UTAH 4-H HORSE PROGRAM STUDY MATERIAL

Volume 2

18 USC 707

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INTRODUCTION

The Utah 4-H Horse Program is one of the largest within the program. Some of the most popular project areas are Western, English, Youth Mustang Challenge, Working Ranch Horse, and the Horse Classics (horseless contests). Youth involved in this program will have experiences to help develop leadership, citizenship, self-esteem, and horsemanship skills. Although we love and promote the horse industry, and everything that comes from owning and riding horses, the true purpose of 4-H is youth development. As a part of that purpose, we encourage youth to master their project area. This includes learning to be a true equestrian, but also knowing the basics of owning and caring for horses. These chapters include a small collection of information for our youth to study. Each volume will build on each other with our junior aged youth (8 years old in in 3rd grade through 5th grade) studying from volume I, our intermediate aged youth (grades 6 - 8) studying from volumes I and II, and our senior aged youth (grades 9 - 12) studying from volumes I, II, and III. Volumes II and III will be released in 2021 and 2022 respectively. Additionally, youth may be tested out of the most current rule book, and the Utah 4-H State Horse Biosecurity Policy. Youth should also take time to review and study additional resources listed in the comprised chapters.

Tack and Equipment: Western

For centuries, horsemen probably rode bareback, but as horses made themselves useful for transportation and work, saddles were developed. The western saddle as we know it today is unique to North America. These heavy, leather saddles were patterned after the Spanish vaquero's working saddle and perfected to suit the needs of the American cowboy and buckaroo.

Parts of the Western Saddle:

Rigging

Rigging refers to how and where the cinch attaches on the saddle. Roping saddles and cutting saddles are double rigged for maximum security. There are various different positions and styles for rigging. The saddle shown is double rigged.

Latigo

Cinch strap used to tie up the cinch nice and snug.

Cinches

The purpose of the cinch is to keep the saddle in place. Cinches can be made out of leather, mohair, felt, or synthetic materials like neoprene. All saddle have one cinch, and some saddles will have a second called the rear or back cinch.

Billet Strap

This strap is designed for connecting a rear cinch. Many saddles will have a billet strap on the right side of the saddle to connect the cinch

Tack and Equipment: Western

Types of Western Saddles:

Although Western saddles are easily distinguished from other types of saddles, each saddle is unique to its specific purpose. Below are examples of different types of Western saddles.

Trail saddles, often referred to as simply all-around saddles, are lightweight multi-purpose saddles. They are comfortable and are the only Western saddle that may not have a horn.

Western Pleasure or Western Equitation saddles are specific for horse show use. Sometimes they are simply referred to as a show saddle. They are usually heavier than a trail saddle and have lots of bling, fancy leather tooling, and other features meant to catch the judge's eye.

Reining saddles have a very deep seat, and a low, slanted cantle. These saddles are designed to help a rider have maximum balance and control during the extreme maneuvers seen in reining such as spins, sliding stops, and roll backs.

Barrel saddles are designed for speed, and are good for all action-packed, timed events, not just barrel racing. These light weight saddles are designed to keep the rider in the saddle and the horn is tall and skinny to provide a good handhold. Mounted Shooting saddles are very similar in their design, as they are designed for speed.

Tack and Equipment: Western

Types of Western Saddles:

Roping saddles are designed for a heavy work load. They are sturdy and rugged, meant specifically to aid in roping events. The horn is designed for dallying the rope and holding it in place. The seat is designed for security. Roping saddles are the heaviest of saddles and always double rigged.

Ranch saddles are a more versatile version of a roping saddle. They are lighter weight and usually double-rigged. Ranch saddles are designed for maximum security and comfort during long days spent working on the ranch.

Cutting saddles are designed so the rider sits directly over the horse's center of gravity. Cutting saddles have a flat seat and a forward leg position to provide extra balance and security. They have a tall horn and low cantle to help the rider sit deep.

Two other saddles that are unique, but not necessarily Western, are the McClellan cavalry saddle and the Australian saddle. These saddles have a distinct purpose but do not work well for most events in the United States.

McClellan cavalry saddle

Australian saddle

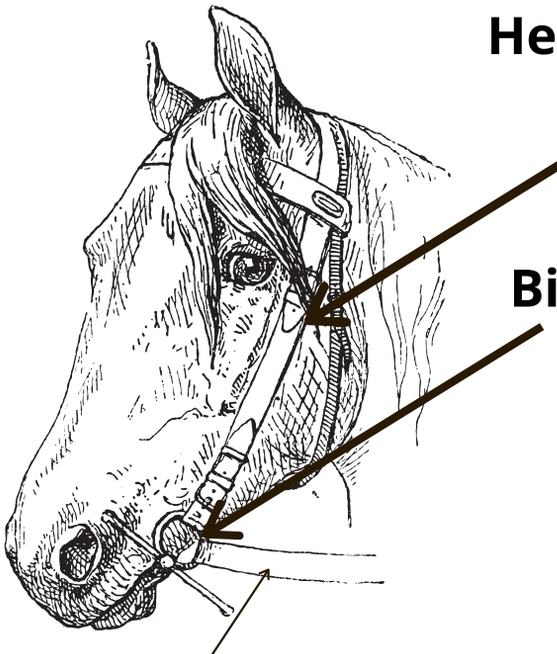
Tack and Equipment: Western

The Saddle Blanket or Pad

The saddle blanket or pad is a staple to a tack set. The blanket helps to protect the saddle from the horse, and the horse from the saddle, it absorbs sweat and moisture, and can help a saddle to fit better. A high-quality pad can aid in saddle fitting. Keep in mind that saddle fitting is complex with many different factors that must be evaluated.

The Bridle and Bits

The bridle is a vital component to your horses tack. Most bridles are made of leather, but they can be synthetic materials as well.



Headstall: The headstall is the bulk of the bridle and is made up of a crown piece, cheek pieces, and sometimes throatlatch.

Bit: The bit is the mouthpiece of the bridle. The bit goes into the horse's mouth and over their tongue. Bit selection is not a simple science and it can take someone years to truly excel at bit selection. Bits are classified as either direct pressure or leverage bits. Some bridles will forgo the bit and are classified as bitless.

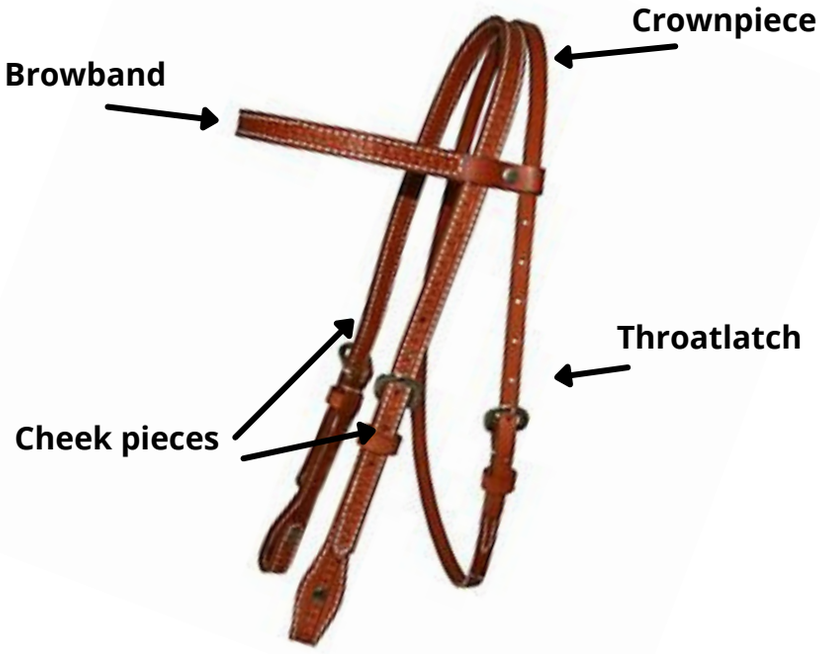
Reins: The purpose of the rein is to give the rider a way to communicate directly to a horse's mouth. The reins are attached to the bit. The location where they attach is specific to each individual bit type.

Tack and Equipment: Western

Headstalls

Much like the various types of western saddles, a headstall can be plain and rugged or be covered with bling to catch a judge's eye. There are three different types of headstalls, all dependent on the crown piece: conventional, split ear, and slip ear. Conventional headstalls have a brow band, whereas split ear and slip ear headstalls have a modified crown that slips around one or both ears to hold the headstall in place.

Western headstalls don't have a nose band, but they usually include a curb or chin strap, and a throat latch. Many western show bridles will forgo some of these pieces for a sleeker look to catch the judge's eye.



Split Ear Headstall

Slip Ear Headstall

Tack and Equipment: Western

Reins

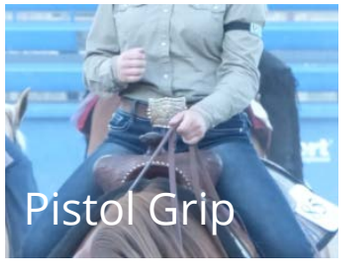
Reins are the link between a rider's hands and the horse's mouth. Traditionally reins were made out of two long strips of leather, but reins can be a variety of materials and styles. Split reins and continuous-loop reins, are the two basic types.

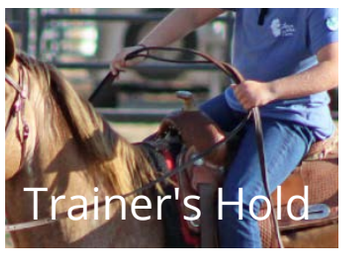
Continous loop

Romal

Continuous-loop reins are sometimes called roping, speed, or barrel reins. As their name implies, these reins are one continuous loop. When using a continuous loop it's important to make sure the rein is long enough so that your horse can move comfortably without pulling the reins out of your hands. Some continuous-loop reins have an attachment called a romal. These reins were developed to help a rider move cattle.

Split reins are the most versatile, as they can be lengthened or shortened and held in a variety of ways. The most common way to hold split reins is the traditional pistol grip where both reins are held in the same hand with the index finger in-between the two reins. The ends of the reins, called the bight, both fall on the same side as the hand holding them. Another hold is the trainer's hold or bridge. This is done by crisscrossing the reins on either side of the horse and then holding the reins with both hands like a bicycle. The bight of each rein is on the opposite side of the horse in this hold.


Pistol Grip


Trainer's Hold

Tack and Equipment: Western

Bits

Direct pressure bits, or snaffle bits, get their name because if you apply pressure to the reins, that same pressure will be applied to the bit. This is direct pressure. In a snaffle, the reins are attached directly to the mouthpiece of the bit. These bits are the most common. Although they can have different styles and be made from various materials, snaffle bits all have a mouthpiece with a ring at each end where the reins attach. Some of these rings are called by their shape, below.

D-ring

Loose Ring (O-ring)

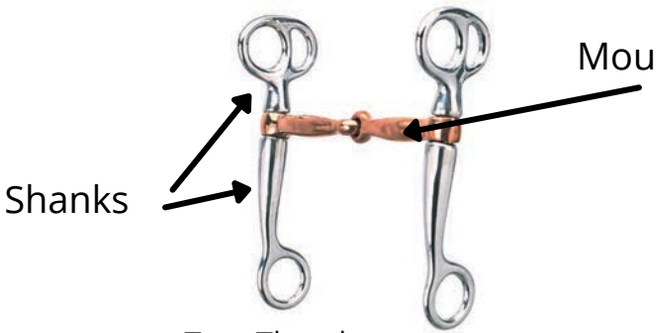
Full cheek

Half cheek

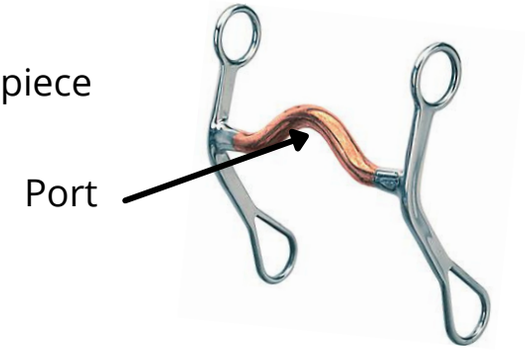
Fulmer

Egg Butt

Leverage bits, or curb bits, increase the pressure applied to the rein to the horse. This is done by adding a shank to the mouthpiece. Depending on the style of the bit, the pressure from the rein can create increased pressure on the mouth, poll, or chin. Unlike snaffle bits, there are a lot of different curb bits. The western curb generally has a mouth piece between 4 ½ to 5" wide, and shanks from 3 to 8 1/2" in length. Most solid mouthpieces will have a "bump" in the middle known as the port. The port relieves pressure on the tongue and applies pressure to the roof of the mouth. One of the simplest, and most common, bits is the Tom Thumb.



Tom Thumb



Medium Port Curb

Tack and Equipment: Western

Bitless Bridles

Bitless bridles, such as the true hackamore or jaquima, consist of a headstall with a special attachment that puts pressure on the nose and other parts of the horse's head, but not the mouth. If the nose piece has shanks, it is considered a mechanical hackamore.

Mechanical hackamores can be quite severe if used improperly. A hackamore that does not have shanks, but instead has rings for the reins to attach near the side of the mouth, is called a side pull.

The jaquima has a bosal, fiador, and mecate. The bosal is a rawhide or rope, tear-drop shaped nose band. The fiador is similar to the throatlatch and serves a similar purpose. The fiador is named after the knot used which is located under the jaw near the horse's throatlatch. The mecate is a lead rope and rein combination, usually made out of 22 feet of horsehair rope.

Some of the most advanced bits are not allowed in many youth horse programs. These include gag bits, elevator bits, spade bits, and mechanical hackamores. These bits are very severe and should only be used by the most experienced equestrians under the supervision of a professional horse trainer. In the Utah 4-H Western Horse Program Rule Book, specific instructions on bridles, bits, and reins are given.

Mechanical hackamore

Side pull bitless bridle

Jaquima

Breast Collars

Some riders will use a breast collar to help stabilize their saddles. Breast collars come in various shapes and styles but are most commonly a "Y" shape with a strap that attaches to either side of the saddle and another strap that runs between the horse's front legs and attaches to the cinch. The breast collar keeps the saddle from sliding backwards and can also keep the saddle from shifting to the side. They are used simply as decoration, or as a necessary way to keep the saddle in place.

Chapter Review

1. What type of rigging does your saddle have?
2. What is the purpose of double rigged saddles?
3. What type of saddles is best for your style of riding?
4. What are the basic parts of the saddle?
5. What are the basic parts of the bridle?
6. What types of reins are there?
7. Can you identify the different types of tack listed in this chapter?
8. What is the difference between a direct pressure and a leverage bit?
9. What are types of bitless bridles?
10. What additional pieces of tack could be used to keep a saddle in place?

Sources

https://horseandrider.com/gear/choose-reins-54101

Horse Smarts. American Youth Horse Council. 2016

Tack & Equipment: English

Introduction to English Tack and Equipment

If you have ever visited a tack store, you know how vast this topic can be. In this section, we will focus on the most basic pieces of the English style tack.

Types of English Saddles

There are two basic types of English style saddles: Saddle Seat and Hunt Seat. Within each of these types, there are several sub-categories. Other saddles we will not cover in this section but do fall under the "English" style are racing saddles and polo saddles.

Saddle Seat

The Saddle Seat type is a relatively flat seat that places the rider well behind the withers and just behind the center of the horse. Because of this positioning, this type of saddle is strictly for being "on the flat" – meaning riders do not jump in a Saddle Seat. Breeds seen most often in this disciple are American Saddlebreds, Morgans, Tennessee Walking Horses and other single-foot or gaited breeds.

Hunt Seat

There are three types of saddles loosely grouped under the Hunt Seat Type. They are extremely popular and used in a variety of settings.

All-Purpose

This is typically the most popular type of forward seat saddle due to it's versatility. It can be used for eventing, equitation, pleasure or trail riding. The seat is deeper than a Close Contact saddle, but it still has a forward flap. To provide more security, it also has a padded knee roll. It is a great option for beginners who are still exploring their discipline.

Close Contact

The main purpose of this saddle is jumping with little or no flat work. The rider is able to have close contact with the horse to provide maximum control, hence the name. The design has a flat seat with forward short flaps and no extra knee roll. Sitting in the seat gives the rider's hip a sharp angle, making them look perched and allowing the rider to be forward and ready for the two-point jumping position.

Dressage

This saddle is designed specifically to give balance through the seat and allow maximum side contact between horse and rider. The Dressage saddle has the deepest seat of the three Hunt types, and a straighter, longer flap with an optional knee roll. This saddle is ultimately for optimal leg contact.

Tack and Equipment: English

Types of English Bridles

Just like a Western bridle, and English bridle has three main parts: Headstall, bit and reins. However, an English bridle will always have a brow band and cavesson. The main function of the brow band is to keep the crown piece from sliding down the horse's neck, while the throat latch prevents it from slipping over the ears and off the head. The cavesson helps keep the bridle in place and keep the mouth closed.

The reins on an English bridle are two pieces of leather that attach to each cheek piece on the bit, and are then attached to one another with a buckle to form a single loop. This allows for the reins to be unbuckled to attach a running martingale if necessary. Rein widths vary in size from ½ inch to 1 inch.

There are several types of reins that can be used based on personal preference of the rider:

- Plain Reins – simple, flat leather straps
- Laced reins – constructed of thin leather lacing wrapped either through or around the strap of the reins for a better grasp
- Web reins – come with horizontal loops of leather at intervals or a rubber coating for use in wet weather when reins become slippery
- Rubber Reins – covered with a pebble surface over the hand grip portion of the rein and are used in racing and cross-country jumping to provide a secure grip

Types of English Bits

Both English and Western riders use snaffles. Additionally, English riders use curb bits of various designs, kimberwickes and pelhams

Kimberwick Bit

Pelham Bit

Tack and Equipment: English

Martingales

Martingales are a commonly used safety and training tool. The two kinds most often used are the standing martingale and the running martingale.

English Standing Martingale – connects to the back of the noseband and to the girth through a slit in the neck strap. The neck strap holds the main strap close to the body to stop the horse from catching a foot in the strap

Running Martingale – a main strap runs from the cinch and divides into two pieces with rings at each end. The reins are run through the rings, which allows the rider to keep in contact with the bit at all times.

Chapter Review

1. What are the two basic types of English saddles?
2. Where does a saddle seat saddle place the rider?
3. What breeds commonly use a saddle seat type saddle?
4. What is an all-purpose saddle used for?
5. What is a close contact saddle used for?
6. What makes a dressage saddle unique?
7. What is the purpose of the browband? The cavesson?
8. What are four different styles of reins used in English riding?
9. What are two popular bit names for English disciplines?
10. Describe the difference between a standing and running martingale.

Sources

Horse Smarts. American Youth Horse Council. 2016

Equine Movement and Gaits

As riders begin to learn more about riding and owning horses, it's important to understand the basics of their movement. Horses are more coordinated and have more distinct gaits than other four-legged animals. The gait is the "way of going" of the horse and is normally easily identified by even an inexperienced eye. Below is a list of terms and pictures associated with the horse's gait.

Gait: Pattern of movement of the limbs of the horse; the way of going.

Beat: Time when a hoof or two hooves strike the ground.

Step: Distance between imprints of the two front hooves or two hind hooves.

Stride: Distance between successive imprints of the same hoof.

Suspension Phase: The non-weight bearing phase when the hoof is not in contact with the ground; sometimes referred to as the swing phase.

Landing: A part of the weight-bearing phase; the hoof touches the ground and weight-bearing begins.

Loading: A part of the weight-bearing phase; the fetlock extends to its lowest point and the pastern is nearly horizontal.

Weight-bearing Phase: When the hooves are on the ground and bearing the weight of the horse. This phase is further divided into landing, loading, stance, and breakover

Equine Movement and Gaits

Stance: A part of the weight-bearing phase; the fetlock rises and the pastern straightens from the loading phase

Breakover: A part of the weight-bearing phase; sometimes called heel lift. The heel begins to lift off the ground tipping the foot forward (toe pivot).

Toe pivot: When the heel has lifted, tipping the foot forward to lift off at the toe.

Speed: Determined by length of stride, rapidity, and time the hoof is on the ground during the stride.

Overlap Time: The time a specific hoof is on the ground versus time off the ground.

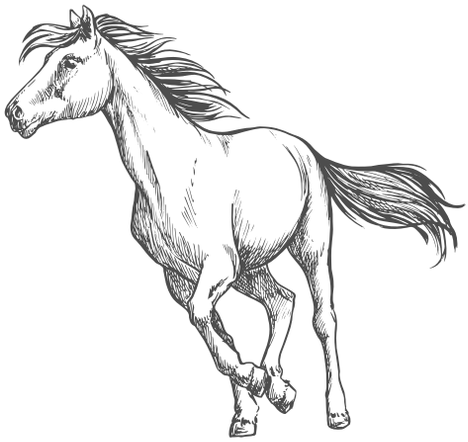
Lateral: Both hooves on one side strike the ground before the hooves on the opposite side strike the ground.

Diagonal: The fore and hind of the opposite sides move in pairs.

Example of a trot

Example of a gallop

Equine Movement and Gaits



Basic Gaits:

Walk: Natural, four beat, lateral gait.

Trot: Natural, two beat, diagonal gait. There is a period of suspension between pairs.

Posting Trot: The rider rises when the horse's foreleg goes forward. "Rise and fall with the outside wall" meaning you rise when the front leg on the outside moves forward.

Jog: The Western version of the 2 beat gait is slower than an English trot. Usually done while sitting.

Canter: Natural, three beat, collected gait. One of the hind legs moves forward first, then the opposite hind and diagonal foreleg, and the last beat is the other foreleg that extends beyond the others, called the leading leg. Typically performed at 10 – 17 miles per hour.

Leading Leg: The foreleg that extends further than the other during the last beat of the canter or lope. A left lead is when the left front leg extends further, a right lead would be when the right front leg is leading further.

Lope: The Western version of the canter.

Pace: A two beat lateral gait where the fore and hind legs on the same side move in unison. This gait is characteristic of Standardbred pacers.

Simple Lead Change: When a horse and rider transition down to a trot/jog briefly before resuming the canter/lope leading with the opposite foreleg than before.

Flying Lead Change: When a horse and rider switch leads while maintaining the canter/lope.

Gallop: Fast, four beat gait. The horse starts off on one hind leg, and then the other hind leg strikes, followed by the opposite foreleg and the final foreleg, or the leading leg. Typically performed at 30 to 50 miles per hour.

Equine Movement and Gaits

Gait Defects:

When a horse does not have free and clear movement, it is referred to as a gait defect. Typically, these defects are when a moving leg contacts another moving leg, called striding leg interference, or when a moving leg contacts a supporting leg, called supporting leg interference. Some gait defects are specific to a structural defect.

Paddling or winging out is when a pigeon toed or base-narrow horse has exaggerated outward motion of the foreleg. Base narrow horses may also experience plaiting or rope walking, where the horse sets the front feet almost directly one in front of the other. Winging in or dishing is when the hoof wings to the inside and then strikes the ground to the outside of the straight track. Some terms refer to where the interference occurs such as speedy cutting, when the fetlock area gets hit; shin hitting, when it's the cannon bone; and hock hitting, where the hock region is struck. Some more detailed terms are listed below.

Brushing: When the interference is slight.

Cross-firing: When the inside fore and outside hind strike in the air.

Forging: When the hind hoof strikes the sole of the front hoof on the same side during a fast paced gait such as the trot.

Striking: When the interference leaves an open wound.

Scalping: When the toe of the front hoof strikes the coronet band of the hind hoof.

Overreaching: When the hind food strikes the back heel, coronet band, postern, or fetlock when walking.

Sometimes gait defects are caused by lameness. Historically, lameness was described as an abnormal gait. It can be inherited, or acquired due to injury or trauma. Lameness is not always directly related to the legs or hooves, but can also be associated with neck or back pain. The American Association of Equine Practitioners (AAEP) has developed a grading system for lameness. Ultimately, if you observe lameness, you should contact a veterinarian.

0 - Lameness is not perceptible under any circumstances

1 - Lameness is difficult to observe and is not consistently apparent, regardless of circumstances (i.e. under saddle, circling, inclines, hard surfaces)

2 - Lameness is difficult to observe at a walk or when trotting in a straight line but consistently apparent under certain circumstances (weight-carrying, circling, inclines, hard surfaces).

3 - Lameness is consistently observable at the trot under all circumstances

4 - Lameness is obvious at the walk.

5 - Lameness produces minimal weight bearing in motion and or at rest, or a complete inability to move.

Chapter Review

1. Can you describe all the terms listed in this chapter?
2. Describe four basic horse gaits.
3. What is speedy cutting?
4. What area of the horse is affected during shin hitting?
5. What is interference in the hock region?
6. What is the difference between brushing and striking?
7. A horses that is lame at the trot is graded what?
8. What is a gait defect?
9. What is the AAEP?
10. What are the various levels of the AAEP's lameness grading system?

Sources

Horse Smarts. American Youth Horse Council. 2016

Horse Health and General Care

Being able to assess the general well-being of your horse is an important part of owning and riding horses. This chapter will be an overview of your horse's vital signs so you can quickly recognize when something is wrong. Besides knowing the normal ranges of a horse's vital signs, it pays to know your horse and being able to tell when something isn't right. Knowing when something is off, or when your horse "ain't doing right" (ADR) will keep your horse healthy and help you identify serious ailments before they get too bad.

Vital Signs

Variation of a horse's vital signs can be caused by the time of day, the age of the horse, external environment such as the weather, and illness or disease, among other things. An increase in Body Temperature can be the first indicator of illness and disease. Heart rate and respiration rate are affected by exercise and the fitness level of the horse; however, these are also indicators of pain. An important thing to keep in mind is that the respiration rate should always be lower than the heart rate. When the respiration rate is too high, it's known as an inversion. This is a sign of a very serious illness and veterinarian attention should be sought immediately.

VITAL SIGNS TO KNOW	
Body Temperature	99.5 to 101.5°F
Heart Rate	30 - 45 beats per minute
Respiration Rate	8-15 breaths per minute

Horse Health & General Care

Body Temperature

To measure your horse's temperature, use a plastic or digital "oral" or "rectal" thermometer. Digital thermometers are safer (harder to break and mercury-free) than glass ones. Care should be taken so you are not injured during this process. Do not attempt to take the horse's temperature if your horse is not experienced or well trained. Some thermometers have a string attached to prevent losing it. Talk to a local veterinarian for more information.

Stand next to your horse's hind leg, facing the direction of his tail, close enough for your shoulder or side to be in contact with him.

If you are right-handed, stand on his left side, with the thermometer in your right hand; if you're left-handed, stand on his right side, with the thermometer in your left hand.

Next, place your arm closest to the horse across his rump and gently grasp the top of his tail in your hand. Raise it up high enough to give your other hand access to the anus.

Then guide the end of the thermometer into the rectum, pressing it approximately 2-3 inches inside, leaving the digital screen outside the body so you can see it while it registers the temperature.

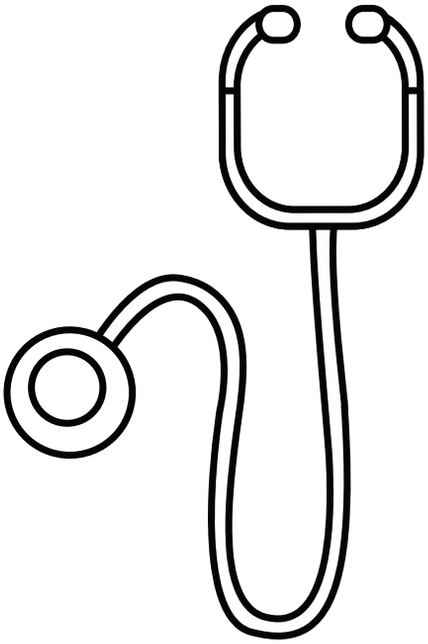
Continue holding the tail and the end of the thermometer firmly until the final reading is clear

Then gently remove the thermometer and double-check the reading.

Horse Health & General Care

Heart Rate

The heart rate of a horse can be evaluated in a couple of places. In each situation, you should count the heartbeats for 15 - 30 seconds, then multiply that count by either 4 or 2 depending on how long you counted the heartbeats. This will give you the heart rate of the horse in beats per minute.



When using a stethoscope, place the head of the stethoscope along the rib cage of the horse behind the elbow. You may have to push the stethoscope deep into this area.

Listen carefully because the heartbeat may be slow, low and difficult to hear. The heart rate can also be evaluated by finding the pulse in the mandibular artery located under the jaw of the horse.

Use your fingers not your thumb to feel the pulse and take your count.

Respiration Rate

The respiration rate can be observed by watching the horse’s chest move in and out. Count the breaths for 15 - 30 seconds, then multiply that count by either 4 or 2 depending on how long you counted the breaths. This will give you the horse's respiration rate. A stethoscope can also be used to listen for breath sounds going in and out of the lungs and the trachea. Be careful to not use a nostril movement to count respiratory rate, as horses can flare their nostrils independent of breathing.

Count breaths for 30 seconds. Multiply by 2.

Horse Health & General Care

Mucous Membranes

Mucous membranes of the horse should be bright pink and moist. You can check the gums, nostrils, inner eyelids, and vulva of the mare for the correct color. Pale, yellow, dry, or sticky membranes are signs of anemia or shock. Yellow color, called jaundice, is also indicative of liver failure or anorexia.

BRIGHT PINK & MOIST

Normal

PALE OR NO COLOR

Anemia, dehydration, or shock

YELLOW - JAUNDICE

Liver failure or anorexia

BLUISH CYANOSIS

Low oxygen

DARK RED

Severe shock or toxemia

PURPLE

Severe shock or toxemia

Capillary Refill Time (CRT)

Another wellness check is the capillary refill time (CRT). Press your thumb firmly to the upper gum for a few seconds and then release. This tests the blood circulation. Count how quickly the color returns to normal. A horse that is hydrated and in good health would have normal color return almost immediately. A horse in shock or dehydrated would take longer, and if the color does not return in 3 seconds, it's a sign of an issue.

Skin Tent Test

A pliability test of the skin is performed on the neck. Pinch the skin and evaluate how quickly it returns to normal. The skin should be flat and tight against the neck and the pinched area should completely disappear within 3 seconds. A horse that is dehydrated will have dry, leathery skin and the skin will remain tented or pinched after releasing.

Horse Health & General Care

Manure and Urine

A normal amount of manure for an average sized horse is 28 to 50 pounds a day. The diet of the horse will determine the color and consistency of the manure, but it should not be runny or bloody. A horse's normal urine will be cloudy and range from pale yellow to reddish-yellow. It's much harder to measure the daily urine output, but typically a horse will urinate five to seven times a day resulting in around 7 quarts. Excessive urination can be a sign of illness.

Hooves and Hair

The hooves of a healthy horse are hard and thick and the coat is shiny and soft. However, these are not a great indication of current health problems since the hooves and hair coat are often the last thing to be affected by illness. For example, a horse with a bright coat could still be suffering from an acute case of colic, and a horse with a dull coat may have suffered from a heavy parasitic load months earlier.

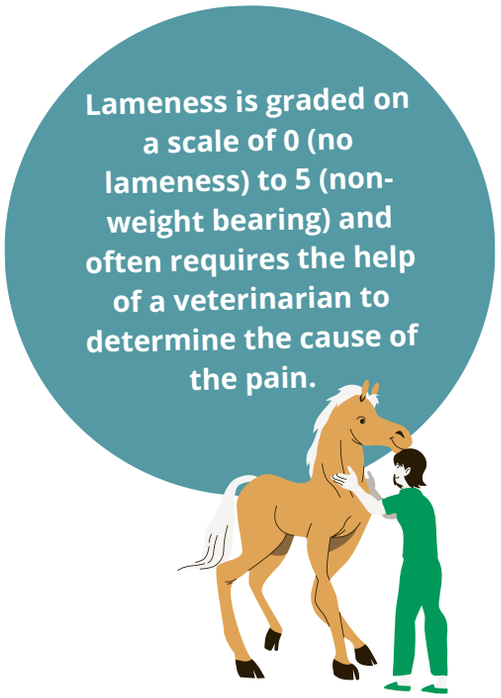
The popular adage "no hoof, no horse" derives from the importance of understanding the health of your horse's hooves. Special care should be taken to understanding hoof health and maintenance. Hoof health is covered in the Utah 4-H Horse Program Study Material Volume 1.

Horse Health & General Care

Movement

Knowing your horse's natural movement, or gait, is an important part of a wellness check. Different breeds will have different gaits and knowing if a horse is moving in an odd manner will be an indicator if that horse is in pain.

Lameness is defined by any alteration or change in a horse's normal gait, usually in response to pain. Lameness can be caused by pain coming from any part of a horse's body that has nerve endings, including legs, back, pelvis, and neck. Pain can be the result of wounds, soft tissue bruising, arthritis, and bone injury; however it may be difficult to localize where the pain is coming from.



Behavior

Horses are creatures of habit and will develop patterns of behavior. Any change in that behavior can be an indicator of change in the wellness of your horse. When given the option, horses prefer to graze for 10 to 12 hours a day, will eat and drink at will, and prefer to move around in herds. A horse that diverges from normal routine is likely not feeling right.

A horse that is off by himself, not eating, or exhibiting other abnormal behaviors should be evaluated for signs of illness. Often the first indicator of pain or illness in a horse is the owner observing that the horse "ain't doin right" or ADR. Understanding normal behavior is the first step to identifying abnormal behavior.

Horse Health & General Care

Body Condition Score

For years, body condition scores (BCS) of a horse have been a subjective science and each horse owner has a personal opinion on what is a good body condition for each horse. Much like human athletes, appropriate BCS of horses are determined by their age, health, and work load. Body condition scores range from a numerical score of 1 to 9.

1
2
3
4
5
6
7
8
9

Horses that are a 4 or less are more prone to performance problems stemming from lack of energy reserves.

Most 4-H horses should be a 5 BCS which is considered moderate.

Horses with a BCS of 7 or greater are more prone to adverse health issues such as Equine Metabolic Syndrome, laminitis, overheating, and joint problems.

For more information on evaluating the BCS of your horse, visit the QR code and the Utah 4-H Horse Programs Website.

BCS 1

BCS 8

Horse Health & General Care

Happy and Healthy Horses

The remainder of this chapter provides some guidelines on caring for your horse, but keep in mind that there is no "one size fits all" for horse care. Ultimately, horse owners should consider best management practices (BMP) and develop their own horse health plan with the help and guidance of a veterinarian. When horse owners and veterinarians work together, they can develop plans that fit the needs of individual horses to keep them happy and healthy.

Nutrition

The majority of a horse's diet should come from forage such as grass or hay. Healthy, adult horses should consume between 1.5 – 3.5% of their body weight in dry matter (DM) daily. DM refers to the material that is left over should you remove all the moisture. For an average 1000-lb horse, that means feeding around 17 to 39 pounds of hay a day.

Fresh, clean water is also very important. One serious ailment caused by not consuming enough water is impaction colic. Adult horses will normally drink 5 – 10 gallons of water a day, regardless of temperature. Horses eating hay require more water than horses on pasture. If your horse is hesitant to drink water, evaluate the location of the water and make sure it is easily accessible, fresh, and at an appropriate temperature.

We cover horse nutrition and diet more fully in later chapters.

Horse Health & General Care

Summer Time

During the hot dry months of summer, special consideration should be taken to keep horses healthy. Horses can overheat (hyperthermia), develop heat stress, get heat exhaustion, suffer from heat cramps, and even get heat stroke or sun stroke. Horses are at risk for these conditions when they are overworked, stabled in a hot barn with poor ventilation, left in direct sunlight for long periods of time, transported in a trailer with poor ventilation, or are obese. Signs of heat stress in horses include increased body temperature, increased heart rate and respiratory rate, dehydration, stumbling, and refusal to work. If you are wondering if it is too hot to ride, you can calculate the heat stress index. The heat stress index is calculated by taking the ambient temperature and adding the relative humidity.

100°F + 30% humidity = Stress index 130

Horses have a biological cooling mechanism to help combat the heat, but they begin to struggle when the heat stress index is between 130 and 150. Riders can evaluate the heat stress index to decide if extra precaution needs to be taken to keep their horses cool.

To prevent complications due to hot weather, make sure horses have access to clean, cool, fresh water at all times. Strenuous exercise should be limited to cooler times of the day, all blankets and sheets should be removed, and adequate air flow and ventilation should be provided in stables.

Make sure horses have a way to replenish body salts. This can be done by providing salt blocks, providing a feed that has been balanced to include electrolytes, or providing a water source with electrolyte additives. If you are going to add electrolytes to a water source, make sure that a second, clean, fresh source of water is also available.

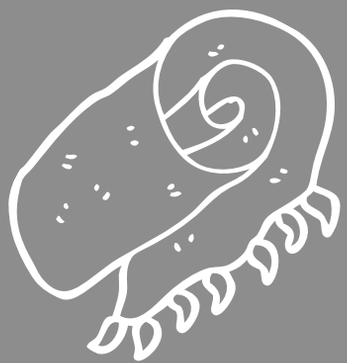
Horse Health & General Care

Winter Time

Horses are naturally well suited to handling the cold. In many ways, horses handle the cold better than the heat. During the fall months when the days get shorter, horses will naturally put on some extra weight and begin to grow a winter coat. It is rarely necessary to keep a horse in a stall during the winter. A horse's winter coat is designed to trap body heat between the hair fibers, keeping the horse warm. Sometimes adding a winter blanket can do more harm than good by compressing the horse's natural winter coat, reducing the natural protection against the cold. Most horses only need good nutrition, plenty of water, and shelter from the the elements.

Does my horse need a blanket?

Horses can fully adjust to new temperatures in about 21 days by growing an appropriate coat of hair and adding or losing a layer of fat. If allowed to properly adjust to new weather your horse probably won't need a winter blanket. The following horses may need a blanket:



- Horses that do not develop a good winter hair coat
- Horses that are underweight
- Horses with no additional shelter and temperatures below 0°F.
- Horses that have not acclimated to the cold
- Horses that have been body clipped
- Horses that are very young or very old

If your horse needs a blanket, make sure that the blanket fits properly. The blanket should be removed every day or two the BCS and for skin irritation including fungus and sores.

Horse Health & General Care

Winter Time (cont).

There are a couple things to keep in mind when deciding if your horse is going to be okay or if it's too cold. The thermoneutral zone (TNZ) is the range of temperature when a horse maintains its body temperature without expending extra energy. The lower critical temperature (LCT) is the temperature where a horse must increase metabolic heat, or expend energy, to maintain normal body temperature. There is a wide range of LCT for horses, dependent on climate, body condition, and other factors such as age and pregnancy. Young, growing horses, pregnant mares, and adult horses in mild climates have an LCT of 40°F. Horses in extremely cold climates may have an LCT as low as 5°F. Typically, an adult horse with a good BCS and a winter coat has a LCT of 18°F.

When the temperature drops below the LCT, horses require more energy to stay warm. This is provided by consuming more calories in their diet. On average, adult horses require 15-20% more feed with each 10°F drop below the LCT (an 1000 lb horse will need 15-20 lbs more food per day). For young and growing horses that requirement could be up to 33% more feed for every 10°F drop below the LCT. Furthermore, horses can handle snowfall with no issues. Rain, ice, and sleet may all be problematic and it's important to provide a way for horses to get out of these conditions.

Care should be taken to evaluate your horse's water supply at least daily. Cold water temperatures cause horses to drink less, which can lead to heath issues. During winter months, drinking water temperatures should be kept between 45 to 60°F to maximize consumption. Water heaters are a good way to keep water from being frozen or too cold. If a water heater is not available, make sure to check water sources twice daily and remove ice to ensure adequate availability

Visit this link to learn more about keeping your horses well fed during colder months.

Horse Health & General Care

Equine Immunizations and Parasite Control

Horse owners should work with a veterinarian to implement a proper vaccination and deworming schedule. The American Association of Equine Practitioners (AAEP) has provided guidelines for equine immunizations and parasite control. The AAEP categorizes vaccinations as being either core or risk-based. Core vaccinations include tetanus, Eastern equine encephalitis, Western equine encephalitis (EEE/WEE), West Nile virus, and rabies. Risk-based vaccines include strangles, equine influenza, and equine herpesvirus (EHV). The Utah 4-H Biosecurity Policy further categorizes certain vaccinations as location based. These are risk-based vaccinations that are specific to geographic or regional areas, such as the Potomoc horse fever. Other risk-based vaccinations that may be needed in other areas of the country, but are not a huge risk in Utah, are botulism, equine viral Arteritis (AVA), rotavirus, and anthrax.

For most vaccinations, two doses spaced at appropriate intervals are required to build the desired immune response. After the initial series, a yearly booster is needed to maintain the immune response. Mares that are up to date on their vaccinations can transfer antibodies via colostrum to newborn foals, and this is an important protective mechanism against disease and illness.

The AAEP takes common parasites and anthelmintic (dewormer) resistance into account when providing deworming guidelines. These guidelines are based on fecal egg count (FEC) surveillance and fecal egg count reduction test (FECRT) to detect drug resistance. All horses have some level of parasitic presence in their system. To keep the parasite counts low and manageable, it is important to have a routine deworming program. Location, age, and number of horses in a specific area will all affect your deworming program. Some veterinarians recommend taking a FEC and only deworming as needed. Some horses will naturally have a higher parasitic load, and so some veterinarians will recommend only deworming those horses. This is called selective deworming. Always consult a veterinarian when beginning a new deworming schedule, or when making plans to deworm a horse that has an unknown history. Horses with a heavy parasite load are at risk for colic if a dewormer causes an extensive kill.

Keeping detailed records of vaccinations and deworming is part of a good management system. Keep these records somewhere that is easy to access and where they won't get damaged or lost. There are several apps that can be downloaded on your phone to aid in keeping these records.

Chapter Review

1. What are considered normal ranges for temperature, heart rate, and respiration rate?
2. Can you explain the procedure for taking a horse's temperature? Which is the better thermometer?
3. What 2 places were mentioned in this chapter for taking pulse rate?
4. Name 4 signs of shock or anemia.
5. What is the CTR for a healthy horse?
6. At what rate do molars and premolars erupt?
7. What is the average amount of manure and urine produced daily by a horse?
8. Define lameness.
9. If given the option, how many hours per day would a horse graze?
10. What is the numerical range for a BCS?
11. What percentage of a horse's body weight should be consumed in dry matter daily?
12. Define TNZ and LCT? What is a typical LCT?

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Horse Smarts. American Youth Horse Council. 2016

Equine Nutrition

Are you familiar with My Plate, the healthy eating guidelines produced by the United States Department of Agriculture (USDA)? These guidelines are established by experts in the United States and are updated every five years. It is important to understand what types of food you choose and to learn to make healthy choices. It is just as important to learn what your horse needs. Horses have a much different diet than humans, but the basics are the same. The six essential nutrients are water, carbohydrates, fats, proteins, vitamins, and minerals.

Water:

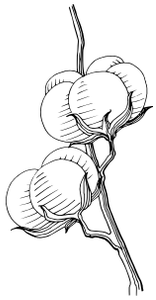
Water is the cheapest and most essential nutrient. Without this nutrient, horses cannot survive beyond a few days. Adult horses will drink 5 to 10 gallons of water a day and can store up to 200 pounds of water in their digestive tract. Horses should always have free access to clean water

Carbohydrates and Fats:

Sometimes a list of the essential nutrients will combine carbohydrates and fats into its own category titled energy. Carbohydrates are made up of building blocks of glucose and fats are made up of free fatty acids. Horses get their energy from carbohydrates and fats. The glucose and free fatty acids provide the energy a horse needs to live and exercise. Sources of carbohydrates for horses include forages and grains while fats are found in supplements and are only used with horses that have an increased energy need.

Proteins:

A limited amount of energy comes from proteins. Proteins are built by amino acids, so nutritionists often focus on amino acid quality and content when formulating feeds. Proteins are the building blocks for bone, muscle, soft tissues and hormones. Good quality hays will provide the majority of the protein needs in a horse's diet, while soybean meal and cottonseed meal are popular choices for supplemental protein.



Equine Nutrition

Vitamins:

Most of the time, the vitamins a horse needs are produced by bugs (microbes) in the horse's own digestive tract. Vitamin A and E are the only vitamins horses need from their diet. They get vitamins A and E from leafy green plants, including high quality hays or pastures. The two categories of vitamins are water-soluble and fat-soluble. Water-soluble vitamins are not stored in the body but are absorbed daily from their digestive tract. These vitamins include Vitamin C and the B-complex vitamins thiamin (B1), riboflavin (B2), niacin (B3), pantothenic acid, (B5) pyridoxine (B6), biotin (B7), folic acid (B9), and cobalamin (B12). Fat-soluble vitamins are stored in the fat and liver of the horse. These are vitamins A, D, E, and K. If a horse is growing, pregnant, or performing, you may want to supplement your horse with additional vitamins. Most commercial feeds will also be balanced to include vitamins.

Minerals:

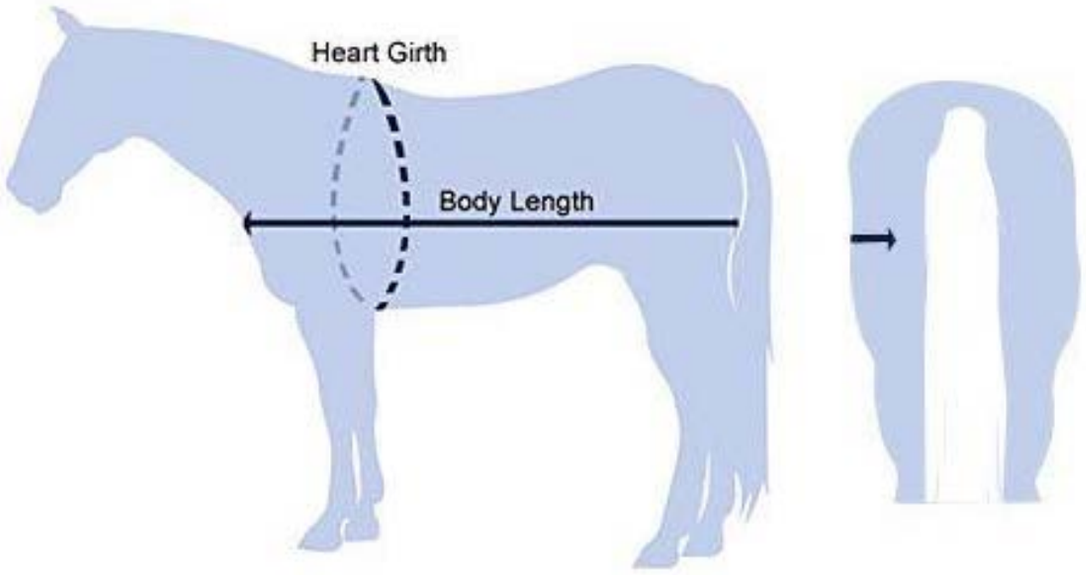
Although horses rarely need vitamin supplementation, it is not uncommon to see mineral deficiencies. Minerals needed in larger amounts, macro minerals, are supplied in good quality forages and grains. These macro minerals include calcium, phosphorus, sodium, potassium, chloride, magnesium, and sulfur. We see mineral deficiencies when horses are fed poor quality feeds. Trace minerals are required in smaller amounts and can be supplied through forages or a free-choice salt and mineral block. Trace minerals include cobalt, copper, iron, iodine, manganese, selenium and zinc.

In general, an adult horse on a maintenance diet should be eating 1.5 - 3.5% of its body weight daily. This means that an average horse weighing 1,000 pounds would eat 15 to 35 pounds of dry matter daily. Ideally, this would be entirely made up of forages. If your horse needs some extra energy, vitamins, minerals, or grains, supplements can be added. When adding concentrates and supplements into the diet, you should feed the smallest amount that you can while still getting the desired result. A good rule of thumb is to make sure your horse's diet is at least 50% forages. This avoids stomach upset and diarrhea. Always change the diet slowly.

Equine Nutrition

Very few riders have access to a horse-sized weight scale, so they use a heart girth tape instead. The heart girth tape is fairly accurate when used correctly. Horse owners can also take the measurement of the heart girth and estimate their horse's weight using the following equation:

$$\frac{\text{HG2 x BL}}{300} + 50 = \textit{Horse's Weight in Pounds}$$



Chapter Review

1. What are the six essential nutrients?
2. How much does an adult horse drink daily?
3. Name a source of carbohydrates in a horse's diet.
4. Name a source of fat in a horse's diet.
5. Name a source of protein in a horse's diet.
6. What 2 vitamins must come from the horse's diet?
7. Where do most vitamins that horses need come from?
8. What is a macro mineral? Name them.
9. What are trace minerals? Name them.
10. How do you calculate an estimate of your horse's weight?

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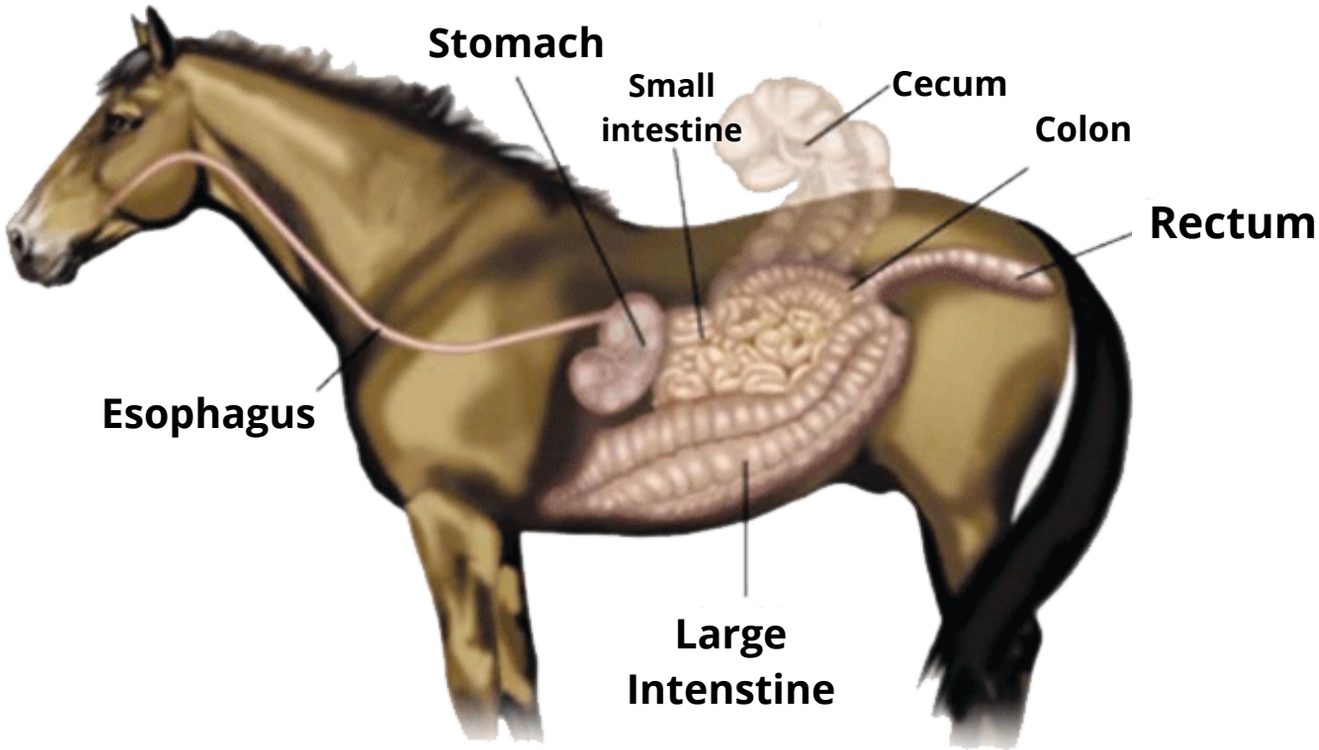
Horse Smarts. American Youth Horse Council. 2016

The Digestive Tract

All animals are classified by their digestive system and diet. Ruminant animals, including cows, sheep, and deer, have four stomach compartments including a rumen. Animals with only one stomach are called monogastric, or simply referred to as non-ruminant. Humans, pigs, horses, and most companion animals such as your dog and cat are monogastric

Horses have a unique digestive system that has a high rate of enzymatic digestion occurring in the foregut, plus some microbial fermentation digestion in the hindgut. The foregut includes the esophagus, stomach, and the small intestine. The hindgut is the large intestine. Horses are designed to handle several small meals with primarily forage. It is absolutely essential that horses have at least 1% of their diet be forage. Ideally, horses would be fed primarily forage with grains only used as a supplement under heavy workloads or breeding conditions.



The Digestive Tract

Esophagus: Thick muscular tube that takes food from the mouth to the stomach. The act of swallowing is called deglutition. The esophagus is approximately 50 to 60 inches long.

The foregut is everything from the mouth to the end of the small intestine.

Stomach: The horse stomach is relatively small in comparison to the whole digestive tract. The stomach holds between 8 and 19 quarts which is only about 8% of the capacity of the whole tract. Due to the size of the stomach, horses cannot handle large quantities of feed at a time. They can also not belch or vomit, and gas build up in the stomach can cause it to rupture. A ruptured stomach is fatal. Food remains in the stomach for 15 to 45 minutes before it moves to the small intestine.

Small Intestine: The majority of nutrient absorption occurs in the small intestine, which is about 70 feet long and holds up to 30% of the digestive tracts' capacity. The small intestine is composed of three pieces starting with the duodenum, then the jejunum, and ending with the ileum. It takes 30 to 90 minutes for food to make its way through the small intestine.

The hindgut is everything from the large intestine to the end of the digestive tract. It takes 1 ½ to 3 days (36 to 72 hours) for food to fully get through the hindgut.

Colon: This is the largest and most significant portion of the large intestine. Sometimes "colon" is used interchangeably with "large intestine." The colon is divided into the large and small colon. The large colon holds 80 quarts which is 38% of the digestive capacity. The large colon is 10 to 12 feet long. The small colon is the same length as the large colon, but its capacity is significantly smaller. It holds about 9% of the digestive capacity with only 16 quarts. The primary function of the small colon is water absorption.

Cecum: In humans, the cecum is called the appendix. The cecum in the horse forms a “T” with the small and large intestine connecting to it. The cecum holds 15% of the digestive capacity, roughly 32 quarts. It is 4 feet long. Of all the animals you may be familiar with, the horse and rabbit have the most similar digestive system. This is because they are both considered hindgut fermenters with a well-developed cecum.

Rectum: This is the last portion of not only the large intestine, but the entire equine digestive tract.

Chapter Review

1. What are three different ruminant animals?
2. What are four examples of monogastric animals?
3. Approximately how long is the esophagus?
4. What is the capacity of the stomach?
5. What are the three pieces of the small intestine?
6. What is the foregut and the hindgut?
7. Horses don't have an appendix, instead they have what organ?
8. What is the colon commonly referred to as?
9. How large is the large colon?
10. What is the last portion of the digestive tract?

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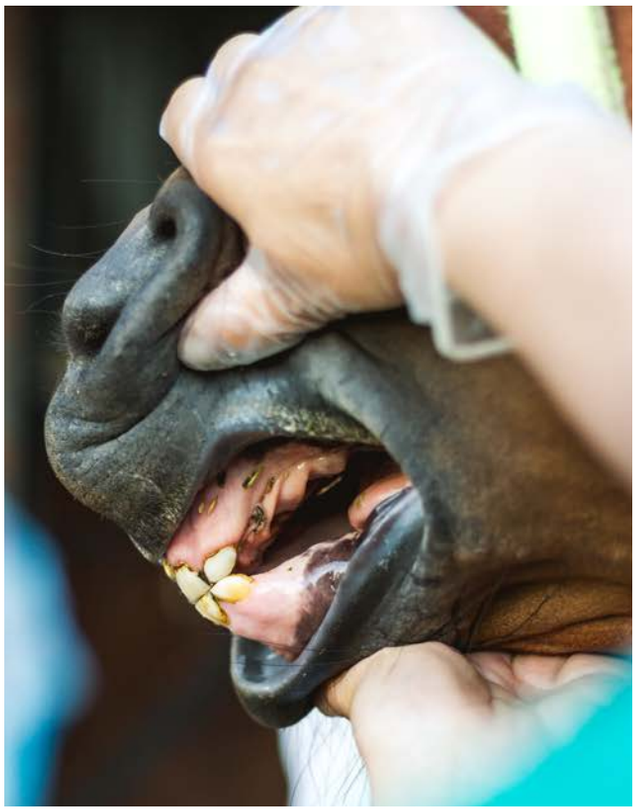
Equine Dentistry

Horse are obligate herbivores meaning they rely on plants to get their nutrients. For millions of years, horses have grazed forests, prairies and grasslands. The horse's teeth had to adapt to the constant wear from the grinding that would occur from continual grazing. A horse's molars and premolars will wear down 2 – 3 millimeters per year under regular circumstances. These teeth, called cheek teeth, slowly erupt to compensate for this wear. Because of this continual growth, an equine dentist or trained veterinarian can evaluate the horse's teeth and give a fairly accurate estimation of a horse's age. With some practice, you can too!

The Horse's Mouth

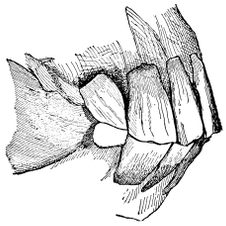
Equine dentistry is a constantly developing science. Under natural conditions, horses graze most of the day, grinding plants with their teeth. Under regular conditions, a horse's molars and premolars will wear down 2 – 3 millimeters a year. To compensate for this wear, horses' teeth have adapted by slowly erupting throughout their lives. As a result, horses have hypsodont teeth, meaning very long teeth.

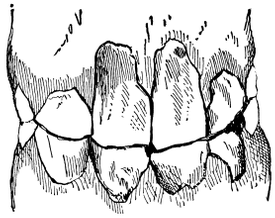
Because not all teeth will wear evenly, problems can arise. These problems include hooks, points, uneven patterns, abscesses, and broken teeth. Some obvious signs of dental disease include slow eating, dropping a lot of food while chewing, slobbering, abnormal swelling, and bad odor. However, some problems in the mouth are harder to detect.



Equine Dentistry

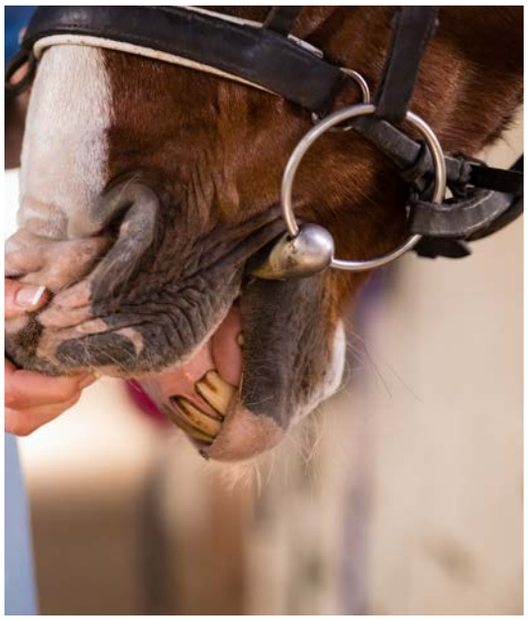
If a horse has lower performance, a bad attitude, head flipping when bridled, unexplained weight loss, or a decreased interest in food, a dental issue may be the culprit. Horses should have a dental evaluation performed yearly by a licensed professional.





Horse Mouth Anatomy

Before you can use dentition to evaluate the potential age of a horse, you need to know some basic anatomy. Mares usually have 36 - 40 permanent teeth and stallions or geldings usually have 40 - 44 permanent teeth.



A horse has 12 incisors with 6 on the top jaw and 6 on the lower jaw. The 2 incisors in the middle are called the central incisors. The teeth on either side of the central incisors are called the intermediate incisors. The third teeth on each side are called the corner incisors.

Horses have 3 premolar and 3 molar teeth on the upper and lower jaw on both sides of the mouth. Typically, a horse will also have an additional premolar tooth on the upper jaw and in rare instances one on the lower jaw that is called a wolf tooth. The presence of wolf teeth is the main reason for the variation in total number of permanent teeth. The wolf tooth is a small, pointed tooth. When it is present, it will be just ahead of the 2nd premolar. The 2nd premolar is quite a bit larger than the wolf tooth, making it easy to identify. Often, a veterinarian will remove the wolf teeth for the horse's comfort and wellbeing. When a bit is used in the mouth of a horse it can bring soft tissue into contact with the wolf tooth causing pain and injury.

The sex of the horse will affect their teeth. Most male horses, and some female horses, will have canine teeth. Sometimes the canine teeth are erroneously thought to be wolf teeth. They are found in the space between the corner incisor and first premolar, called the interdental space. Canine teeth are found on both the top and bottom jaw on both sides, and are sometimes called fang teeth, tusks, tushes, or bridle teeth.

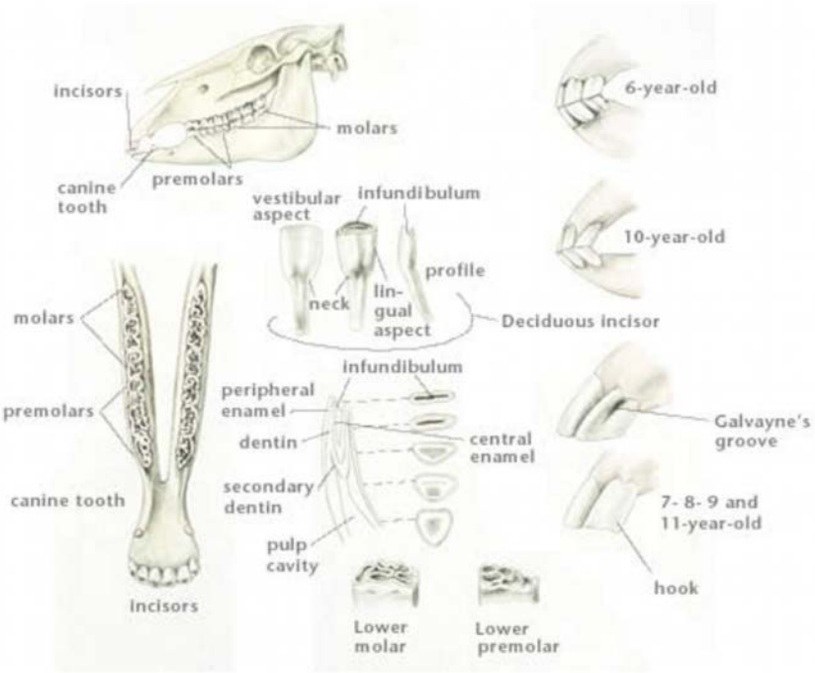
Equine Dentistry

DETERMINING AGE USING THE TEETH

Because the cheek teeth are not easily accessible, you can look at the incisors to evaluate age. The first method of using dentition to age a horse is to see how many teeth have erupted. The permanent incisors will erupt at different times.

Permanent Teeth Eruption
Centers – 2 ½ year
Intermediates – 3 ½ years
Corners – 4 ½ years

After the incisors have erupted, they will eventually come to be “in wear," When a horse’s incisors are “in wear,", it means that the top and bottom teeth are in contact with each other. For the centers, this occurs when the horse is about 3 years old, the intermediates at around 4 years, and the corners when the horse is around 5 years. When all the permanent teeth have erupted and are in wear, the horse is considered as having a full mouth.



When a horse has a full mouth, you can further evaluate their age by looking at the individual teeth. Permanent teeth have deep indentures called cups. These cups will eventually wear smooth, but not at the same time. Generally, the lower cups become smooth first, starting with the centers, followed by the intermediates, and last the corners. Then the upper teeth will begin to wear smooth in the same pattern. As they wear, dental stars will develop. Dental stars are narrow yellow marks in front of the enamel ring. In older horses, they will appear as dark circles in the center of the tooth.

Equine Dentistry

DETERMINING AGE USING THE TEETH

Cups Smoothen
Lower Centers – 6 years
Lower Intermediates – 7 years
Lower Corners – 8 years
Upper Centers – 9 years
Upper Intermediates – 10 years
Upper Corners – 11 years

The term smooth mouth refers to a horse with no visible cups. This typically occurs in horses 11 to 12 years of age. Sometimes a shady horse dealer would use silver nitrate to create the appearance of cups so they could market their horses as being younger. This unethical practice is called bishoping. Luckily, you can see if a horse's mouth has been altered, and there is no way to hide the dental stars and aging of the enamel rings.

Top: occlusal, meaning the chewing surface, view on the lower incisors of a 6-yr-old mare. Dental stars are visible on I1 and I2 (arrows); cups are present as large elliptical infoldings (arrowheads). Occlusal surfaces of the incisors are oval, and curvature of the dental arch is semicircular.

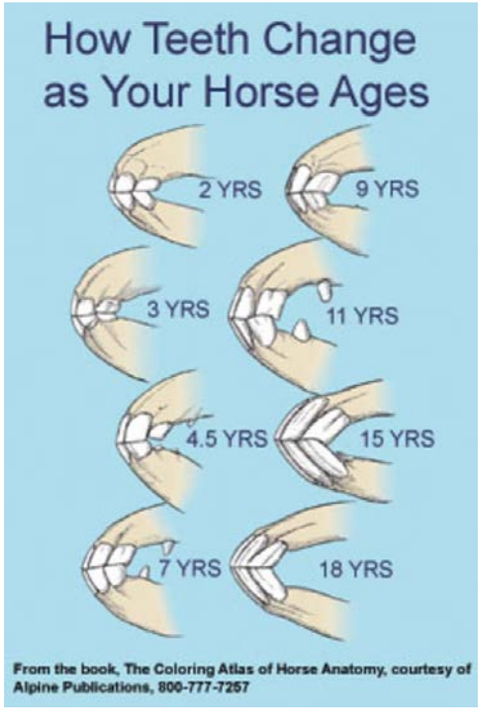
Bottom: occlusal view on the lower incisors of a 12-yr-old mare. In the center of the dental stars, a white spot is clearly visible (arrows). Cups have become smaller and more shallow. Occlusal surfaces are more triangular.

Equine Dentistry

DETERMINING AGE USING THE TEETH

Another way to evaluate age is by angle of incidence. When you stand to the side of the horse and look at its profile, you can evaluate the angle where the upper and lower incisors meet. This is the angle of incidence. As a horse ages, the angle will become more acute. In young horses the angle is typically 160° - 180°. In older horses, the angle of incidence could be around 90° and the incisors will have the appearance of slanting forward. As the slant increases, the upper and lower corner teeth will not wear evenly. When the horse is around 7 years of age, the upper corners will develop a hook. This is called the 7-year hook. This hook will disappear and then reappear at age 11, and disappear and reappear again around 18 years. A horse's diet and genetics will affect their teeth, but most horses will have the well-developed and identifiable hook by 7 years. The American Association of Equine Practitioners considers the 7-year hook to be an inconsistent and unreliable tool for aging a horse.

Lastly, when a horse is about 10 years of age, the Galvayne's groove appears near the gum margin of the upper corner incisors. The groove will extend halfway down the tooth at 15 years of age, and reach the wearing surface at 20 years. The groove will then begin to disappear. At 25 years the groove is halfway gone and when the horse is 30 or older, it won't be visible at all.



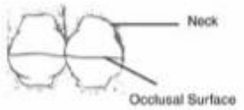
From the book, The Coloring Atlas of Horse Anatomy, courtesy of Alpine Publications, 800-777-7257

Do you enjoy going to the dentist? If not, you aren't alone! Not many people enjoy having their mouths looked at, and our horses are no different. Checking the teeth of your horse should be done with the help of an experienced adult.

	Di_1	Di_2	Di_3
Erupts	8 days	8 weeks	8 months
***In Wear**	1 year	1 year	2 years

* In wear means that the occlusal surfaces are touching on the both the upper and lower incisor.

Foals and Yearlings: The bottom deciduous incisors erupt or break through the gums at 8 days, 8 weeks, and 8 months. The deciduous teeth are wide at the occlusal surface and have a distinctive neck. They are smaller than permanent teeth.



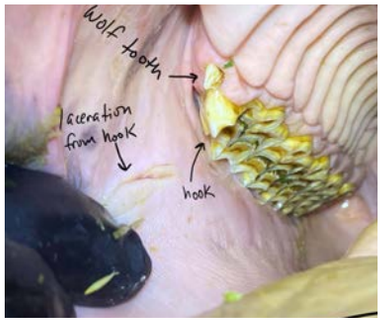
Equine Dentistry

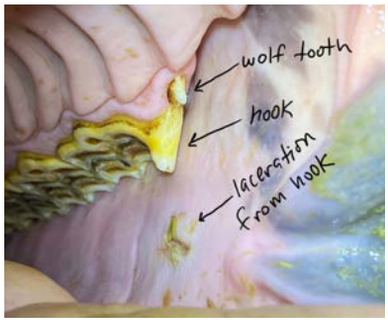
Common Equine Dentistry Problems

Many times, a change in movement or behavior can be linked to issues in the mouth. Sometimes uneven wear on the teeth will cause sharp points. These points can be filed down by an equine dentist or specially trained veterinarian. This process is called floating because the rasp-like tool used to smooth down sharp edges is called a float. It used to be common for a horse's teeth to be checked and floated after they were 15 years or older.

Common problems include:

- Sharp enamel points
- Retention of deciduous incisors and premolars (baby teeth)
- Presence of wolf teeth
- Hooks (sharp points on the edge of molar where the teeth don't align fully)
- Infected teeth or abscessed teeth
- Misalignment (parrot-mouthed or sow-mouthed)
- Tall or excessively sharp canines





Now, it is recommended that horses have their teeth checked and any necessary dentistry performed yearly.

Chapter Review

1. What is an obligate herbivore?
2. How many teeth do mares typically have? Stallions? Geldings?
3. Explain the difference between canine teeth and wolf teeth.
4. What are the three ages for eruptions of permanent teeth?
5. When is a horse considered to have a full mouth?
6. What are cups and where are they found?
7. What is bishoping?
8. What is the angle of incidence?
9. Where does Galvayne's groove develop?
10. Explain how to tell a horse's age from looking at the Galvayne's groove.

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Horse Smarts. American Youth Horse Council. 2016

Identifying Common Illnesses and Other Ailments

Prevention through general health and best management practices is the best medicine for our horses. Horse owners should be diligent and work with equine health professionals to make sure they are preventing illness and other ailments. However, no matter how careful, our horses will sometimes get sick, develop a toothache, or bad habits that can affect their health. This chapter covers some common illnesses and other ailments so you can help your sick horse get onto the path of recovery, and prevent other horses from getting sick.

Common Equine Diseases

Should your horse get sick, being able to identify symptoms is a crucial first step to helping your horse recover. Many diseases are highly contagious and often fatal. If you suspect any of the following diseases, contact a veterinarian for assistance right away. This chapter denotes diseases that are often fatal with a red, that can be fatal with yellow, and diseases that can usually be cured with green (❗❗❗)

❗TETANUS

Tetanus is caused by a spore-forming, toxin-producing bacteria called Clostridium tetani. The bacteria are introduced to the blood stream through deep puncture wounds. This bacteria is present in the soil, and naturally occurs in the intestines and feces of humans, horses, and other animals. It is not directly contagious from horse to horse.

Some signs of a horse with tetanus is a stiffening and rigidity of the muscles, a stiff, stilted gait, and the classic "saw horse" stance where the horse stands stiff and rigid with the legs at an unnatural angle. Horses that go untreated develop lock-jaw and are unable to eat or drink.

Identifying Common Illnesses and Other Ailments

EQUINE ENCEPHALOMYELITIS

Equine encephalomyelitis is caused by the Eastern or Western virus. The virus lives mainly in birds but can also find a host in rodents. It is then spread to horses through mosquitos or other blood-sucking insects. It is not directly contagious from horse to horse.

The first signs of the disease are much like the human flu with a high fever, loss of appetite, depression, and stiffness or muscle aches. As it progresses, the horse develops a drowsiness and appears weak and unsteady in its gait. In the final stage, the horse will develop paralysis and be unable to stand, the lips will droop, and the tongue may hang out, making it impossible to eat or drink.

INFLUENZA

One of the most common infectious diseases for horses is influenza. This respiratory disease is highly contagious and is spread rapidly through herds or stables when horses cough. The airborne virus can travel for 35 yards and can be spread by feed, bedding, shared tack, grooming supplies, or human hands.

Horses will develop a fever, become lethargic, and show a decreased appetite, but it is most commonly characterized by a harsh, frequent cough.

Identifying Common Illnesses and Other Ailments

‼️EQUINE HERPESVIRUS (RHINOPNEUMONITIS)

Two different viruses are the culprit for Equine herpesvirus (Rhinopneumonitis): equine herpes virus type 1 and type 4, abbreviated to EHV-1 and EHV-4. These viruses affect the respiratory tract and give your horse a low fever and an abnormally snotty nose. Some horses will exhibit more severe symptoms including a loss of appetite, lethargy, and a more severe nasal discharge and a cough.

Horses infected with EHV-4 will usually only exhibit respiratory symptoms, however more serious illness is linked to EHV-1. This less common virus is known to cause abortion and occasionally paralysis alongside the respiratory symptoms. Additionally, the mutated neuropathic strain of EHV-1 can cause Equine herpesvirus myeloencephalopathy or EHM. This severe neurological disease is almost always fatal and spreads rapidly.

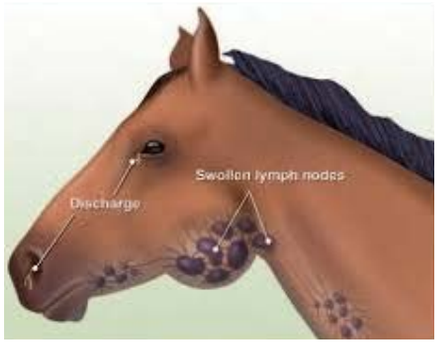
RABIES ❗

Most people with companion animals are familiar with rabies, a neurological disease passed through saliva amongst dogs, cats, and other wildlife. The primary hosts are skunks, bats, foxes, and raccoons. Horses can get rabies the same as our domestic pets. Clinical signs vary and can include fever, loss of appetite, changes in behavior, increased sensitivity to touch, weakness, uncoordinated movement, colic, blindness, inability to swallow, and convulsions. This is fatal.

Identifying Common Illnesses and Other Ailments

STRANGLES

The bacteria streptococcus equi causes equine distemper, commonly known as strangles. This disease causes horses to develop enlarged lymph nodes in the neck and throat that turn into abscesses. Horses have a decreased appetite and will act depressed due to the discomfort, and will develop a fever between 102-106°F. The abscesses will eventually drain pus, and the horse may stand with an outstretched neck. The horses most susceptible to strangles are young horses between 1 and 5 years, horses that travel a lot, or horses in high concentration living conditions. The disease is transmitted through either direct contact with infected discharge or inhalation of particles.



EQUINE PROTOZOAL MYELOENCEPHALITIS (EPM)

Equine protozoal myeloencephalitis (EPM) is unique because it's caused by a protozoa called Sarcocytis neurona or Neospora hughesi which is carried by opossum. Intermediate hosts could include cats, sea otters, skunks, and armadillos. Horses become infected when they eat or drink food or water that has been contaminated by feces. Interestingly, symptoms tend to affect one side of the horse more than the other and includes weakness, head tilt, and paralysis of certain areas of the face. Horses will have a droopy eye, ear, or lips, difficulty swallowing, inability to get up after lying down, or seizures

Identifying Common Illnesses and Other Ailments

POTOMAC HORSE FEVER

Neorickettsia risticii is the bacteria responsible for Potomac horse fever. Most veterinarians will only recommend vaccination against this disease if your horse is going to be geographically exposed or at risk. The disease is associated with the northeastern United States near the Potomac River, but can be found in many areas of the United States. The disease is seasonal and most common during the hot summer months of July, August, and September. It is not transmitted between horses.

Horses with access to running water such as a river, creek, irrigation ditch, or a canal are susceptible. Horses can get exposed if they graze in pastures near these waterways. Talk to your veterinarian if your horse is at risk. Some common signs are fever, depression, and loss of appetite. Horses will also show signs of colic, have absent gut sounds, and may even get diarrhea and get dehydrated.

WEST NILE ENCEPHALITIS

When a horse is infected with West Nile virus, the resulting infection is called West Nile encephalitis. The virus uses birds as the primary host, and then mosquitos transmit the virus to both humans and horses. The disease is only transmitted from infected birds via mosquitos and infected horses will not spread the disease to other horses or humans. Symptoms of West Nile encephalitis include weakness and discoordination of the hind legs, fever, loss of appetite, paralysis of the lower lip and inability to swallow, and excessive sweating. Horses will also exhibit neurological symptoms like pressing their head against a hard service, head tilt, convulsions, and severe cases may result in coma.

Identifying Common Illnesses and Other Ailments

Vices or Bad Behaviors

Horses will develop vices or bad behavior as a result of illness, boredom, or poor stabling practices. Three common vices are weaving, cribbing, and windsucking.

Weaving is an escape vice where the horse shifts its weight back and forth between the two front legs and often includes throwing the head and neck back and forth. This vice is commonly associated with social isolation of stabled horses.

Cribbing and windsucking are both oral vices, meaning it involves the horse's mouth and teeth. When a horse is cribbing, it grasps an object with its teeth and pulls on the object while attempting to suck in air. Winduscking is the same behavior but the horse will actually inhale. Another term for windsucking is aerophagia.

Frequently chewing on wooden rails and doors is mistakenly called cribbing. The horse pictured is cribbing, not just chewing wood.

Although some vices are merely annoying for horse owners, some vices can be detrimental to a horse's health and wellbeing. Vices may be a sign of a serious condition or illness. Correcting vices is a popular topic amongst animal behaviorists, horse owners, trainers, and veterinarians. There are several theories on treating and preventing vices. Removing horses from environments that are causing stress, such as being stalled next to a busy area in the barn or near a loud construction project may help with behavioral vices.

Evaluating the horse's social or nutritional status, offering toys, extra turn-out time, or a break from rigorous training schedules are all acceptable methods for treating and preventing vices.

Chapter Review

1. Name all the diseases referenced in this chapter and list the symptoms associated with each.
2. What illnesses are caused by bacteria?
3. What illnesses are caused by a virus?
4. What illness is caused by protozoa?
5. What diseases are carried by bats, birds, rodents, opossum, or other non-equine hosts?
6. What is the process of filing down the sharp points on an equine tooth called?
7. What are some common equine dentistry problems?
8. What may cause a horse to develop a vice?
9. What are the three common vices listed in this chapter?
10. What are some ways to help a horse that is exhibiting destructive behavior?

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Horse Smarts. American Youth Horse Council. 2016

Pest Management

If you have spent anytime outside, whether you are around horses or not, you know about pests. Although some pests are simply an annoyance and do not pose any real threat, some can spread disease. Parasites, which are organisms that feed and live on a host, can also have detrimental effects on a horse's health if left unattended. Some pests are easy to spot, but some are impossible to see with the naked eye. There are over 100 different kinds of external and internal horse pests. This chapter covers some of the most common.

External Pests & Parasites

External pests and parasites affect the outside of the horse. They are also known as ectoparasites. These are typically easy to see with the naked eye and include common pests like flies, mosquitos, lice, and ticks. Some pests such as mites are too small to see, but we can see the damage or mange.

FLIES: The most common external parasites are flies. Flies are classified as non-biting or biting. Non-biting flies are the best example of pests that are annoying and pose a threat to the horses's health. Many flies get their name from where they are most often found. This includes house flies, face flies, and stable flies.

Non-biting flies The house fly (Musca domestica) and face fly (Musca autumnalis), do not bite, but the can still be very annoying and can spread germs and stomach worms.

House fly (Musca domestica)

Face fly (Musca autumnalis)

Pest Management

Biting Flies: Biting flies are more than just a nuisance for our horses. Interestingly, it is most common for only the female fly to bit and suck blood, while the male survives on nectar. If the male and female both bite to get blood, it will be specified below.

Stable Fly: (Stomoxys calcitrans) One of the most hated biting flies is the stable fly. They may get confused with a common house fly, but both males and females have a mouth that allows them to pierce the skin and suck the blood from their victims. They can also act as an intermediate host for certain types of worms.

Horn Fly: (Haematobia irritans) Also affect cattle. Both male and female flies will bite and get blood from horses.

Deer Fly: (Chrysops) The deer fly has a bayonet-like mouthpart and its bites are painful. The deer fly is easy to identify because of its brown color and striped wings.

Horse Fly: (Tabanus) Horse flies are large, up to 1 and 1/4" long and black. They have the same mouth as deer flies and have painful bites. They are known to transfer blood-borne diseases like equine infectious anemia.

Black Fly: (Simulium) Sometimes called buffalo gnats because of how they look. They can be found inside the ears of horses and they travel in swarms.

Biting Midge: (Culicoides) Most often found in southern coastal states of the U.S. These flies are small but can cause allergic reactions called sweet itch. Their incessant biting can make horses nervous and irritable.

Eye Gnats: (Liohippelates) Mostly a nuisance, eye gnats feed on mucous, pus, and blood. They can be a nuisance almost year-round, becoming dormant in the cold winter months.

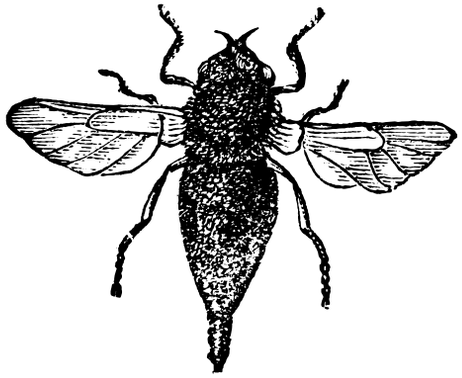
Control: Practice good sanitation, manure management, minimize waste, and use of fly traps or tapes. Biological methods such as utilizing parasitic wasps can also be a good way to control flies. Insecticides and larvicides can be very effective. Always follow the label when using these products.

For more pictures and tips on identifying pests visit the USU Extension Urban Pest Guide. There are lots of common pests listed, but youth should specifically study the pests listed in this chapter. (https://extension.usu.edu/pests/schoolipm/structural-pest-id-guide/index)

Pest Management

BOT FLIES:

This parasite is unique because it is both an external and an internal parasite at different stages of its lifecycle. Most likely, every horse will be infested with bots at some time in its life.



There are three types of bot flies: the common bot fly (Gasterophilus intestinalis), throat bot fly (Gasterophilus nasalis), and nose bot fly (Gasterophilus haemorrhoidalis). You don't have to worry about the nose bot fly, because they aren't common in the U.S.

The common bot fly females will lay their eggs on the horse's legs, chest, neck, barrel, and sometimes the hind legs and flank.

The throat bot fly females lay their eggs on hairs along the horse's chin and manidble.

Horse's will lick the eggs up, and after spending some time in the mouth, the larva will migrate into the digestive system. The larvae will live here until they are fully grown, and then are passed the remaining way through the digestive tract and shed in manure.

They may seem harmless, but both adults and larvae can have detrimental impacts on a horse's health. The larva may cause tissue damage as it feeds and migrates from mouth to the stomach. Heavy parasitic load can cause blockages leading to absorption problems and colic, or tears of the lining of the stomach or intestines. These flies are about the same, shape, and color as honeybees, but they don't sting.

Control: Remove the eggs and deworm the horse with a boticide, an insecticide that kills bots, after the first hard frost. Ivermectin and Quest are examples of boticides.

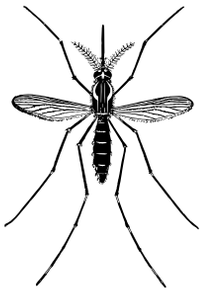
Pest Management

CATTLE GRUBS

As is suggested in the name, cattle grubs affect horses that are housed near cattle. The larva make their way from the heels of the horse to other parts of the body, and create hard, painful nodules. These nodules usually have to be removed by a veterinarian.

Control: Practice good waste management and remove excess manure; control grub infestation on cattle with updated deworming program.

MOSQUITOS:



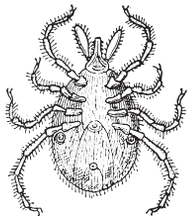
Perhaps the most common blood-sucking insect, the mosquito (Culcidae) is both a nuisance and a hazard. They are known to carry some of the deadliest diseases for horses including Eastern, Western, and Venezuelan Equine Encephalitis as well as West Nile Virus. These diseases are known as endemic diseases and suspected cases have to be reported by veterinarians to state health officials. They can be disastrous to the equine community. These diseases spread by mosquitos feeding on infected birds and then spreading the virus through their saliva when they feed on horses.

Control: Remove stagnant water, avoid dawn and dusk, and use repellant if needed.

TICKS:

Another common blood-sucking parasite is the tick (Dermacentor). There are several types of ticks that affect horses across the U.S, and they are becoming more and more prevalent. Ticks can cause skin irritation, anemia due to blood loss, and spread dangerous diseases. It's important to remove ticks as soon as you find them And be careful! If you find a tick on your horse, there might be one on you too. The Rocky Mountain wood tick (Dermacentor andersoni) and the American dog tick (Dermacentor variabilis) are the primary vectors of the bacteria that causes Rocky Mountain Spotted Fever in humans, and toxins in the saliva of the ticks can cause paralysis in horses.

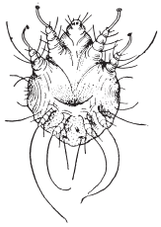
Control: Keep pastures mowed, avoid brushy areas, groom horses frequently, and use tick deterrent if ticks are an issue.



Name	Scientific Name	Diseases Transmitted
Rocky Mountain Wood Tick	*Dermacentor andersoni*	Rocky Mountain Spotted Fever; toxin paralysis
American Dog Tick	*Dermacentor variabilis*	Rocky Mountain Spotted Fever; toxin paralysis
Eastern and Western Blacklegged Tick	*Ixodes scapularis*	Lyme, Equine Granulocytic Ehrilichiosis (EGE).
Lone Star Tick	*Amblyomma americanum*	EGE
Tropical Horse Tick	*Dermacentor nitens*	Equine Piroplasmosis

Pest Management

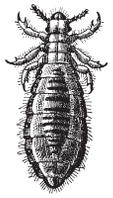
MITES:



There are many different types of mites (Psoroptes or Chorioptic). The skin condition called mange is caused by mites. The mites tear open the skin and create a special hardened cover over themselves. They are then protected while the feed, causing irritation, scabs, and infection to the host. Psoroptic mange is caused by Psoroptes equi, leg mange is caused by Chorioptes bovis, and sarcoptic mange is caused by the Sarcoptes mite. Of these three, leg mange is the most common and sarcoptic mange is the rarest and the most dangerous. If mange gets bad enough, a horse may become debilitated and could die.

Control: Horses have natural immunity against mites. Keep horses in general good health including good nutrition and routine grooming. This is especially important in the winter when the hair coat is humid and animals may be confined in close quarters indoors.

LICE:

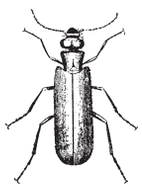


You may know what lice are because they are a common insect that plagues schools and public gatherings amongst children. Lice can also infect horses. When horses are infested with lice, it's called pediculosis. Biting lice (Bovicola equi) move frequently and like to hide under long hair like the mane, tail, or the feathers on the lower legs of some breeds. Sucking lice (Haematopinus asini) move slowly and are found attached to the skin of the flank, neck, or base of the tail. The eggs, also called nits, of lice attach at the base of the hair near the skin in those respective areas.

Although hard to see with the naked eye, lice can cause big problems. Heavy infestation will affect the hair coat causing an unthrifty or dull appearance. The skin irritation causes horses to itch so they rub, often rub patches of their hair off and further irritating the skin. Anemia can even occur in severe cases.

Control: Horses also have some natural defense factors against lice. Ensure proper nutrition, regular grooming, and avoid overcrowding and unsanitary conditions.

BLISTER BEETLES:



A dangerous toxin called cantharidin is secreted from blister beetles (Epicauta) and can be deadly to horses. These bugs get their name from the painful blisters they produce. The blisters erupt on the skin as well as the mouth, tongue, and the digestive tract. These beetles are usually black or brown and can be solid, striped, or spotted. They like to live in alfalfa hay. In Utah, alfalfa is a common forage for horses and so it is important to keep an eye out for these toxic pests. Even the dried remains of these beetles can be toxic.

Control: Obtain hay from someone who has good management practices, use first cutting alfalfa, and always check for beetles at time of feeding.

Pest Management

Internal Pests & Parasites

The majority of pests and parasites that affect horses are internal, meaning they live within the horse. Most of these parasites call the intestinal tract their home. At any given time, your horse will likely have at least a few internal parasites. Some of these parasites cause no harm, but some are associated with various complications and can be a real problem. The best-known internal parasites are the various parasitic worms. Although all worms are internal, not all internal parasites are worms. Bot fly larva is a prime example.

STRONGYLES: The most common parasite category includes large strongyles (Strongylus) and small strongyles (Cyathostomin). Large strongyles are ingested as larvae living in pasture grasses. After being ingested, the laravae penetrate the arteries of the gastrointestinal (GI) tract. These worms are sometimes referred to as blood worms because they can cause blood clots and tissue death resulting in fever and colic. Rigorous deworming practices have all but eliminated large strongyles from horse herds.

Small strongyles on the other hand, are much more prevalent. Just like large strongyles, the larvae are ingested when horses consume pasture grasses.

From there, they are very different. Small strongyles imbed into the walls of the large intestine, create a hardened protective case around themselves, and then become dormant. The dormant larvae wait for favorable conditions.

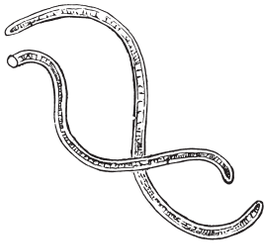
One such condition is when adult populations within the intestine are diminished, such as using a dewormer. This imbalance triggers the larvae to emerge to finish their life cycle and to take the place of the previous adult group. Only heavy infestation will lead to clinical signs. Sometimes, if a large number of larvae emerge at the same time, a disease called larval cyathostominosis can occur. Colic, diarrhea, weight loss, and fever are all clinical signs of this potentially deadly disease. The eggs of small strongyles won't hatch until it reaches 40°F and once they hatch, the larva will die if the temperature gets above 100°F. Adult horses will build a certain level of resistance, but virtually every horse will get strongyles yearly.

Most deworming programs target small strongyles, amongst other common parasites, but parasite resistance has become a serious issue throughout the horse community. You should work closely with a veterinarian to establish a deworming program.

Pest Management

ASCARID

The eggs of ascarids, also known as round worms (Parascaris equorum), are ingested by eating grass or licking walls and other objects. The eggs will hatch, and the larvae will work their way through the GI walls, to the liver and lungs. The larvae will develop in the lungs for a time, and then work their way up the trachea where they can be swallowed again. They finish developing into adults in the small intestine.



Heavy parasite loads can lead to weight loss, lethargy, fever, coughing, and snotty noses. It can even stunt a horse's growth. But the most dangerous problem with roundworms is the potential for impaction colic. This happens when a heavy infestation is killed off too quickly, and the adult worms clump together creating a blockage. Roundworms usually infect horses younger than 2 years old. After that, horses typically develop an immunity.

To protect young horses, good management practices include removing manure daily, cleaning walls and objects with phenol-based disinfectants, and feeding in buckets, tubs, or feeders, rather than the ground. Ascarids are amongst the common species targeted by most deworming programs.

TAPEWORMS

There are a few different types of tape orms, but the most common is Anoplocephala perfoliata. They are spread when a horse eats a forage mite containing a tapeworm larva, called a cysticercoid. It takes 6 to 10 weeks for the cysticercoid to develop into an adult, where it starts shedding egg packets. Tapeworms are a type of flat worm that live in the ileocecal junction between the small and large intestine. They live in clusters on the intestinal wall and adults can be about one inch long. Heavy burdens can cause colic.

Unlike the worm parts visible in the feces of cats and dogs infected with tapeworms, you can't visually see the worms in horse's manure. Instead, blood and salivary tests can be done. It's not uncommon for 20-80% of an entire horse herd to be harboring tapeworms at any given time, and yearly deworming with praziquantel is recommended for all horses.

Pest Management

PINWORMS

Like other worms, pinworm (Oxyuris equi) eggs are picked up by horses eating, and make their way to the large intestine. Once mature, the female will migrate through the rectum and lays eggs around the anus. The drying eggs are irritating to horses. To try to relieve the itchiness, they will rub their tail head against walls and fences, leaving eggs behind. There are several dewormers that can be used on pinworms, but like strongyles, parasite resistance has been noted.

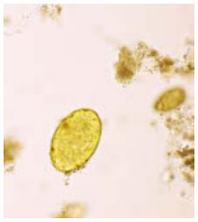
THREADWORMS

Foals are the most common victim of threadworms (Strongyloides westeri). They can become infected through the dam's milk or through their soft skin. The adult female threadworm attaches to the small intestine. A unique characteristic of threadworm eggs is that they don't need to be fertilized to develop and they have both a parasitic stage where they are inside the animal, and a free-living stage where they live without a host. The best way to control threadworm infection in foals is to make sure the mother is dewormed at foaling. If a heavy parasite load occurs, foals will develop diarrhea. They can be dewormed at 2 weeks if needed. They'll develop immunity between 6 and 12 months of age.

HAIR WORMS

The hairworm (Trichostrongylus axei) may affect horses that come in contact with cattle, sheep, and goats. These worms can cause the stomach to become inflamed, called gastritis; they can also cause weight loss. They are extremely hard to identify because the eggs look like strongyle. Luckily, all available dewormers seem to work on controlling hairworms.

LUNGWORMS



Infection with lungworms (Dictyocaulus arnfieldi) can cause issues with more than just horses. Multiples species are affected by these parasites. The larva mature in the bronchi and bronchioles of the lungs resulting in parasitic pneumonia and bronchitis. Most horses are asymptomatic meaning they don't show symptoms. When they do, the symptoms are sometimes confused with Recurrent Airway Obstruction or heaves. Horses will cough and have runny noses. Severe cases result in respiratory distress and can be fatal. Donkeys seem to be infected with lungworms the most and act as a reservoir for infection. Horses will develop immunity after being infected once, and most dewormers are effective means of control.

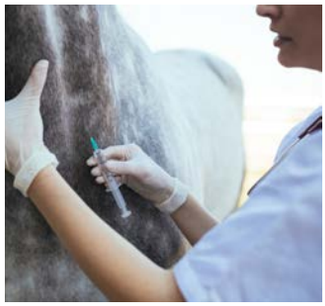
Pest Management

STOMACH WORMS

You can probably guess where stomach worms (Habronema) are found. The larva is ingested, but stays in the stomach to grow. The larva can cause inflammation and fibrous masses to occur. The most common problem with stomach worms doesn't happen in the stomach however. The larva of the worm is introduced to cuts and scrapes on the skin from flies. This causes what is known as summer sores where the skin becomes inflamed. Stomach worms use house and stable flies as their intermediate host. Like many other worms, they have been known to exhibit resistance to commonly used dewormers.

Controlling Worms

Understanding the lifecycle and infection method of worms is the first step to controlling them. Most worm infestations occur when the eggs are ingested. This is why any horse that has access to pasture likely has some level of parasitic load. Some worms have an intermediate host that aids in infection, such as tapeworms and stomach worms. There are several methods of controlling worms. Anthelmintics are anti-parasite medications commonly called dewormers. These medications affect certain stages of the lifecycle in different species. The environment can also play a big role in controlling parasites.



When developing a deworming program, horse owners should work closely with their veterinarian. Overdoses can be fatal, so always ready the label and only use deworming medication that has been recommended by a vet. It is important to understand that not all horses have the same susceptibility to parasites. Some horses seem to always have a heavy load, while others may never need dewormers to control infestation. A popular veterinarian saying is that 20% of horses have 80% of worms. This means that a small portion of the herd will have the majority of all the worms. It used to be a very common practice to give every horse in the herd dewormer on a seasonal basis, whether if the horse actually had an infestation or not. This has aided in the development of parasite resistance to anthelmintics.

Resistance occurs when worms are not killed by the medicine and the stronger ones are left to multiply, spreading resistance down the line. Some veterinarians are recommending that you use fecal exams to find which horses are infected, and only deworm horses that have an obvious need. Horse owners should work closely with a veterinarian to come up with a good deworming program. Good programs are adjusted to each individual horse and farm. Your program should be evaluated every couple of years or when something changes within the herd.

Chapter Review

1. What are the external pests listed in this chapter?
2. What are the internal pests listed in this chapter?
3. Can you identify all the pests listed in this chapter?
4. What is the most common external parasite?
5. What are some basic fly control practices?
6. What are the various types of ticks and where are they found on the horses body?
7. What internal parasites affect specific ages of horses?
8. Most horses will develop a natural immunity to what parasites?
9. What is the first step to controlling worms
10. What causes resistance to anthelmintics?

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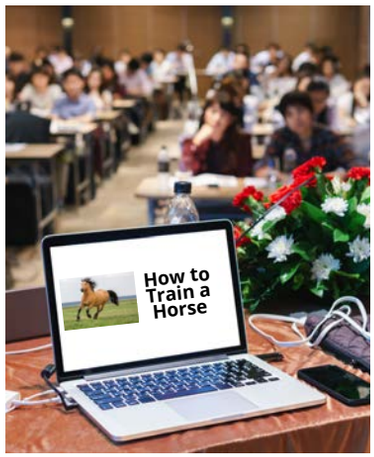
Horseless Horse Activities in 4-H

Did you know that you can be involved in the horse industry without owning and riding horses? Although most horse enthusiasts would prefer to spend time with living and breathing horses 24/7, participating in horseless activities can be very beneficial. The horseless activities don't just promote horse education, they also promote the development of important life skills. Not only will you learn more about horses, but you'll also develop valuable life skills and become more productive. The horseless horse events, or horse classics, are some of the most popular horse related activities across the nation. This chapter gives a brief overview of the 5 horse classic events and outlines some of the benefits to equestrians these events have.

Horse Public Speaking

This contest provides an opportunity for youth to study a horse related topic that interests them and then prepare a 5 – 10 minute speech. Participants improve their public speaking skills and gain confidence, but first, there are many educational benefits. The horse public speaking contest is an educational experience for both participants and spectators. The knowledge gained and skill learned will be used in many settings. Horse public speaking is an individual contest meaning participants don't have a team or partner helping to give the prepared speech.

Horse Demonstrations



Much like public speaking, horse demonstrations are an excellent opportunity for youth to explore new topics and learn new things. Sometimes a horse demonstration contest will include a category called illustrated talk. In an illustrated talk, the participant uses visual aids to discuss a topic that interest them. In a horse demonstration, participants will demonstrate their knowledge and skill to complete a task. Participants preparing a demonstration provide a step by step guide to accomplish a task or portray an end result. Both forms of horse demonstrations are educational experiences for everyone involved. Participants can compete as an individual or in teams of two.

Horseless Horse Activities

Photo Credit: Lillian Shupe
New Jersey 4-H

Horse Bowl

Horse riders that love to learn, thrive under a little pressure, and enjoy working on a team, will enjoy participating in horse bowl, a quiz bowl type competition. Participants compete on a team of 4 or 5 individuals and demonstrate their understanding of a wide variety of horse related topics. This contest is fast paced and thrilling for participants and spectators alike!

Horse Judging

In a horse judging contest, the participants act as the judge and evaluate a variety of classes. They are then scored on how closely their placing of the class matches the placing of the contest official. Participants will evaluate conformation in halter classes based on the principles of balance, muscle, and structure, and judge various performance classes using actual score cards. Some of the classes will have a public speaking component where the participant will explain to an official why they placed the class the way they did. Besides gaining a better understanding of what a judge is looking for, being able to evaluate the conformation of a horse is a valuable skill. Horse judging participants also gain confidence, develop critical thinking skills, and may even have the opportunity to help judge horse shows. Horse judging is typically done in teams of 3 or 4, but individuals can also compete.

Hippology

The most comprehensive contest is hippology. The word hippology means the study of the horse, and this contest takes components of the other 4 horse classics and combines it into one amazing contest. In hippology, participants will complete four phases: a written exam, stations, a team problem, and horse judging. The written exam tests their general knowledge while the stations take it a step further. In stations, participants may have to identify pictures or pieces of equipment or perform simple tasks. In the team problem phase, the team works together to solve a problem and then present on that problem. With horse judging, the participants will judge a few classes just like in horse judging contest. This contest is often the pinnacle event that horseless horse participants work towards. Being successful at hippology means you have gained all the benefits of the other four horse classics and are true masters of the horse.

Chapter Review

1. What are the five horse classic events?
2. What horse classic event sounds the most appealing to you?
3. What are some benefits of horse public speaking?
4. What is an example of a horse demonstration or illustrated talk that you could do?
5. Which horse classic contest is fast paced?
6. What are the basics for evaluating conformation in horse judging?
7. What tool is used to evaluate performance classes in horse judging?
8. What contest is a combination of all the horse classic events?
9. What contest demonstrates a true mastery in horses?
10. What horse classic events have you participated in? Which ones are you looking forward to participating in in the future?

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High Expectations

Horses used to be an integral part of American culture. Rural families used horses to plow their fields and haul their equipment. City dwellers used horses as a means of transportation. But between 1920 and 1950 horses were replaced by tractors and cars. Now, horses are primarily used as companions and recreation. Being involved in the horse industry is a privilege. With this privilege comes the responsibility to have good character, sportsmanship, and manners. Doing so will maintain the integrity of the horse industry, and provide the framework for horses and riders to exist in harmony with the millions of individuals that do not have horses.

CHARACTER

We want to make sure that anyone who loves horses feels welcome. Your moral compass, shoulder angels, Jiminy Cricket from the children's classic Pinocchio, your gut, your conscious, and other terms, are all used to illustrate the perception of right and wrong. Whatever it is called, the principle being described is ethics. The technical definition of ethics is "the rules of practice in respect to a single class of human actions". Essentially, your ethics are what you view as moral values and behavior.

High Expectations

Dr. Peter L. Benson, in a publication titled *What Kids Need To Succeed*, states:

"The more a child develops positive values that guide her or his behavior, the more likely it is that he or she will make positive choices and grow up healthy."

A primary objective of the Utah 4-H Program is to help our youth develop life skills and positive character. Six Pillars of Character are trustworthiness, respect, responsibility, fairness, caring, and citizenship. By providing opportunities for youth to cultivate, advance, expand, foster, and improve on each of these six pillars, we are helping to accomplish the goals of Utah 4-H while promoting the equine industry that we all love. One of the ways that we promote the development of positive character is by the Utah 4-H Horse Rank Advancements with skills that involve mastery and citizenship. Another way is by including this chapter in the study material

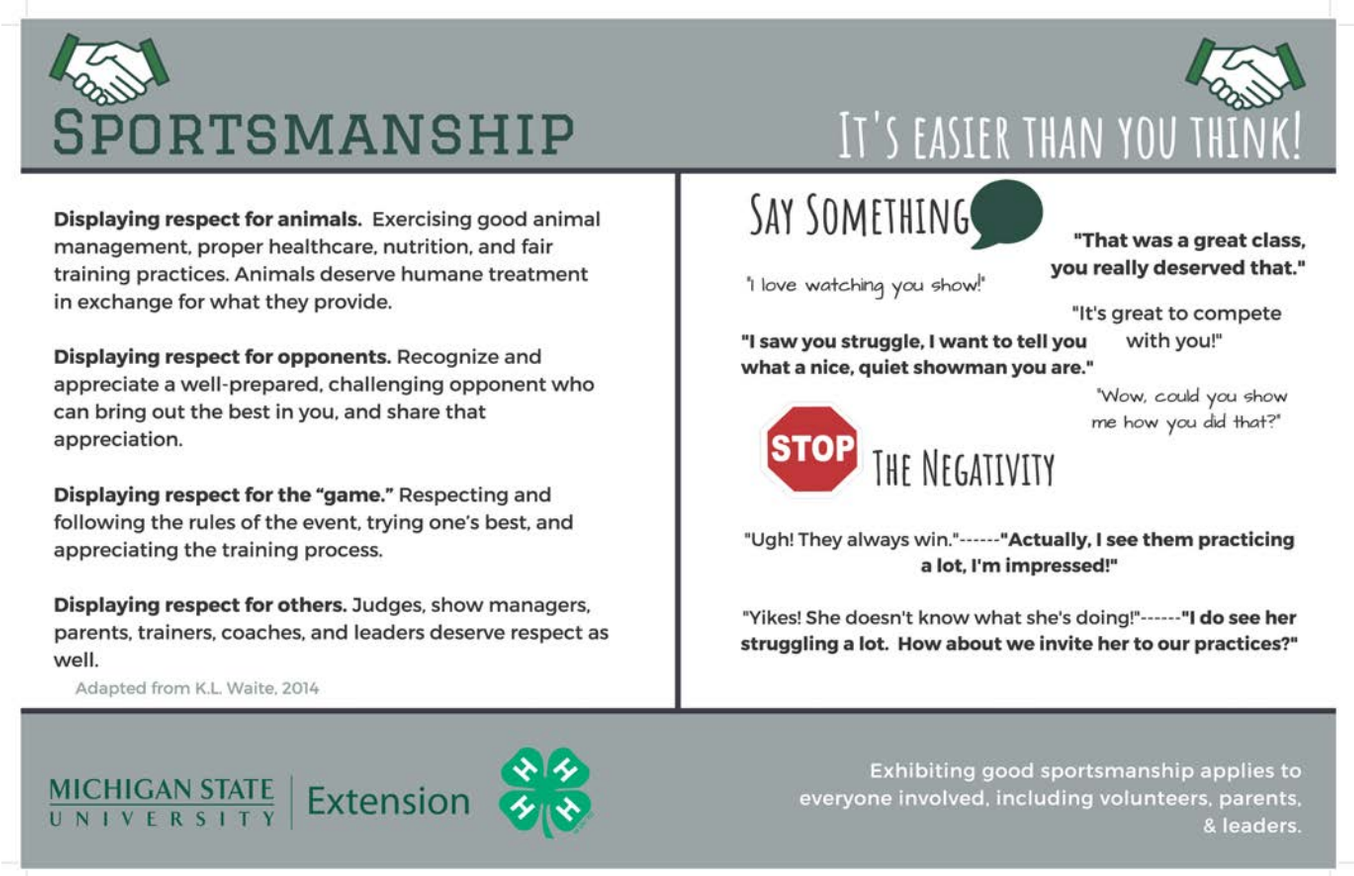
Your ethics are influenced by your experiences in life, and are heavily influenced by your family. Other influencers include your classmates, religion, and friends at the barn. We learn right from wrong by watching parents, siblings, and older youth. These people are role models. You are likely a role model to someone else, and you owe it to them to be the best role model you can be.

Ethics and sportsmanship go hand in hand but there are some key differences. The technical definition of sportsmanship is “fair play, respect for opponents, and polite behavior by someone who is competing in a sport or other competition”. Ethics are your dedication to following the rules and having good character. Sportsmanship is having a good attitude while having ethical behavior. There are three levels of sportsmanship. The first is not expecting to win and following all the rules to the best of your ability. The second level is having a good attitude whether you win or lose. The final level is looking outside of yourself. The final level is the hardest to achieve and is usually learned behavior. The final level involves putting the needs of others ahead of yourself and to always have the best interest of your teammate, meaning your horse, in mind. When your integrity means more to you than winning, you have mastered the levels of sportsmanship.

High Expectations

If you are involved in showing horses, you know that competition can be a breeding ground for poor sportsmanship. Michigan State University Extension has provided some great ideas on having good sportsmanship. You can have good sportsmanship by saying something nice to your competition.

When you hear people saying negative things, you can be positive. When one of your friends is discouraged and says “ugh, they always win!” you can reply with “actually, I see them practicing a lot and I’m impressed.” Likewise, instead of putting down other riders, you can help to lift them up. Instead of saying “yikes, they have no idea what they are doing!” you could say “they seem to be struggling. We should invite them to our practices.” Sometimes it’s easy to be negative and blame other people when you don’t excel. But it’s important that you don’t make excuses. Although it can be hard, having an “always winning” attitude is important for sportsmanship. When you are always winning, it is because you either took the blue ribbon, or your learned something new.



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High Expectations

The last component of having good character, helping everyone feel welcome in the horse community, and promoting horses, is to have good manners. Of course you should have good manners at the dinner table, when buying groceries, or when you meet someone new, but you should also have good manners when you are riding. Whether you ride in an arena or out on the trail, there is proper etiquette and good manners to follow.

ETIQUETTE IN THE ARENA

Almost every horse will spend some time in the arena, even if they are primarily a trail horse. Some people are fortunate to have a private arena, but the reality is that most riders will be sharing their arena with others. This may be at a public arena, the arena at the barn where you board your horse, or the warm-up arena at a show. Having proper etiquette is essential to enjoying your time in the arena and avoiding accidents.

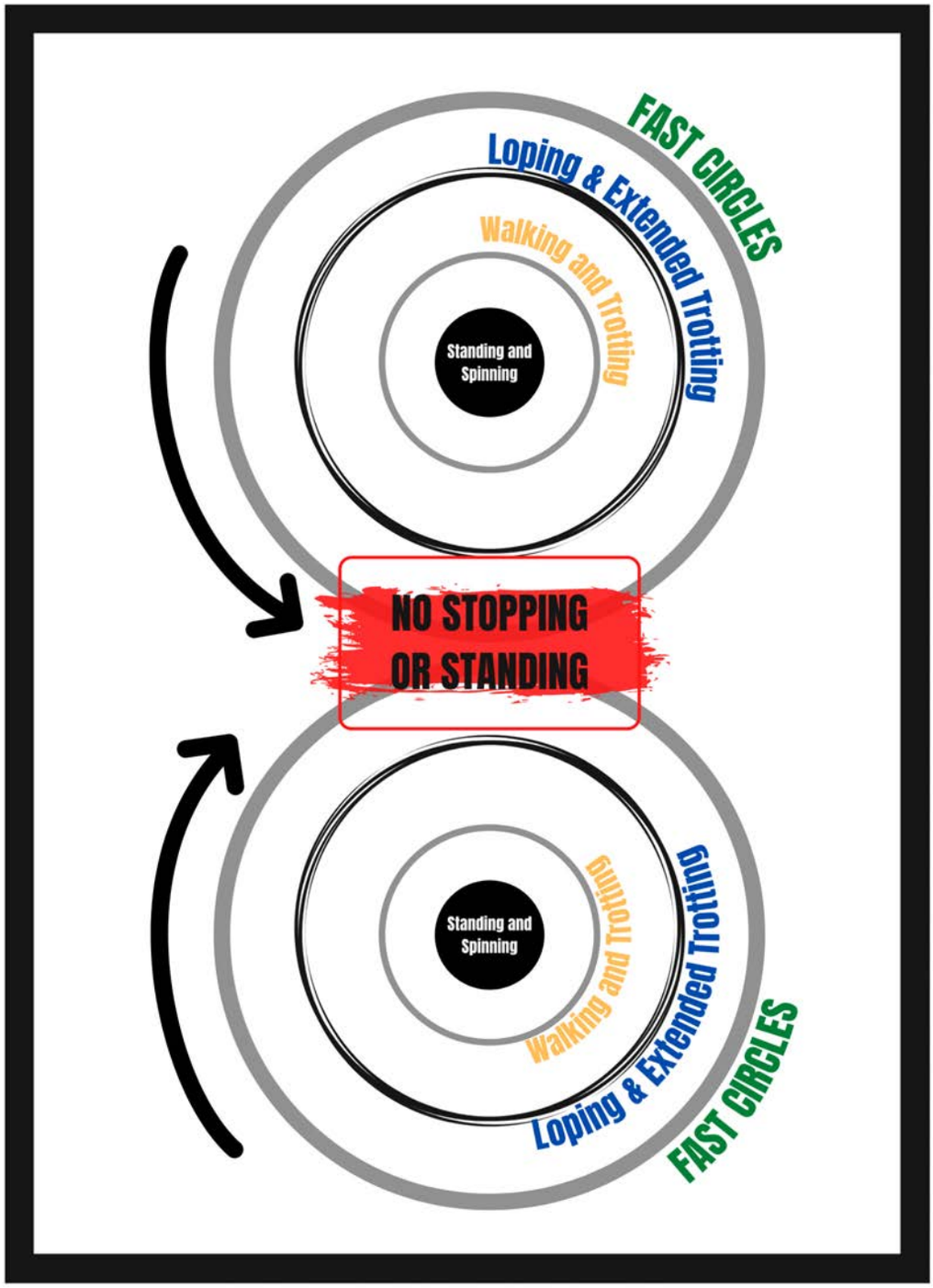
In general you will travel with the flow of traffic. In an ideal situation, an arena would have an imaginary line down the middle. Horses on one side would all be traveling in a clockwise direction. Horses on the other side would be traveling in a counterclockwise direction. This prevents horses and riders from running directly into each other in the middle of the arena. Horses traveling fast, such as an extended lope, will create a large circle on their end of the arena. Further inside that circle, horses will be traveling at the lope and extended trot. Another smaller circle will consist of horses walking and trotting. Stationary exercises will happen in the center of these circles. Not everyone will know these basics, so it's important to be polite and help inform other riders when they are not exhibiting good arena manners. If you get cut off, be polite and don't lose your temper. Likewise, if you cut someone off, which happens to the best riders, apologize and do your best to respect the space of others.

Below are some additional rules for good etiquette in the arena:

- Be aware of your surroundings and stay off your phone.
- Go with the flow of traffic and pass to the inside
- Never run up directly behind another horse.
- No stopping and standing in the middle of the arena.
- Always look behind you before stopping or slowing down.

High Expectations

Below is a diagram to help you visualize proper arena etiquette and the flow of traffic. If we all work togehter, we can keep the warm-up arena a safe and enjoyable space for everyone.



High Expectations

ETIQUETTE ON THE TRAIL

Millions of horse enthusiasts hit the trails every year. This aspect of the horse industry contributes $32 billion a year to the economy and provides jobs for over 435,000 Americans. Trail riding is an enjoyable recreational activity for everyone! There are numerous benefits of trail riding for both horse and rider. Some benefits for riders include: being able to enjoy horses with friends and family without the pressure of competition, a change of scenery, and improved mental and emotional health. The benefits of trail riding for your horse are pretty much the same. Horses that spend time on the trail are generally less spooky, more responsive, and happier.

Trail riding is also good for a horse's balance and general conditioning. There are lots of people who are seeking these benefits for themselves, even without horses. You may encounter hikers, mountain bikes, and ATV's on the trail. Many people don't know how to act around horses so it's important to have good manners on the trail. Horses have the right of way, meaning everyone else you encounter should yield and let you go by. This is not always the case! If you run into others, be polite and ask them to pass you slowly. Turn your horse to face them and try to move off the trail.

Here are some basics for the trail:

- Clean up after yourself. Not just your own garbage! Leave the parking lot better than you found it. Don't leave hay, straw, or manure behind.
- Stay in control of your horse and never run blindly around corners. It's safest to keep your horse at a walk when you can't see what is ahead of you.
- Be aware of property lines and never go through a closed gate without permission. If it's closed, leave it closed. If it's open, leave it open.
- When passing others on the trail, let them know. For example "coming up on your right!" will help other riders and horseless trail users be prepared.

Chapter Review

1. What are some ways you show good character?
2. What are some personal examples of good ethical behavior?
3. How can you exhibit good sportsmanship?
4. What are the levels of sportsmanship?
5. What are six different rules for riding in the arena?
6. What should you do if you run into a mountain bike on the trail?
7. What should you do when you come across a closed gate?
8. The recreational horse industry is worth how much economically?
9. How many Americans are employed through the recreational horse industry?
10. What are some ways to have good manners in the barn where you board your horse or at a show?

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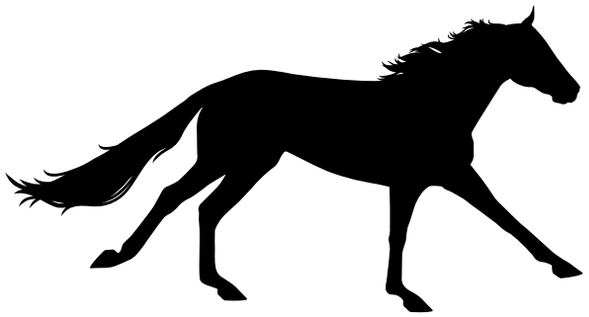

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