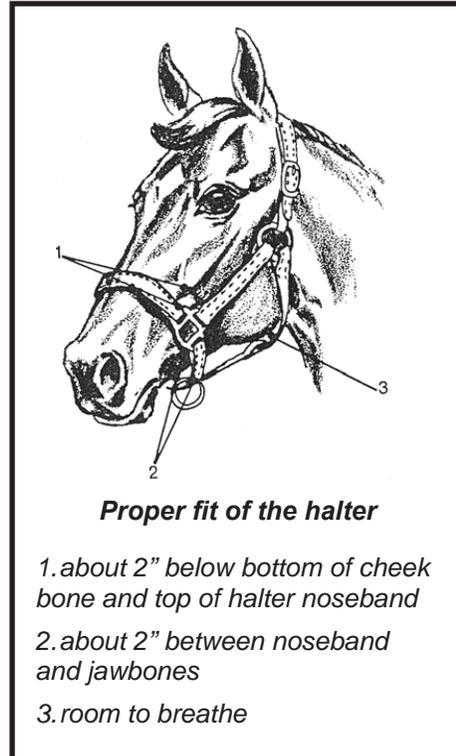
Once the snap is attached, the length of the chain between the handler's hand and the left cheek ring on the halter should be only about 4 inches or 10 cm long. If it is too long, the chain must be readjusted by unsnapping it from the top right ring, passing the snap through this ring and snapping it back on the chain at an appropriate spot or back down to the lower right cheek ring, whichever would make it the proper length for the handler.



To avoid injury to the hand, **the handler must NEVER hold the chain.**

If the chain is too long, it would be best to take some of the links out of the chain to make it the appropriate length.

If the horse or the handler has never used the



SECTION 5: FUN WITH HORSES

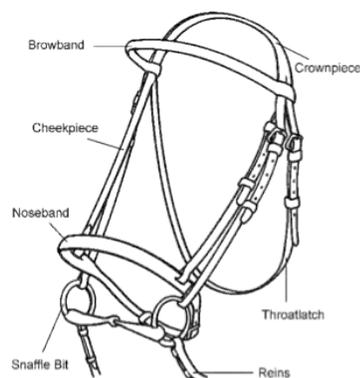
chain in this manner, it is recommended for 4-H that the member use a shank with just a snap and no chain. Although it is acceptable to use a shank with a short chain no longer than 4 to 6 inches or 10 to 15 cm. in length with the snap attached directly to the ring under the horse's jaw, the member will not have as much control and the chain could cause injury to the hand. In cases where the chain is too long and is doubled or tripled before snapping it to the ring under the jaw, there is more chance of injury to fingers if the horse was to pull back.

Once again, the handler must **NEVER** hold the chain part of the shank, to avoid injury to the hand.

Bridle

Your bridle is a very important piece of equipment that needs careful attention. The term headstall refers to everything on your bridle except the bit and reins. It should be made of strong leather. The width will be dependent on its use. The crownpiece should be smooth and should not pinch the ears. If your bridle has a browband, it should fit so it holds the crownpiece in place but does not pull behind the ears. If your bridle has a throat latch, it should be adjusted to allow three to four fingers (sideways) between it and the jawbone so the horse can flex its neck. The curb strap should be loose enough to allow two fingers (stacked) between the jaw and strap. If your bridle has a noseband it should be positioned two fingers below the cheek bone and adjusted one to two fingers between the noseband and jaw.

The Western Bridle Western headstalls come in two main styles, Browband or Ear Bridles. An ear bridle often will not have a throat latch whereas a browband always has a throat latch. Western bridles do not usually have nosebands.



English Bridle

The English Bridle English bridles always include a throatlatch and a noseband or cavesson. There are several types of nosebands: the plain cavesson, the drop noseband (buckles under the bit), the flash noseband (a plain cavesson with a strap attached that buckles under the bit), figure 8 noseband and others with special purposes.

Bits

Bits can be divided into two main groups:

1. Non-leverage Bit (snaffle)
2. Leverage Bit (curb)

SECTION 5: FUN WITH HORSES

Both English and Western riders use snaffles. Both riders also use leverage bits of various designs. Where the reins are attached determines whether the bit is being used as a snaffle or leverage. For example when using a Pelham, if the reins are attached to the ring of the mouthpiece it is a snaffle. If they are attached to the end of the shank it is being used as a curb. Leverage bits must have a curb strap or curb chain to work properly. In English, a snaffle bit never uses a chin strap or curb chain.

What is the difference between the two types of bits?

The shanks (in the leverage or curb bit) or rings (in the non-leverage or snaffle bit) are where the reins are attached.

- A. When reins are attached to the rings on a mouthpiece, (as in a non-leverage bit) pressure is applied directly, because the rider's pull on the reins creates a direct pressure on the corners of the mouth, tongue and sometimes the bars, but does not affect the poll or chin groove of the horse. Snaffles fall under the category of non-leverage bits.
- B. When shanks are added to a mouthpiece, "leverage" is created which allows the bit to apply pressure to parts other than the mouth. For example, on the poll through the crownpiece, under the chin through the curb strap and up against the palate when the bit is rocked forward (if it has a port of 2 inches or more).

The Snaffle Bit

- Snaffles vary widely in design and material, but do have common features which include a mouthpiece that can be either jointed or solid, with a ring at each end to which the reins are attached. A snaffle bit is used with two hands on the reins.
- The different basic rings available include the
 - loose or O-ring
 - D-ring
 - eggbutt
- In general, snaffles are quite mild with severity determined by the smoothness and thickness of the mouthpiece. The thicker the mouthpiece the milder the bit.
- Some common mouthpieces are jointed and mullen mouth (solid mouthpiece with slight upward curve to relieve tongue pressure).
- A western snaffle's rings may be larger than is acceptable in English but not usually.
- Western riders are required to use a leather chin/curb strap with a snaffle to prevent it from pulling through the horse's mouth.
- English riders do not use a chin strap on a snaffle because they use a cavesson so the horse cannot open his mouth wide enough for the bit to be pulled through the mouth.

SECTION 5: FUN WITH HORSES

Three Main Types of Snaffles



Jointed Mouth Loose Ring Snaffle

O or Loose Ring Snaffle



Rubber-Covered Racing Dee Snaffle

D-Ring Snaffle

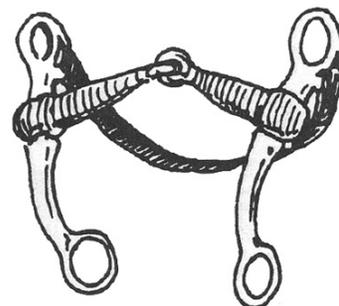


Eggbutt Snaffle

Leverage Bits

Western Leverage Bits

Often called the “curb” bit, the leverage bit is available in literally hundreds of shapes and numerous combinations of mouthpieces and shanks. Generally speaking, the longer and straighter the shank, the more leverage and more severe the bit.



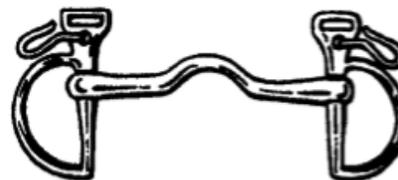
Jointed Curb



Western Curb Bit with Low Port

Just as the snaffle can have a variety of shapes of mouthpieces, so can the leverage (curb) bit. They also can have either a jointed or solid mouthpiece. They must have a “curb strap” that can be made of leather or chain with leather at both ends which attaches to the bit and must lie flat under the horse’s chin. It is usually attached to the same ring as the bottom of the crown piece on the headstall.

A solid mouth piece often has a “bump” known as a port in the middle. The port relieves pressure on the tongue but can apply pressure to the roof of the mouth if it is over 2 1/2” high. The higher the port, the more pressure on the roof of the mouth. Most Western riders try not to use a bit that puts pressure on the palate. A straight shank gives less reaction time than ones which are swept back.



Kimberwick

English Leverage Bits

The kimberwick and the pelham are English leverage bits. They have slots on the rings to attach the headstall and hooks to which a curb chain needs to be attached. A pull



Pelham

SECTION 5: FUN WITH HORSES

on the reins creates a short lever action through the rings themselves to the curb chain, applying pressure in the chin groove.

Jointed Mouth Pieces

Jointed mouth pieces have 1 or 2 joints and loose shanks, and should probably be your first choice when moving from a snaffle bit to a leverage bit. This is a very common mouthpiece because the horse is used to jointed mouth pieces and the loose shanks allow the rider to signal the horse without applying pressure in the mouth. The rider can still ride with 2 hands on the reins and when using one hand to supple or do training exercises, the other side of the mouth is not affected.

The double jointed mouthpiece puts more pressure on the tongue and less on the bars as it allows the mouthpiece to wrap around the top of the tongue.

The ball and joint type jointed mouthpiece allows the rider to work one side of the horse's face very independently from the other and also allows the rider to lift the shoulders more easily.

Solid Mouth Pieces

Ported - may be high, medium or low in height. Remember to try and avoid use of high ports that create palate pressure. Some parts are covered and have a roller under the port to encourage salivation (half-breed).

Mullen Bit - soft upward curve in the solid mouthpiece.

Space Bit - most severe with a 3 ½ inch port, roller and springs. It is not recommended for most riders and can be very cruel when used with harsh hands.

Types of Mouthpieces



Spade Bit



Medium Ported Mullen



Western Curb Bit with Key

Mouthpiece Materials

Stainless steel and sweet iron are common materials. Many have a copper inlay. Horses like the taste of sweet iron and copper and suck it like a candy. This causes them to salivate and they relax their jaw. A relaxed jaw is important for more advanced training.

Fitting the Bit

Be sure the bit is the correct size for your horse. The bit you use should match the width and depth of your horse's mouth. Open your horse's mouth to see if it has a shallow or thick tongue. While a thicker mouthpiece would be milder, it would cause

SECTION 5: FUN WITH HORSES

discomfort on a thick tongue. To measure for width, stretch a string across the inside of your horse's mouth. At the corners, tie a knot where the mouthpiece would exist. You can then take this string with you to help you size up the right bit when purchasing one.

A standard western bit is 5" wide and comes in a variety of thicknesses. The thickness is 1" in from the butt (where the mouthpiece joins the shank). Common thicknesses range from 5/16" to 3/4".

Choose one that fits comfortably in your horse's mouth and gives you control.

See that you can put one finger on each side of the horse's mouth between the mouth and ring shank. Then adjust the cheekpiece to the proper length. Ideally there should be one small wrinkle in the corner of the lips when the bit is properly fitted. If the bit is too

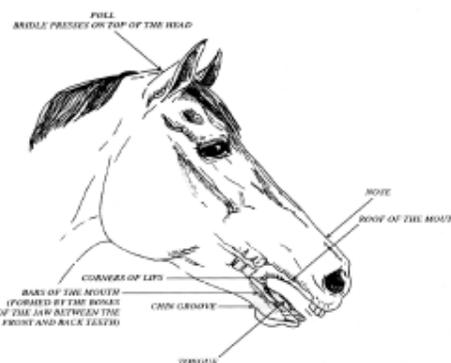
low it will knock and damage the horse's teeth. If the bit is too high, the horse will be uncomfortable. Adjust the cheekpieces to raise or lower the bit.

Check your bit often to see that it is not developing sharp edges on the joints that could cut or pinch your horse.

The Mechanics of the Bit

The bit is designed to put pressure on the sensitive parts of the horse's mouth. There are four main (M) pressure points involving the bit and

1. Tongue Pressure (M)
2. Bar Pressure (M)
3. Palate Pressure (roof of the mouth) (M)
4. Lip Pressure (S)
5. Curb Pressure (chin groove) (M)
6. Poll Pressure (S)



1. **Tongue Pressure** - All bits put some downward pressure on the tongue. The tongue of the horse is probably as sensitive as our own tongue. A straight bit exerts more pressure than a jointed bit and a ported mouth puts the least pressure on the tongue, and is useful for horses with thicker than normal tongues. The width of the port also determines the amount of tongue pressure.

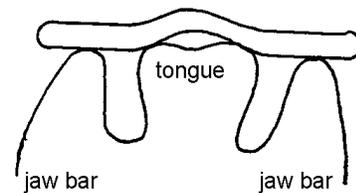
Horse Fact

The bit you use should be light and as mild as possible to maintain control of your horse. Do everything possible to keep your horse's mouth soft and responsive, remembering that the best methods of communication with your horse are the simplest and least harsh. Your horse will work much better for you if you do not have too severe of a bit. A thick snaffle is the softest bit you can use.

SECTION 5: FUN WITH HORSES

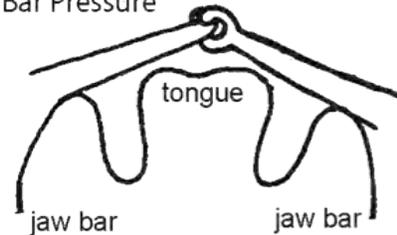
2. **Bar Pressure** - The bars of the horse's mouth are in the space on the lower jaw between the incisors and the molars where the bit rests. Every bit acts on the bars of the mouth. The thickness and smoothness of the mouthpiece determines the severity of the action on the bars. The thinner and more twisted the mouthpiece the more severe the effect.

port (raised part of a solid mouthpiece)



3. **Palate Pressure** - The palate is simply the "roof" of the mouth. In order for a bit to come into contact with the palate of a horse, it must have at least 2 inches of elevation. The higher the port, the angle of the port, and the less tongue relief the bit gives the more pressure on the palate. An example of this type of bit would be the "spade bit". These bits should only be used by experienced hands because of the sensitivity of the horse's palate.

Bar Pressure



4. **Lip Pressure** – All bits put pressure on the horse's lips at the corners of the mouth where lips meet.
5. **Curb Pressure** – The chin groove lies just behind the bulge of the chin under the jaw bone. A curb chain or leather curb strap attached to pelham or curb bits fits across the chin groove. Pulling the reins backwards makes the bit rotate forward on the mouth of the horse and tightens the curb strap or chain. As the horse softens his jaw to pressure, the curb strap becomes less tight and hence the reward for the correct response.
6. **Poll Pressure** - Leverage bits exert pressure on the poll when the bit rotates in the horse's mouth and pulls down on the headstall.

Bits and Bit Progression: A Training Problem Is Usually Not Fixed With a More Severe Bit

A snaffle bit is a non-leverage bit used to teach your horse the basics or for a tune-up if a horse has been allowed to become unresponsive.

With the snaffle, the rider should be able to easily control the horse at all three gaits, halt, back, flex, laterally, vertically and neck rein. When we are easily able to do this in a snaffle, we advance to a leverage bit so we can gently still do all of the above with two hands, but now do most of it with one hand. However, because we now have more pressure points on the horse's head when using a leverage bit, the amount of contact should be lighter. If you are having trouble with the basics, there is a hole in your horse's education and you need to go back and train or retrain with the snaffle. When you do advance to a leverage bit, the jointed mouthed bit is familiar to the horse and so makes the progression easier. Obviously the shorter the shank, and the smaller the ratio of the length of the bit above the mouthpiece compared to the length below the mouthpiece, the less severe it will be. The jointed mouthpiece also allows us to still ride with two hands when necessary and only affect the side of the horse's mouth on which we are

SECTION 5: FUN WITH HORSES

applying rein pressure. Once the horse is comfortable with the jointed mouthpiece leverage bit, a further progression may not be necessary.

Some bits may be illegal but it depends on the type of showing you want to do as to whether the bit is illegal or not. Different associations have different rules. And, any bit can be harsh on a horse if not used properly. Use bits with care when working with horses and keep the best interest of the horse in mind.

Reins

There are a variety of reins used in riding depending on the discipline and show guidelines. Always choose a size that feels comfortable in your hands giving you more control and contact with your horse's mouth. In general the smaller the rider's hands, the narrower the reins should be.

English Reins

All English reins buckle to the bit at each side and to each other in the middle.

- **Plain Reins** - are flat leather straps which are comfortable to use, but can become slick from rain or sweat.
- **Laced Reins** - are constructed of thin leather strips laced through and around the strap of the reins for a better grip.
- **Web Reins** - come with either a horizontal loop of leather at intervals or rubber incorporated for grip. They are used in wet weather when leather reins would become slippery. They are made of cotton web with leather at the bit and buckle ends.
- **Rubber Reins** - are covered with a pebble surface over the hand grip portion to provide a secure grip.

Western Reins

- **Split Reins** - are the most commonly used rein for Western riding, designed with two separate straps which are attached to the bit at one end and left unattached at the other "*rider*" end.
- **Romal Reins** - are connected near the "*rider*" end with a flexible quirt. Also known as California Reins.
- **Roping or Single Reins** - are usually one continuous strap usually attached to the bit with a snap on one or both sides.
- **Mecate Reins** – used with a bosal or snaffle bit. Reins are made of horsehair or rope (approximately 22 feet long) of which ten feet are made into a continuous (round) rein, leaving 12 feet on one side to use as a lead.

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Inspect a horse's equipment (tack). Ensure that it fits properly and that it is cleaned, stored and maintained properly. Ensure that it is safe and that it is the proper equipment for the work that the horse does. Take a picture(s) of it and include the picture(s) in your Record Book.

AND/OR

2. Try out a particular type of reins that you have not used before and see how you and the horse do using these reins. Bring the results of your trial to the next meeting.

SECTION 5: FUN WITH HORSES

DIGGING DEEPER**For Senior Members****Improper Use of Equipment**

When horse equipment is not used properly or doesn't fit properly, it can cause many issues for both the horse and rider. Investigate how the health and well-being of the horse can be affected and how this impacts the rider. Speak to a veterinarian, an experienced horse person or do some research to find out how many horses have issues caused by improper use of equipment.

Document the correct ways to use horse equipment, using pictures if possible, and record your findings in your Record Book. Be prepared at the next meeting to demonstrate how to properly fit and use halters, bridles, bits and reins.

ACTIVITIES

Activity #1 - Horse Tack Show and Tell

Items Needed:

- Pieces of horse tack brought to the meeting by members

Instructions:

1. Have members bring miscellaneous pieces of tack to the meeting.
2. Ask each member to show the piece of tack to the group and have them tell the group about the tack. Information they could share could be:
 - How old is it? Has it been passed down through the generations?
 - What is it used for?
 - Is it still currently being used?
 - Has the member used it?

Activity #2 - Bridle Break-Up

Items Needed:

- Variety of bridles that can be taken apart
- Stopwatch
- Blindfold

Part One - Instructions:

1. Have members work in pairs or in small groups.
2. Have members disassemble and reassemble a bridle.

Part Two - Instructions:

1. Have a timed race to see which member can disassemble and reassemble a bridle in the fastest time (or give members a set amount of time to complete the task to see who can complete in before time is up)
2. For an added challenge, blindfold members to complete this task.

SECTION 5: FUN WITH HORSES**Activity #3 - Feel the Vice!****Items Needed:**

- Bridle and reins for each pair

Instructions:

1. Have members work in pairs for this activity.
2. Have one member of the pair hold the bridle up by the crownpiece with one hand. With the other hand, have this same member spread their fingers so their thumb is behind the mouthpiece and their fingers are holding the curb strap away.
3. Have the other member of the pair pull on the reins.
4. The first member of the pair will notice that their fingers and thumb are being pulled towards each other. Unfortunately for the horse, his lower jaw does not give like fingers do.

Activity Credit: 4-H Alberta Horse Project

Activity #4 - Bit Severity**Items Needed:**

- Variety of bits, labelled
- Bit Severity worksheets - Non-Leverage Bits and Leverage Bits (found at the end of this meeting)
- Soft tape measures
- Writing utensil (pens/pencils)

Instructions:

1. Collect a variety of bits. Label the bits and lay them out in a somewhat organized fashion.
2. Have members work in pairs. Give each pair a soft tape measure and a pencil.
3. Hand out one Non-Leverage Worksheet to each group. As an introduction to the activity and to reduce the number of questions you will get later, complete the worksheet together using one of the non-leverage bits from your display.
4. Review the parts of the bit. The cannons (long tubular sections of the mouthpiece), bridle rings, butt (where the mouthpiece meets the sleeve), players, keys and crickets are small moving pieces in the centre of the mouthpiece. Identify a copper, sweet iron, steel and rubber mouthpiece.
5. The first two questions are straight forward. The more severe a characteristic

SECTION 5: FUN WITH HORSES

is the higher the score will be. You may need to point out a triangular or edged mouthpiece so it is not mistaken for a smooth mouthpiece. Question 3 is multiplied by question 4 and the total is carried over to the right hand

side. To answer question 4, measure 1" in from the bridle ring, then use your tape measure to wrap around the mouthpiece to measure its thickness.

Questions 5, 6 and 7 are all subtracted from the running total as they deal with characteristics that make the bit milder, thereby reducing the total score.

6. Working in pairs, have members complete their own Non-Leverage Worksheet using one of the non-leverage bits provided.
7. Once members have finished, review some of the bits together as a group. See where groups differed on scores and dig deeper to find out why.
8. Hand out the Leverage Bits worksheet to each member and repeat the steps above. Have each pair choose a leverage bit.
9. In addition to the above parts, a leverage bit will also have a shank, purchase (the part of the lever above the mouthpiece), rein loop or ring and it may have a port (high, medium and low).
10. Question 7 is added to question 8 then the total is multiplied by question 9.

Activity Credit: 4-H Alberta Horse Project

SECTION 5: FUN WITH HORSES

TACK: BIT LAB

NON-LEVERAGE BITS

Type of Snaffle _____ BIT # _____

1) How many pieces are there in the horse's mouth?**TOTAL SCORE**

- A. 1 to 3 pieces 1 pt
 B. more than 3 pieces 5 pts

2) What kind of texture or shape does the mouthpiece have?

- A. Sharp (eg. Triangular or edged) 10 pts
 B. Prickly 10 pts
 C. Rough (eg. Twisted wire or chain) 10 pts
 D. Twisted metal 5 pts
 E. Wrapped with smooth wire 3 pts
 F. Smooth 1 pt

3) What is the ring shape?

- A. Round (rings are circles) 1 pt
 B. All other shapes 2 pts

4) How thick are the canons?**X**

- A. 1/2" or more 1 pt
 B. 3/8" but less than 1/2" 3 pts
 C. less than 3/8" 10 pts

_____ = _____

5) How are the rings attached to the canons?

- A. Through holes in the canons 1 pt
(this would be all snaffles except Fulmer aka Australian loose ring)
 B. All others including Fulmer 3 pts

(_____)

SUBTRACT

6) Are there players, keys or a cricket on the bit?

- A. Yes 3 pts
 B. No 0 pts

(_____)

SUBTRACT

7) Is the mouthpiece rubber, copper, sweet iron, or a flavoured material?

- A. Yes 3 pts
 B. No 0 pts

(_____)

SUBTRACT

TOTAL: _____**Total score of:**

1-5 > Mild

6-19 > Moderate

20 or more > Severe

TACK: BIT LAB

LEVERAGE BITS

Type of Bit _____ BIT # _____

1) How many pieces are there in the horse's mouth?

TOTAL SCORE

- A. 1 to 3 pieces 1 pt
 B. More than 3 pieces 5 pts

2) Is it a gag / elevator bit?

- A. Yes 5 pts
 B. No 0 pts

3) What is the size, height and shape of the port?

- A. No port and a broken mouth piece 0 pts
 B. High port with steep narrow tongue relief
 Port meets the cross piece
 squarely (90 degree angle) 10 pts
 C. High port with broad tongue relief
 Port meets cross piece on a rounded angle 5 pts
 D. Medium or low port with broad tongue relief.
 Port meets cross piece on a rounded angle 1 pts
 E. No port. Unbroken arched cannon 2 pts
 F. No port. Straight unbroken cannon 3 pt

4) How is the port angled with respect to the shanks?

- A. Port slopes back more than the shanks 1 pt
 B. Port is parallel to the shanks 2 pts
 C. Port slopes forward more than the shanks 10 pts
 D. No port. 0 pts

5) How does the mouthpiece slope side to side?

- A. Broken mouth like a common snaffle
 WITH a solid bar connecting the shanks 1 pt
 B. Broken mouth like a common snaffle
 WITHOUT a solid bar connecting the shanks 10 pts
 C. Solid mouth perpendicular to shanks 1 pt
 D. Solid mouth slopes down to shanks 10 pts

6) How are the shanks bent?

- A. They aren't bent 3 pts
 B. Backwards toward the horses chest 1 pt
 C. Forward 5 pts

MEETING 22: OTHER COMMONLY USED EQUIPMENT

Topic:

- Equipment Used for Riding
- Fitting a Saddle

Objectives:

- To learn about the different equipment you need when working with horses

Roll Calls

- Name three different pieces of riding equipment that you use on your horse.
- Name a type of English or Western saddle.

Sample Meeting Agenda – 2 hrs. 30 minutes

| | | |
|-------------------------------------|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Saddles, different types and parts of the saddle. | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Saddle Parts Word Search (instructions found at the end of this meeting) | 15 min |
| Topic Information Discussion | Review Fitting a Saddle to a Horse, Fitting a Saddle to the Rider and Other Commonly Used Equipment. | 30 min |
| Activities Related to Topic | Choose from Activities #2, #3 #4 and/or #5 (Horse Tack Relay, Blindfolded Saddle & Bridle ID, Who is Telling the Truth?, Horse Saddling Demonstration) (instructions found at the end of this meeting). | 60 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 5: FUN WITH HORSES

Topic Information

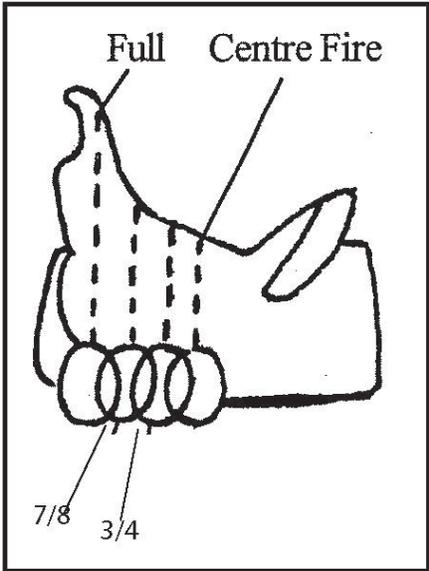
Saddles

Your saddle is an important piece of riding equipment and should be a help to any kind of performance. There are a variety of saddles that may be used when riding. The type will depend on the style of riding and the intended purpose.

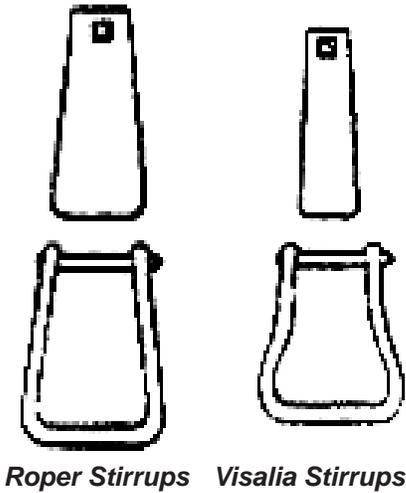
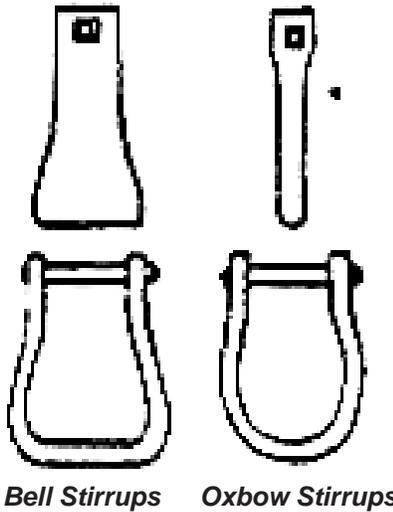
The saddle should fit the horse on which it will be used. Horses with high withers or mutton withers may require special fitting. The saddle should be comfortable for the horse as well as the rider.

Riggings of Western Saddles

Western saddles are usually, but not necessarily, double-rigged (two cinches). The positioning of the front cinch is relative to the swells or pommel. This positioning indicates full, 7/8, or 3/4 rigged saddles. The type of rigging your horse needs depends on the conformation of his shoulders. Full rigged saddles tend to place the horn over the centre of balance of the horse (which can be useful for roping) while 3/4 rigging tends to place the rider over the centre of balance of the horse.



Stirrup Styles



Bell Stirrups Oxbow Stirrups

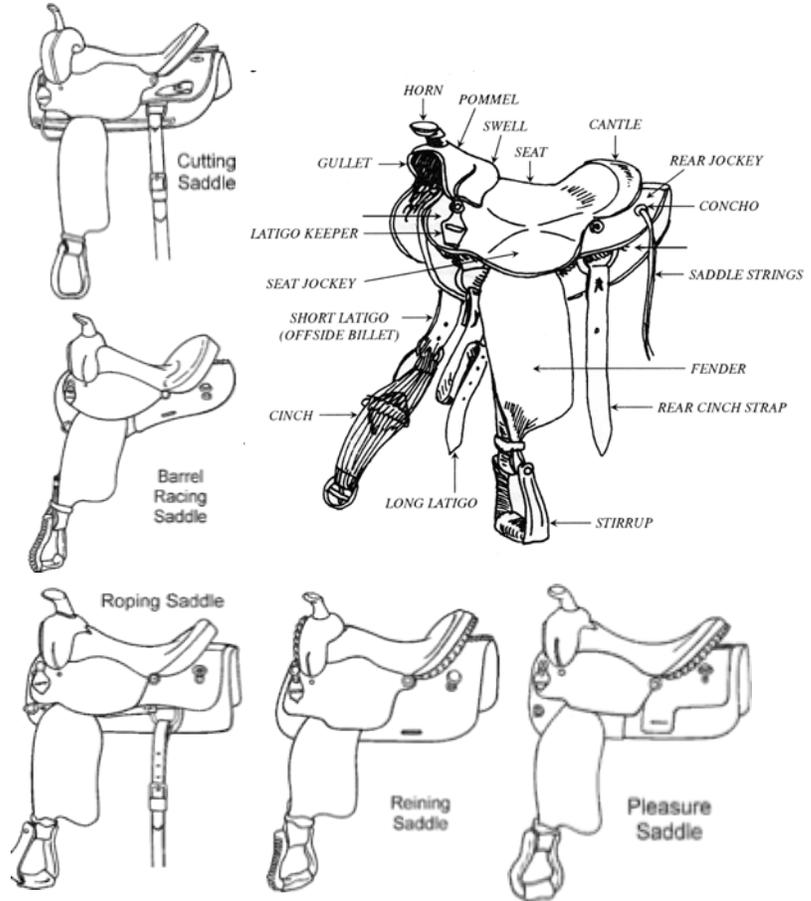
Roper Stirrups Visalia Stirrups

Tapderos Stirrups

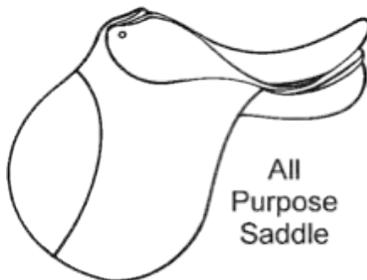
SECTION 5: FUN WITH HORSES

Types of Western Saddles

- **Cutting Saddle** - Longer than a general saddle, seat is flatter, cantle is higher, horn is long and slim.
- **Barrel Racing Saddle** - Seat sized for actual rider, cantle is wide and sloped, horn is similar to cutting saddle.
- **Roping Saddle** - Deeper seat, cantle is higher, horn is tall enough and stout enough to hold a rope, fitted to rider for correct comfort and position.
- **Reining Saddle** - Seat is deeper, cantle is higher and wider, horn is lower to moderate height.
- **Pleasure Saddle** - More middle of the road, moderate seat, moderate horn, moderate cantle, fitted for average riders. There are two types of pleasure saddles - recreation and show pleasure

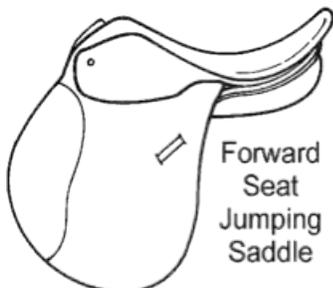


Types of English Saddles



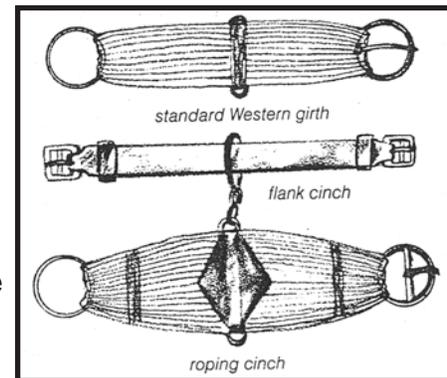
All Purpose Saddle

All purpose - allows the rider to use the same saddle for all kinds of riding. The all-purpose seat is probably the best English saddle for the novice as it is the most versatile.



Forward Seat Jumping Saddle

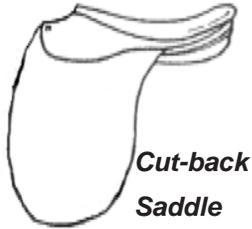
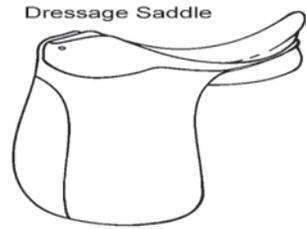
Jumping or Forward-seat - sets the rider forward, well over the centre of balance of the horse. These saddles are meant for jumping and may have heavy knee rolls which give the rider maximum security. Close-contact forward-seat saddles eliminate the bulky knee roll.



Western Cinches

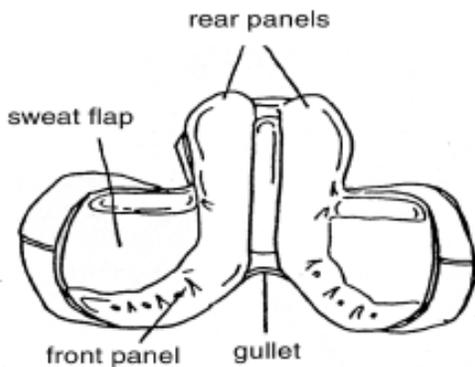
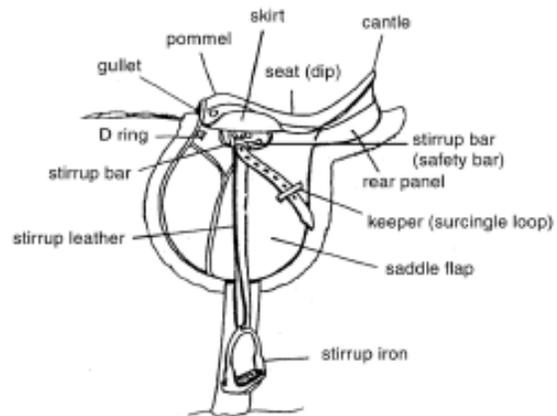
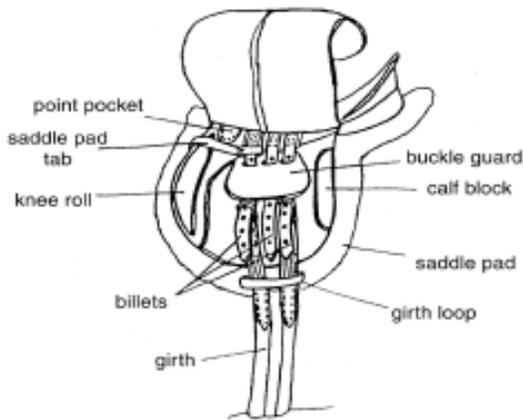
SECTION 5: FUN WITH HORSES

Dressage - has a deeper seat with leathers positioned under the deepest part of the seat. This allows the rider more exactness of leg position for riding a highly schooled dressage horse.

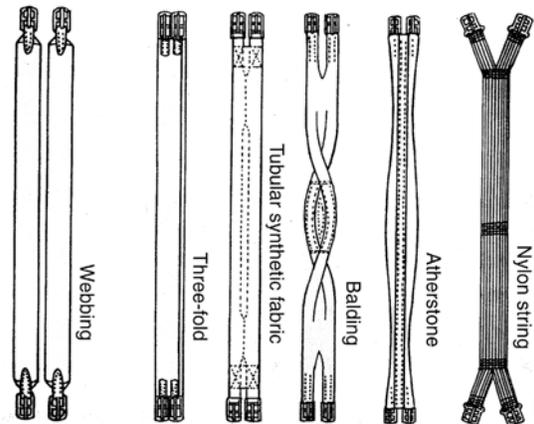


Cut-back - used on gaited horses as well as Morgans and Arabians which move with much animation or lift of the legs. This movement combined with an arched neck and head set tends to move the centre of balance of these horses somewhat further back from where it is normally found.

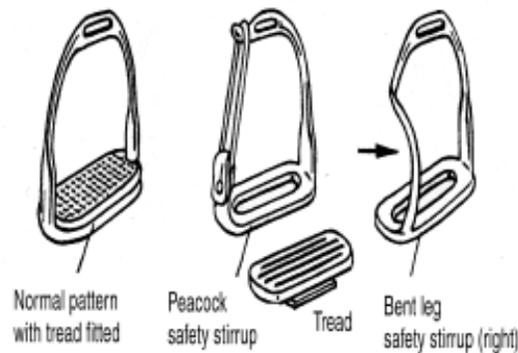
Parts of the English Saddle



Girths



SECTION 5: FUN WITH HORSES

Stirrup Irons**Fitting A Saddle to a Horse**

A sore horse is often difficult to detect. Often the signs are ignored, believing instead that the horse has developed an attitude, when in fact this change is caused by pain. Shortened strides, switching tail, pinned ears, nervousness and an otherwise mentally preoccupied horse may be signs of poor fitting equipment.

Whether English or Western, a well fitted saddle:

- is neither too wide, nor too narrow for the horse's shoulders or back.
- does not touch any part of the horse's backbone.
- rests evenly along the horse's back, with no concentrated areas of pressure.
- seems comfortable to the horse

After considering all the factors that affect saddle fit, you must test models on your horse. Set the saddle without any pads, on your horse's back and check it from the front and the rear. Test that the gullet completely clears the horse's backbone by inserting a long whip through the gullet, from the withers toward the croup. The whip should slip easily through this channel, between the bearing surfaces. Check the saddle's length. Look for the seat to sit level from back to front. The deepest part should remain in the saddle's centre and the pommel and cantle should measure the same height. The pommel must never sit higher than the cantle, as this will shift your weight too far back.

Using appropriate padding can help a saddle fit a horse properly. If the saddle is too high in the pommel/horn area, put padding under the back of the saddle, being careful that the front of the saddle does not come down and rub the horse in the wither area. If the saddle is low in the front and is rubbing the horse on the withers, use a wither pad under the front of the saddle.

Fitting A Saddle to a Rider

Once you have chosen models that fit your horse, choose one that fits you. First, determine the size of seat you need. While mounted in the saddle test if you feel centered. You can check the seat size by placing your hand behind your seat. See if you can fit four fingers between you and the cantle; more or less room may indicate a poor

SECTION 5: FUN WITH HORSES

fit. Saddles come with varying widths to the seat which can make a big difference to a rider's comfort. A seat that is too wide can be fatiguing to the hips and thighs but may be necessary for riding a wide horse. An extremely narrow seat can feel as if you are riding a rail. Choose the saddle that feels comfortable to you. One way to determine if a saddle is right for you (assuming it is right for your horse) is to take your feet out of the stirrups while riding and jog your horse for at least 10 minutes. A Western fit includes about 2 fingers between thighs and swells if the stirrups are adjusted properly.

Choose:

1. A saddle designed for your purpose if possible (reiner, barrel racer, roper, pleasure, etc.)
2. A seat length that positions you as close as possible over the horse's center of gravity (seat length).
3. A seat shape that is made to accommodate your build.
4. Use a video or mirror to look at how the saddle positions you.
5. You must sit with a straight pelvis to maintain strength. If your pelvis rotates, your back curves and your shoulders roll ahead, and then you brace against the cantle.
6. You should feel like you are sitting in the saddle and not on the saddle.
7. There should be full contact from your crotch down through your thigh (not able to place your hand under any part of your upper leg).

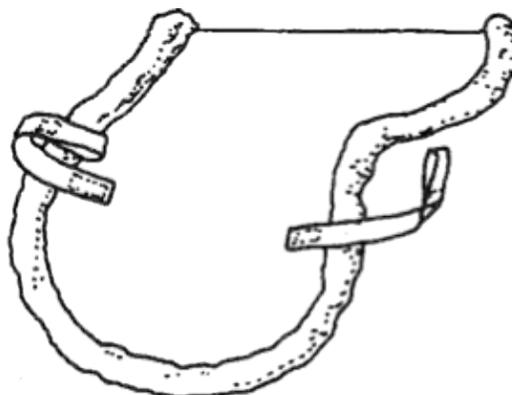
Saddle Blankets

Saddle blankets or pads are used to protect the horse's back. They also keep the lining of your saddle clean and absorb moisture. Western saddles are heavier, therefore a thicker blanket is often needed. Some saddles may require additional blankets or pads. The use of two Navajo wool blankets is very common in western riding. Blankets or pads made from natural fibres (such as felt or wool) work better than synthetic fibres, but they are more difficult to clean and manage.

Depending on the type of riding done, English saddles will require a full pad (dressage), or a numnah which follows the shape of the saddle.

Both the pad and numnah must be pulled well up into the front arch of the saddle to avoid pressure on the withers. It may be attached to the saddle before tacking up.

On western saddles, consider the length and depth of the saddle skirts. The saddle pad should extend at least one inch both front and back.



Numnah

SECTION 5: FUN WITH HORSES**Riding Equipment for the Rider**

Do not wear running shoes!. Boots are the safest. Boots should be high enough to support the ankle and should have a heel so that the foot cannot slip forward through the stirrup. The sole should be smooth and rigid for comfort and protection.

Wearing a helmet with a chin strap can reduce injury (see General Knowledge: Safety Section).

English riders wear either jodhpurs which cover the legs to just below the ankles and are worn with jodhpur boots or breeches which are worn with tall riding boots. Jodhpurs and breeches are made of stretchy material; light colours are worn in the show ring, dark colours are worn for practicing at home.

Riding apparel should be comfortable and not too tight to restrict mounting. Do not wear anything too loose or that dangles (including jewellery) that could spook the horse or get caught on something.

English riders wear pants that are stretchy with no inseams, which permit enough freedom of movement to ride comfortably. Western riders wear jeans or dress pants.

The rider's equipment for competitions is sometimes governed by regional or individual show rules. Check these carefully before any competitions.

Care of Equipment**Storage**

All equipment should be stored where it will remain dry and out of the sunlight. Check equipment regularly for deteriorating threads, weak glue and any screws or bolts that are coming out.

Cleaning Saddles

Clean your saddle with a damp, not wet sponge to get all the dirt and salty sweat off. If there are little black patches of greasy dirt called jockeys, scratch these off with a fingernail or a plastic pot scrubber but nothing more abrasive. Use a silver polish or toothpaste to shine silver trim on saddles.

Work glycerine saddle soap well into another damp sponge. If you get a lather you are using too much water. Work the saddle soap into all the leather, paying particular attention to the undersides of the flaps and other parts which touch the horse. Use lots of saddle soap and elbow grease. If the saddle has gotten wet or feels stiff, oil it using a product like Lexol or neatsfoot oil before using the saddle soap. Pay particular attention to the underside of the leather where water is more easily absorbed.

On English saddles remove the stirrup leathers to clean and oil them. On Western saddles pull the stirrup leathers down a few inches so you can reach in and oil the bend where the leather grips the tree. Do not use saddle soap or oil on suede leather. English saddles should be examined often to see if the stuffing is going flat and making the saddle uncomfortable for the horse's back.

Do not oil leathers of French leather saddles. This will cause the leather to stretch.

SECTION 5: FUN WITH HORSES

Cleaning Headstalls and Bits

Clean the leather headstall or bridle the same way as the saddle. Ideally both saddle and bridle should be cleaned every time you ride. The bridle, breast collar/breastplate, martingale, leather girth and any other leather piece of tack which lies directly on the horse's skin must be cleaned often because they pick up dirt, grease and salt which stiffens and cracks the leather. Saddles usually have a pad under them and do not get as dirty. Nylon bridles can be washed in the clothes washer with saddle pads and cinches. Rinse well!

Wet Leather

If your saddle and other leather equipment gets very wet, put it out in the sun to dry (or in the shade if it is a hot day). Don't try to speed the drying using excessive heat because this will harm the leather. Oil the equipment thoroughly only once it has completely dried.

Cleaning Saddle Blankets or Pads

Clean blankets are important to protect the back and prevent the spread of disease. When you wash blankets be sure to remove all of the soap because it can irritate the horse's back during the next ride. Not all pads are washable, so brush or vacuum them to remove hair and debris or take them to the drycleaners.

Commonly Used Equipment**Bell Boots**

These are bell shaped and made of rubber and are a rubber circle that fits the horse from the pastern down over the hoof. They are worn on the front feet to protect the horse from stepping on their heels or grabbing their front shoe and pulling it off if they overreach. This type of boot is often used on jumping and gymkhana horses. Overreach boots serve the same purpose as bell boots, but are made of different material.



Bell boot

Skid Boots

These boots protect the fetlocks of the rear legs from hard ground and friction burns when a horse is doing sliding stops, roll backs and spins.



Skid Boot

Splint Boots

These boots are used on the front legs to protect the splint bone from accidentally being hit by the other front foot. This type of injury can happen when horses are spinning, working in circles (lunging) or being trained.



Splint Boots

SECTION 5: FUN WITH HORSES

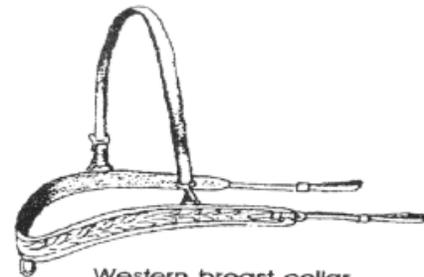
Breast Collar

The breast collar is used for some Western riding and for speed events. It helps to balance the saddle in tight turns and keeps it in place during fast acceleration and uphill climbs. It should be v-shaped, as this does not restrict breathing, with the center part attached to the girth. Each end of the breast collar is attached to the D-rings on the saddle.

The breast collar in English riding is called the breastplate. It is used to prevent the saddle from sliding back when the horse is moving fast or jumping. It is also helpful for keeping the saddle in place on a round backed horse. Some English and Western breastplates have martingale attachments.



Proper fit is to be able to make a fist between breast collar and point of shoulder



Western breast collar

Not commonly used anymore

Blankets

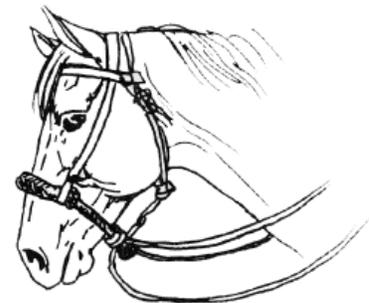
Blankets are used to keep horses warm in winter and clean when washed and groomed for a show. Sweat sheets and coolers keep horses from getting chilled when they are sweaty and the air is cool. Summer sheets keep horses' coats from sun burning and helps keep the flies at bay.

To figure out the size of blanket your horse wears, measure him from the center of his chest, along the side of his body, straight back to the middle of his tail. If the measurement you get is an odd number round it up. For example if the measurement is 77 inches then round it up to 78 inches.

Hackamore (or Bosal)

The rawhide bosal hackamore is acceptable for use by 4-H members on a young horse. The mechanical hackamore is not recommended because it is very different and more severe than bosal hackamores. In competitions, check the rules for specifications regarding the use of hackamores.

The bosal hackamore is much the same as using a snaffle bit in that it will not injure the horse's mouth. When the headstall is properly adjusted the bosal should rest on the horse's nose about nine cm (four inches) from the top of the horse's nostrils. The back part of the bosal should hang at the base of the cheekbones. It should also permit the passage of two fingers held edgewise between it and the jaw. Hackamore reins are usually held in two hands.

**Hobbles**

Hobbles are a rope or leather strap used to tie the front legs together to restrain a horse's movement. Horses are often broke to hobbles when they are trained to ride.

SECTION 5: FUN WITH HORSES

They are used to train the horse to stand or to graze a horse outside a pasture without being tied. They can be useful for a horse that paws the ground, trailer or feed tub. Horses that are used to them are also less likely to panic if they become tangled in wire or rope. Get the help or direction of an experienced horseman when hobbling your horse for the first time.



Lunge Line

An eight to ten metre rope or web strap used for lunging. Two lunge lines may be used for ground driving a horse. It is safer not to put your hand through the loop at the end. It is safer to remove the loop at the end by cutting the stitching or knotting.



Martingales

Martingales and tie-downs are schooling devices that can be used as needed and taken off when the problem has been corrected. They should be adjusted so that they come into play when the horse's head comes out of the correct position.

Standing Martingale - The standing martingale consists of a strap running from the noseband through a neckstrap and down between the front legs to the girth. It should act when the head is too high. Standing martingales must only be used with a cavesson noseband to avoid restricting the breathing or damaging the nose. Many western riders refer to the standing martingale as a "tie-down".



Running Martingale - The running martingale branches off towards each side of the bit from the neck strap. These branches end in rings through which the reins pass, helping to stop the horse from raising his head too high or throwing it from side to side, and also improving reining. Rein stops (small rubber clogs that the reins slide through) must be fitted to the reins to prevent the martingale rings from catching on the buckles near the bit and making it impossible to release pressure.

Quirt

Small whip used to discipline the horse.

Side Reins

Training tool used with a snaffle bit. They are long leather or web straps on each side which attach to the saddle and the bit. They teach the horse to give to the bit and flex over the poll and back. Side reins are only used when lunging. When starting out, side reins should fit very loosely and be gradually tightened as the horse responds to them and builds up neck muscles. They should never be tightened so much that they force the head into position.

Horse Tip

Members should always get the assistance of an experienced trainer before trying to use side reins as they can injure the horse if used incorrectly or if something spooks the horse.

SECTION 5: FUN WITH HORSES

Leg Bandages

Leg bandages are often used for support or protection. There are a variety of bandaging materials available for use.

Applying a Leg Bandage

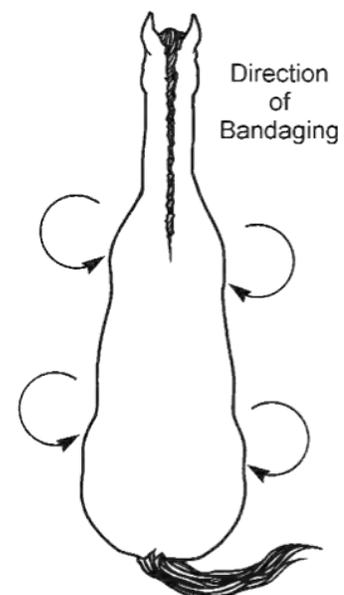
When bandaging:

- The horse's legs should be completely dry before bandaging. Never apply a wet bandage as it may tighten and cause swelling or chafing.
- Bandages must be put on clockwise on the right legs and counter clockwise on the left legs (Inside out, front to back). For a stable bandage apply the cotton or quilt at the back of the leg (edge of the cannon bone) just in front of the tendons. Wrap around the leg, making sure the ending edge of the quilt is not over the tendons. Tuck the end of the outer wrap under the edge of the quilt and begin applying the bandage. Work your way down to within 1 cm of the bottom of the quilt (down over the fetlock,) then begin working up to within 1 cm of the top of the quilt (just under the knee or hock). The tension of the wrap should be even, so time your pull towards the back at the same place for each wrap.
- Bandages applied below the fetlock joint are used for first-aid or for when the horse is not exercising. Bandages applied for support during exercise should not be applied below the fetlock joint because they would interfere with the movement of the joint.
- Apply bandages firmly enough that they will not slip or move around, but not so tight that they restrict circulation. You should be able to slip a finger easily under the quilt.
- The same person should bandage all the legs on a horse to ensure that all legs are bandaged with equal tension.
- Padding is used under shipping and stall bandages but not under exercise bandages.

Types of Leg Bandages

Exercise

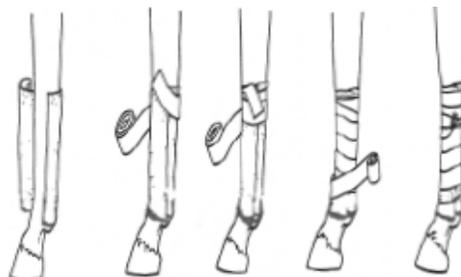
Exercise wraps are used when the horse is being ridden or lunged to help support and protect the lower leg. Fleece polo wraps are available in a variety of colors. The exercise bandage should be applied from below the knee/hock to the fetlock. Do not wrap too low on the fetlock. **Secure (tape) exercise bandages well so they do not unravel and trip your horse.**



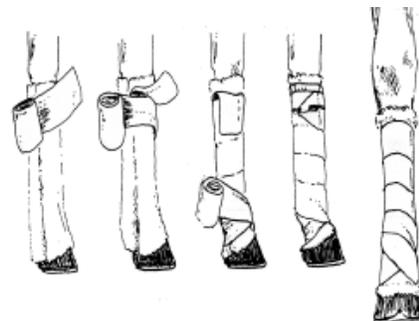
SECTION 5: FUN WITH HORSES

Stable

A stable bandage is used when a horse is being kept in a stall overnight or for first aid. It often prevents "stocking up". A long stable wrap should only be used with a quilted pad underneath.

**Hauling (Shipping)**

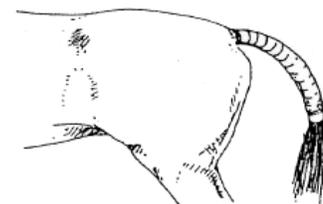
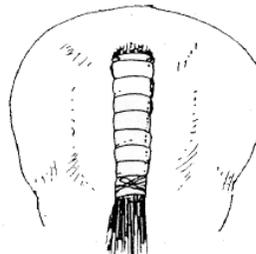
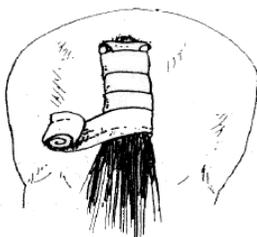
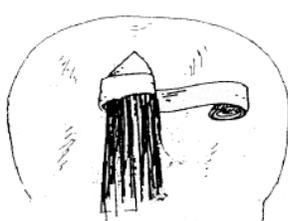
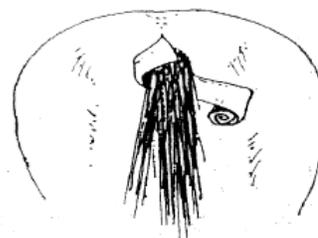
This type of bandage is used for support and protection while the horse is being hauled in a trailer. A thick quilted pad that covers from below the knee/hock to below the coronet band on the front and hind legs is under the long wrap which is at least 12 feet in length.

**Tail Wraps**

If you want to protect your horse's tail from getting dirty or being rubbed, you can apply a tail wrap. Made from knit or rubber backed material like the neck sweat or similar to a leg wrap (a knitted leg wrap will also work).

The tail bone is wrapped to protect the bone and the tail hair from damage when you are trailering. Do not put a tail wrap on too tightly.

- Lightly dampen the tail hair with a brush. Do not wet the bandage as the material may shrink thus injuring the tail by cutting off circulation.
- Put your left hand under the tail, unroll about 20 cm of bandage; and place this spare piece under the tail, holding its end in your left hand and roll the bandage in your right hand.
- Keep your left hand on the root of the tail until the spare end is secured. The first turn is often difficult to keep in place, try making the next turn above the first. Put pieces of hair into the wrap to prevent slippage.
- Unroll the bandage evenly around and downwards, stopping just above or below the tail bone.
- Tie the tapes neatly - no tighter than the tension of the bandage. Tuck in the spare ends, then bend the tail back in a comfortable position.



BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Visit a tack shop and look at the variety of equipment available for both horse and rider. Talk to the owner or salesperson about the proper equipment for the kind of riding that you do. Do you have all of the required or suggested equipment? Is it in good shape? Is it safety approved?

AND/OR

2. Make a list of all of the equipment you would need for riding a horse. Then, using a horse equipment catalogue, the Internet or by visiting a tack shop, find the price of each item. Add up the list to find the total cost of equipment for riding one horse. Record your findings in your Record Book.

SECTION 5: FUN WITH HORSES

DIGGING DEEPER**For Senior Members****How is a Saddle Made?**

Saddle making is quite an art. Find out if there is anyone in your area that makes saddles. If possible arrange a visit, take pictures and ask questions which could include the following:

- How did the person learn how to make saddles?
- How long have they been making saddles?
- Where do they get their supplies for making the saddles?
- How long does it take to make a saddle?
- What special tools, if any, did they need to purchase?
- Is it a hobby or is it a business?

Record your findings in your Record Book.

DIGGING DEEPER II**For Senior Members****Create a Back Map**

A back map is a useful tool for selecting the proper tree for difficult to fit horses and can be used by anyone to determine if their saddle fits the horse. Using a back map can also help you determine where shims and padding can help improve how well your saddle fits.

Items Needed:

- 267cm (107") of wire. The best is any piece of wire that can be readily bent but is stiff enough to hold its shape so you can make a tracing of it.
- Permanent magic marker, fine or medium tipped.
- Tape measure or ruler.
- Optional, cardboard or card stock for cutting out traces.

Instructions:

1. Cut 5 pieces of wire, each 40cm (16") long, marking the middle. Number the wires 1 to 5 on one side only. The numbers serve to record the order of the wires and to allow you to avoid accidentally flipping the wires around.

SECTION 5: FUN WITH HORSES

2. Cut 1 piece of wire 67cm (27") long. Put five marks completely around the wire 4" apart beginning 4" from one end of the wire. Number, on both sides of the wire, the ticks 1 to 5 which will guide where you put the wires. The length of the wire from the first tick mark to the end of the wire should be 57cm (23"), which is the average length of skirting for Crest Ridge saddles.
3. Align the first tick mark on the long wire at the rear edge of the scapula and mold the wire to conform to the horses back. The front of the wire will go up and over the horses whither. The wire extending back behind the scapula, #1 mark on the wire, should end at or before the horse's last rib.
4. Mold the wire labelled 1 (#1 wire) over the horses back at the tick mark on the long wire that is aligned with the back edge of the horse's scapula (shoulder blade). The #1 wire should be centered over the long wire so that the center tick mark of the #1 wire is directly over the foremost tick mark on the long wire. The wire should be vertical, perpendicular to the ground, with the horse standing square and straight (not looking to the side) on level ground. Make sure the horse is standing with all four feet down and not resting a foot. A properly molded wire maintains contact with the horse's skin along its entire length. If your horse's spine is slightly recessed, causing the wire to lose contact with the horses skin for less than an inch on each side of the spine, don't worry about it. The saddle should not contact the spine anywhere.
5. Repeat this process for wires #2 through #5 at the corresponding tick marks along the long wire. Again, make certain the horse is standing level and square, with its head forward and all four feet on the ground.



To assess how a saddle fits your horse:

- Turn the saddle upside down. We recommend you put the upside down saddle on a blanket to avoid scratching the saddle or getting it dirty.
- Lay the long wire along the back channel of the saddle with the #1 tick place even with the conchos at the front of the saddle which gives you a good indication of the front of the tree. On many saddles there is a copper rivet visible which also indicated the front of the tree. What to look for:
 - The wire should lay along the underside of the saddle evenly if the saddle has the correct rock for the horse. If the saddle skirting extends past the wire, it may be hitting the horse in the loin or interfering with the hips. This is easily checked by placing the saddle on the horse. If the skirting extends past the last rib, it is too long for the horse. If the skirt is past the last rib, but short of the hips, it may be possible to use a pad to protect the horses loin.

SECTION 5: FUN WITH HORSES

- If the wire touches the saddle front and back, but not in the middle, the saddle is too flat, not enough rock, for the horse and will likely bridge. Proper use of saddle pads can correct some amount of bridging.
 - If the wire loses contact on the ends, there is too much rock in the saddle. It is quite possible a saddle with too much rock will sore a horse's back.
- Place wires 1 to 5 at their respective tick marks you made on the longer wire used to measure rock. Make sure the fenders and stirrups are out of the way. You may need to gently and evenly press the wire into the fleece under the saddle to make sure the wire is measured against the tree, not the fleece. Be very careful not to distort the shape of the wire when pressing on it.

**What to look for:**

- A wire laying nicely along the tree without gapping indicates a good fit.



This set of wires was made from a single horse. The saddle on the left fits well. The saddle on the right is too narrow.

- If the wire rests on either side of the saddle and does not approach the back channel, the saddle is too narrow for the horse. The saddle will perch along the horse's ribs near the outside edge of the bars causing pressure points. Pads and shims don't fix the fit of a too narrow tree.
- If the wire pulls away towards the outside of the saddle, the tree is too wide and, if severe enough, may cause the saddle to sit on the horse's spine. Saddle pads can help a too wide saddle tree fit the horse acceptably, but there are limits to how much correction is possible with saddle pads.
- If the center of the wire makes contact with the saddle, the saddle will contact the horse's spine. A lift pad or a cut-out pad may protect the spine enough for the saddle to be used. The goal is for zero contact along the horse's spine. The

SECTION 5: FUN WITH HORSES

saddle will likely cause pressure points on either side of the horse near its midline since weight is not be distributed over some portion of the bars.

This six wire system offers several advantages as it allows the use of wires to easily visualize how a saddle will make contact with a horse's back. The wires are completely reusable and are easily transportable. Best of all, the wire molds, compared to other types of molds on the market, are very inexpensive to make.

Activity and Picture Credit: Crest Ridge Saddlery <http://www.crestridgesaddlery.com/build-a-back-map.html>

SECTION 5: FUN WITH HORSES

ACTIVITIES**Activity #1 - Saddle Parts Word Search*****Items Needed:***

- Saddle Parts Word Search (found at the end of this meeting)
- Writing Utensils (pens/pencil)

Instructions:

1. Give each member a Saddle Parts Word Search.
2. Have members work individually to find all of the parts of a saddle.
3. Review each part and where the part is found on a saddle.

Activity #2 - Horse Tack Relay***Items Needed:***

- Western saddle & bridle
- Eastern saddle & bridle
- Labelled Sticky Notes (list of tack items found at the end of this meeting))

Instructions:

1. Review the parts of the Western and English saddles and bridles.
2. Divide the group into two teams; an English team and a Western team.
3. Post the labeled Sticky Notes on a vertical surface (wall or flip chart).
4. This is a relay race. The first member runs up to the board and choose a sticky note and places it where it belongs. They then run back to their team and tag the next person in line.
5. There are five bridle parts and fifteen saddle parts on each set of tack.
6. Once a winner is declared, have the teams switch places and repeat the activity.
7. It is a good idea to enlist youth leaders, senior members or adult helpers to help out by being a “judge” at each station to ensure the label is placed in the correct place.

Activity Credit: 4-H Alberta Horse Project

Activity #3 - Blindfolded Saddle & Bridle ID

Items Needed:

- Various saddles
- Various bridles
- Blindfolds

Instructions:

1. Blindfold each member.
2. If possible, have a saddle and bridle for each member. If it is not possible, have members work in groups by taking turns wearing the blindfold.
3. Call various parts of a saddle and/or bridle and have the members point out the part by using their sense of feel to find it.

Activity #4 - Who is Telling the Truth?

Items Needed:

- Various pieces of obscure horse equipment
- A panel of three adults who are knowledgeable about horse equipment

Instructions:

1. Ahead of the meeting, have panel members take a look at the various pieces of horse equipment for this activity.
2. To start the game, produce a piece of horse equipment and show it to all of the members and the panel of three.
3. The panel of three people tell the group what the item is and what it is used for. The catch is that only one of the panel members is telling the truth. The others will make up convincing but untrue stories (panel members will have to decide ahead of time who is telling the truth and will not be for each piece of equipment).
4. Have each member say who they think is telling the truth.
5. After each member has had a chance to answer, have the panel members tell the group who was actually telling the truth. Each member who answered correctly gets one point. The member with the most points at the end of the game wins. OR the group could vote on which panel member they think is telling the truth and then the panel reveals the truth.

SECTION 5: FUN WITH HORSES

Activity #5 - Horse Saddling Demonstration***Items Needed:***

- A quiet horse(s)
- Saddle(s) & related horse equipment

Instructions:

1. Have someone demonstrate to the entire group, the proper way to saddle a horse.
2. Depending on the number of members in the club and the number of available horses, have members work in small groups to practice properly saddling a horse. It is advisable to have a leader, adult helper or senior member work with each group to ensure the safety of members and the horse.

SECTION 5: FUN WITH HORSES

Saddle Parts Word Search

h m d m p e d g s f l e m n k c n i l t
 c o l x u e l r u l t l l j j r s a v g
 i c r u r c v b e l q i k i g o t s r t
 j k b n r k j w b p l x q q g i a z s o
 c r d b i q s l a o b e y r g d u n h q
 g o l t t o t o f x h y t o d m m e t w
 t s t b s e a t p j q x t l p h c c r b
 r f u u o a w k k x g j e l h z u t i w
 u e z c r v z m w e i f o h c n o c k u
 j n o k m u l m l h l p f o d e r c s d
 s d p l s c f t l a w c y g k v d u v o
 d e r e y t n h p v y a p t a m i h n a
 w r h g q a e q p y p d g w m w c i e r
 z y t u c b s l e n a p t n o r f k v r
 p r l a a o e y l i b n o x q f m l m u
 y u h r b f x m x i q c p u m j w d j e
 c l o d m x a a u b b r c r b v f o d a
 w l h e v l t r x y p i j k s t h k s w
 o s q x o v h f v o l v p o m m e l e f
 r x w o x s c i e k z c e s f a t h s c

billets
 buckleguard
 cantle
 concho
 fender
 frontpanel
 gullet
 hobble

horn
 latigo
 pommel
 saddleflap
 seat
 skirt
 stirrup
 swell

Horse Tack Relay

Write the following 40 tack parts on small Sticky Notes:

Western

HEADSTALL

crownpiece
throatlatch
cheekpiece
chin strap
browband

SADDLE

cantle
seat
pommel
gullet
horn
fender
skirt
rear
billet
latigo
seat
jockey
rear jockey
swell
concho & strings
latigo keeper
stirrup hobble

English

BRIDLE

crownpiece
throatlatch
cheekpiece
noseband
browband

SADDLE

cantle
seat
pommel
gullet
skirt
D-ring
buckle guard
rear panel
front panel
sweat flap
saddle flap
stirrup iron
stirrup leather
stirrup bar
billets

MEETING 23: WORKING WITH HORSES - GROUNDWORK

Topic:

- The basics of working with a horse
 - Haltering, leading and tying

Objectives:

- To understand how to properly work with horse equipment
- To learn how to work with a horse safely

Roll Calls

- What are three different ways you can use a horse?
- What do you think is the best way to approach a horse?

Sample Meeting Agenda – 2 hrs. 5 minutes

| | | |
|-------------------------------------|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Approaching a Horse and Haltering a Horse | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Preparing Your Horse's Halter (instructions found at the end of this meeting) | 20 min |
| Topic Information Discussion | Review Leading a Horse and Tying a Horse. | 30 min |
| Activities Related to Topic | Activity #2 - Quick Release Knots (instructions found at the end of this meeting). | 30 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 5: FUN WITH HORSES**Topic Information****Approaching a Horse**

When you approach a horse, it will respond to your position, gestures and tone of voice. Therefore you should always approach a horse calmly, confidently, carefully and avoid sudden movements. Speak to the horse before approaching. Advance in an arc towards its left shoulder (never from behind as it may not see you and you may get kicked). Once you are near it, stroke its shoulder to reassure it. At first stay on the left side. A nervous handler causes a nervous unsafe horse.

Haltering a Horse

Halters should not be left on horses. Halters may catch on fences, branches or brush and the horse, unable to free itself, may panic and get injured. If halters are left on a loose horse they must be checked daily.

Before you approach your horse to catch it, prepare the halter by:

- unbuckling the crownpiece.
- folding the lead rope in half and holding it over your left arm, making sure the end is not dragging where it can trip you.
- slipping your left hand through the bottom of the noseband and resting the halter on your wrist.

Holding the halter in this manner will free your right hand for holding out to touch your horse.

1. Approach your horse towards the left (near) shoulder and talk to it.
2. Stroke your horse and approach the head. Position yourself just behind its head. You may need to hold your horse steady with your right hand under its neck.
3. Place your left hand under your horse's neck and your right hand over its neck. Reach with your right hand to grasp the lead rope you are holding over your left arm and pull the lead rope over your horse's neck. Move the lead rope to just behind the ears of your horse.
4. To hold the lead rope in place, wrap its loose end around the part of the lead rope attached to the halter.
5. Now hold the crownpiece of the halter in your left hand and reach under your horse's neck and place your right hand over its neck.
6. Grab the crownpiece with your right hand and move the left hand to the left cheek buckle, holding your horse steady with your right arm.
7. Slowly snag your horse's nose by using your left hand to manoeuvre the halter.
8. Pull the halter up in place and buckle the crownpiece and secure.

SECTION 5: FUN WITH HORSES

9. Slide the lead rope off your horse's neck.
10. Hold the lead rope with your right hand, about 12 cm (six inches) from the halter and fold any extra length into your left hand.
11. Check to see that the halter fits correctly. Refer to page 143/144 in Equipment.

Leading a Horse

Horses walking on top of the handler during leading, is one of the biggest and most common problems.

The horse should stay back.

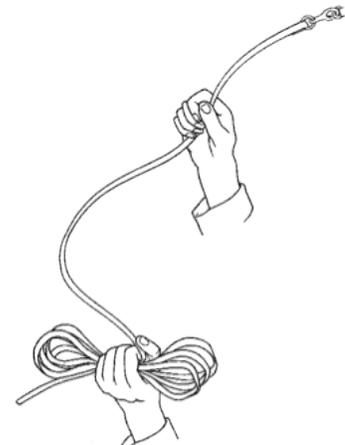
A horse should learn from the very beginning that the handler has an area of personal space in which he is never allowed to enter unless asked.

It is safest to lead a horse from the near (left) side. Always lead with a halter and shank because they provide better control. It is unsafe to lead a horse by just the halter or with just a rope around the neck.

1. Hold the lead rope with your right hand, approximately 12 cm (6 inches) from the halter. Do not hold the chain if there is one on the shank.
2. The remaining length of the lead is folded and held neatly and safely in the left hand. Make sure there is not a sagging loop in the leadshank that hangs below your knees. Never coil excess leadshank around your hands.
3. Lead the horse from its left side, positioning yourself between its head and shoulders. Move with the horse, do not drag it. The ears and eyes of your horse tell you what it may be thinking, so be aware of that.
4. To move a horse forward, you may give a verbal command. Give the horse a moment to understand the command, then walk forward yourself. Don't look at the horse as you move it forward, as this will often cause it to resist moving.
5. If the horse won't move, then try pushing it one step sideways before moving forward.
6. Don't lead the horse from behind the shoulder as you will have less control and could possibly be kicked.

Horse Tip

If catching a horse in a stall, close the gate behind you, but do not latch it. Leaving it unlatched means that, if something happens that you must leave the stall in a hurry, you can do so quickly and safely.



SECTION 5: FUN WITH HORSES

7. To halt your horse, give a verbal command "*whoa*" and apply pressure on the halter back towards the horse's chest. If it fails to stop, give a stronger hand aid.

8. To back a horse, face the direction that you want the horse to move. Never stand directly in front of it as you could get injured. Don't change hands on the shank. Give a verbal command to "*back*" and apply slight pressure on the halter, on a give and take basis, towards the horse's chest. Walk with the horse as it backs.



Leading your horse this way through a doorway or gate could get you in trouble.

9. To turn a horse to the right, push the horse's head to the right so that the horse is forced to turn on its haunches. For safety reasons, horses should always be turned to the right (away from you). This will prevent you from being stepped on or bumped by your horse if it is frightened while turning.

10. In some circumstances it may be necessary to turn your horse to the left. To do this safely, take the lead shank in your left hand. Place your right hand on the ribs of your horse and, as you turn the horse's head towards you, apply pressure on the ribs to push his ribs and hind quarters away and keep your horse from stepping on you. Correctly turning to the left is an acceptable way to regain control of a horse that is excited or upset.

This handler will get nowhere leading his horse like this!



When leading a horse through a doorway, make sure the door is open and will not close as you move through it. Slow down to a walk and move forward from your horse, but still to the side of its line of travel. Proceed calmly through the door then resume your position at the horse's shoulder. Make sure the door is wide enough to pass through with ease.



Standing in the proper position and holding onto the lead shank correctly will help prevent this from happening.

If you have a mature horse that does not want to lead, be sure that you walk beside it. Walking in front of it and looking at the horse while leading it may make the horse more resistant to moving forward and can be dangerous. Be mindful of your body language around the horse. Have someone assist you by standing to the side of the horse and encouraging it to walk forward with a long whip, if necessary.

If your horse rears while it is being led, don't stand directly in front of it. Hold the rope firmly and release the tension as soon as the horse's feet hit the ground. Release your hand nearest to the halter so you won't be lifted off the ground. Stand to the side, look ahead and walk forward. Do not stand near the horse's feet. The shank should be quite long

SECTION 5: FUN WITH HORSES

(longer than normal) in case the horse rears up and drags the shank out of the handler's hands. A knot in the end of the lead shank will help prevent the shank from slipping through your hands.

How do I prevent my horse from running out of its stall while being led?

This is a rather annoying and dangerous habit which should be stopped as early as possible. Consider this problem from the perspective of the horse; why is the horse doing this? The horse may have been injured in the past as a result of going through a doorway. Be sure to keep the doorway as wide as possible, making sure that the door does not slide closed while you are leading the horse through it. Most horses are widest at the hips and if the doorway is tight at the shoulder, most horses will panic. To help train the horse that the doorway is not a threat, stand it in the doorway while you feed it some grain and groom it.

Cueing Your Horse to Move Sideways (Dismounted)

We should never allow ourselves to be in a small space between our horse and a solid object. To prevent this, our horse must be responsive to hand aids to move his hip, his shoulder or his whole body. We should be able to move the horse that is tied and the horse we are holding.

1. Get the horse's attention. At the very least, the ear and eye on the side you are on must be focused on you.
2. Assess the horse's reaction to your presence (size of eyes, height of head, busyness of ears, muscle tension).
3. When safe for you to do so, a verbal command and light touch should move the desired part. Remember to speak "horse". If the horse does not respond by moving, DO NOT PUSH - "bite" him like another horse would with little jabs with your fingers.

Cueing Your Horse to Turn on Haunches - Left & Right (Dismounted)

Sometimes you will be required to have your horse move his front end around his hindquarters, whether it is to turn him around in a tight spot, to perform a manoeuvre in a Showmanship class, or when performing a Turn on the Haunches when mounted. This is a skill that indicates good communication between horse and handler. It shows that the horse respects the handler's request to move out of his space. To teach the horse this skill, the handler must (insert "once again,") speak "horse". In a herd, if one horse wanted another to move his front end, that first horse would threaten to bite or kick the front end and then follow through with action if the second horse did not move. Remember, we are moving the shoulder, so assume a somewhat assertive stance, stare at the shoulder from a position $\frac{1}{2}$ way between the eye and the shoulder, lean toward the shoulder, click, and tap the horse with braced fingers (bite) on both the neck and shoulder. Assess the horse's reaction and either tap quicker or slower until the horse moves 1 – 2 steps. Stop when he moves. The horse understands this. He moved out of your space and you quit "biting". If the horse moves ahead, change your position to be

SECTION 5: FUN WITH HORSES

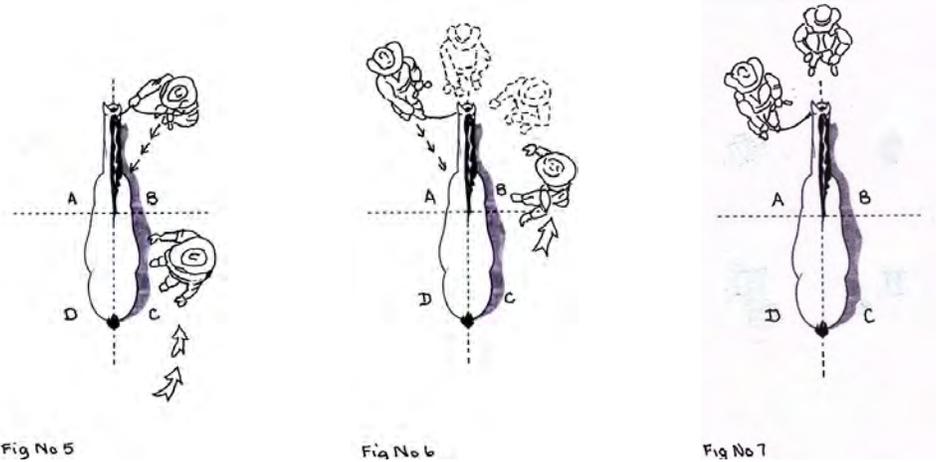
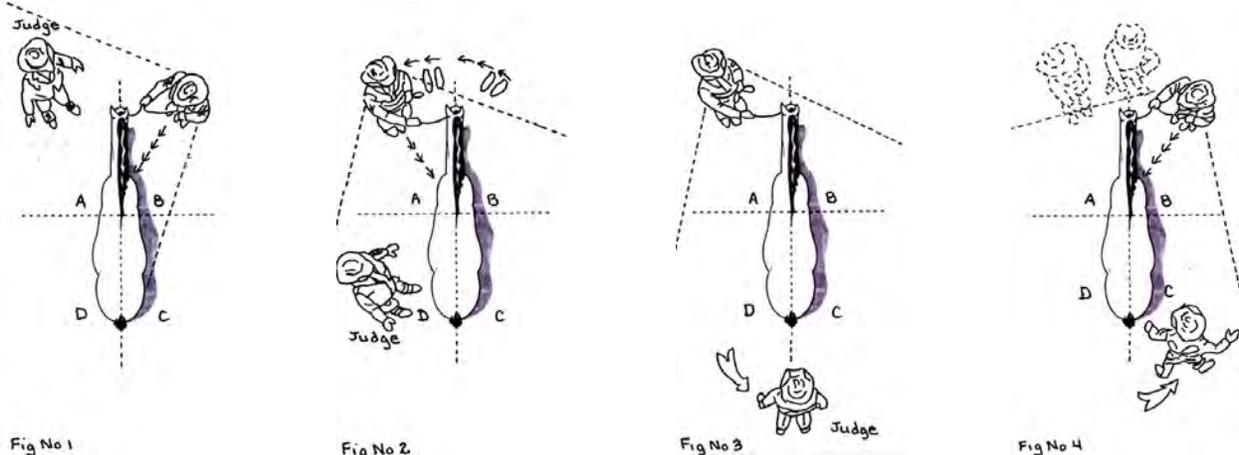
closer to the head so you can cut him off if he goes forward. A fence in front of his head will also help with this. Gradually increase the number of steps asked for, BUT ALWAYS quit the horse before the horse quits you."

Posing: 1/4 System

Learning how to pose your horse, using the following "1/4 System" will teach you the safest place to stand if anyone is walking around your horse to inspect or evaluate it. This system is also used for showmanship.

In order to understand the position and movement around the horse, imagine that the horse has been divided into four equal parts using an imaginary line that runs from the horse's nose to its tail and another line that bisects the horse across its wither right behind its front legs.

Next, remember that the handler is always in the quarter that is adjacent to the observer, which would mean that the handler is always in 'A' or 'B' because the handler can never leave the horse's head. This method is used for safety as in all situations demonstrated, the handler can keep the horse's hindquarters from swinging towards the observer should the horse become unsettled.

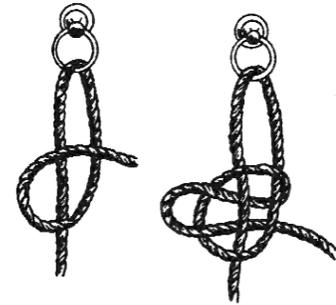


SECTION 5: FUN WITH HORSES

Tying a Horse

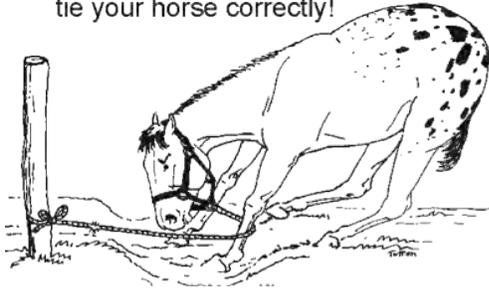
You should tie a horse only with a halter; never with a bridle or bit.

Make sure that the lead shank is correctly fastened to the centre bottom ring of the halter noseband. Find a strong and secure object (post) to tie your horse to. Never tie your horse to a wire, loose pole, plank, gate, end gate or anything that moves. Tie at about the height of the withers of the horse or higher. Wrap the lead rope around the post, then tie it with a quick release knot. This is a safe knot because it can be easily and quickly untied if necessary. Never tie a horse too short (it may panic and pull) nor too long (it could turn around or catch



Quick Release Knot

This can happen if you don't tie your horse correctly!

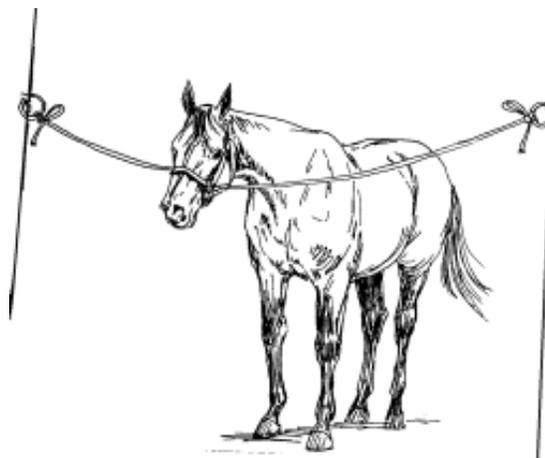


its leg in the rope and injure itself). A length of about two feet between the post and the halter is considered safe under most circumstances.

Cross-tying

Cross ties are another common way to secure a horse. Cross ties are usually two ropes tied high up on each side of the walkway in the stable.

Each rope usually has a snap or clip to attach to the halter. The snaps attach to the side rings on the nose band of the halter. Use quick release ties attached to a breakable string or twine.



SECTION 5: FUN WITH HORSES

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Under adult supervision, practice approaching horses that you don't know.

AND/OR

2. Under adult supervision, practice putting a halter on your horse.

AND/OR

3. Go to a local fair to watch a Horse Show, watch a video or visit a local horse stable to see how the people in the show ring lead their horse around the ring. If possible take pictures and put them in your Record Book.

DIGGING DEEPER

For Senior Members

Personal Space

When leading a horse, the horse needs to learn from the very beginning that the handler has an area of personal space in which the horse is never allowed to enter unless asked. But, this is easier said than done.

Interview an experienced horse trainer and find out what techniques they use to gain the respect of the horse to stop the horse from entering their personal space. Do they have any tips for a horse that refuses to learn this concept? Have they as a trainer been hurt while training horses?

Design an activity, step by step, that teaches this concept. Design the activity so that members can teach it to their horse. Be prepared to demonstrate the steps at the next meeting.

SECTION 5: FUN WITH HORSES

ACTIVITIES**Activity #1 - Preparing Your Horse's Halter****Items Needed:**

- Halter
- Quiet Horse (optional)

Instructions:

1. Have members work in small groups.
2. Have members go through the following steps to prepare the halter for putting on a horse:
 - Unbuckle the crownpiece
 - Fold the lead rope in half and hold it over your left arm (make sure the end is not dragging where it can trip you)
 - Slip your left hand through the bottom of the noseband and rest the halter on your wrist. Hold the halter in this manner so that your right hand is free for holding out to touch your horse.
3. If a horse is available, put the halter on the horse.
4. Have each member in the group take a turn.

Activity #2 - Quick Release Knots**Items Needed:**

- Rope (one piece for every member)

Instructions:

1. Demonstrate to the entire group how to make a quick release knot.
2. Give each member a piece of rope.
3. Have members work in pairs to tie their own quick release knots.

MEETING 24: WORKING WITH HORSES - GETTING READY TO RIDE

Topic:

- The basics of working with a horse
 - Saddling
 - Bridling
 - Using restraints

Objectives:

- To understand how to properly work with horse equipment
- To learn how to work with a horse safely

Roll Calls

- Have you ever put a saddle on a horse? If so, were you successful and would you do anything differently next time?

Sample Meeting Agenda – 2 hrs. 15 minutes

| | | |
|-------------------------------------|--|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Saddling a Horse. | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Saddle Up! (instructions found at the end of this meeting) | 30 min |
| Topic Information Discussion | Review Bridling, Lunging and Restraints. | 30 min |
| Activities Related to Topic | Activity #2 - Don't Spill the Water (Lunging Practice (instructions found at the end of this meeting). | 30 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 5: FUN WITH HORSES

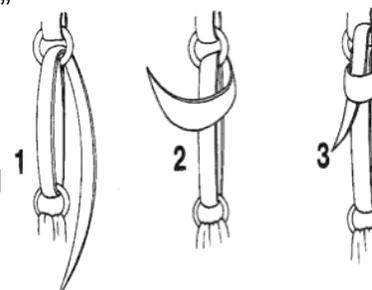
Topic Information

Saddling

Tie your horse securely with a halter. Never tie a horse with the bridle reins. Groom your horse well to remove all straw or other bedding from its hair. Always be sure to brush the back, withers and area where the girth will be fastened. Shake out the saddle blanket or pad before you place it on your horse to be sure that there are no straw or twigs on it.

Western Saddling

1. Set the blanket on your horse, ahead of where you want it and then pull it back into place, smoothing out the hair underneath. If using two blankets, place the top blanket back about 2.5 centimetres (one inch) from the front of the bottom blanket. This will help to hold the blankets in place.
2. On the saddle, lift the right stirrup and cinch out of the way so that you don't have to lift the saddle as high and they won't get caught under the saddle. Hook the right stirrup on the horn of the saddle.
3. Lift the saddle by grasping the gullet and centre of the back of the saddle. Lift it high and set the saddle gently on your horse's back. Settle it into place by rocking it back and forth. Lift the blanket up under the gullet of the saddle to improve the ventilation under the blanket and check to see that the saddle blanket is even on both sides and has at least four to eight centimetres (two to four inches) in front of the saddle.
4. Go to the right side of your horse and set down the stirrup and cinch, ensuring that the cinch is not twisted. Be careful that the cinch doesn't fall down and bang your horse's leg.
5. Go back to the left side and lift the stirrup out of your way. Standing near the left shoulder of your horse, reach under the girth of your horse to pull the cinch towards you. Make two wraps with the latigo and tie (as illustrated) or buckle the cinch. If using the tongue in the cinch ring, be sure to lock it by pulling down on the top wrap of the latigo. Tighten it so you can fit three fingers (inserted flat) between the cinch and your horse's belly. If you are tightening a cinch on a strange horse watch for signs of uneasiness. A "cinchy" horse can be very dangerous (they will often throw themselves over backwards or sink to the ground in a panic attack).



Visa versa for right handed saddler

6. If you have a back cinch, always do it up last, fastened so two to three fingers will fit (inserted sideways) between the cinch and your horse's belly. Check to ensure that a hobble strap is attached tying the back cinch to the front cinch. This keeps the back cinch from flapping back into the flank areas of your horse.
7. If you have a breast collar, attach it and tighten it so that a fist can fit between the breast collar and the point of shoulder.

SECTION 5: FUN WITH HORSES

8. Walk your horse and recheck the tightness of the cinch before mounting.

English Saddling

1. Make sure that the stirrup irons are pushed up and that the girth is undone on both sides of the saddle and is lying on the seat of the saddle, dirty side up, with buckles pushed through the stirrups.
2. Hold the saddle on your left arm with the pommel facing towards your elbow.
3. Stand at your horse's left shoulder and with your right hand, lay the saddle pad on the horse's withers, making sure that it is flat and that the straps are on top.
4. Slide the saddle pad into place by pulling it slightly towards the rear in the direction of the horse's hair. The saddle pad should be the right size for the saddle being used.
5. Grasp the saddle with your right hand on the cantle and your left hand on the pommel and place it on the saddle pad which is sitting on your horse.
6. Attach the straps of the saddle pad to the girth straps on both sides of the saddle and check that the knee rolls and saddle flaps on both sides are flat.
7. Slide the saddle and adjust the pad so that there is no friction nor pressure on the withers, lifting the pad into the gullet of the saddle for ventilation.
8. Walk around the horse to its far side and fasten the end of the girth to the girth straps on the right side of the saddle. There are normally three billet straps on an English saddle. It is common to fasten the buckles to the two outside straps, leaving the center one undone. If a horse is built in such a way as that the saddles slides forward, it is recommended to fasten the girth buckles to the front two girth straps on the saddle.
9. Return to the near side and stand at your horse's left shoulder. Face the rear of your horse and bend over to grasp the loose end of the girth with your left hand.
10. Pull the girth through the loop of your martingale or breastplate (if you are using one). Any such loops should be positioned at the center of the girth.
11. Bring the girth up, well back of your horse's elbow, buckle it in the same manner as the off side, tightening it slightly. You will need to tighten it more before mounting.

Smoothing Out The Wrinkles

After saddling, you should pull the horse's forelegs forward from the knee to smooth out and bring forward the skin underneath the cinch. This will help to prevent pinching and galling. Bend the leg forward at the knee by clasping your hands behind the knee and lifting the leg one at a time. You can also achieve the same result by leading your horse in a tight circle in both directions.

SECTION 5: FUN WITH HORSES

Unsaddling

The steps for taking any saddle off a horse are the same as for saddling, only done in reverse order. Some important points to remember:

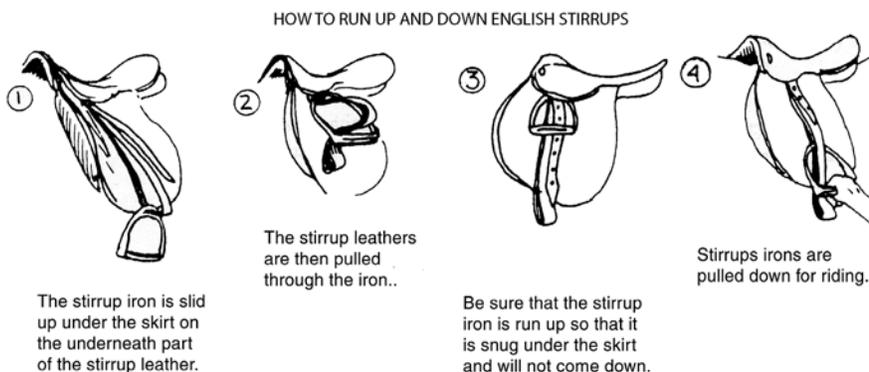
For Western Saddles:

- First undo any auxiliary equipment that attaches to the saddle (martingale, breast collar).
- If you have a back cinch, be sure to undo it first, before the front cinch.
- Once you have undone any cinches, tie them up on the far side so they will not drag in the dirt.
- Do not pull the saddle over the wither without lifting the saddle as you remove it as this would cause discomfort for your horse.

For English Saddles:

- Push up both stirrup irons as high as possible on the stirrup leathers and pull the stirrup leathers through the stirrup irons.
- Unbuckle the girth on both sides, lay it over the saddle, dirty side up, and pass the ends through the irons on each side.

For both Western and English saddles, remove the saddle and saddle blanket (or pad) together. Store your saddle in a natural position with the blanket (or pad) on top, lying with its dirty side up so that it has a chance to dry for its next use. Wash the pad often.

**Bridling**

There are two accepted methods of bridling a horse. Some horses may respond better to one method than the other.

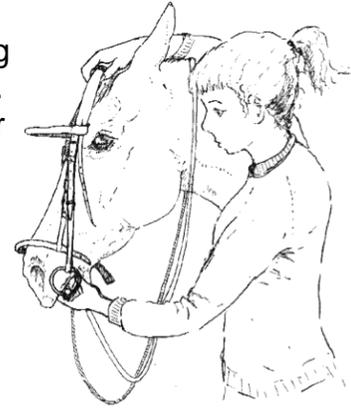
Method One

1. Untie your horse.
2. Undo the halter buckle and slip the halter off your horse's nose and rebuckle it around your horse's neck.
3. Hold your bridle with your left hand, laying the reins over your left arm or shoulder so they won't get in the way or place the reins over the horse's head around the

SECTION 5: FUN WITH HORSES

neck to keep them from falling on the ground.

4. Place your right hand over the poll of your horse between his ears, and grasp the crownpiece of the bridle.
5. With your left hand, spread the bit between your thumb and second finger. While pulling the bridle up with your right hand, gently place the bit at the horse's mouth. Open the mouth by inserting your thumb in the interdental space (where the lips end). Pull up on the bridle until the bit rests on the bars of your horse's mouth.
6. Change hands and hold the crownpiece up and in front of your horse's ears with your left hand. Gently pull the headstall over the ears, one ear at a time, guiding the ears forward under the crownpiece with your right hand. Folding the ears forward, when placing equipment over them, is more gentle on their ears.
7. Adjust the browband so that it is straight and buckle up the throatlatch (if you have either of these). Between the throatlatch and your horse's throat, you should be able to fit three to four fingers (or a fist sideways).
8. Fasten the cavesson or noseband on an English bridle so that one or two fingers can be inserted between the cavesson and the nose, with cavesson inside the bridle cheek pieces.
9. If using a curb chain or strap, adjust it so that it is not twisted and so that two fingers can be inserted between the strap and the horse's jaw.
10. Undo the halter and place it in a safe place. This is key to avoid stepping and being tripped by the halter.



Horse Tip

If your horse will not open its mouth, don't ram the bit against the incisor teeth. Rather, run your left thumb up and down the bars until it opens its mouth. Pressing on the side of the bar with your thumb may also help.

Method Two

This method is often used by shorter riders with tall horses OR for harder to bridle horses (to allow more head control)

1. Same as method one, except place your right arm under your horse's jaw, around its nose and grasp the cheekpieces of the bridle (Step 4). Remember to pull up with your right hand.



SECTION 5: FUN WITH HORSES

Unbridling

1. Buckle a halter around your horse's neck, just behind its ears, so that you have control if it tries to move away.
2. Place the leadshank and reins over your left arm, being careful not to have them dragging on the ground.
3. Unbuckle the throatlatch and noseband (if you have one).
4. Hold the crownpiece of the bridle in your hand. Remove it, one ear at a time, by gently pulling the crownpiece; first over one ear, then over the other.
5. Once the ears are released from the crownpiece, continue holding tension on the bridle with your hand to hold the bit in your horse's mouth.
6. Slowly release the tension on the bridle and allow the bit to slip gently out of your horse's mouth. Be careful that the bit does not bang any teeth.
7. Once the bit is out of the mouth, hold the bridle in your left hand and continue to halter your horse.

Horse Tip

Improper bridling and unbridling can cause head shyness.

When removed too quickly the bit can catch on the horse's teeth. Consequently, he throws his head up and pulls away, temporarily avoiding the unpleasantness.

Storing Your Bridle

Western: Hang the bridle exactly as it would sit on your horse's head if the horse were facing you with the reins crossed over his neck. The crown piece and throatlatch would be touching the hook where they would touch the horse's poll. The reins are then either crossed over and hung on the hook over the crown piece or placed together and draped over the crown piece from left to right or right to left.

English: Hang the bridle as you would the western bridle, except the cavesson and throatlatch are done up and the reins go behind the bit, inside the cavesson and are buckled over the throatlatch.

Horse Tip

When learning to lunge, always get the assistance of an experienced horseperson.

Lunging

Lunging is a common way to both train a green horse or to exercise a schooled horse. When training a green horse, lunging allows the handler to introduce many new things to the horse without having to be on its back. You would start out with little or no equipment on except for the halter or lunging cavesson and splint boots or leg wraps. Then you

SECTION 5: FUN WITH HORSES

progress to where the horse would be lunged with the saddle, bridle, leg protectors and possibly side reins. The goal of lunging should be to move the horse forward into the bridle or halter with upward and downward transitions in all three gaits, with the horse responding in a relaxed manner to the voice and body aids. Lunging improves a horse's balance in both directions and teaches contact with the bit or halter.

Lunging can also be a safe way to exercise an injured horse that needs to move. It is also a safe way to remove excess energy before riding.

Lunge in an area with soft, even footing where your horse will not be at risk for injury. Avoid heavy, deep or uneven footing. Do not lunge on too small a circle. A small circle makes it hard for your horse to stay balanced, making him much more likely to stress his lower legs.

Never lunge on a circle that is small enough to put you in kicking range.

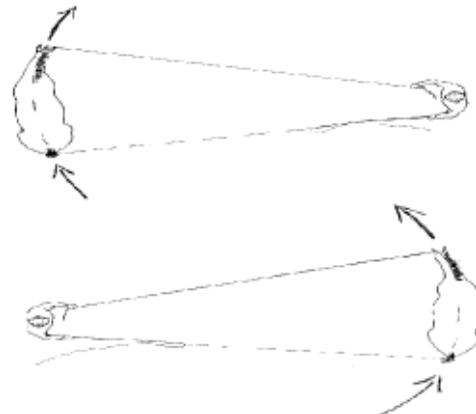
Equipment

- A well fitted halter or lunging cavesson.
- Lunge line or rope (at least 15 - 20 feet in length)
- Lunge whip (total length including lash should be at least 12 feet long).
- Gloves
- Splint boots or wraps

Teaching a Horse to Lunge

There are many ways to teach your horse to lunge. The following is one method.

When you are teaching your horse to lunge make sure the footing is suitable. Use a corral or small area where the horse cannot run away. If this is not possible, use bales or heavy poles to mark your circle. The first thing to teach your horse is to go around you. To lunge a horse to the left (counter-clockwise), hold the shank in your left hand. Hold it in your right hand when the horse is going to the right (clockwise). Hold the whip in the other hand. Excess coils may be held in the same hand as the whip to avoid getting them tangled in your feet.

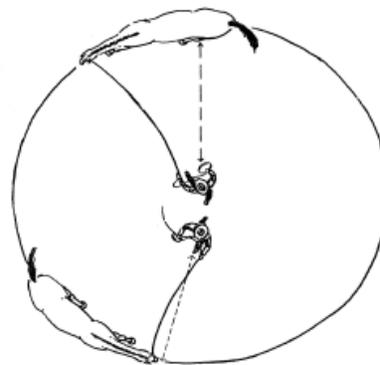


To teach your horse to move around you, hold the lunge in one hand and the whip in the other. Move back from the shoulder of the horse to its flank. Tap the horse on the hindquarters with the butt end of the whip. Tell the horse to walk while making sure that you stay opposite the flank of the horse or it may stop and face you. Keep doing this until the horse moves around you on at least 4 to 5 metres (15 feet) of line, without stopping.

After the horse has gone around several times let it stop, saying "*whoa*". Praise the horse for obeying and change directions. When reversing, either walk out to the horse and reverse him or do it on the end of the line. Do not pull him in to the center. Do this every day until the horse easily walks around you.

SECTION 5: FUN WITH HORSES

To teach the horse to trot, tap the horse with the end of the whip and say “*trot*”. For canter or lope, do the same while saying “*canter*” or “*lope*”. Because both lope and whoa are one syllable “o” sounding words, western riders often use the aid “lope on” so as not to confuse the horse. Another method is to “cluck” for a trot and “kiss” for a lope.



Horses understand the tone of your voice, not the words, so changing the tone of your voice when asking for a gait helps the horse understand. Speak loudly, clearly and firmly and use the whip and lunge line to reinforce the change of gait you want.

Lunging to Gain Respect

If you have a nervous horse that wants to run, do more changes of direction. This will slow the horse down and get him to use the thinking side of the brain. You don't want to allow a horse to race around and allow him to build up speed as he circles you.

If you have a lazy horse, keep the horse going around the circle longer before you let him stop (yield). Do less yielding and more going around in a circle. You don't want to have the horse slow down by making him change directions. The faster you make a lazy horse's feet go, the better attitude he will eventually have. The slower you let him go, the more disrespectful he will become.

Restraints

Horses do not quietly accept everything we ask. It is sometimes necessary to physically control a horse before any work can be done. This may be required for veterinary work, training and farrier work. Any method of controlling the physical movement of the horse is called restraining. It ranges from tying the horse to physically laying the horse on the ground. By controlling the physical movement of the horse, you reduce the chance of injury to the horse and the people around it.

The form of restraint that is used will depend on the situation the level of training, maturity and the temperament of the horse. Often a nervous horse will stand more quietly in a strange situation than a normally quiet horse.

Always begin with minimal restraint and, if the horse does not respond, progress from there.

Twitches

Nose twitches are used to distract the horse while other work is being done. It can be used to reduce the risk of injury to the horse or handler, to administer medicine and for safety and control. Not all horses respond to a twitch, therefore twitches should be used by a skilled horse person when all other methods are not successful.

Hobbles

Hobbles are another method of restricting the horse's movement. Make sure you get the assistance of an experienced horse person, to help you teach your horse to hobble if he is not “*hobble-broke*”.

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Under adult supervision, practice lunging with a horse.

AND/OR

2. Lunging is an important aspect of gaining the respect of a horse. Talk to an experienced horse person to find out what techniques they use when lunging a horse to gain the results they want.

SECTION 5: FUN WITH HORSES

DIGGING DEEPER**For Senior Members****Humanely Restraining Horses**

Some changes have taken place in recent years as to how we work humanely with all animals, including horses. One of those areas that has been reviewed is the use of restraints.

Review the Code of Practice for the Care and Handling of Equines found at: <http://www.nfacc.ca/codes-of-practice> for updated information on best practices for restraining horses.

If possible, travel with a veterinarian or visit a veterinary clinic that specializes in horses to discuss restraints. If you attend a case in which restraints needed to be used, ask if you can take pictures.

Record your findings (and pictures) in your Record Book. Be prepared to discuss your findings at the next meeting.

ACTIVITIES

Activity #1 - Saddle Up!

Items Needed:

- Saddle(s)
- A quiet horse(s) or a saddle stand(s)

Instructions:

1. Depending on the number of saddles and horses/saddle stands available, divide the group accordingly.
2. Have members work through the steps outlined in this meeting for putting a saddle on a horse.
3. Have members follow the correct order for taking the saddle back off of the horse.
4. Have members practice this a few times.

Activity #2 - Don't Spill the Water! (Lunging Practice)

Items Needed:

- Lunge Line
- Plastic drinking glass
- Water

Instructions:

1. Divide the members into pairs.
2. Give each group a lunge line and a plastic drinking glass filled with water. (If there aren't enough supplies, have each pair do this activity one at a time).
3. One member holds the end of the lunge line while the other member in the pair is on the end of the lunge line like a horse would be. The member on the end of the lunge line is to hold a glass of water and run like a horse would without spilling their water.

MEETING 25: MOVEMENT

Topic:

- The basics of movement
 - Gaits, leads, stride, pressure and centre of gravity
- Defects in movement

Objectives:

- To understand the different movements of a horse

Roll Calls

- What is your horse's favourite gait? Walk? Trot? Canter?
- Name one movement defect a horse can have.

Sample Meeting Agenda – 2 hrs. 15 minutes

| | | |
|-------------------------------------|--|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Gaits of Horses. | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Horse Gaits (instructions found at the end of this meeting) | 30 min |
| Topic Information Discussion | Review Stride, Leads, Centre of Gravity and Defects in Movement | 30 min |
| <i>Activities Related to Topic</i> | <i>Choose from Activities #2, #3 #4 and/or #5 (Horse Gaits Obstacle Course,) (instructions found at the end of this meeting).</i> | 30 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

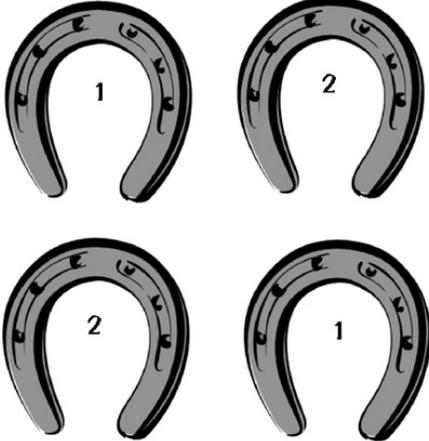
NOTE: Activities can be interspersed with Topic Information.

SECTION 5: FUN WITH HORSES

Topic Information

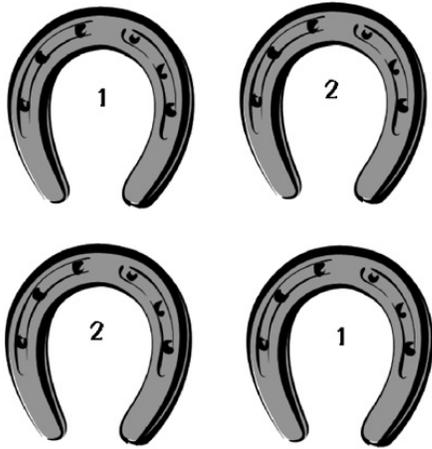
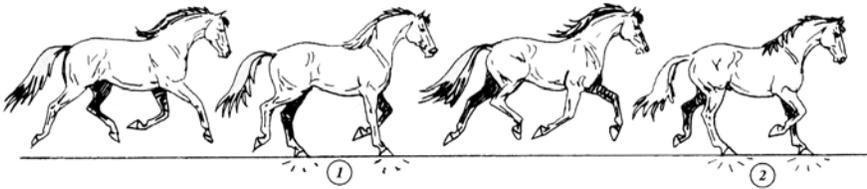
Gaits

The gait of a horse refers to the different sequences in which the horse's feet touch the ground. The common gaits for horses are the walk, trot, canter and gallop. Some breeds pace and rack. Some of the terms used to describe a horse's gait are determined by the style of riding that is being done. For example, the western horse jogs and lopes while the english trots and canters. There are some breeds of horses that naturally do other gaits than walk, trot, lope or gallop. For example: Some Standardbreds pace – a two beat gait where the horse moves the legs on the same side together.



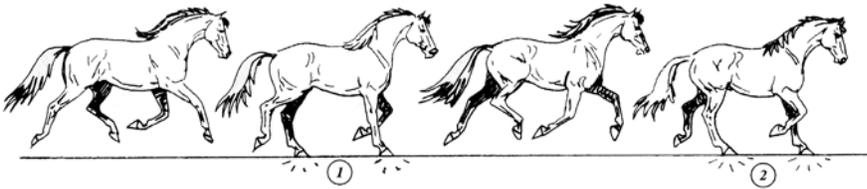
Walk

The walk has a four beat rhythm. Each foot is picked up and set down in sequence. The horse's back is level at the walk.



Trot/Jog

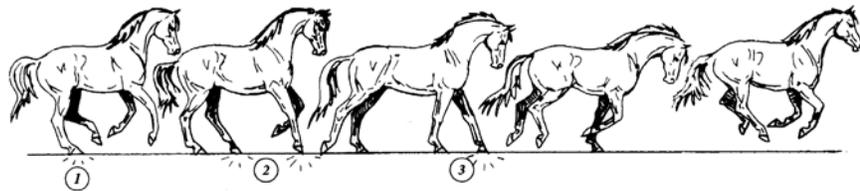
The trot/jog has a two beat rhythm. Diagonal (opposite) front and hind feet move forward at the same time. This is called a diagonal movement. The horse's back has a regular up and down movement at a trot/jog.



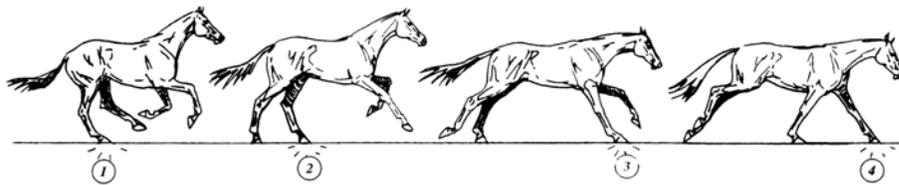
SECTION 5: FUN WITH HORSES

Canter/Lope

The canter/lope is a three beat gait with a moment of suspension (hesitation). The head and neck are carried above the natural position of the neck to lift the forequarters and help front leg action.

**Gallop**

The gallop is the horse's fastest gait and is a four beat gait, with a moment of suspension. The body of a horse is more stretched out when it gallops than with any other gait. For example a horse running a race is galloping.

**Back up**

Two beat rhythm on diagonal pairs

SECTION 5: FUN WITH HORSES

Stride

Stride is the term used to measure the distance covered between two successive steps of the same hoof in any gait. When a horse lengthens its stride it reaches further with each leg.

Leads

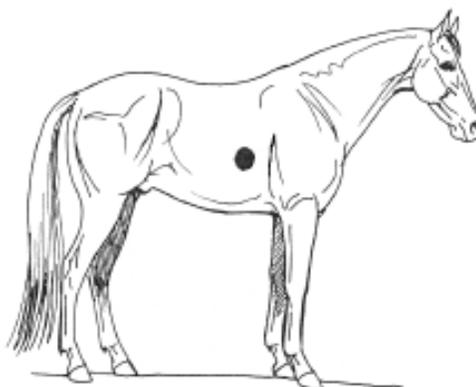
When a horse lopes/canters it reaches further in front with one front leg which is called the lead. To be properly balanced on turns and circles a horse naturally and/or with training should pick up the inside lead. Hind legs should take the same leading actions as the front. When the front and hind legs are not on the same lead, it is called cross-firing.

Leading is important for smooth turns and balance.

Centre of Gravity

Every living thing has a center of gravity and as they move, the center of gravity moves. The horse's center of gravity is located behind the wither at the lowest part of the back. A horse (at a standstill) carries approximately 60% of his weight on the forelegs and approximately 40% on the hind legs. As a horse speeds up, its center of gravity moves forward and as it slows down or collects its center of gravity shifts back. The horse's neck and head also affect the center of gravity. As the head and neck are raised, the center of gravity moves back and when the horse moves with its head and neck lowered, the center of gravity moves forward.

Location of horse's centre of gravity (at a standstill)

**Defects in Movement**

Over-reaching

Over-reaching - is when the toe of the hind leg "grabs" the heels of the forelegs. This can cause serious injury, usually to the heels or the tendons. This can happen in high energy sports when the hind leg extends too much or the front leg doesn't extend quickly enough.

SECTION 5: FUN WITH HORSES

Forging - the hind foot striking the sole of the front foot as a horse trots is called forging. Horses wearing shoes will make a distinctive sound if they have this fault when they travel. Forging happens when a horse advances its hind foot too quickly or lifts its front leg too slowly. Young inexperienced horses will sometimes do this, or it can be a sign of laziness (especially in the front end), lack of condition or fatigue.



Forging

Scalping - the toe of the forefoot strikes the coronet band of the hind foot.



Interfering

Interfering - associated with horse toeing out. Horse usually base narrow and/or narrow chested. It happens when one foreleg/hindleg strikes the opposite foreleg/hindleg while in motion. This is associated with horses that toe out and that are usually base narrow and or narrow chested.

Plaiting - is when a horse places its front feet directly or almost directly in front of each other (like walking a tight rope). A horse that plaits often has conformation faults (base narrow) and may be subject to stumbling.



Plaiting



Winging

Winging - is when the foot wings in to the inside and then lands to the outside of the straight track. A horse may strike itself when it wings and it places extra stress on the inside of the horse's leg as it lands outside rather than straight.

place extra stress on the outside of the leg. Horses that toe in (conformation fault) often paddle when they travel.

Paddling - the foot paddling out to the outside and then landing to the inside of the straight track is called paddling. It rarely causes interference but it does

Brushing - happens when one front or hind foot hits the opposite foot at the fetlock. Ankle boots are a must to protect the fetlock of a horse that brushes.



Paddling

SECTION 5: FUN WITH HORSES

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Try sitting on a horse and without going anywhere, try to affect the common centre of balance. What reactions does the horse give if you shift around so that your weight isn't distributed properly? Don't do this while moving. Record your findings in your Record Book.

AND/OR

2. Visit a local horse show. Watch when the horses move around the show ring and identify which type of gait they are exhibiting. If possible, video one of the horses as they travel around the ring. Show the video at your next meeting.

DIGGING DEEPER

For Senior Members

Defects in Horse Movement

This meeting discusses what defects can be found in horse movement but no solutions are given. Are there solutions for these defects? If so, what are they?

Choose one of the defects and investigate if there is a correction that can be taught to the horse to rid the horse of the defect. Consult with a veterinarian, an experienced horse person or by researching the defect. If there is a correction, how long is it estimated that the training might take and what might the cost be for this training.

Record your findings in your Record Book.

SECTION 5: FUN WITH HORSES

ACTIVITIES**Activity #1 - Horse Gaits*****Items Needed:***

- No items needed

Instructions:

1. Have members work in pairs.
2. One member will put their hands on the shoulders of the person in front of them.
3. Together, the pair must mimic the horses legs in a walk, trot, lope and gallop.
4. If there is a pair that are quite good at mimicking a horse, have that pair demonstrate horse gaits for the rest of the group.

Activity #2 - Horse Gaits Obstacle Race

After practicing various horse gaits in the previous activity, have members compete in a race using these gaits.

Items Needed:

- Various items to set out as obstacles (2 of each item)

Instructions:

1. Set out items to make two identical obstacle courses.
2. Have members work in pairs.
3. Divide pairs into two teams.
4. Have two pairs line up at the starting line.
5. Announce which gait they have to use to complete the obstacle course.
6. When the pair completes the obstacle course, the next pair on their team will start.
7. The game is finished when all pairs on a team have completed the obstacle course.
8. Repeat the game using a different gait.

Activity #3 - Horse Movement Word Search

Items Needed:

- Horse Movement Word Search (found at the end of this meeting)
- Writing Utensil (pens/pencils)

Instructions:

1. Give each member a Horse Movement Word Search.
2. Have the members work independently to find the words.
3. Review the words in the puzzle and their description.

SECTION 5: FUN WITH HORSES

Horse Movement

g k s i g g a g z g e z d y u x l f g f
 t r a i d n p x q n d l f r r p h n f o
 h g a p y s i n t i i c k c f o i s l r
 o r j v o z w p e t r x n c g l w o x g
 y x g b i l z m l i t u d b d i l j a i
 l y r l x t l e m a s q l d n g m e t n
 o a f c a i y a h l c i a g d t w u n g
 p q b s l y h y g p i s i u n f u a x v
 e l u b i l v e n n p n t d t r o t l v
 s t t m n h e e t c g s b r s w w b m k
 b r u s h i n g b b d f b r x q c v n q
 t c r e t n a c f d q r h y p s z f z e
 l k t e u t a o a u v s i x d o p t v n
 o g l s f b v l o h j a j a u o t t d k
 y e y t t p p j i s y o e k t j x w h f
 e u k h u q c t d r w l j c n r r n a y
 g n i r e f r e t n i o z q v j h b u c
 q r c a q w j v k d g y g e y f k v t r
 q u k q h d o u c b t m o n h o o z p l
 l u y j f j b v v y j j d i f r s i o v

brushing
 canter
 forging
 gallop
 gravity
 interfering
 jog
 leads

lope
 plaiting
 saddling
 scalping
 stride
 trot
 walk
 winging

MEETING 26: RIDING

Topic:

- Riding: mounting and dismounting; warming up and cooling down
- Riding Aids
- Changing Direction
- Terms Used in Riding

Objectives:

- To learn about riding.

Roll Calls

- Have you ever ridden a horse? If so, where did you ride?
- Have you ever ridden a horse? If so, where/how did you learn to ride?
- Where do you ride your horse? How do you communicate with the horse?

Sample Meeting Agenda – 2 hrs. 35 minutes

| | | |
|--|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Being Courteous to Your Horse, Warming Up and Cooling Down, Mounting and Dismounting. | 30 min |
| Activities Related to Topic | Activity #1 – Mount and Dismount (instructions found at the end of this meeting) | 30 min |
| Topic Information Discussion | Review Natural Aids, Artificial Aids, Changing Directions and Riding in a Circle. | 30 min |
| Activities Related to Topic/
Public Speaking/Judging Activity | Choose from Activities #2, #3 and/or #4 (Emergency Dismount Game, Good Hands Game, Cool Down Scavenger Hunt) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 5: FUN WITH HORSES

Topic Information

Be Courteous to Your Horse

1. Mount your horse gracefully, without hitting the horse's rump or the saddle with your right leg.
2. Keep good posture and alignment in the saddle to go with the motion of your horse.
3. Ride with a light touch on the reins. Check reins regularly and often to make sure they are even.
4. Do more walking and trotting/jogging than cantering/loping.
5. Give clear consistent cues to your horse to move, stop, back up, etc. Use your natural aids (voice, hands, legs and weight) more than artificial aids (crop and spurs).

Warming Up and Cooling Down

Horses require a period of gradual warm up for proper muscle function. Cold muscles injure easily. Therefore, you should begin by walking in both directions, advance to a trot/jog (again in both directions) before advancing to a canter/lope.

Walking your horse after a workout is essential to cool down its muscles and avoid cramps. This may be done mounted, but it is preferable for the rider to lead the horse on the ground. This also allows you to loosen the cinch so that your horse may breathe more easily. Your horse is cooled down enough when its breathing has returned to normal without nostril dilation and when its chest and neck have dried.

Mounting

- Safe and proper riding begins with safe mounting. Different styles of riding have slightly different methods of mounting, but both maintain some basic principles:
- Before mounting your horse, always lead it to an open location where you wish to mount, ensuring that you are a reasonable distance from other horses.
- Check your equipment to ensure that it is all adjusted correctly.
- Check the cinch/girth and if it requires adjustment, tighten it before you proceed with mounting.
- It is important that your horse does not move while you mount. Adjust the reins evenly with enough tension to feel the bit so that you can hold your horse steady.
- The eyes and ears of your horse can communicate to you if the horse is going to shy or bolt when you mount. Therefore, as you mount, you should watch your horse's head for such signs.
- Using a mounting block is best when possible. It should be solid and safe. A

SECTION 5: FUN WITH HORSES

mounting block may help to reduce pulling and strain on a horse's back. It is also advisable to have someone hold the other stirrup down when mounting.

If you ride **Western**, you would proceed to mount using the following steps:

1. Stand on the left side of the horse's neck holding the reins in your left hand. Split them by placing a finger in between each under the horse's neck with your left hand while reaching over the neck with your right hand taking the rein in your right hand to bring it over the horse's neck. Then cross the left rein over the horse's neck so that the bight of the reins are lying on opposite sides. Check to ensure that the reins are even.
2. Take up the reins in your left hand tight enough to keep the horse from moving forward and proceed to mount, after mounting the reins may be moved to the side if using a leverage bit.
3. Face either the same direction as your horse, or face the side of your horse, using your peripheral vision to keep an eye on your horse's head. Be careful not to push your toe into the horse's side.



4. Place your left hand on your horse's neck in front of the withers, grasping the horse's mane or the saddle pad if necessary.
5. Hold the stirrup with your right hand and place your left foot in the stirrup. Your right hand may also be used on your left shin to help guide your foot into the stirrup. If you are tall enough, your right hand may immediately be placed on the base of the horn (never on the cantle).
6. Grasp the saddle horn with your right hand and push up off the ground with your right leg. Bouncing once or twice helps the shorter rider create energy to push themselves up rather than pulling heavily with their arms and stressing the horse's withers.
7. Lift yourself to a standing position with your weight on the left stirrup.
8. Pass your right leg over the saddle without touching your horse.
9. Sit down gently in the saddle.
10. Put your right foot into the right stirrup (without leaning over to guide your foot into the stirrup with your hand). Re-center your saddle.
11. Take up the reins and adjust them.



SECTION 5: FUN WITH HORSES

If you ride **English**, you are encouraged to use a mounting block and then proceed to mount using the following steps:



1. When leading a horse saddled with an English saddle, you should keep the stirrup irons run up (so they don't bang the horse's sides). When preparing to mount, your adjustment of equipment will include lowering the stirrup irons, and adjusting their length as well as checking the girth and tightening if necessary. As you pull the stirrup irons down, keep them away from the horse's sides so that they do not knock him. When they are fully down, place them gently back against his sides.
2. Place the reins over your horse's head.
3. Stand on the left side of your horse and take the reins in your left hand, with the reins even and short enough to hold the horse steady.
4. Facing slightly towards the forequarters, with your left hand, grasp your horse's mane at the withers (not the pommel of the saddle).
5. With your right hand turn the stirrup iron clockwise towards you.
6. Put your left foot into the stirrup, turning your toes into the girth, to avoid gouging your horse in its side.
7. Place your right hand on the offside (right) side of the saddle.
8. Turn slightly to face the side of your horse.
9. Push with your right foot to spring off the ground, then transfer your weight onto your left foot which is resting in the stirrup. You should be facing into your horse when you leave the ground.
10. Lean slightly forward, keeping your body close to the horse.
11. Bring your right foot close to your left.
12. As you pass your right leg over the saddle without touching your horse, bring your right hand to the forward arch. This will help you support and balance your upper body.
13. Sit down gently in the saddle.
14. Put your right foot into the right stirrup iron (without leaning over to grasp the

SECTION 5: FUN WITH HORSES

stirrup with your right hand).

15. Take the reins with both hands and adjust them.

Dismounting

Before dismounting, always check to see that your landing area is safe and free of obstacles. For Western riders, the correct methods of dismounting include sliding down from the horse without using the left stirrup or leaving your foot in the left stirrup and stepping down from the horse. The method you choose will depend on your size. For smaller members, sliding down is safer.

For English riders, the correct methods of dismounting include sliding down or vaulting from the horse, without using the left stirrup. English riders **do not** dismount by stepping down from the horse.

Stepping Down, Using the Left Stirrup (Western)

1. Take both reins in your left hand and place your left hand on the horse's neck or wither for balance.
2. Reposition your left foot further out of the stirrup so there is no chance of it getting caught. Then remove the right foot from stirrup.
3. Grasp the base of the horn with your right hand.
4. Bend your upper body slightly forward.
5. Swing your right leg back and over the saddle.
6. Bring both your legs together.
7. Step down from the horse, facing into the horse with the reins still in your left hand.
8. Remove your left foot from the stirrup as your right foot touches the ground. Your feet should land facing the same direction as your horse's feet. This is less stressful on your knees and ankles in case your horse moves.
9. Loosen the cinch to let the horse relax, breathe freely and to allow the heat from its body to dissipate.

Sliding Down from the Horse

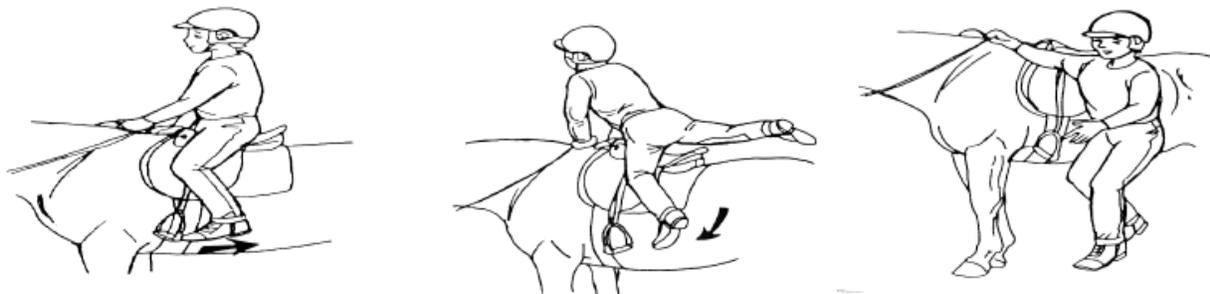
1. Take both reins in your left hand on the horse's wither.
2. Reposition your left foot further out of the stirrup so there is no chance of it getting caught. Then remove the right foot from the stirrup.
3. Grasp the base of the horn with your right hand.
4. Bend the upper body slightly forward.

SECTION 5: FUN WITH HORSES

5. Swing your right leg back and over the saddle.
6. Bring both your legs together.
7. Lean forward over the saddle and kick the left foot out of the stirrup. Be careful and NEVER lean forward over the right side of the saddle. If your horse jumps, you could fall off on your head. Face slightly forward and rest the outside of your right leg against the saddle. Slide down with just the right leg touching the saddle.
8. Keeping the reins in your left hand, let your feet drop to the ground together. Bend your knees to absorb the shock.
9. Take both the reins down.
10. Run the stirrups up (if riding English) and loosen the girth to let the horse relax, breathe freely and to allow the heat from its body to dissipate.

Vaulting from the Horse (English)

Vaulting follows the same steps as sliding down from the horse, except the rider kicks both feet out from the stirrups and pushes from the horse. The rider lands on the ground with both feet, a short distance from the side of the horse.



Riding Aids

The aids (cues) are the way a rider communicates with their horse so that the horse understands and can be directed by the rider. You use aids or a combination of aids to tell your horse what to do. With proper consistent training your horse will learn to obey these aids.

The goal of training is to get the horse to respond to as light an aid as possible. A light aid is like a whisper, a strong aid is like a shout. The natural aids are your legs, hands, weight and voice. Artificial aids are tools that reinforce natural aids such as spurs and whips.

Natural Aids

Voice

Your voice is a valuable form of communication with your horse. He will know from the tone of your voice whether you are pleased with him or not. Commands should be kept clear and simple. Often a stern “No” is all it takes to stop bad behavior. “Good Boy” is

SECTION 5: FUN WITH HORSES

a good way to let him know things are going well. “Whoa” is used to teach a horse to stop, and other voice commands used for lunging include walk, trot, canter, as well as clucking and kissing for gait changes

Leg Aids

It is the legs that are used first and most importantly to instruct the horse to do something. Leg aids are used to ask for movement, increase impulsion and control direction of the hindquarters. They are also used to bend the barrel of the horse and move the horse sideways. The legs create the power, while the hands gently guide the horse in the right direction.

Trot - Squeeze with both legs.

Canter/Lope - The inside leg gives the aid gently on the girth, the outside leg gives the aid firmly behind the girth.

Back - Squeeze with the legs to cue for movement, then movement is directed backward with pressure of the hand aids.

Turning - The inside leg at the girth creates bend which initiates the turn, the outside leg determines the amount or quickness of the turn (by the amount of pressure applied) and controls the hindquarters.

Weight

The way you carry your weight on your horse is important to you and your horse. The rider can shift the weight in the saddle to help cue for a change of gait or direction. Weight cannot be used alone. It is most effective when used with hand and leg aids. You can use your weight to help balance your horse as it works.

Vertical Weight - To use your weight vertically over the horse you need equal weight in both stirrups and with your center of gravity balanced over the midline of the horse's back. If you shift your weight in any direction the horse will notice. Use your vertical weight to affect the speed and rhythm of your horse. Leaning forward or back in the saddle will affect the speed of the horse by putting you ahead or behind the center of gravity. In order to use the position successfully, you must keep your body in a vertical line from the shoulders down to the saddle.

Posting to ride a brisk trot is an example of a vertical movement. Post up from the hips and keep your shoulders up. The height and speed that you post will affect how fast your horse moves and its length of stride. The longer you sit in the saddle, the slower your horse will go. Vertical weight is also used in a downward transition (slowing down from one gait



SECTION 5: FUN WITH HORSES

to the next). Imagine that you have become so heavy that you are being pulled down through the saddle. The horse will slow down. What happens is that your pelvic bone tilts back slightly and your weight shifts back.

Horizontal Weight - Using your horizontal weight, means shifting your weight from one seat bone to the other while keeping your body straight up and down. This weight shift can be used in preparation and during lead departures, turns, side-way movement and circles. Riding without stirrups is a good way to get a strong feeling for weight distribution.



Hands

Your hands are used to guide and help your horse. Use them lightly, so that your horse will keep a responsive mouth. Never pull steadily with all your strength as this will ruin the mouth and encourage your horse to pull against your hand aids. Never jerk your horse's mouth. Good hands come from having a good seat.

Horse Tip

Equipment is just a tool that we use to communicate with the horse, but you first have to be able to use your hands correctly with any equipment.

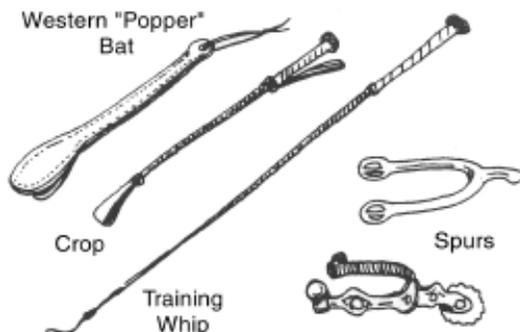
Your hands control the energy created by the legs (decreasing speed or allowing speed to increase). They control the forehand of the horse and actions such as bending the horse and controlling direction. Signal your horse by using light pulls and

slacking (“give and take”) of the reins with your fingers or by massaging the reins.

Artificial Aids

Artificial aids are those that reinforce the natural aids of legs, hands, weight and voice. They are sometimes used for correcting bad habits.

- Artificial aids must be used with self-control, judgement and purpose and never with temper
- Usually one or two taps will be sufficient. Repeated hitting or spurring will only make a horse angry or frantic.
- Artificial aids must never be used on or near the horse's head.

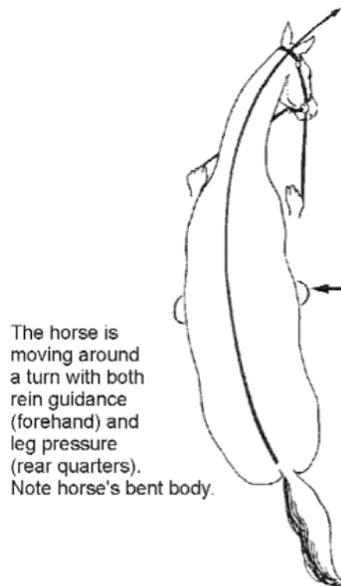


SECTION 5: FUN WITH HORSES

Changing Direction

When changing direction you must use seat, hands and legs together to aid the horse for a balanced turn.

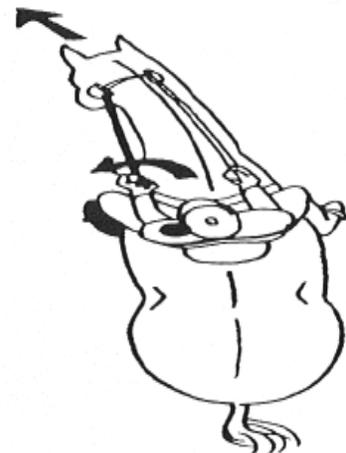
To turn to the right:



Circle to the Right

Circle to the Left

- place more weight in inside (right) stirrup but do not lean
- ask lightly and open, or draw back the inside rein (if two handed) otherwise lay neck rein against neck
- when riding with two hands, turn your head, then your shoulders, then your hips in direction of turn (this allows the outside rein to soften as horse's head moves in direction of turn)
- if neck reining, the rider's slight weight shift to the inside when the rider looks in that direction will aid the horse in turning. Remember the rider should be able to see some of the horse's eye on the side he is turning to as the neck rein is applied
- as horse steps around, lightly bump at the girth with your outside leg if you want the horse to turn around more tightly on the forehand
- outside leg controls amount of impulsion (go) a horse has and the inside leg controls the bend of his ribcage



For left turn apply opposite aids. Use pressure and release with all aids to reward horse for correct response.

SECTION 5: FUN WITH HORSES

Which Rein Are You On?

Riders being instructed will usually be riding in a circle around an instructor. The hand and leg on the inside of the circle (nearest the instructor), are referred to as the inside hand and leg. The hand and leg on the outside of the circle are known as the outside hand and leg. When the inside hand is your left hand (you are going anti-clockwise), you are on the left rein. If you are told to change the rein, this means you turn the horse and circle in the opposite direction. The inside hand is now your right hand, which means you are now riding on the right rein.

Riding A Circle

A circle is a continuous bend around at least four points. A circle begins and ends at the same point and the rider should see the same amount of the horse's inside eye all the way around the circle.

Horse Hint

Look up and where you want to go. Your body naturally follows as will the horse.

1. As you start to move around the arc of the circle, you want your horse to follow his nose and look where he is going.
2. Ride with a rein in each hand and using your inside rein, slightly tip his nose into the arc of the circle, so that you just see the corner of his inside eye and his head and neck match the arc of the circle. You want to move your inside hand a few inches away from the withers (opening the door). This is using an open rein.
3. The rider's outside leg is used on the girth to keep the horse moving forward; or behind the girth to stop his hindquarters swinging too far to the outside of the circle.
4. Now apply inside leg pressure to arc his spine and rib cage in the same arc as the circle. You want to slightly push his rib cage to the outside of the circle while keeping his head and neck matching the arc of the circle. The arc of his entire body should match the arc of the circle.
5. If he doesn't respond to light inside leg pressure, bump him lightly with your inside leg at the girth until he moves his rib cage to the outside of the circle; then stop bumping with your inside leg as a reward.
6. Remember to keep your horse's shoulder up. You want your horse to stay upright so he learns to move balanced and collected. To keep his inside shoulder up, lift your inside rein slightly above his mane.
7. The rider's focus should be 1/4 of circle ahead of where they are.
8. When your horse is correctly bent and traversing nicely around the circle, lighten your pressure to reward him and see if he will hold the arc of the circle. Correct him as needed. As the western horse and rider progress, the slightly open inside rein will become more direct and the bend will be maintained with minimal inside leg aid.

Troubleshooting

1. If your horse begins to drift in to the center of the circle, use more inside leg pressure to send him back out.
2. If it feels as if your horse is falling into the circle, dropping his inside shoulder, lift your inside rein to lift his inside shoulder. You might also have to apply inside leg pressure to send him out.
3. If your horse turns into the center of the circle, lighten your rein pressure. Use only a small amount of inside rein pressure and increase it as needed to match your horse's head to the arc of the circle. Apply inside leg pressure to bend his body around your inside leg.
4. If your horse drifts to the outside of the circle, keep the slight bend in his head and neck with your inside rein and use a light outside neck rein and strong outside leg pressure to send him back into the circle.

SECTION 5: FUN WITH HORSES**Riding Glossary: Terms Used in Riding****Lateral Flex**

The ability of the horse to bend its spine from the poll to the tail. The neck is most flexible part of the spine. There is limited flexibility along the body's length from the withers to the tail. This flexion is required for advanced levels of training and is a soft, upward bend of the back, a bend at the poll, and through the neck.

Collection

The vertical control of the movement of the horse. The balance point for the horse's weight is moved toward the hindquarters. This increases the up and down hock action and encourages the horse to travel with its hocks further under the body. The movement lets the horse stride forward with its legs and limits the extension of the hocks behind the body.

Strung Out

The opposite of collection; the weight of the horse is balanced near the front legs and the forward extension of the hind leg is shorter than its extension behind the body.

Impulsion

Is a combination of the alertness of the horse and its action. It is related to the force that the horse uses to move its leg up and down, or the strength of the stride. For example, the force used in a job may be the same as at a brisk trot. The speed is not important, but knee, hock and pastern action is.

Downward Transition

Slowing the horse to a distinct, new gait. The horse should make a quick, smooth change. The amount of collection and impulsion should not change. Head position should stay the same as the original gait, and give no sign of resisting the bit.

Upward Transition

Increasing the speed of the horse to a distinct, new gait. The horse should respond quickly and make a smooth change. Collection and impulsion should be the same as at the previous gait.

Above the Bit

The horse travels with its neck stretched up and forward and the head pushed forward.

Behind the Bit

The horse pulls its head behind a line perpendicular to the ground. The jaw is held close to the chest to avoid contact with the bit.

SECTION 5: FUN WITH HORSES

On the Bit

The horse carries its head in a vertical position over the bit. This is done with a rein carried in each hand. The horse is easier to control because the rider's hands are always in contact with the mouth. This also raises the head and neck of the horse, shifts the balance point of the horse towards the hindquarters, shortens the frame of the horse, slows the gait, produces more front knee action and produces more impulsion from the hind legs.

Accepting the Bit

The horse travels with the front of the head slightly ahead of perpendicular to the ground. This controls the speed without the horse avoiding the bit. Some of the body weight is shifted toward the hindquarters, but less than when the horse is on the bit.

Riding Without Stirrups

Riding without stirrups is the most natural and effective way to achieve security in the saddle. It can provide you with a strong base of support and independent control over hands and legs by teaching you to follow your horse's movement with the small of your back. This is especially useful for someone who tenses and stiffens in the stirrups against different motions.

If riding with an English saddle, pull the buckle down from the bar about six inches, then cross them over the wither, out of the way. Without the stirrups, your position should be exactly the same as if you were riding with stirrups. A general tendency is for the knees and thighs to ride up, forcing the seat bones and buttock to the back of the saddle. This is something you definitely want to prevent. As soon as you feel this happening, slow down and adjust your seat, pull yourself into the front part of the saddle, lower your thighs

SECTION 5: FUN WITH HORSES

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Practice different dismounting techniques and using the riding aids. Report at the next meeting which one you and our horse had the best luck with.

AND/OR

2. If you are new to riding, go to a horse stable that gives lessons and watch a lesson. Take note to how the rider mounts and dismounts the horse, what aids they use when working with the horse and how they guide the horse to change direction and ride in a circle.

DIGGING DEEPER

For Senior Members

Become the Trainer

There are many steps in learning how to ride a horse before a rider is ready to go for a ride. After learning about the equipment, the next step is to learn how to mount and dismount and to feel comfortable sitting on top of the horse.

Create a lesson plan for the first time a person will be mounting, sitting on a horse and dismounting. Be sure to list all of the steps that you will go through, including warm up and cool down as well any tips that you will give.

Keep in mind that those learning may be young children or older adults.

Put your lesson in your Record Book.

SECTION 5: FUN WITH HORSES

ACTIVITIES**Activity #1 - Mount and Dismount*****Items Needed:***

- A quiet horse(s)

Instructions:

1. Have members, one by one, practice mounting and dismounting a horse, using the instructions found in this meeting.
2. When practicing the dismount, have riders practice dismounting with both feet out of the stirrups, hands on the neck with grabbing a little mane, swinging the legs over and landing on their feet.

Activity #2 - Emergency Dismount Game***Items Needed:***

- Hula hoop (for each team)
- Horse for each rider

Instructions:

1. Divide members in to two teams.
2. Each rider on each team has to ride to the end and do an emergency dismount (landing on their feet) inside the circle.
3. Riders receive one point for landing with one foot in the circle and two points for two feet in the circle.
4. The rider then has to remount and ride back to the starting line.
5. The next rider then repeats this until all team members have completed the emergency dismount.

This activity can be done at a walk for beginners or a trot for more advanced riders. Most riders will land on their feet and then fall on their butts or on their sides. Therefore, it is best to have soft footing for the safety of the riders.

Activity #3 - Good Hands Game

Good hands are soft hands. Soft hands “ask” instead of hard hands that “demand”. There are several ways we use our bodies to communicate with our horses while we ride (voice, hands, legs, seat, upper body).

Items Needed:

- Bridles (ask each member to bring their own)
- Blindfolds
- Pylons

Instructions:

1. Set out pylons for an obstacle course.
2. Divide members into pairs. One person is the “horse” and the other is the “rider”.
3. The horse is blindfolded, has their bridle around their neck and holds the bit in their hands. Horses need to keep their hands up in front of their chin so the reins will go over their shoulders.
4. The rider stays about 1 metre (3 feet) behind the horse and uses the reins, not the voice, to ask the horse to stop and turn. The rider can cluck to the horse to initially ask for forward motion.
5. The horse is encouraged to say what they are feeling – whether a rein action is too subtle or unnecessarily strong or sudden.
6. Have the rider and horse move through the obstacle course.
7. Have pairs switch positions so everyone has a chance to know what it feels like to be the horse.
8. After completing this activity, discuss how they felt as the horse and what the riders could have done differently to make it a more pleasant experience for the horse.

Activity Credit: 4-H Alberta Horse Project

Activity #4 - Cool Down Scavenger Hunt

Items Needed:

- Scavenger Hunt list (found at the end of this message)
- Markers

SECTION 5: FUN WITH HORSES

Instructions:

1. Divide members into pairs.
2. Each pair is to be given a Cool Down Scavenger Hunt sheet.
3. Because a horse is to be walked when being cooled down, members are not allowed to run when looking for their Scavenger Hunt items.
4. The first team to collect everything on the list and return back, without running throughout the entire game, will be the winners.

Note: Be sure to set limits as to where members can go to find the items. Depending on the location of the scavenger hunt, leaders may have to decide how many items on the list members need to find before they return e.g. members need to find 8 items on the list and then return.

Cool Down Scavenger Hunt

Find the following items:

Maple leaf that is laying on the ground

Feather

A stick that is laying on the ground that is longer than 30cm

Piece of garbage

Stone the size of a baseball

A penny

A blade of grass that is longer than 30 centimetres

Pine cone

Piece of alfalfa

A stick that is shaped like a 'Y'

Acorn

A brown leaf on the ground that is not a maple leaf

MEETING 27: RIDER'S BODY POSITION

Topic:

- How to have the right body position while riding
- Riding exercises

Objectives:

- To learn the importance of a rider's position including the centre of gravity of the rider and the horse

Roll Calls

- Name one good habit to have when riding a horse.
- Do you have good posture in the saddle? Why is good posture important?

Sample Meeting Agenda – 2 hrs. 15 minutes

| | | |
|-------------------------------------|--|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Body Position | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Sit Up Straight! (instructions found at the end of this meeting) | 20 min |
| Topic Information Discussion | Review Rider Balance & Centre of Gravity and Rider Exercises | 30 min |
| Activities Related to Topic | Choose from Activities #2, and/or #3 (Magazine Hunt, Rider Exercises) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 5: FUN WITH HORSES

Topic Information

Body Position

No matter what your style of riding is, having a good balanced position is important. Your body position affects how your horse moves.

In the basic seat position, you sit erect, deep in the saddle with your body balanced and relaxed. Sit “tall in the saddle”, don’t slump, but don’t be stiff either. If you are stiff, you can’t flow with the movement of your horse and you will always be half a beat behind. Note the line (on the graphic) from the ear to point of shoulder to the hip to heel. Your leg should maintain (resting gently on the horse’s side) light contact with the horse’s body through your inside thigh and upper half of your calf. Your foot should be at the same angle as your knee and the angle of the knee is determined by the size of the horse’s barrel. The ball of your foot should be in the stirrup and your heel



should be lower than your toe to allow more flexibility in your ankle. Your hand and arms should be relaxed and supple with your elbows in close to your body. You should hold your reins just above and in front of the saddle horn or pommel.

An imaginary line should run through the center of the back of your head, between your shoulder blades and down the center of your back to the horse’s spine. If you allow yourself to become uneven anywhere, the horse will be forced to become uneven to compensate for you and he will not be able to work to his best ability.

Most positional problems have their beginnings with bad habits. Develop the following good habits and you will ride with good position.

Head

You should be looking ahead and watching where you are going. Your head should be square with your shoulders and not tilted. Keep a “chin-up” position, or your entire body will tilt forward and pull the weight out of your heels. The weight of your head is noticeable to the horse and your horse will usually go in the direction you are looking. For example, you can ride in a circle with minimal leg or rein pressure, by just looking to the center of the circle. If checking diagonals and leads be careful not to lean your head as the extra weight shift may unbalance your horse.

Shoulders

As you sit in the saddle your shoulders should be level. Shoulders that are not level are a sign that you may have your weight shifted. This makes the horse lean in the same direction. Loping/cantering in small circles will cause you to want to drop one shoulder so pay careful attention to keeping them even and back. Open your chest while riding.

SECTION 5: FUN WITH HORSES

Back

Your back should be straight but not rigid.

Stomach

Your stomach should be flat.

Arms

The arms should hang naturally from the shoulder with elbows at your side but not held rigidly. You must have a bend in your elbow and from the side there should be a straight line from your elbow, through the wrist and down the reins, to the bit. Your whole arm should stay soft and relaxed, right from the shoulder through the elbow to the wrist. This allows your elbow to open softly to let the hands go forward as the horse's head moves.

Hands

When riding with two hands the rider's hands should be placed slightly above either side of the wither and slightly in front of the saddle. The hands should be held at the same angle as the slope of the wither or neck. The hands should remain closed with the fingers securely on the reins but not rigid. The hands follow the movement of the head and neck. As a rider advances, rein tension is altered by the fingers. The best riders maintain contact by keeping the reins further back in their hands.

Seat

Your hips and pelvis are your body's main shock absorbers so they must remain relaxed to follow the rhythm of your horse's gait. Sit squarely in the middle of your saddle with the same amount of weight on each seat bone. The inside of the thighs should remain in contact with the saddle without gripping. Your seat bones and pubic bones should form a triangle and be in contact with the saddle so that your body sits at a 90° angle to the saddle. Be careful that you do not sit back on your buttocks and back of your thighs and become a "dead weight" in the saddle. Sit up, take your feet out of the stirrups and turn your legs until the flat inside of your thighs are in contact with the saddle.

Legs

The most important way to communicate with your horse is through your legs and seat. The legs are used to balance the upper body in the saddle and cue the horse. Different events and disciplines use different stirrup lengths. The difference in the stirrup length depends on the type of work you and your horse will be doing. For all saddles, the stirrups need to be short enough that the legs and ankles can act as shock absorbers. To do this, the knees and ankles must have a slight, relaxed bend. Your legs should hang long and relaxed at the horse's side with no tightness in the knee joints. It will be the inside of the calves that squeeze against the horse that ask him to move.

For most Western and English riding, the stirrups should hang so that when your foot is out of the stirrup, the bottom of the stirrup touches your ankle. If you are involved in cattle work, gymkhana or jumping events you may want the stirrups slightly shorter.

SECTION 5: FUN WITH HORSES

The lower leg is important for leg aids. It may be used to squeeze, kick or bump the side of the horse. The lower leg needs to be kept still when you ride, or your leg aids will not be effective. This is because if the horse has been getting signals continually, he will not know which to obey. The distance between your lower leg and the side of the horse will depend on the length of your legs and how they fit against the body of the horse.

Foot

Foot position affects how you can use your legs. The ball of the foot should be resting on the stirrup with most of your weight carried down through your heel so that your heel is lower than your toe. If you place your weight on your toe, it will push you up out of the saddle. If your toes point down it is possible that your foot will slip and go through the stirrup. Putting your foot too far into the stirrup makes it hard to flex your ankle. By placing slightly more weight on the inside of your foot, your ankle will cock slightly - aligning the inside of your leg correctly with your horse's sides.

The feet of the rider should be nearly parallel to the side of the horse. Toes pointing outward can cause problems, especially if wearing spurs. You can accidentally jab the horse because of an incorrect foot position. Also, the direction of the foot will turn the whole leg. This makes it hard to get the inside of your calf, knee and thigh against the saddle.

Rider Balance and Centre of Gravity

Learning to ride includes the use of your whole body. It is not enough to sit in the correct position on a standing horse. You need to practice the use of your body as the horse moves. Balance comes with experience and correct positioning on a moving horse.

When you are riding, your center of gravity is located about 10 cm below your navel. In order to maintain your horse's balance, you must align your center of gravity with that of your horse. Your position will vary depending on the work that you are asking of your horse. This is why jockeys who gallop race horses are hunched over the horse's withers (as the speed of the horse increases, the horse's center of gravity moves forward) or why dressage riders doing collected work, keep the center of gravity further back, helping to slow and collect the horse (as the movement of the horse slows, the center of gravity moves back).

If you can maintain your balance over the shifting center of gravity of your horse, your horse will stay balanced, will be more confident with your aids and will not have to work as hard. No matter what style of riding you are interested in, balance is important. The rider's position can influence the horse's way of going to a great extent. Learning to relax and allowing yourself to feel the horse's movement can greatly add to the horse's and your enjoyment.

Good Balanced Position - eyes up - arms hang beside rib - head balanced - back straight - balanced on seat bones - feet and legs under body - heels down



SECTION 5: FUN WITH HORSES



Problem Position: "Slumping" - head and eyes down - round back - sitting on buttocks - rider out of balance - arms out ahead of body - knees pinching - heels up, toes down



Problem Position: "Chair Seat" - back straight, but feet and legs ahead - rider out of balance backward - knees tight - heels level



Problem Position: "Perching" - too far forward - stiff, hollow back - sitting on front of seat (crouch) - knees tight - legs too far back - heels level or up

Developing a Seat

Lunging is an ideal method for a horse, rider and instructor to work together to produce a first-class seat. A beginner rider who is lunged on a reliable horse can develop a deep, balanced, and relaxed seat in the saddle. They can concentrate on their balance and correct position, while enjoying controlled forward motion.

Rider Exercises

There are several exercises which can be used to help increase a rider's suppleness, balance, rhythm and focus.

An exercise that can be used before the rider ever gets on a horse is to have the rider sit on a barrel that is laying on its side. Have the rider assume a proper riding position

SECTION 5: FUN WITH HORSES

with his/her head up, eyes forward and hands in the proper position for holding two reins.

Have the rider rock the barrel from side to side, pushing off and landing with their heel and not the toe, to practice keeping the feet in the correct position. Remind the rider to breathe. This exercise will greatly increase suppleness in the mid-section of the body and will help stretch the back of the calf.

There are also many exercises that can be done while sitting on a horse with a competent handler, who will hold or lead the horse with a halter placed over or under the bridle, with a lead shank. Do not hook a lead shank to the bit or lead with a rein, as this would be unsafe. The reins should be secured if riding in a Western saddle by tying a knot in the reins at an appropriate length and looping them over the horn, or if riding in an English saddle, by tucking the reins under the stirrup leather. The rider should be wearing a helmet and boots with a heel.

These exercises should be started while the horse is standing still and then once the rider becomes more confident, and if the horse is quiet and safe enough, some may be done at the walk and then the jog/trot, with stirrups or without, as the rider progresses:

1. Reach forward with both hands and touch your horse's mane in front of the saddle, then $\frac{1}{4}$ of the way up its neck, $\frac{1}{2}$ way up its neck, $\frac{3}{4}$ of the way up its neck and then try to touch its poll.
2. With right hand, reach around in front of you and try to touch your horse's left hip. With left hand, try to reach around and touch its right hip.
3. Reach back with your right hand and try to touch your horse's tail. Do the same with your left hand.
4. With both arms stretched forward, rise in your stirrups and hold the position.
5. Reach down and touch the right boot with the right hand and then the left boot with the left hand.
6. While sitting in the saddle, remove your feet from your stirrups and away from your horse's sides and rotate your feet in circles first clockwise and then counter-clockwise.
7. With feet out of the stirrups, stretch your toes down as far as you can and then up as far as you can, repeating several times.
8. With your feet out of the stirrups and while sitting straight up in your saddle, stretch you right leg back as far as you can and then forward as far as you can. Repeat with your left leg.
9. While keeping a proper seat and position, do a rotation with both arms reaching forward, out to the sides, down and then back and reverse.
10. Do the airplane exercise where the rider rides with arms stretch out to the sides and then rotate right and left.
11. Ride with one arm reaching forward and the other back and switch.

SECTION 5: FUN WITH HORSES

12. Punch one fist out straight in front of you and then the other, alternating back and forth in rhythm with the gait of the horse.
13. Rise trot with arms stretched out in airplane formation.
14. Sit up straight with arms crossed in front of body at shoulder height.
15. Sit up straight with arms crossed behind body at waist.
16. With one or both arms stretched in a straight line above the head from the shoulder, rotate the arms both clockwise and counter clockwise. Keep arms in motion with the motion of the horse.
17. With one or both arms stretched in a straight line above the head from the shoulder, rotate one arm clockwise and one arm counter clockwise. Keep arms in motion with the motion of the horse.

The following exercises will help to improve a rider's strength and flexibility while off the horse.

For the abdominal muscles and hip flexors, which are both important to the rider's upper body position:

1. Lie flat on the back, bend the knees to avoid strain to the lower back. Hands behind head, slowly bring the head towards the knees and slowly back to the original position. Rest and repeat.
2. Lie flat on the back with one knee bent and the other leg straight. Raise the straight leg but do not point the toe. Lower the leg and repeat with the other leg.

For the back and neck extensors and pectorals:

3. Lie on table or bench with arms clasped under it to anchor the upper body. Both legs are raised and lowered with the knees kept straight.

For the hip extensors that help control the thigh and pelvis position:

4. Get down on your hands and knees with the head up, looking forward. Straighten one leg and push it to the rear. Hold to the count of five, bring leg to original position and repeat with other leg.

A balance and coordination exercise:

5. Stand with the feet apart, head up and arms to the side. Slowly bend the knees, lean forward and raise the arms forward into a position similar to the forward jumping position. Stand up again and repeat.

To strengthen the inner thigh muscles:

6. Sit on a bench and use an isometric exercise by pushing the knees out with the hands while pushing in with the knees. Tense the muscles for 5 seconds and relax. Repeat. The same exercise can be done with a large beach ball.

SECTION 5: FUN WITH HORSES

For the hip abductors:

7. Lie on a bench with the top leg resting on another bench of similar height, raise and lower the other leg slowly. Turn over and repeat for the other leg.

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. When you are out exercising a horse, try some of the exercises in this meeting. How does the horse react?

AND/OR

2. Lay a lunge line on the ground (a piece of rope will work as well). Practice your balance by walking on this rope (and nowhere else) from one end to the other with your arms out to the side. If possible, ride a horse with your arms out to the side to further work on your balance. If you feel comfortable with this, try doing it with your eyes closed. Be sure to have someone with you while trying this.

DIGGING DEEPER

For Senior Members

Become the Trainer - Part Two

Continuing from the last meeting, work at creating a lesson plan that focuses on body positioning, balance and centre of gravity. Outline how you would approach this topic to instill the importance of learning this before acquiring any bad habits.

After covering the above topics, create a lesson plan that covers rider exercises. Because this is a large activity, it may cover a number of riding lessons. Be sure to allow for enough time for a rider to be able to become comfortable with the exercises before moving on to further aspects of riding.

Put your lessons in your Record Book.

SECTION 5: FUN WITH HORSES

ACTIVITIES**Activity #1 - Sit Up Straight!****Items Needed:**

- Exercise Ball(s)

Instructions:

1. One by one, have members sit on an exercise ball.
2. Have members move from side to side and back and forth on the ball. Tell them that the motion of the ball somewhat mimics the moving motion of riding on a horse.
3. Remind members to keep good posture and body position while moving on the ball.
4. Once all members have had a turn, discuss whether or not it was easy to stay sitting up straight and to keep their balance.

Note: this activity could also be completed using a barrel if an exercise ball is not available.

Activity #2 - Magazine Hunt**Items Needed:**

- Old horse magazines
- Scissors

Instructions:

1. Depending on the number of available magazines, have members work individually, in pairs or in small groups.
2. Have a race to see who can find a picture of a rider with extremely poor posture while sitting on a horse.
3. Give a time limit for members to find this picture (e.g. 5 minutes)
4. Have each person/group present their picture and why it is an example of poor posture.
5. Once everyone has presented, have a vote as to which picture they think shows the worst posture.

Activity #3 - Rider Exercises

Items Needed:

- A quiet horse(s)

Instructions:

1. Using the information found in this meeting, review exercises riders can do to become more comfortable with their horse and to help increase a rider's suppleness, balance, rhythm and focus.
2. Discuss why these exercises are so important before moving on to learning how to walk, trot, canter, etc. with their horses.

MEETING 28: HOW TO'S OF RIDING

Topic:

- The different aspects of riding:
 - Walk
 - Trot
 - Canter
 - Halt
 - Backing
 - Transitions
 - Lead Changes
 - Gallop
- How to hold the reins

Objectives:

- To learn the 'how-to's' of riding.

Roll Calls

- What is your favourite gait? Why?
- Do prefer to ride Western or English? Why?
- Name something an inexperienced rider should never try on their own.

Sample Meeting Agenda – 2 hrs. 10 minutes

| | | |
|-------------------------------------|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Absorbing the Horse's Motion, Correct Position and Aids for Various Gaits | 30 min |
| Public Speaking/Judging Activity | Activity #1 – Gaits of the Horse (instructions found at the end of this meeting) | 15 min |
| Topic Information Discussion | Review Holding the Reins | 20 min |
| Activities Related to Topic | Choose from Activities #2, #3 and/or #4 (Match it Up!, Reining It In, Musical Poles) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

SECTION 5: FUN WITH HORSES

Topic Information

Absorbing the Horse's Motion

Four joints are important in absorbing the horse's motion when riding - the ankle, the knee, the hips and the elbow. The upper body should remain as still as possible but not stiff during the gaits. Moving the hips independently allows this to happen.

Correct Position and Aids for Various Gaits

The Walk

The walk is a four beat gait and is a pace that the horse naturally offers the rider. The horse takes long, relaxed steps of equal length and usually overtracks, which means the horse's hind feet step further forward than the hoof prints left by the front feet.

Aids for the Walk: From the halt, the rider asks for the walk by gently squeezing both legs against the horse's side and by following the movement of the horse's head and neck with his hands and arms.

The Jog/Trot

The jog/trot has two beats to a stride, so it is a two beat gait. The jog/trot can be ridden either sitting or posting.

Aids for the Trot: From the halt or walk, the rider asks for the trot by squeezing with both legs at the same time. The hands give slightly on the reins and the seat encourages forward motion. Clucking is a voice aid or say "Trot".

Rider Position

In a **sitting trot**, you should remain sitting deep in the saddle, maintaining the same position as when stationary or at a walk. The movement of the horse's body at the trot will cause your hips to make a slight side-to-side motion. This occurs because as the horse is stepping forward with his hind leg his hip drops; thus the rider will allow his hip to drop at the same time. Allow this motion in your hips but keep your upper body as tall and still as possible.

The **rising trot** is an easy movement for the rider. When the horse trots, he is springing from one diagonal pair of legs to the other. Let the spring from one pair of legs going forward lift your seat out of the saddle. Your seat returns to the saddle as the other pair spring forward. So as your horse moves each pair of legs in a one-two, one-two beat, you are sitting and rising to the same up-down, up-down beat. Your seat should be raised by the movement of the horse, returning quietly to the saddle without any loss of balance. With each stride of the trot - the horse "bumps" the rider out of the saddle (and slightly forward), followed immediately by the rider returning to the saddle. This "rise and fall" motion should not be forced but look natural for the amount of energy that the horse is using to trot. Do not actively try to push the body up and down, or it will make your shoulders and arms appear to be bobbing. To rise, use the muscles in your abdomen, buttocks and thighs rather than pushing in the stirrups. The shoulders stay upright and do not tip forward any farther than a 20° incline at the waist. The hips move forward.

SECTION 5: FUN WITH HORSES

The weight on the stirrup irons should not vary. The contact of the lower legs should not vary. Elbow and shoulder joints should be supple, allowing the hand to maintain the correct position. As you rise, the angle of your elbow joint will open, closing again as you return to the saddle. Your hand should maintain the same contact at all times.

Two Point Position

The purpose of the Two Point Position is to get the rider's weight off the horse's back and to teach the rider how to use their core muscles to balance. The two point position is very close to the basic position except the rider's seat is raised forward off the saddle and with their weight deep in their heels, the rider balances by using abdominal, buttock and thigh muscles.

Riding Diagonals

The trot is a two beat gait which allows the rider to post. To ride the correct diagonal the rider will rise and fall in the same motion as the outside front leg and inside hindleg of the horse. For example, if you were riding to the left, you would rise when the horse's outside (right) front leg and inside (left) hindleg are off the ground, and sit when these legs are on the ground. To check to see if you are on the correct diagonal - you may glance at the movement of the horse's shoulders to determine the position of the legs.

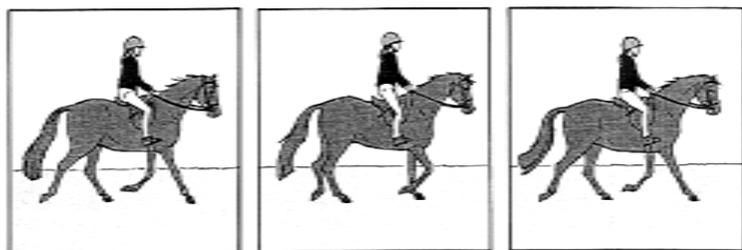
The reason for being on the correct diagonal is that your horse's inside hind leg is in the best position to bear the full strain of your weight. When riding in a circle, the horse will find it easier to balance, if the rider is in the saddle when the inside hindleg and the outside foreleg are on the ground. Because the horse uses his legs in diagonal pairs, RISE as the outside shoulder goes forward and SIT as it comes back.

Horse Hint

Rise and Fall With The
Shoulder On The Wall

Posting on the Right Diagonal

When doing a rising trot in a straight line, a rider may use either diagonal pair to post. However, if you are going to ride in a straight line for a long time; it is advisable to change diagonals quite often so your horse remains balanced (about every 1/3 kilometer).



To change diagonals is very simple. All you do is sit two bumps of the trot and rise again. So instead of sit-rise, sit-rise, you would sit-sit-rise and this would change you to the correct diagonal.

SECTION 5: FUN WITH HORSES

The Canter/Lope

There are three beats to the canter/lope stride, so it is a three beat gait.

Aids to the Canter/Lope: Before asking for a canter/lope, prepare the horse for the upward transition by momentarily half-halting to encourage collection. Apply your outside leg behind the girth to cue for the correct lead. Your inside leg remains at the girth and is used at the same time as the outside leg, but not as firmly.

Aids for the Western Lope:

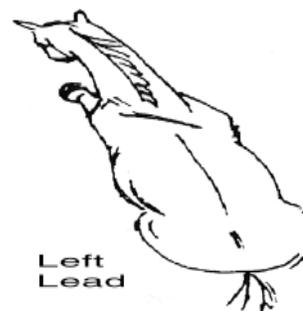
1. Signal – slight hand motion to forewarn the horse.
2. Slight inside rein pressure to elevate the shoulder and to slightly direct the horse to the inside.
3. Outside leg pressure and kiss (vocal aid).

As the horse and rider advance; more outside seat aid will be given to start the lope from the outside hind leg of the horse and the rider's power source will be used.

Riding a horse at a canter/lope is different than riding at a walk or trot. The front end and hindquarters rise and fall alternately. This affects how you ride the movement. As the front end comes off the ground, you should move your hips forward. As the front end comes down, your hips should follow the movement. This will allow you to follow the motion of the canter/lope. With practice, riders will feel the three beats of the lope and should allow their hips to move in a forward, up, and down triangular pattern.

The movement of the horse is absorbed by your hips. When you start to canter/lope you may catch yourself "pumping" (your shoulders move in rhythm to the horse). Your shoulders should stay still. A problem beginners may have is losing the correct lower leg position. Once your seat improves you will be able to maintain proper leg position.

At the canter/lope, a horse will travel on one lead or the other. This is important for smooth turns and balance for the horse. In order to determine which lead you are on, you should glance down at the horse's shoulders (without bending over) to see which shoulder is reaching more forward. This will indicate the horse's left or right lead. The rider's hips and legs will also take up the same 'lead' position as the horse. If you are sensitive to this 'feel' you can also determine the lead using your body.



Gallop

A gallop has four beats, and like a canter/lope, has a leading leg. At a gallop, the horse is at full stretch - it lengthens out its body and neck, and each leg is fully extended as it powers forward over the ground. When riding the gallop, lean forward, lighten your seat slightly out of the saddle and extend your arms as your horse stretches its neck forward with each stride. It helps to ride with shorter stirrups when galloping, as this makes it easier for your weight to be lifted out of the saddle.

SECTION 5: FUN WITH HORSES

Halt

At the halt, the horse must stand still and straight, its weight distributed equally over all four legs. This is termed 'standing square'. The English horse should remain "on the bit" (with light contact through the reins to the hands). The Western horse should stand relaxed on a somewhat loose rein when halted.

The Aids to Halt: Ask your horse to halt by giving him cues from your seat and voice, then hands. Sit deep and squeeze lightly with your upper legs. At the same time, say whoa (if not being judged) and increase pressure on the mouth with your hands on the reins, which will block the forward movement. As soon as the horse halts, soften your hands and relax your legs.

The Western rider sits deep and extends weight down the back of their legs into their heels. The verbal command "whoa" is given and reins are applied only if the horse does not stop. If the rein aid is used, two direct reins are applied with increasing pressure until the horse does stop, then they are immediately released.

The Rein Back or Backing

The rein back (back up) is carried out from the halt. It is a two beat diagonal gait and should be fluid in motion. The steps should be straight, active and unhurried, but of good length. The feet must be picked up and put down cleanly, with the horse maintaining its correct outline and remaining on the bit. The horse should not raise its head or hollow its back, and should back straight.

The Aids to Perform the English Rein Back: The horse should be calm and relaxed at the halt. Squeeze both legs against the horse's sides, as you lean forward slightly and apply equal pressure with both hands on the reins. Leg pressure tells the horse he has to move somewhere. Because forward motion is blocked by the hands maintaining contact on the reins, the horse moves backward. The moment the horse responds by stepping backward you should release the rein pressure then 'ask' again if needed.

Western Back Up: Do not lean forward, but instead, sit square, start with your hands by asking the horse to flex at the jaw and poll by applying pressure with two direct reins, then take your legs off the horse and cluck. If the horse resists, then add your legs to bump the horse to elevate its back and loosen its shoulders to encourage it to back.

Transitions

A transition refers to a change in gait(s) either upward or downward. The ideal is to execute in a clean, balanced manner. When you ask for a transition, the key is to make it happen like clockwork.

Preparation for the transition is more important than the transition itself and is of utmost importance to success. Do not rush into a transition. Do not 'surprise' your horse by suddenly stopping or turning it without 'half halting' to warn it that you are about to make a change.

Three P's of Transitions

1. Preparation
2. Positioning
3. Patience

SECTION 5: FUN WITH HORSES

| UPWARD TRANSITIONS | DOWNWARD TRANSITIONS |
|-------------------------|-------------------------|
| Halt to Walk | Walk to Halt |
| Walk to Trot/Jog | Trot/Jog to Walk |
| Trot/Jog to Canter/Lope | Canter/Lope to Trot/Jog |

*Transitions can increase or decrease through more than gait (example: walk to canter)

Collection

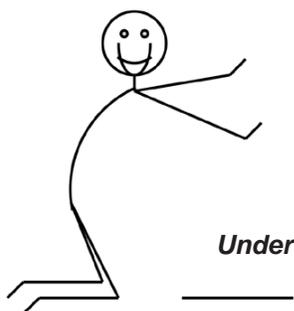
What is Collection? In order for a horse to be able to perform any type of movement or manoeuver efficiently, it needs to have some aspect of collection. Collection happens when the horse reaches forward with its hind feet, bringing its hindquarters more “under” itself, causing its back to round and giving its whole body an upward arch from nose to tail.

An exercise the rider can do in order to better understand this concept is to get down on the ground on their hands and knees. Make as big a space as possible between your hands and knees by placing your hands as far forward as possible and your knees as far back as possible. Notice that this causes your back to go down or “hollow out”. **Now keeping that big space between your hands and knees, try to pivot on your knees** and you will notice that it is very difficult because your back has sunk and you have no strength to lift your front end up and over.

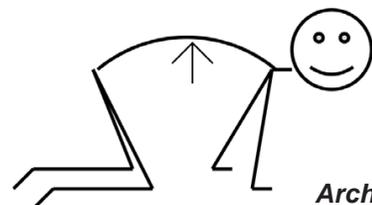
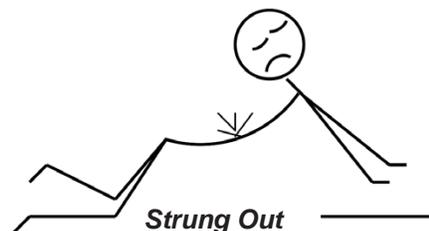
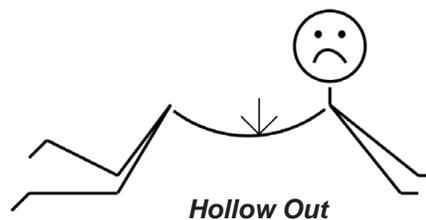
The same thing happens to a horse when it is not collected or is “strung out”. If its hind legs are not reaching up as it moves, there is a lot of space between its front legs and hind legs, which causes its back to sink. Because a horse’s head and neck are attached to its front end, it is heavier than its hindquarter, making it very difficult for it to use its front quarters efficiently to stop, turn, lope or canter, jump; anything involving athletic ability.

Now move your hands and knees closer together and notice what happens to your back – it arches like a cat,

making it much easier to **lift your front end, pivot on your knees and move one hand across in front of the other.**



The same applies to a horse that is collected because when it is reaching up with its hind legs, its hindquarters are more “under” its body and its back becomes arched or rounded, making it much easier to move its front end and perform the required movements.



SECTION 5: FUN WITH HORSES

How to Achieve Collection

There are several steps required in order to teach a horse to collect and to maintain collection while moving.

1. At a walk, the rider needs to put its legs on the horse to get the horse to start reaching up with its hind legs so that its hind legs are closer to its front legs.
2. Once that is happening, start to make the horse bend using an inside, direct rein with possibly a little bit of rein of opposition, and an outside support rein to tip the horse's head slightly to the inside.
3. While using the outside leg to keep the horse moving forward, press and release with the inside leg so that the horse is going forward around the inside leg and the ribs are moving slightly to the outside.
4. Once the horse is bending willingly, start to use the outside support rein to straighten the horse's head. Use both legs to drive the horse's hind end up while using both hands to bring the horse's nose back towards its chest, causing its back to round slightly.
5. Don't expect your horse to stay in this shape for more than a few strides to begin with as this is very hard work.

Once the horse becomes comfortable doing this at the walk, practice it at a jog/trot and then at the lope/canter.

The Half Halt

The half halt is a brief almost invisible signal to the horse to re-balance its weight on the hindquarters and therefore become lighter in the rider's hand. It is achieved by resisting the forward motion by using the hand and seat aids. The rider closes his legs on the horse's sides and pushes him up into the rider's hands, which just for a second blocks the horse's forward movement. This is followed immediately with rewarding the horse by the rider relaxing the leg and softening the hand again.

The half halt can be used to:

- re-balance the horse in any gait.
- warn the horse that the rider is about to ask him to do something such as change direction.
- build impulsion within each stride which can be stored to produce collected work or released to produce extended work.

The half halt is probably one of the most difficult things to learn or explain and takes time and practise to perfect for both horse and rider. Your hands, seat and leg aids should be used in combination to cue the horse for changes of gait.

SECTION 5: FUN WITH HORSES

General Aids for Upwards Transitions

The rider's legs apply pressure on the horse's sides to increase the forward movement. At the same time the hands give slightly and the rider's seat follows the movement of the new gait. The rider's upper body should remain tall and still so as not to unbalance the horse as it moves upward. As soon as the horse is in the desired gait, the pressure from the legs should be released. The rider will maintain the gait through the combination of aids.

General Aids for Downwards Transitions

Relax, breathe out and quit following the rhythm of the gait with your hips. The rider's upper legs apply pressure while the hand(s) and seat block forward movement. Only apply rein pressure if the horse does not respond. The pressure on the reins, along with downward pressure in the saddle will discourage the forward motion as the horse moves into the lower gait. As soon as the horse becomes balanced into the new gait, the backward/downward pressures are released and the gait is maintained by the rider's correct use of the aids.

Simple Lead Changes

A simple lead change allows you to slow to a trot/jog before cuing your horse to change from one canter/lope lead to the other. Simple lead changes are easier for a rider to understand the combination of aids and the cues needed to make lead changes.

The Flying Lead Change

The flying lead change occurs when the horse switches leads in the air without changing gait. Horses often do flying changes naturally while exercising in the pasture. The rider must learn how to prepare and properly cue the horse to pick up the new lead. The moment to cue the new lead is when the horse is balanced (straight) and during the period of suspension that follows each canter/lope stride. It is only at this point that the horse will be able to perform a flying change. Some horses tend to become excitable or nervous when they are introduced to this movement, so be sure to teach the horse carefully and patiently. Some examples of when you would use the flying lead change are in competition over fences, equitation patterns, western riding class, reining, barrel racing and pole bending.



Left Lead



Front and hind legs switch in air.



Right Lead Lope

SECTION 5: FUN WITH HORSES

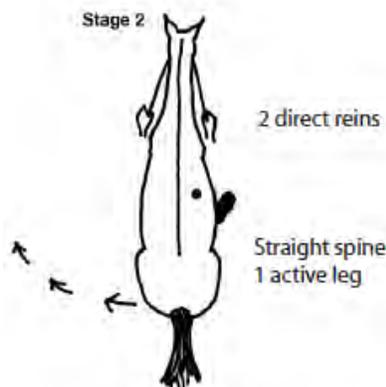
Progression of Lateral Skills

Turn on the Forehand

A turn on the forehand is executed from a halt and the horse moves its hindquarters around its forelegs in a circle. The inner foreleg acts as a pivot and the outer foreleg describes a very small circle. It can be done through 90, 180 and 360 degrees. The outer hind leg crosses over in front of the inner hind leg to show a tendency for forward motion.

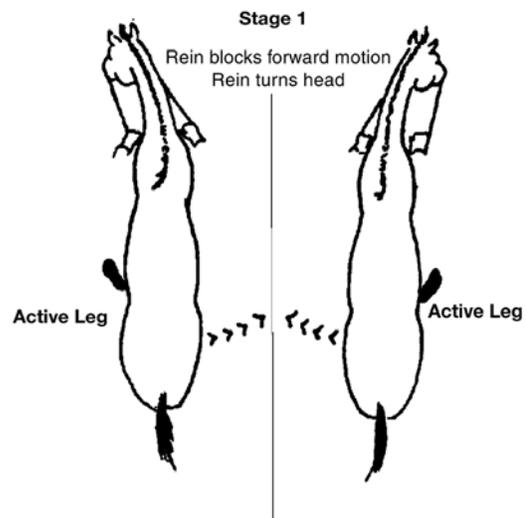
Stage 1 - In the early stages of training the horse and rider, the horse's neck is bent with an open or direct rein toward the rider's active leg. This makes it easier for the rider to move the hindquarters.

Stage 2 - As both horse and rider become more competent the aids will change to two direct reins with only enough pressure to prevent forward movement. The horse's neck will straighten. The hindquarters will be moved



with one active leg while the other leg will be neutral, allowing the horse's hips to move. The rider can also add slightly more weight to the seat bone on the same side as the active leg. Be careful and strive for correct movement, not speed.

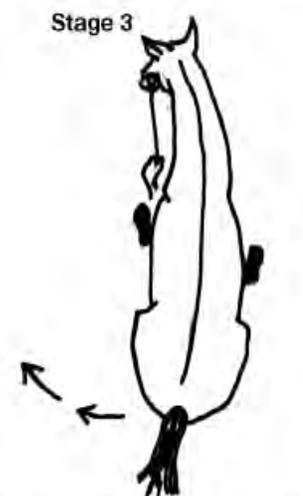
Stage 3 - Advanced This exercise is used to increase suppleness, and is a lead up to collection, haunches in and two track.



Step 1 - Create forward motion, then bend around inside leg.

Step 2 - Stop the horse in the bent position and apply these aids:

- Inside rein direct to maintain a soft relaxed bend; rein may change to a rein of opposition to prevent horse from reversing his bend when outside leg is applied. Outside rein essential as support. Be careful not to over bend the neck or horse will not be able to give his hip.
- When the horse relaxes in the bent position, slowly add the outside leg to push his hip to the inside. The horse will usually try to bend around the outside leg so both reins and the inside leg are essential to keep the horse in the correct shape.



Lead up to haunches in two track

SECTION 5: FUN WITH HORSES

Only ask for 1-2 steps until the horse starts to relax when asked to do the skill. Another approach is to leg yield off one leg; hesitate, then while maintaining the shape of the leg yield, use the opposite leg to push the horse's outside hip in.

Leg Yield

Any time the horse moves sideways or forward and sideways in response to a leg aid, he is performing a leg yield. As riders advance and they want the horse to reach up further with his hind legs and elevate his back, this exercise will help.

To teach the leg yield begin at the walk. These are the cues for a leg yield to the left, reverse them for a leg yield to the right. Use light, two-handed rein contact on half circle to the right (clockwise). Use the following cues to arc the horse's body on the half circle's track.

1. Light right rein contact to tip his head to the right (until you can just see the corner of his eye).
2. Light left rein contact to prevent his head and shoulders from falling to the right. This is the support rein.
3. Right leg pressure at the cinch to bend his ribcage to the left.
4. Keep your outside (left) leg in a neutral position, applying pressure only if needed to block a leftward swing of your horse's hindquarters, or to add impulsion if he loses his "forward" motion

Leg Yield (Basic)

- horse moving forward and sideways diagonally
- horse's head tipped toward rider's active leg
- Horse's body arced around rider's active leg



Reverse Arc Bend

This exercise is never taught until the horse is very comfortable in a natural arc bend (going forward in a circle both ways with head tipped slightly to the inside and ribs slightly to the outside). A reverse arc bend occurs when the horse travels the circle with his head slightly to the outside, his ribs slightly to the inside and crossing his outside front leg in front of the inside front leg. The horse is taught this exercise for suppleness, shoulder control and as a lead up to turn on the haunches. It can be done at both the walk and the jog/trot.

AIDS: To create impulsion, slowly change the natural arc bend of the circle to the reverse arc bend. The rein on the outside of the circle becomes a rein of opposition, the rein on the inside becomes supporting (keeping the horse from over bending and assisting in getting some lateral movement in the shoulders). The leg on the outside of the circle creates bend and helps the rein of opposition move the shoulders slightly to the

SECTION 5: FUN WITH HORSES

inside. The other leg maintains impulsion. The outside seatbone may assist the outside leg if the horse is resistive but will be removed when the horse relaxes. Once the horse and rider are competent at this exercise, it may be used in preparation for a Turn on Haunches. Remember, always return to a Natural Arc Bend before asking for the turn on the haunches or the horse will be shaped totally incorrectly.

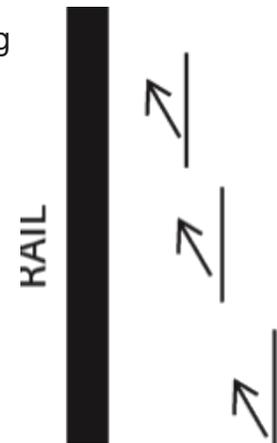
Two Track or Half Pass

The two-track or half pass is the movement in which your horse moves forward and sideways in a diagonal direction making two sets of parallel tracks. It is an excellent activity for developing muscle, coordination and a supple, athletic body on your horse. Some horses will begin a two-track/half pass more easily at a trot/jog because they have more forward motion to help them move. The two-track is a great exercise for horses. It encourages them to round their back, lift their shoulders and move their weight onto their hindquarters.

Cuing for the two-track/half pass is the same as cuing for a sidepass, except that your rein tension will be lighter and your opposing leg pressure more so that your horse will continue to move forward. A correct two-track/half pass requires the horse to either remain straight in its body as it moves along the diagonal or be slightly bent in the direction of travel. Leading with either the forehand or the haunches is incorrect. The two-track/half pass is the most advanced form of leg yield.

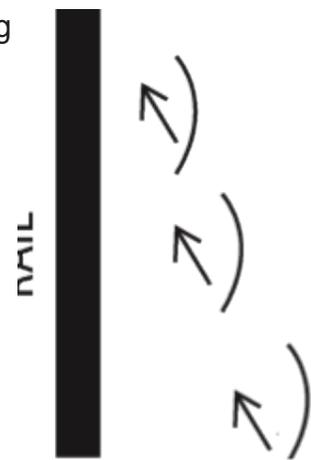
Transition from Leg Yield to Two Track/Half Pass

- horse moving forward and sideways diagonally.
- horse's spine is straight
- shoulders and hips of horse are an equal distance from the rail.
- Rein Aids: two direct reins
- Leg Aids: one active leg to move horse laterally, second leg maintains forward motion.



Advanced Leg Yield to Two Track/ Half Pass

- horse moving forward and sideways diagonally.
- horse is bent around rider's less active leg and head is tipped to look in direction of travel.
- Rein Aids: inside direct rein to tip nose, outside rein supports.
- Leg Aids: one active leg to move horse laterally, second leg creates bend and maintains forward motions.



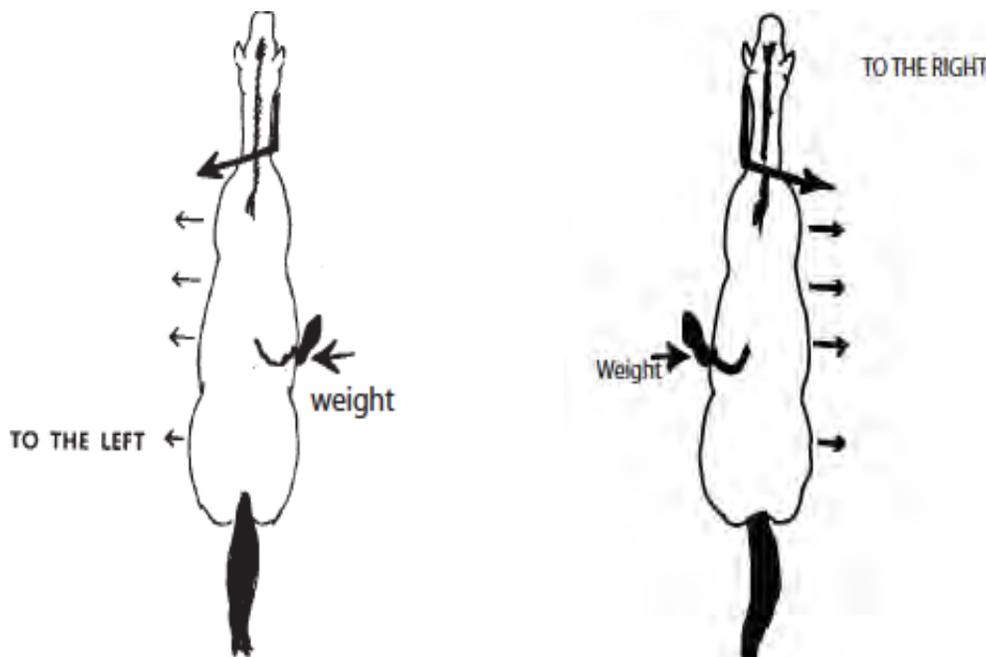
SECTION 5: FUN WITH HORSES

The Sidepass

In the sidepass your horse moves sideways, stepping to the side with both the forehand and hindquarters moving together evenly. The cues required for a smooth sidepass involve control of the forehand with the reins and hindquarter with the rider's legs. A sidepass performed correctly to the left should result in the right legs crossing over in front of the (left) supporting legs (and vice-versa when sidepassing to the right).

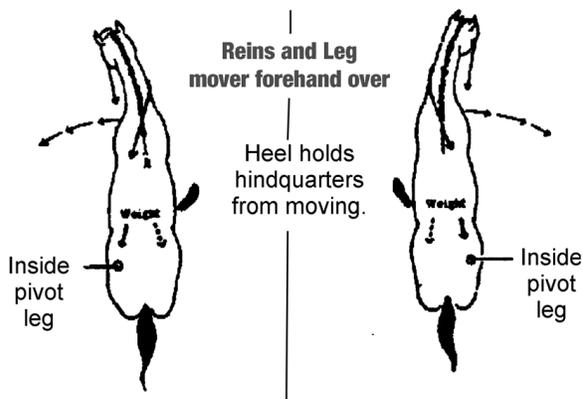
Aids: Active rein may be indirect, direct or rein of opposition (whatever is needed to keep the horse from leading with shoulders).

- active leg on same side as active rein.
- second rein supporting (doing what it has to do to make the active rein work).
- second leg open and inactive unless horse is crossing behind, then it will create forward motion.
- seat aid may be active on side of active leg. If the horse's shoulders get ahead of his hips, use a rein of opposition to slow the shoulders and let the hips catch up.



Turn on the Haunches

In the turn on the haunches, the forehand moves around the hindquarters. The inside hind leg acts as a pivot. The horse must keep the hindquarter in one place as the rider cues the horse to move the forehand around step by step. It can be done through 90, 180 and 360 degrees. The outside foreleg should cross over in front of the other as it steps around the hindquarter.



SECTION 5: FUN WITH HORSES

The turn on the haunches is more difficult than the turn on the forehand because the horse must transfer some weight to the hindquarters in order to do it. It may be done from a halt or from a small walking circle.

Aids:

- inside rein open, outside rein indirect
- inside leg open, outside leg active

Care must be taken that the rider does not try to pull the horse round with the indirect rein or the horse's shoulders, neck and head will all be out of position to turn properly. The spine can be straight or looking slightly in the direction the horse is moving. It is a good exercise to do to get the horse's weight on the hindquarters. Turning on the haunches is used in reining, gymkhana events and leads up to rollbacks for cattle work and reverse in the western pleasure class.

Haunches In

This is an excellent exercise to increase suppleness, collection, produce smooth lope transitions and prepare for flying lead changes. In this exercise, the horse bends around the rider's inside leg, then moves his haunches inward off the track. The aids are the same as those described in the advanced turn on the forehand, except the horse must maintain forward motion (the rider's inside leg produces this). It may be done at any gait.

Shoulder In

This is a three track movement to increase suppleness and assist with balance and collection. If the horse is coming directly toward you, you can see the legs moving on three tracks.

Track 1 - closest to inside of arena - inside front leg.

Track 2 - middle track - outside front leg directly in front of inside hind leg.

Track 3 - closes to rail - outside hind leg.

Aids: Implusion, bend, inside rein direct or rein direct or rein of opposition and outside supporting or indirect. Inside leg creates bend; outside leg works with hands to bring forequarters in off the track.

The Rollback

The rollback is a change of direction at the canter/lope, combining the stop and turn into one motion. Your horse should bend into the turn, turning on its hocks and using the inside hind foot as a pivot, with its front legs close to the ground to maintain momentum. A rollback to the left will come out on the left lead (and vice versa).

The rollback is more animated than a turn on the haunches. It is a lope in one lead, stop, sweep 180 degrees over the hocks away from the lead leg and immediately exit on opposite lead.

SECTION 5: FUN WITH HORSES

Extended Stride

An extended (lengthened) stride means the horse steps 'longer' (not faster) in whichever gait it is in.

The Counter Canter

The counter canter demonstrates the horse's suppleness, coordination, balance and obedience. A counter canter is a movement in which the horse lope/canters on the outside lead. It involves the horse cantering with the left leg leading, while being worked on the right rein, and vice versa.

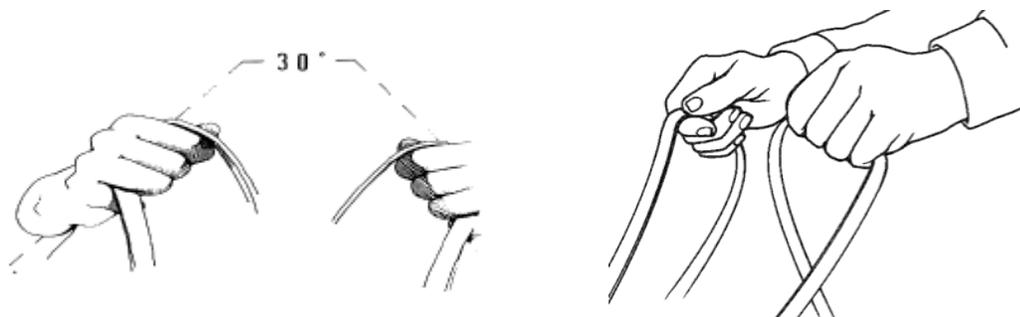
The counter canter must only be attempted when a horse can pick up and hold correct leads constantly. The horse must keep its head and neck bent over its leading foreleg, so that it is, in fact, bent in the opposite direction to that in which it is moving.

Holding the Reins

Holding the reins in two hands is important for beginner riders, to teach them balance and how the horse responds to different reining aids. You must know how to hold the reins in two hands when schooling horses. Western riders should know how to effectively use two hands before they ride with one hand. English riders always ride with two hands on the reins. It is most common for right handed people to ride with their left hand and left handed riders to ride with their right hand leaving their "best" functioning hand free to rope, open gates etc.

Two Handed Position

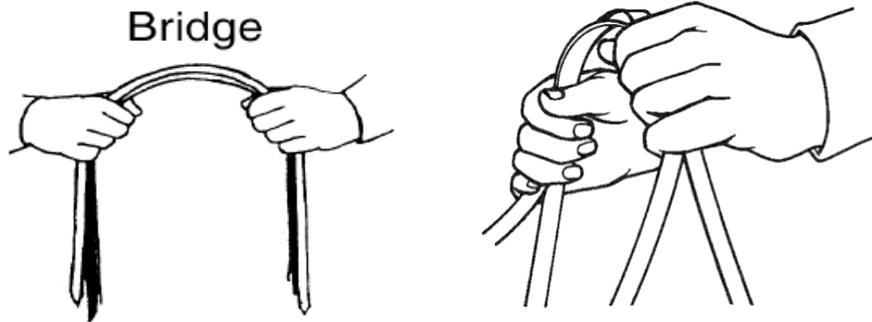
(This is an accepted method for English & Western riding). The reins are held in the palm of the hand by closing the thumb and index finger, not gripping with the other fingers. The hands should be slightly inclined (30°) with thumbs up and the ends of the reins passing up through the hands to the thumbs. The reins may be held under the little finger or pass between it and the ring finger. The loose ends of the reins should hang over the horse's neck on the right side, although for safety, the loose ends of the reins can be crossed over the horse's neck in case one rein is dropped. To adjust the length of the reins, the left hand should grasp the right rein and the right hand grasp the left rein until the desired length is achieved. This allows you to always have a light contact with the horse's mouth.



SECTION 5: FUN WITH HORSES

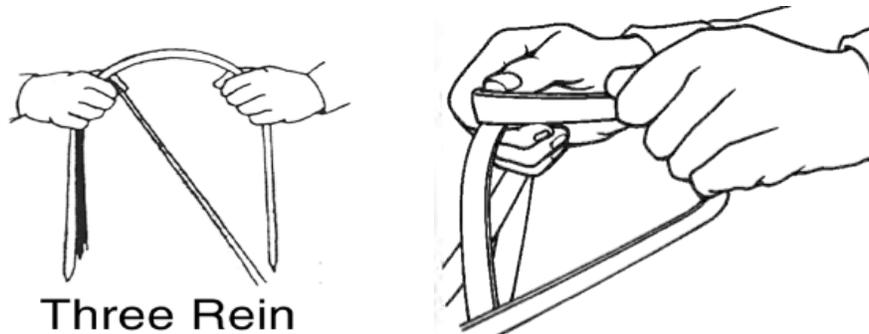
Bridge Position

This position is used with split reins. Cross the reins over the neck of your horse so that the loose ends of the reins hang on each side of your horse's neck. Pick up the reins, as though they were one, joined rein. You will now be holding both reins with each hand. As above, the reins may be held under the little finger or pass through the hands up to the thumbs. To adjust the length of the reins in this position, you can slide each hand along the reins, by holding the reins steady with your other hand.

**Three Rein Position**

The three-rein position is similar to the Bridge position. The difference is that one hand will hold the rein from its side and the other will hold its rein as well as the bight of the opposite rein. The single rein is held on the inside or active rein side and switches as the active rein switches. Usually this rein is shortened on the active side.

With Western riding, as horses and riders mature, they will advance on to use a leverage bit held with one hand. They may ride with either hand, with the ends of the reins hanging down the same side as the hand holding the reins.

Split Rein

Another method of holding split reins is to have no fingers between the reins. The proper method of holding split reins is to have the pointer finger between the reins with the palm down. In both cases, the hand is held at a 45° angle with the palm down.



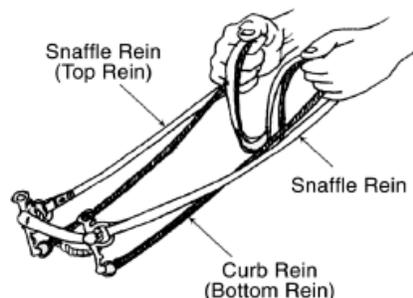
**One Handed
with split reins.**

SECTION 5: FUN WITH HORSES

Romal Rein

When using romal reins, no fingers can go through the reins. The reins run up through the bottom of the hand and out through the top. The extension of the romal is held with the free hand at least 40 cm from the rein hand.

One handed
with romal rein.

**Four Reins**

With English riding, as horses and riders mature, they may advance to use a leverage type bit, such as a pelham or double bridle but will continue to use two hands on the four reins. The snaffle rein is normally carried outside and underneath the little finger, the curb rein is carried inside the snaffle rein and is carried between the little and ring finger. This allows you to ask with the snaffle rein before demanding with the curb rein.

Rein Effects

The reins are an important part of the rider's equipment. They can be used in a variety of ways. The rider's hands control what happens to the reins, which are attached to the bit in the horse's mouth, therefore it is important that the rider develop "good hands". You can very quickly ruin a horse by using the reins in a harsh manner and destroy this means of communication to your horse.

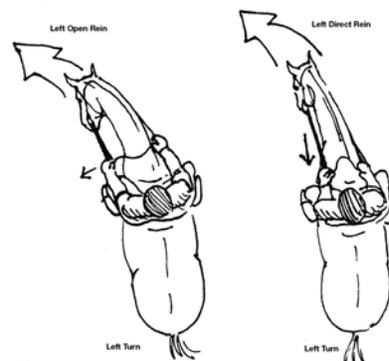
The **open** and **direct** rein are mainly used for forward turns and putting a horse on a circle with an inside bend. Positioning the horse's head often occurs with the use of an open or direct rein as well.

Open Rein

Is often used on young horses where the rider "opens" the hand away from the neck (never back), on the same side they wish the horse to turn into. It directs and encourages the horse instead of forcing him. One of the most important uses of an open rein is in the case of a runaway or any out of control horse. An open rein is applied as strongly as necessary until the horse circles down and control is regained. This is called an emergency stop. It is important to have either a chin strap (Western) or cavesson (English) to prevent the bit ring from being pulled into the horse's mouth.

Direct Rein

Is a more subtle rein that produces the same action as the open rein, however you do not bring your rein away from the horse's neck, you simply apply a bit of pressure on the bit by bringing your rein hand back towards your hip. This leads the horse into the turn. There should be a straight line from your elbow to the horse's mouth. For example, if the horse is turning to the left you use the left rein to create the turn. You may apply a one-handed direct rein aid to turn but usually you do not want this much lateral bend in the neck.



SECTION 5: FUN WITH HORSES

If riding with two hands and two direct rein aids are given at the same time, the horse should flex, slow, stop or back. The direct rein is used more often as the horse advances in its training. It is also used to collect the horse or decrease speed.

Indirect Rein

A rein effect in which pressure is put on one side of the horse's neck with the rein and the horse moves away from that pressure. The rider should keep his reining hand inside his shoulders. If crossed too far over the neck, the rein pressure will increase on the mouth so the horse will turn one way but his head will go the other, making the horse very unbalanced.

An indirect rein is assisted by a direct rein in the learning stages. The Aids would be indirect rein and leg aid on the same side. If the horse does not turn away from neck pressure, a direct rein assists in getting the horse to look where he is going.

The indirect rein is a lead up to the neck rein and is called a neck rein when the rider advances to one hand. If a neck rein is used properly, the pressure is mainly on the neck, not the mouth. When the horse turns away from a neck rein, the rider will see part of the horse's opposite eye (inside). It is often used in Western to demand a prompt turn of the horse's shoulders.

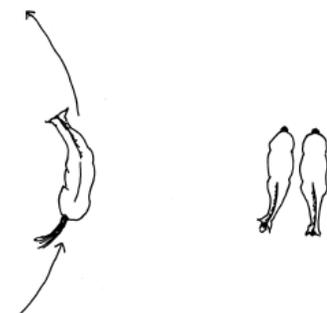
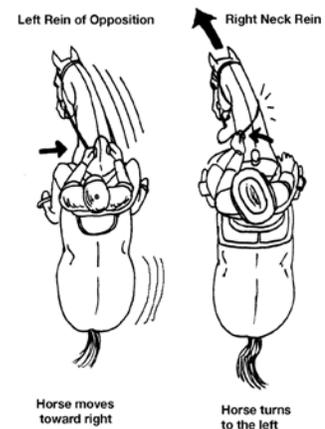
Rein of Opposition

Once a rider is past the beginning stages of riding it is important to learn how to correctly use a rein of opposition.

A rein of opposition is a rein used to either correct or supple the horse's shoulders. Therefore it is a great tool to use if the horse is shying, or falling in or out of a circle. When using the rein of opposition, pressure is put on the bit and neck on one side of the horse in order to move his shoulders sideways in the opposite direction. To do this, the rider moves the rein toward their opposite shoulder but keeps it short enough to not cross the neck line.

This rein effect requires the other rein to be used as a support rein so the horse does not over bend in response to the rein of opposition. The support rein also helps the rein of opposition reduce forward motion so the shoulders can be moved laterally. In almost all cases the rider assists the rein of opposition with a leg aid on the same side. The other leg is open to allow the shoulders to move. A weight aid may also be used on the same side as the rein of opposition.

Problem: For example the horse falling out of circle to go back to friends at other end of arena. Shoulder to the outside of track, head to inside.



SECTION 5: FUN WITH HORSES

Correction: Right rein of opposition, right leg, right seat bone, left support rein, left leg open. If the rider is using a right rein of opposition, he should be able to see the horse's right eye and the horse's shoulders moving left. There will usually be forward movement as well.

Support Rein

A support rein is a secondary rein used with another rein effect. It is the less active of the two reins but essential for the active rein to do its job. It is usually a holding rein and its position may vary to get the desired result.



SECTION 5: FUN WITH HORSES

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Go to a local horse show (or watch horse videos online of horse shows if there is no show near you). Watch the various gaits of the horse and how they transition from one gait to another. Be aware of how the rider positions themselves on the horse. If possible, take a video of the show and show this video at the next meeting. Be prepared to talk about what is happening in the video.

AND/OR

2. Practice the various gaits presented in this meeting with your horse. Which one is easier for you and your horse? Which one does your horse do better at? Which one is your favourite? Record your findings in your Record Book.

AND/OR

3. What does horse and rider suitability mean? Record your answer in your Record Book.

SECTION 5: FUN WITH HORSES

DIGGING DEEPER**For Senior Members****Become the Trainer - Part Three**

Once the lessons from the Riding and Rider's Body Position meetings have been mastered, it's time to move on to creating lesson plans for learning how to walk, trot, canter, halt and many other aspects of horse riding.

Keep in mind that riders may be young children or older adults when creating lesson plans. Use various types of learning (reading, discussion, hands-on, with the horse and without, etc.) when teaching these new concepts.

Put your lessons in your Record Book.

ACTIVITIES

Activity #1 - Gaits of the Horse

Items Needed:

- Gaits of the Horse worksheet (found at the end of this meeting)
- Writing Utensil (pens/pencils)

Instructions:

1. Give each member a Gaits of the Horse worksheet.
2. Have members work individually to fill in the chart by drawing the sequence of the feet for each gait.
3. Once members have completed the worksheet, review the answers to ensure that everyone has them correct.

Activity #2 - Match it Up!

Items Needed:

- Match it Up! Worksheet (found at the end of this meeting)
- Writing Utensils (pens/pencil)

Instructions:

1. Give each member a Match It Up! worksheet.
2. Have members work individually to match up the statements.
3. Once members have completed the worksheet, review the answers to ensure that everyone has them correct.

Activity #3 - Reining It In

Items Needed:

- A quiet horse
- Reins

Instructions:

1. Have members, one by one, mount the horse and use the reins using two hands to become comfortable with turning the horse.
2. Progress to having the member use one hand if they have mastered turning the horse with two hands.
3. Discuss the various positions that the hands can be held while holding the reins.

SECTION 5: FUN WITH HORSES

Activity #4 - Musical Poles***Items Needed:***

- Poles (one less than the number of horses participating)
- A horse for each member
- Radio or music of some type

Instructions:

1. Place the poles randomly around the ring.
2. All members ride their horses around the ring while the radio plays.
3. When the radio stops, members have to find a pole and their horse must stand over the pole with the horse's front legs on one side and back legs on the other.
4. The one who ends up without a pole is out.
5. Keep going until you have two horses and one pole, then crown your winner.

NOTE: this activity could first be done with the members walking on foot to play this game before trying it on horseback

SECTION 5: FUN WITH HORSES

Gaits of the Horse

Draw the sequence of the feet of a horse as it travels at a:

| Walk | Trot | Lope/Canter | Gallop |
|------|------|-------------|--------|
| | | | |

SECTION 5: FUN WITH HORSES

Match it Up!

Match the following:

- | | |
|---|---|
| 1. If a horse is given all the water it can drink when it is hot.... | a) Is quiet, reliable and has had a lot of training |
| 2. If a horse gains unlimited access to the grain pile..... | b) To train a young horse |
| 3. A young rider that has never ridden before should ride a horse that..... | c) A lot to a new rider |
| 4. Only an experienced rider should ride a..... | d) A pony |
| 5. An old horse with lots of training and experience can teach..... | e) It may poison itself by having too much |
| 6. An experienced rider should never try..... | f) Large, tall horse |
| 7. It is difficult for a young short person to ride a..... | g) It may get colic |
| 8. An adult should never try to ride..... | h) Green horse |

Match it Up! Answer Key

Match the following:

1. If a horse is given all the water it can drink when it is hot....
g) it may get colic
2. If a horse gains unlimited access to the grain pile.....
e) it may poison itself by having too much
3. A young rider that has never ridden before should ride a horse that.....
a) Is quiet, reliable and has had a lot of training
4. Only an experienced rider should ride a.....
h) green horse
5. An old horse with lots of training and experience can teach.....
c) a lot to a new rider
6. An experienced rider should never try.....
b) to train a young horse
7. It is difficult for a young short person to ride a.....
f) a large, tall horse
8. An adult should never try to ride.....
d) A pony

MEETING 29: SELECTION AND BUYING

Topic:

- Buying a horse
 - What to look for first
 - What is the horse's character
 - What is the horse's skill

Objectives:

- To learn about the key things to consider when buying a horse

Roll Calls

- What are three things you should consider when buying a horse?
- Name somewhere you could buy a horse.
- How much money would you be willing to spend on a horse?

Sample Meeting Agenda – 2 hrs. 5 minutes

| | | |
|-------------------------------------|--|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review Purchase or Lease | 10 min |
| Public Speaking/Judging Activity | Activity #1 – Sales & Lease Agreements Listing (instructions found at the end of this meeting) | 30 min |
| Topic Information Discussion | Review Suitability, Disposition, Price of the Horse and Paperwork. | 30 min |
| Activities Related to Topic | Choose from Activities #2 and/or #3 (Auction Catalogue Listing, Auction Barn Visit) (instructions found at the end of this meeting). | 30 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Unless otherwise stated, all diagrams are courtesy of 4-H Alberta

NOTE: Activities can be interspersed with Topic Information.

Topic Information

One of the most important safety decisions you will make is selecting the right horse for you to use or buy. Safety and suitability of horse to rider are the most important factors when selecting a horse. The horse should be appropriate for your level of horse handling and riding skills and, hopefully, as safe as possible for its intended use.

Purchase or Lease

Begin by consulting a knowledgeable horse person to help select your horse. Qualified, reputable riding instructors, trainers, breeders, veterinarians or other horse professionals are good sources for help in locating a horse. Next, decide if you will purchase or lease the horse. If you are unable to purchase or lease a horse, you may be able to locate someone willing to share a horse with you. A variety of “shared horses” or “share boarding” options are available to share expenses and/or responsibility for care of the horse with the owner. The conditions for sharing the horse should be specified in a written agreement.

Horse Fact

Selecting the right horse is a very important decision.

Suitability

The purpose and intended use of the horse will determine the type and breed of horse that is most appropriate for your needs. An outstanding show horse may not be suitable for competitive or pleasure trail riding. Likewise, an excellent trail horse may not be successful in the show ring.

Carefully compare your horse handling experience and abilities to the experience, ability and disposition of the horse. A novice rider is usually not well suited to a young, inexperienced, or highly spirited horse. An older, calmer horse with a successful show record or considerable experience is generally preferred for young or inexperienced riders. Recommendations from horse professionals or knowledgeable horse owners (other than the seller) can be very helpful in locating suitable horses that match the rider’s ability.

A qualified veterinarian can help assess the athletic ability, soundness and conformation or structure of the horse with a pre-purchase exam.

The conformation and soundness of a horse affect its suitability for a specific purpose or long-term usefulness. The horse should be balanced, sound and free of serious structural abnormalities or health problems.



Veterinarian checking the horse's mouth

Disposition

Disposition is the sum of personality, trained manners and experience. It will determine the compatibility of you and the horse. Disposition is extremely important to consider because it is the characteristic that will determine whether or not you actually like your horse. Inquire about his disposition and observe the horse's behavior in his surroundings. Is he gentle and friendly, is he stubborn or lazy, or does he have any bad habits? Don't buy a horse with a bad habit hoping to change its behaviour.

Before you climb on, watch someone else ride him. Finally try him yourself. Can you control the horse and does he respond to you?

Price of the Horse

The price of the horse must be within your budget, and it should be compared to current market prices for similar type horses. Compare prices of horses from several sources, review current sale averages of breed auctions, and talk with knowledgeable horse owners in your area to establish an idea of a reasonable price. However, the purchase price is generally the cheapest part of horse ownership.

Paperwork

Finally when you have located a suitable horse, request a sales or lease agreement. The sales agreement will define the conditions of sale, and protect you in the event of a later dispute. The agreement should identify the horse, the price, deposit (if required) method of payment, and any other details such as a trial period. A bill of sale, transfer of ownership or registration papers and any required health certificates must be provided at the time of sale. The Animal Pedigree Act of Canada states that, by law, sellers of registered horses must transfer the registration papers to the buyer within six months (or as dictated by the breed association).

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Using either an auction catalogue or by looking at an online auction sale, choose which horse you would buy if money wasn't an object. Cut out or print off the picture of the horse and write out your reasons for wanting to buy that particular horse. Keep in mind things like the size of the horse, what you want the horse for, what training the horse has had, etc. Put the picture and your reasons in your Record Book.

AND/OR

2. What does a veterinarian look for when doing a pre-purchase exam on a horse? Interview a veterinarian and write down a list of everything they check before make before they make a report to the person who is interested in buying the horse. Record your findings in your Record Book.

DIGGING DEEPER

For Senior Members

Annual Cost of Owning A Horse

There are many factors to consider before deciding to own a horse.

- Feed
- Regular veterinary care
- Farrier
- General maintenance of barns, fencing, trailers, etc. OR Cost of boarding
- One-time expenses (start-up expenses) such as purchasing the horse, grooming supplies, saddle, etc.

Research and interview those in the horse industry to estimate the costs for each of the above, plus any other costs that you might incur to come up with a dollar figure for owning a horse for a period of one year. Then, add in the one-time costs and divide them over the expected lifetime of the horse to get a true yearly cost.

Record your findings in your Record Book.

ACTIVITIES

Activity #1 - Sales & Lease Agreements

Items Needed:

- Copies of a sales agreement
- Copies of a lease agreement

Instructions:

1. Divide the members into small groups.
2. Give each group a copy of a sales agreement and a lease agreement. If you don't have access to these type of agreements, samples can be downloaded from the Internet. If you are using copies that you have, be sure that no confidential information is contained in the agreements.
3. Ask each group to review the agreements. Have them make a list of the information they would need to gather in order to fill out the forms (e.g. identifying information about the horse, fees, expectations of the horse owner and the horse, insurance required, any other stipulations, etc.)
4. Once members have reviewed the agreements, have half of the small group be the horse owners and the other half be the person wanting to enter into a sales or lease agreement. Have the members fill out an agreement form after agreeing on the terms outlined in the agreement.

Activity #2 - Auction Catalogue Listing

Items Needed:

- Old horse magazines
- Scissors
- Glue
- Blank paper
- Writing utensils (pens/pencils)

Instructions:

1. Divide the members into pairs.
2. Give each pair a picture of a horse out of a magazine.
3. Have the members glue the picture to the top of the page.
4. Base on the picture only, have members write a description for the horse that could be used in an auction catalogue listing. Tell members to be as creative as

possible while creating this fictitious description. Remind members to consider the following in their description:

- Physical description of the horse
 - Age, breed, gender
 - Lineage
 - Purpose of the horse
 - Training that the horse has received
 - Past accomplishments
 - Possibilities that the horse could accomplish
5. Have members present their auction listing to the group.

Activity #3 - Auction Barn Visit

Items Needed:

- Local auction barn hosting a horse sale
- Auction Catalogue
- Writing utensil (Pen/pencil)

Instructions:

1. If possible, go to the auction barn before the sale starts so members can have a chance to look at the horses while they are calm (at least calmer than they will be in the sales ring).
2. Have members put a star beside the horses in the catalogue that they think would be suitable for what they want in a horse.
3. Watch the sale and have members write down the prices of the horses that they were interested in. Have them also make any notes of extra information the auctioneer may give about the horse.

Activity #4 - Horse Jeopardy

Items Needed:

- Horse Jeopardy questions (found at the end of this meeting)

Instructions:

1. If desired, create cards with the dollar value on one side and the answer on the other side. If time doesn't permit this, print off a sheet with the questions and read the questions as the game is played.
2. Divide members into three or more teams of two to four members per team.
3. Following the style of the TV Jeopardy Game Show, have each team take a turn at choosing a category and a dollar value to determine their answer.
4. Read the answer and have them answer in the form of a question.
5. If the team gets the question correct, they receive the dollar value of the question towards their total score. If they don't get the question correct, the other teams can have a chance at answering the question.
6. The team with the highest score once all categories/questions have asked, is the winner of the game.

Horse Jeopardy

Healthy Animals

100 – A body condition score of a 1 would mean this. (What is a very skinny, emaciated horse?)

200 – The ideal body temperature range of a horse. (What is 37°C-38.5°C (99.5°F-101.3°F?)

300 - This vital sign is examined via the animal's rectum. (What is its temperature?)

400 - The ideal heart rate range of a horse. (What is 28-44 beats/minute)

What's in a Feed?

100 – This should be provided to horses free choice. (What is salt? OR What is water?)

200 - The natural way a horse eats. (What is grazing?)

300 – The main source of bulk food for a stabled horse. (What is hay?)

400 – These are the five components of a balanced ration. (What are protein, energy, water, minerals and vitamins?)

Horse Equipment

100 – These can be divided into two main groups – leverage and non-leverage. (What are bits?)

200 – Another name for a soft brush. (What is a body brush?)

300 – This is used to clean out a horse's hoof. (What is a hoof pick?)

400 – The two main types of saddles. (What are western and English?)

Diseases

100 – This is a disease that can spread from animals to humans (category not specific disease). (What is a zoonotic disease?)

200 – This type of disease can pass from one animal to another. (What is an infectious disease?)

300 – An alternative name for Equine Infectious Anemia. (What is Swamp Fever?)

400 – The common name for Chronic Obstructive Pulmonary Emphysema (What is heaves?)

Fitting & Showing

100 – This can be used to make white fetlocks extra white. (What are baby powder or corn starch?)

SECTION 6: OTHER

200 – This can be used to enhance the look of the hooves. (What is gloss (or shoe polish)?)

300 – Unless the judge asks otherwise, the direction you turn your horse when the judge is finished. (What is turning the horse away from you (or the right)?)

400 – The minimum distance you should leave between you and the nearest horse when lined up nose to tail or side by side. (What is at least 3 metres (10 feet)?)

MEETING 30: JUDGING

Topic:

- The Basics of Judging
- Judging a Conformation Class
- Judging Tips
- Outline for a Set of Reasons

Objectives:

- To provide some extra judging tips

Roll Calls

- Have you ever judged horses before? If so, how did you do?

Sample Meeting Agenda – 2 hrs. 10 minutes

| | | |
|-------------------------------------|---|--------|
| Welcome, Call to Order & Pledge | | 10 min |
| Roll Call | | 5 min |
| Topic Information Discussion | Review What is Judging?, Judging a Conformation Class of Horses and Judging Tips – Comparative Terms. | 20 min |
| Public Speaking/Judging Activity | Activity #1 – Criteria for Judging Horses (instructions found at the end of this meeting) | 15 min |
| Topic Information Discussion | Review Outline for a Set of Reasons | 30 min |
| Activities Related to Topic | Choose from Activities #2, #3 and/or #4 (Judging Horses, Judging Horses – Part 2, Where Should I Stand?) (instructions found at the end of this meeting). | 40 min |
| Wrap up, Adjournment & Social Time! | | 10 min |
| At Home Challenge | Choose one of the At Home activities to complete. | |

NOTE: Activities can be interspersed with Topic Information.

Topic Information

What is Judging?

Just like critical thinking, judging is the process of making a decision. It involves using a set of criteria to form an opinion on something and having reasons to support that opinion. Judging is very important because of the transferrable skills it teaches you. It is important to remember that judging is not just a 4-H activity. Even if you do not become an official judge for something in the future, you will use this process long after your 4-H career and it can be applied to any class from livestock to clothing to photography as well as later in life from shopping, to selecting a stallion or mare to choosing a job and a career.

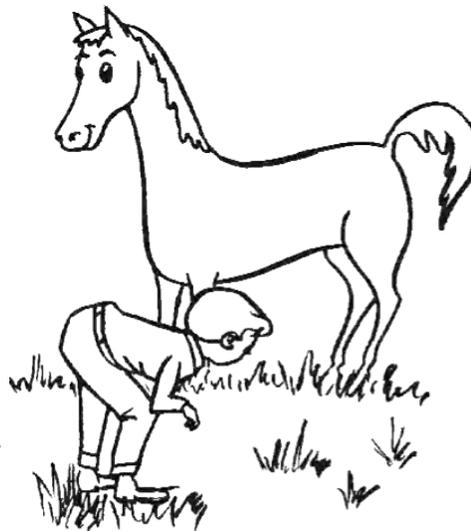


Diagram courtesy of 4-H Alberta

And remember, judging is a matter of opinion. It is not a matter of 'right' or 'wrong.' Focus on having logical, informed reasons for your decisions.

Judging a Conformation Class of Horses

When judging conformation, consider each of these factors:

- Soundness
- Conformation
- Muscling and Balance
- Travel or Way of Going

Check the animals over carefully from bottom up and front to back, comparing these factors. The horse with the best combination of all of these will be your top placing.

Judging Tips - Comparative Terms

General Appearance

Below are examples of some terms used in horse judging. Please refer to horse judging manuals or breed web sites for additional terms.

- Heavier muscled, more ideally balanced mare (stallion etc)
- Shows more refinement and style
- Was a balanced, refined and feminine mare
- More alert and attentive expression
- More substance of muscle and bone
- More rugged and durable type of frame

Balance

- Longer, more sloping shoulder
- Deeper barrelled horse
- Deeper ribbed, wider chested
- Shorter top line
- Stronger over the back, loin and croup
- Exhibited more balance with all parts blending smoothly together

Muscling

- Showed more tone and power of muscling from end to end
- Was more powerfully muscled in his quarters
- Fuller through (his/her) forearm and shoulder, and was more powerfully muscled through (his/her) hindquarter
- Thicker, heavier muscled stifle
- Heavier muscled forearm

Head and Neck

- Trimmer throat latch coupled with a longer, smoother neck
- Finer featured
- Longer necked
- More prominent through the jaw
- Shorter distance from eye to muzzle

Structure

- Stood straighter on his/her legs
- Cleaner about the knees and hocks, with a flatter cannon bone
- Stands on a shorter cannon
- More correct angle at the hock
- Longer more sloping pasterns
- Wider, deeper heel
- Hooves more proportional to body size

SECTION 6: OTHER

Way of Going

- Moves out straighter and more correct at the walk (trot)
- Straighter, truer stride
- More fluid
- More flexion of the knee and hock, showing more reach
- Drives from behind with more hock action

Breed, Sex, Character and Quality

- Higher quality hair coat
- Showed more breed character and femininity/masculinity
- More prominent, deeper jaw
- Showed more breed character about the head and neck
- Was more stylish and eye appealing

Outline for a Set of Reasons

When you give your reasons for placing animals in a certain way, you should give your reasons based on how you have judged the animals, i.e. comparatively. If you were buying a horse from this group, why would your first choice be the horse that you have placed on top? Why was your #2 horse your second choice and not your first choice? Why was #2 placed over #3. Why was #3 placed over #4?

In giving reasons, a class of four animals is divided into three pairs: a top pair, a middle pair and a bottom pair. The basic outline for an entire set of reasons (for a placing of 3-1-2-4) is as follows:

I place this class of _____ (horses) _____, _____ (your placings, ex. 3, 1, 2,4) _____.

I place ___(3)___ at the top of the class because _____ (explain why) _____.

I place ___(3)___ over ___(1)___ because _____ (explain why) _____.

I place ___(1)___ over ___(2)___ because _____ (explain why) _____.

I place ___(2)___ over ___(4)___ because _____ (explain why) _____.

I place ___(4)___ in 4th place because _____ (explain why) _____.

For these reasons I place this class of _____ (horses) _____, _____ (your placings, ex. 3, 1, 2,4) _____.

Granting that ___(4)___ has _____.

If you give good reasons why the 3rd exhibit places over the 4th, it is usually unnecessary to give reasons for placing the 4th placed article last, or on the bottom. It is important to be positive at all times. If you are participating in a Judging Competition though, make sure to check before the judging competition as to what format is preferred.

Granting

It is best practice to mention the good qualities of a lower placed article. This is called granting. This is important to remember, especially when explaining your last placing. Granting gives credit to an inferior animal for an area where quality surpassed the higher-placed animal.

Mention a close or easy placing. Sometimes, there may only be one reason for placing.

For more information on judging, refer to the 4-H Ontario Judging Project Manual and the 4-H Ontario Judging Toolkit.

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Practice judging a class of horses. If you do not have access to horses, try judging a group of whatever you can find (e.g. shoes, cell phones, sports equipment). Practice giving reasons in front of a group.

AND/OR

2. Go to a local horse show or watch a horse competition online if possible and watch for the following things:
 - Where does the handler stand?
 - Where does the judge stand?
 - What is the handler wearing?
 - How does the handler know when to move about the show ring?
 - How did the judge line up the winners?
 - If you can hear the judge, what format did they use for giving reasons?
 - Any other details that are unique to a horse competition

Record your findings in your Record Book.

DIGGING DEEPER

For Senior Members

Becoming an Official Horse Judge

What steps are needed in Ontario (or in Canada) to become an Official Horse Judge? Through research, find out if there is an official process for becoming a horse judge. If there is, what are the steps? Is there a cost? Are there special workshops to attend?

Find out all of the details and record your findings in your Record Book.

ACTIVITIES

Activity #1 - Criteria for Judging Horses

Items Needed:

- Blank paper
- Writing utensils (pens/pencils)

Instructions:

1. Depending on the abilities of the group, have members either work individually or as a group.
2. Create a list of ideal criteria that a member would want to see in a horse.
3. If members completed this activity individually, have a few members share their list and why they chose the criteria they did.

Activity #2 - Judging Horses

Items Needed:

- Live horses (4) OR pictures of horses (4)
- Judging Card (found at the end of this meeting)
- Writing utensils (pens/pencils)

Instructions:

1. Give each member a judging card.
2. Review the criteria for an ideal horse.
3. Give members time to inspect the horses and make their choices for placing the horses.
4. Ask some members to give their reasons for their placings.

Activity #3 - Judging Horses – Part 2

Items Needed:

- Live horses (4) ready for riding
- Judging Card (found at the end of this meeting)
- Writing utensils (pens/pencils)

Instructions:

1. Explain to members that one of the reasons for practicing judging is to improve critical thinking skills for everyday life, such as choosing a horse to purchase.
2. Have members ride all four horses to determine, based on pre-determined criteria for riding horses, how they would place the horses.
3. Give each member a judging card.
4. Ask some members to give their reasons for their placings.

Activity #4 - Where Should I Stand? (Intro to Horse Showmanship)

This activity will help younger members visualize and practice where they need to stand while their horse is being inspected by a Judge, Vet or Farrier. If they haven't had any Showmanship experience then you will need to give some general guidelines before they play the game. Explain how the area around the horse is divided into quarters. Discuss the Safety aspect and the importance of always being on the same side of their horse as the person inspecting the hindquarters of their horse. By being in this position they can control the hindquarters by pulling the nose toward them which would cause the horse to swing the hind end away from the person inspecting. When the person inspecting their horse is in front of either shoulder, the handler should be in front of and facing their horse on the opposite side. The Safety consideration here would be that the handler can pull the head away from the person inspecting if necessary.

This is a game a younger member can play with an older member. Their partner should be comfortable with Quarters so they can offer guidance during the game. The younger member is the Handler and the older member can be the Judge, Vet or Farrier.

Items Needed:

- Game cards (enough so each pair will have one) (game cards found at the end of this meeting)
- Two game pieces (1 red & 1 black checker or 2 quarters – one is heads and the other is tails)

Instructions:

1. Give each pair a game card and two game pieces.
2. Meet with the older members prior to the start and explain the game. Also ex-

SECTION 6: OTHER

plain their role as the coach, teacher and mentor. Older members may want to play a few games themselves to get comfortable with the process.

3. Once the older members are comfortable with the game, have them partner up with a younger member.

The Game:

1. The handler (younger member) can only move to Box A or Box B. The Judge, Vet or Farrier (senior member) can move anywhere.
2. The handler starts in Box A (on the front, left side of the horse).
4. The Judge, Vet or Farrier places their game piece in any Box and the handler must respond by moving or staying where they are.

Activity Credit: 4-H Alberta Horse Project

Judging Horses

Judging Card

Criteria:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Giving Reasons:

I place this class of _____, _____, _____, _____.

I place _____ first because.....

I place _____ over _____ because.....

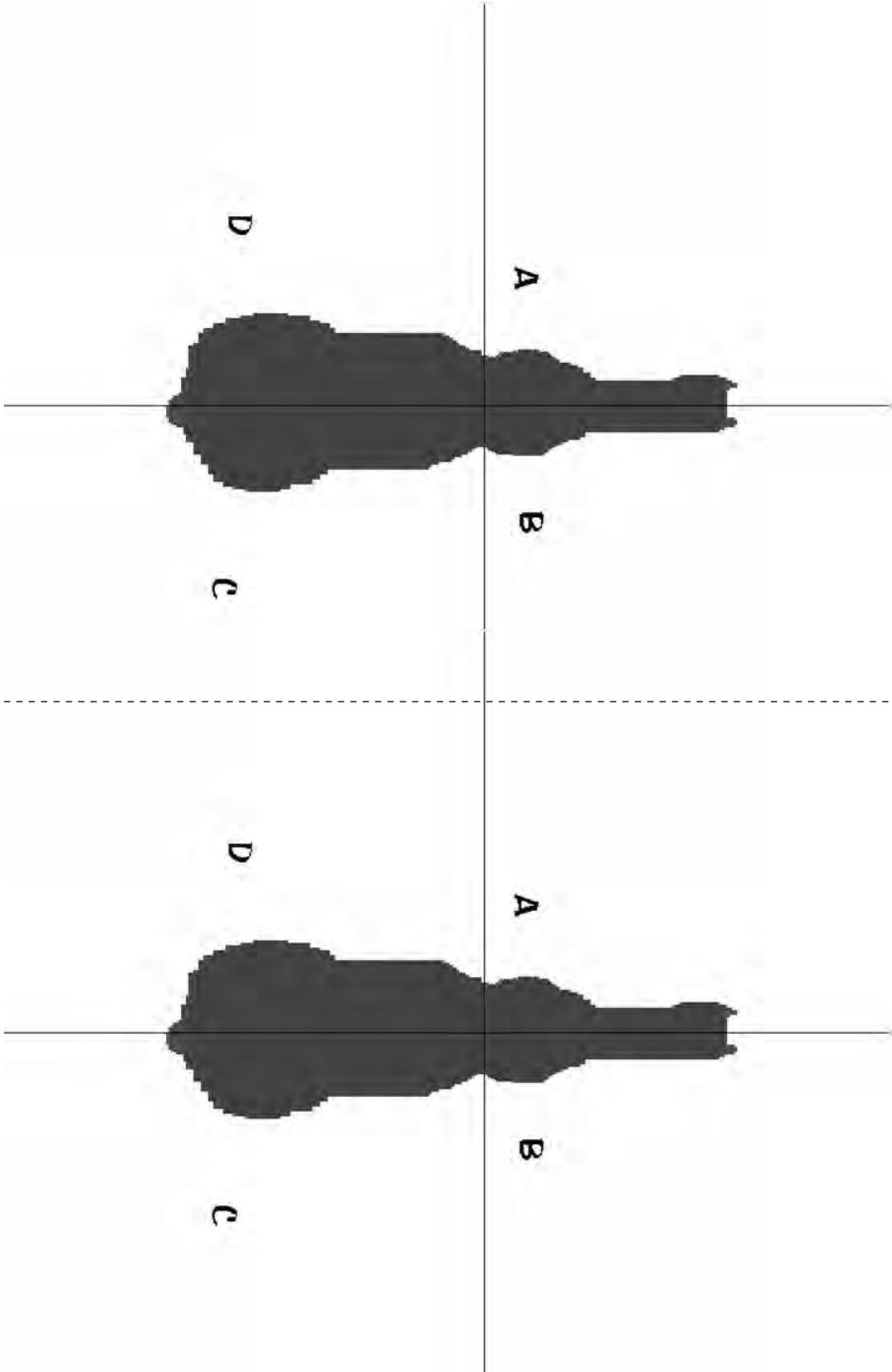
I place _____ over _____ because.....

I place _____ over _____ because.....

I place _____ 4th because.....

For these reasons, I place this class of _____, _____, _____, _____.

Official Placing _____.



FITTING & SHOWING SUPPLEMENT

Topic:

- Preparing for the show ring
 - Three months before the show
 - Several days before the show
 - The day before the show
 - Day of the show
 - At the show
 - After the show
- How to show
 - Where to stand
 - Rules of the ring
 - Guide for proper turnout
- Final grooming inspection zones

Objectives:

- To assist 4-H members to be prepared when showing horses

NOTE: this information is provided courtesy of Region Two 4-H. Thank you to those volunteers that put this information together so that it can be shared with all 4-H Horse Club Members.

Topic Information

Fitting and Showing Your Horse

Most breed Associations have booklets on showing. You may wish to contact them. Many local horse clubs will also have people to help you learn about showing. This material has been reviewed by many experts in the industry. For specific information for your breed, contact your breed association.

Standard Showmanship Halter Class

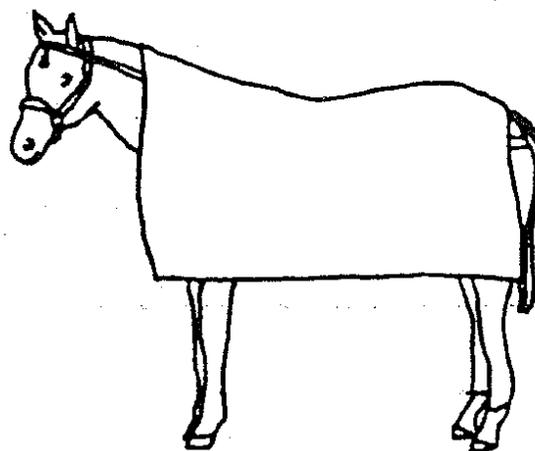
The rules for judging a class must be determined by the organizers of the show as rules vary according to breeds and types. Individual judges can also hold different opinions as to what they like to see in a class so be sure you understand what will be expected of you before the class begins.

The most important thing to remember about showing is that it is supposed to be fun. This is a great opportunity for you to try your hand at a showmanship class and to get advice from a judge or knowledgeable horseperson. Don't be afraid to ask questions and don't be afraid to enjoy yourself.

A healthy horse looks bright and alert and this is achieved through good muscle tone, proper nutrition, regular veterinary and farrier care and a complete grooming program. No amount of hair conditioner and eye-catching tack can replace the look of a healthy, conditioned horse.

It takes a minimum of three months to get a horse in top halter or performance condition. In general, a halter horse is expected to have more muscle bulk than a horse shown in performance classes.

Take a look at the timeline of the following pages. Check off which steps you take. If you work your way through these guidelines, you and your horse will be ready for that big show.



THREE MONTHS BEFORE THE SHOW

- If your horse is on the thin side, be sure it always receives a full, balanced ration, using the best quality feed available.
- Vegetable oil can be added to the daily ration to improve coat quality.
- More daylight hours in spring and summer encourage shedding out and the growth of a finer quality hair. Keeping a horse in a dark barn all day will have the opposite effect. Clipping a horse in the spring can damage the hair tips and ruin its shine. Body clipping is best done in January.
- For good muscle development and to remove any winter fat, a horse should be worked five days a week for at least ½ hour each day. Trotting or jogging both on the flat and over gentle slopes is recommended. Follow with a canter or lope, for greater suppling and conditioning work.
- Always groom a horse before and after every exercise session to keep the skin and hair healthy, shiny and clean. Grooming a horse before riding it prevents burrs or other objects from being caught beneath the saddle.
- Good farrier care is essential. Any corrections for leg problems that your farrier recommends must be done gradually to prevent stress injury to the legs. Trims should be done every 6 to 8 weeks.
- Proper veterinary care is important. Set up a deworming and vaccination schedule, have your horse's teeth floated (filed) if needed and follow a general health care program.
- Rules for showing a horse online can be different depending on the breed and style of riding. Check the breed rules for your horse's breed. **Also check with your leader for any special guidelines for your club.** Practice these movements and setting up the horse.
- Practice loading and unloading the horse so that it will not be a problem on show day.

SEVERAL DAYS BEFORE THE SHOW

- Do any fine point clipping so irregular spots will have time to grow back in.
- If the horse tends to lie down, a light stable sheet or blanket will keep the horse from getting too dirty.
- Wash your brushes so you are not just moving the dirt around.
- Clean your show tack and check the fit.
- Be sure your own clothing and accessories are clean and in good condition.

THE DAY BEFORE THE SHOW

- Groom the horse carefully, paying close attention to white socks or blazes, as dirt shows up clearly in these places. Consider blanketing at night. Horses that are usually pastured should be stabled overnight.
- Use the clipper for a final trimming and tidying up. The inside of the ears (unless the horse is kept at pasture), bridle path, muzzle, underside of jaw and fetlocks should be trimmed neatly without leaving telltale clipper marks.
- Make sure you know the way to the show and the travel time. Be sure the horse trailer is in proper working order and is bedded down.
- Wash the horse, to give the coat's natural oils time to return before the class. A commercial coat dressing will control the amount of dirt that sticks to the hair and a hair conditioner on the mane and tail will make brushing much easier.
- Make sure all necessary equipment and tack is clean and polished. Have your name on your belongings. Pack up and load as much as possible the night before to avoid leaving anything behind. Don't forget to pack feed for your horse! Use the list below to help make up a list for yourself.

Shipping halter

Fly repellent

Two lead ropes

Grain, hay, water

Shipping bandages/boots

Feed tub, hay net*

Boots i.e. splint boots

Manure fork and basket

Tail wrap

Grooming kit

Head bumper

Braiding kit (English)

Show tack

Hoof dressing or polish

Chain end shank

Baby oil for highlighting

Lunge line and large whip

Cornstarch for white markings

Extra halter

Rubbing alcohol to remove stains

Extra reins and stirrup leather

Blanket or sheet

First aid kit

Pails

Health and registration papers

Rain cover

Lunch and money

**Hay nets should be tied at wither height. A net that is tied too low may allow the horse to get a leg caught.*

THE DAY OF THE SHOW

- Clean the hoof wall and sole, and allow them to dry before applying gloss (dark for black hooves, clear for striped or white). Shoe polish also works. Gloss should be scrubbed off after the show as it can damage the hooves.
- Be sure the horse is spotlessly clean, including ears, eyes, nose, mouth, sheath or teats and dock. Pick out the feet.
- Prepare the horse for trailering.
- Check tack and equipment again. Collect your clothing and accessories.
- Leave in plenty of time, allowing an extra two hours at the show to prepare yourself and the horse.

AT THE SHOW

- Hand pick or comb out the mane and tail. Dampen the tail hairs to the end of the tailbone and wrap firmly so that the hair will lie smoothly. Braid the tail if allowed.
- Brush the body or rub down with a cloth to remove dust. Apply coat dressing and wipe with a clean cloth to make the hair lie flat.
- Wipe the face and ears with a dry cloth to remove dust. Use a cloth to apply coat dressing, avoid the eyes, lips and nostrils. Use a damp cloth to clean these areas.
- Comb coat dressing through the mane and forelock. Use water or hairspray to flatten hairs sticking up. Braid or band mane if permitted.
- Use a soft cloth to apply a small amount of baby oil or petroleum jelly around the eyes, muzzle and ears to highlight features.
- Apply baby powder or cornstarch to clean, dry, white fetlocks to make them seem very white.
- Touch up any bald spots on hooves with gloss or polish.
- Clean hoof and sole wall of any dirt or manure.
- Add a touch of fly spray if the bugs are particularly annoying.
- Put on show tack.

SECTION 6: OTHER

AFTER THE SHOW

- If it has been a hard workout and your horse is hot and blowing, put a COOLER or light blanket over it to prevent the loss of too much body heat. Walk it around until the horse's breathing returns to normal.
- Wash your horse down with warm water (NEVER use cold water on a hot horse). Use a large sponge to rub out any caked sweat or mud, then scrape off the excess water. Towel the head, chest, loins and belly with a rub rag. Cover with a collar once again and walk until dry.
- Do not allow a hot horse to gorge on water, especially cold water, as this can cause colic. Allow small drinks at frequent intervals.

Horse Tip

You will be judged on your ability to fit, prepare and show your horse. In showmanship, your horse will not be judged on its conformation and abilities. Remember, that you are being judged the entire time you are in the ring, not just when the judge is looking at you.

THE SHOW ITSELF

Hold the lead leather in your right hand, 15cm from the halter. If a lead shank is used, it should be no more than 15 to 20cm long from halter to leather. The hand should never be on the chain. Do not allow the loose end to fly around. Hold the leather in two large loops in your left hand, with one finger between the coil.

Standing behind the eye of the horse with your shoulder even with the cheek or throatlatch area, enter the ring and lead the horse in the direction indicated by the show steward. Keep your arms relaxed, with the right hand held higher than the left so that it is closer to the horse's head. Hold the lead at the height of your shoulder, to encourage the horse to keep its head up and look alert. The left arm should be bent and relaxed with the hand in front of the body at or just below the belt buckle.

The judge or steward will tell you when and where to line up. Each horse and exhibitor will be asked to perform individually - to walk, trot and set up for the judge. **Listen to the instructions.** You should also check one hour before the class for posted pattern instructions.

Leave at least 3 metres (10 feet) between you and the nearest horse when lined up nose to tail or side by side.

When asked to leave the line, always move your horse in a straight line to or from the judge. Stay close to the horse at all times. Don't forget to walk the horse (not yourself) straight to the judge. It is also important that you look at the judge, not your horse or the ground. Remember to smile.

Execute any movements briskly but smoothly, then return to your spot in line and set the horse up again. Precision counts in this class.

SECTION 6: OTHER

Any time you must stop and set the horse up, choose a flat area or one where the front end of the horse is slightly higher. This helps the horse stand correctly. Push or pull on the halter using the lead when squaring the horse - do not use verbal commands nor point with your hand or foot. Never touch the horse, unless the judge asks to see the teeth or there is a mess with the halter or mane, etc. In this case, fix it immediately and return to your position.

If asked to back the horse, push back on the lead shank and move the horse back one body length.

When the judge approaches, smile. Let him/her see that you think your horse is special. Stand up straight with both feet together and don't block the judge's line of vision. Move smoothly and quietly around the horse. Never switch hands on the lead. Make sure you can see the judge at all times. Occasionally glance at your horse to be sure it's still correct and alert. If not, fix the horse, then return your gaze to the judge.

Be natural Do not overshadow or fuss with the horse. Look please to be there.

As the judge moves on to the next horse, do not heave a sigh of relief and relax completely. The judge may be finished examining your horse individually, but may return at any time to compare your horse to another, glancing back and forth between the two so stay sharp. The judge will also watch you from several horses away to see if you're paying attention. Know where the judge is at all times and keep showing your horse. Never talk to others in line, even if the judge is far away.

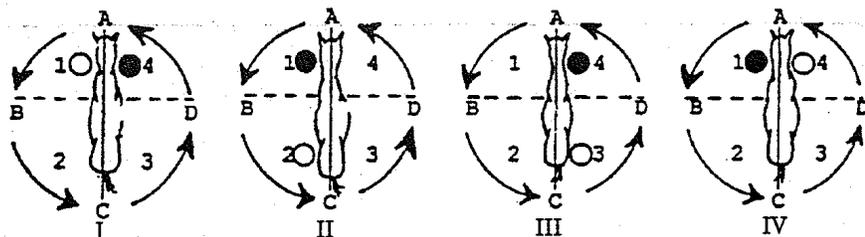
WHERE TO STAND DURING JUDGING

- I. When the judge is in section 1, stand in section 4, facing the horse.
- II. When the judge crosses line B, step over to section 1.
- III. When the judge crosses line C, step back to section 4.
- IV. When the judge crosses line D, return to section 1 and stand facing the horse until you are excused.

When working the sections, do not move until the judge actually steps across the line. If the judge stands on the line, stay where you are.

Stand facing your horse, with your belt buckle and toes pointing to the point of the shoulder. Stand a comfortable distance away and do not crowd the horse. When moving around the sections, you may lengthen and shorten the lead line, to allow you room to move while making sure that your horse stays in position. Practice creeping up and down with your fingers on the lead. Each time you stop moving, return to the proper stance.

When the judge is finished, always turn



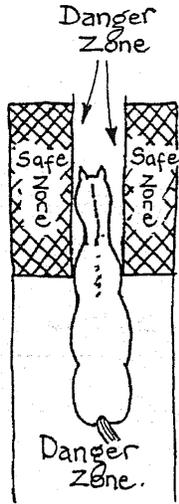
● = handler (that's you!) ○ = judge

| | |
|------------------|-----------------------------|
| LEADER RESOURCE | 4-H ONTARIO - HORSE PROJECT |
| SECTION 6: OTHER | |

the horse away from you (to your right) unless the judge asks otherwise. Keep lined up with the judge and move the horse away at the required gait, back into the line-up or as required by the pattern.

HANDLING STRANGE OR UNSCHOOLED HORSES

The shaded areas are the safe areas for handlers to stand when showing a strange horse. These areas place the handler out of reach should the horse lunge, strike out with a front leg or kick with a hind leg. And, since the horse uses its head and neck to balance its body, the handler can pull an unruly horse’s head into these areas, forcing it off balance and so controlling any further action.



When pulling an unruly horse, turn it away from you. If it is absolutely necessary to turn the horse towards you, hold the lead and halter in your left hand and face the horse. Place your right hand at the back of the shoulder, pushing the body around and away from you, while pulling the head towards you as you step around.

WHAT IS BEING JUDGED

Each breed and style of riding has its own set of showmanship rules. Contact the appropriate association to receive their exhibitor’s guidelines.

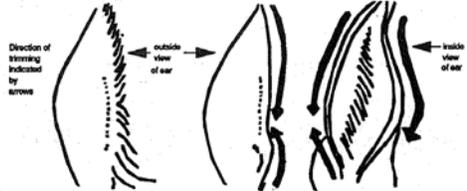
You must follow the rules for the show you are attending. No matter how good your performance and how well-groomed your horse, you will be penalized or even disqualified if you break these rules. It is your responsibility to know the rules.

Rules can include:

- Your appearance and costume
- The type of tack allowed
- Shoeing regulations and the type of hoof dressing or polish allowed
- Braiding, clipping and banding allowed
- Your stance in relation to the judge
- The way in which you move with the horse and
- The type of questions that the judge can ask you

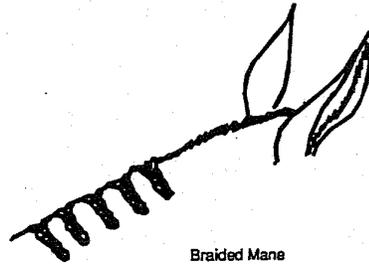
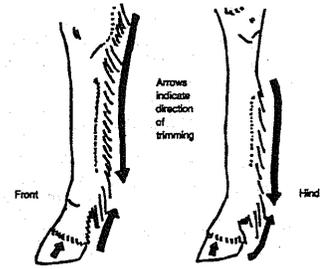
GENERAL GUIDE FOR PROPER TURNOUT

1. Trim the long feeler hairs above and below the eyelid (not the lashes). Place your hand over the eye for protection.
2. Trim hair around the muzzle and inside of the ears. Do not trim the ears of horses pastured outside during fly season.

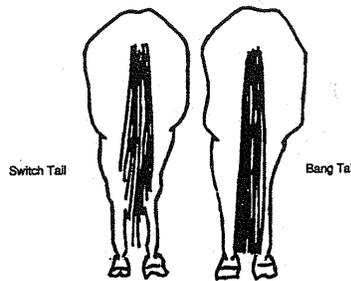


SECTION 6: OTHER

- The coronary band should be trimmed to form a neat even edge at the hoof.
- Pull the mane and forelock according to breed rules. Clip a bridle path, making sure that the length agrees with the breed of your horse. Band or braid an unruly mane.



- Trim the tail according to English, Western or breed-specific rules. Braid if necessary.



FINAL GROOMING INSPECTION ZONES

