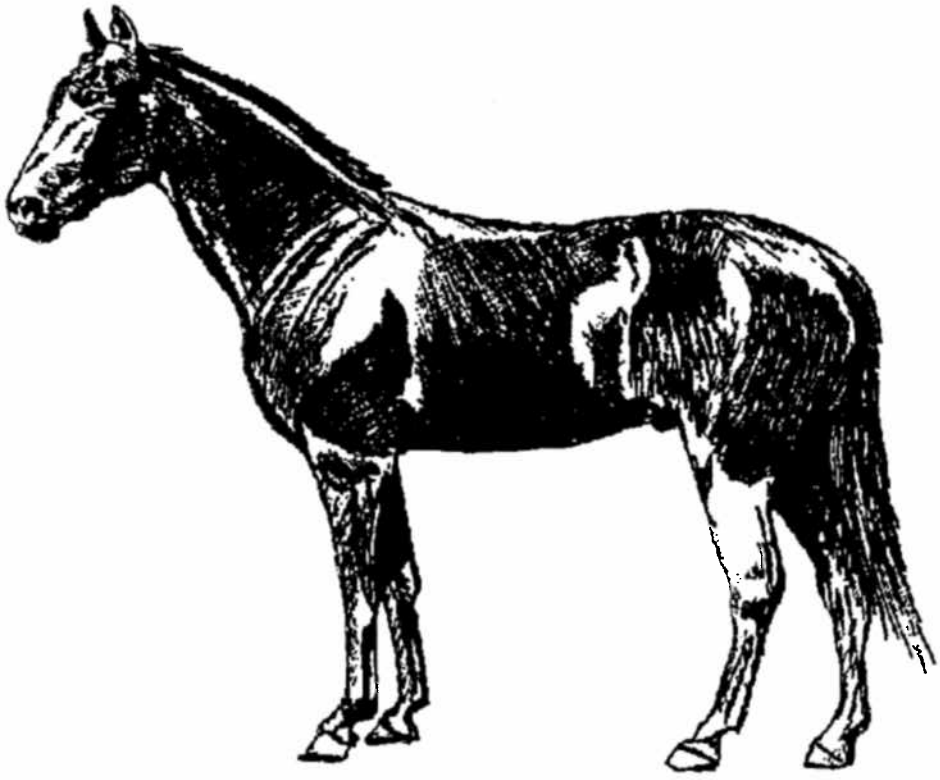
4-H Horse Project Manual



Compiled by Ann M. Swinkler
Colorado State University
Cooperative Extension Service

4-H Horse Project Manual

Compiled by **Ann M. Swinker**[1]

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1. Colorado State University Cooperative Extension Equine Specialist and assistant professor, animal sciences. Information collected and reviewed by the Colorado State University Cooperative Extension Horse Program Committee. Lyn Merrick, Lyle Chadwell, Jennifer Nisbet, Molly Rollo, Ron Ackerman, Myrna Folsom, Ginger Rich and Bill Culbertson served as consultants and resource persons in writing and reviewing the manual. Illustrations by Bill Culbertson.

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Colorado State University Cooperative Extension

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Acknowledgments

This revised edition of the Colorado 4-H horse project manual has had many contributors. Members of the Colorado State University Cooperative Extension Horse Program Committee collected and reviewed information for use in this manual.

Agents who represented their districts on this committee were: Wayne Colette, George Ellicott, Dave McManus, Bill Ekstrom, Carol Robertson, Kathryn Milne, Robert Bishop Robert Seaton, Audrey Volt, Gary Lancaster and Alvie Rothe. Volunteer leaders who served on the committee were: Jodi Zeier and Lynn McGreagor, who represent the Eastern slope; and Peggy Gilbert and Sue Ann Wilson, who represent the Western slope.

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We wish to thank Bill Culbertson, Extension Horse Specialist Emeritus, for his contribution to the content and artwork in this manual and give him special acknowledgment.

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Disclaimers

The content and recommendations found in this manual are based on average horse industry standards at the time of printing and under certain conditions these recommendations may be under or overstated. Under certain conditions, professional help may be required. When in doubt, consult your veterinarian, county agent or horse industry professional.

Terminology that is gender specific, such as horseman or cowboy, reflect common useage in the industry. No discrimination is intended.

Chapter 1-- What is the 4-H Horse Project?

The purpose of the 4-H Horse Project is to help you learn how to care for and use your horse properly and to have fun while you learn. Not all cowboys are good horsemen and many top horsemen never were cowboys. Both follow certain basic principles in handling horses.

As a member in the 4-H Horse Project, you are expected to learn about your horse. You will learn breeds of horses, safety, body colors and markings. You will learn how to determine a horse's age and how to feed horses. In addition, you will learn about health, shelter, grooming, training, judging, equipment, saddling and bridling, basic horsemanship, and showing horses.

To become a good horsewoman or horseman, you will need to train yourself in addition to training your horse. You will earn **respect** for your horse, **responsibility** in caring for your horse and **discipline** in the way you handle yourself around horses. You also will learn to have **patience** in training, **neatness** in your own appearance and your horse's appearance, and **pride** in yourself when you know friends and others who see you with your horse admire and respect what you have done.

Many options are available in the 4-H Horse Project. You can train yourself in western advancement levels; English advancement levels; horse safety; horse breeding; horse judging; horse bowl, horse demonstration, horse public speaking, and hippology competitions; riding for the disabled; and, for members without a horse, the horseless horse projects. You can enroll in any or all of these options after you enroll in the horse project.

To be a top horseman or horsewoman requires learning all you can about horses. You will learn to set and achieve goals for you and your horse. The end result will be a well-trained horse that is responsive to your wishes and willing to give you its best if not abused.

Additional literature and many books are available to 4-H Horse Project members and leaders from the Colorado State University Cooperative Extension Bulletin Room or your local Cooperative Extension office. Available literature includes *Colorado 4-H Horse Rule Book*; Service in Action bulletins; publications from National 4-H Council; and books, such as *The Horse* by J. W. Evans; *Feeding and Care of the Horse* by Lon Lewis; and *Horses and Horsemanship* by M. E. Ensminger.

Horse Humane Policy Statement

It is the responsibility of every 4-H member to ensure that proper care is taken of their horse according to acceptable methods of good equine husbandry, as set forth by Colorado State University Cooperative Extension and the Colorado Department of Agriculture. A healthy horse requires sufficient food, water, shelter and correct health care. Cruel and inhumane training methods are not appropriate in the Colorado 4-H Horse Program. Specific equine husbandry guidelines and humane training methods are provided in this Colorado 4-H Horse Project Manual.

Chapter 2-- Brand and Health Inspection Tips for Equine Transportation

The Colorado State Board of Stock Inspection requests and receives assistance from county sheriffs and the Colorado State Patrol to check livestock transported over Colorado highways. Inspections control theft and illegal movement. The State Board of Stock Inspection suggests anyone who transports livestock carry proof of ownership papers to show a sheriff or patrol officer.

Breed registration papers are insufficient proof of ownership. Registered horses are not exempt from inspection laws. All horses, mules, hinnies and burros must have brand inspection papers:

* anytime a horse is transported over 75 miles, regardless of change of ownership;
* anytime a horse is transported out of state, regardless of change of ownership; and
* anytime there is a change of ownership—including gifts, trades or actual sales.

For further details on these laws, contact your local brand inspector or call the State Board of Stock Inspection, (303) 294-0895.

When you transport a horse across a state line, a health certificate and negative Coggins test are required. The brand inspection office does not enforce health regulations, but the officers attempt to help the Colorado State Veterinarian whenever possible. To obtain a current health paper, contact your veterinarian.

See *Chapter 7—Your Horse's Health*, for explanation of Coggins test and Equine Infectious Anemia.

Horses do not require a brand to be inspected for transport or ownership. However, a permanent brand inspection card can be obtained without a brand. A brand aids in distinguishing one horse from another of the same color. Brands can be purchased or a new brand can be registered with the State Board of Stock Inspection. All brands must be registered with the State Board of Stock Inspection to be legal. For further details on registering a brand, contact the brand office.

Chapter 3-- Breeds of Light Horses

What is a Breed?

A breed is a group of animals with a common origin. Each group, or breed, has definite breed characteristics not commonly found in other breeds. These characteristics are fixed in the genetic makeup of the breed and will be passed from parents to offspring. Many 4-H'ers can identify Chevrolets or Fords by body styles. Learn to recognize horse breeds the same way.

The most popular saddle breeds in Colorado include Quarter Horse, Arabian, Appaloosa, Morgan, Thoroughbred, American Saddle Horse and Paint Horse. Popular pony breeds for smaller riders are Shetland, Welsh and Pony of the America (P.O.A.). Crossbreeds make excellent riding horses. They are produced by crossing two or more breeds.

Learn to recognize breed characteristics so you know a horse is a Thoroughbred, Arabian or Quarter Horse. You will soon be able to tell when certain breed characteristics appear in crossbred horses.

You are not required to purchase a purebred or registered horse for 4-H project work. Select a healthy, sound, well-mannered horse. As you learn more about horses, you will be drawn to one breed. Remember every breed has good points, but no matter what its breed your horse can be only as good as your ability to handle it.

Owning a horse is expensive and a big responsibility. Horses require time and money. This should be taken into consideration before acquiring a horse. The following criteria will determine the type of horse you need:

* rider's age and size
* interest and riding style
* family's knowledge of horses
* facilities
* affordability.

First, decide the use for the horse and who will use it. Fit the rider to the horse. Do not purchase an unbroken horse for a beginner—generally the outcome is not good. It is common practice to have a veterinarian, riding instructor, trainer or 4-H leader inspect a horse before purchasing it.

Horses are classified, regardless of breeding, to the purpose for which they are best suited. The following classification is a practical guide for you to

use in selecting a 4-H mount. You will find the stock horse used most frequently in Colorado for ranch work and western pleasure riding. English pleasure horses, hunters and jumpers are more popular as show horses. The type and conformation of the major lighthorse breeds are described in the *4-H Horse Judging Guide*.

Horse Classifications

* ***stock horse***-- These horses are short-coupled, deep-bodied and well-muscled. They were developed for work under saddle on cattle ranches. Quarter Horse, Appaloosa, Arab, Paint, Morgan or P.O.A. breeding usually predominates in horses of this type. Their easy-going gaits are the walk, jog (trot) and canter or lope.

* ***gaited pleasure horse***-- Horses of this type are found in all light breeds. They are popular for pleasure riding at the walk, trot and canter. Gaited pleasure horses usually are more angular than stock horses and have more extreme style and action. Some of the popular breeds are Saddlebreds, Arabians and Morgans.

* ***walking horse***-- These horses originally were developed for plantation riding. They are characterized by an easy running walk such as the Tennessee Walker.

* ***hunter***-- A hunter is a large, clean-cut horse bred for cross-country riding and jumping. They are usually purebred or grade Thoroughbreds (crossbreds) selected for stamina, speed and surefootedness.

* ***ponies***-- Ponies are small horses under 14.2 hands in height at maturity. Most common are the Shetland and the medium-sized Welsh pony. These two breeds often are crossed with Arabs, Morgans and other breeds of light horses to produce larger, more spirited ponies. Hackney ponies are noted for their high trotting action for light carriage use.

* ***sporthorse*** (warmbloods)-- Some of the popular breeds are Hosteiner, Trakehner and Hanoverian. Today these breeds are used for dressage, jumping, combined training (eventing) and combined driving. The wormbloods combine the hot Thoroughbred and Arabian blood with draft breeds.

* ***crossbred***-- A crossbreed is a horse that combines the characteristics of two or more horse breeds.

Chapter 4-- Conformation and Judging of Horses

A good knowledge of conformation is necessary for selection, proper care and use of a horse. The *4-H Horse Judging Guide* contains information on conformation and formal judging. Remember you judge (or evaluate) your horse every time you study some part of it for grooming, feeding, shoeing, doctoring or training. If you watch for lameness, you are judging its way of going (gait). To care and use your horse properly, you must know conformation, soundness, health and the terminology involved. You also will apply this information to formal show ring judging.

Judging is an attempt to identify the horse that most closely resembles what is considered the industry ideal. When you evaluate conformation, there are four major considerations:

* ***Balance and Quality***-- The horse appears symmetrical. All parts blend together nicely. Clean, well-defined flatbone; clean joints and tendons; fine hair; and refined head and ears.

* ***Muscling***-- The horse should be well-muscled. The chest should be fairly wide, deep and full. The forearm and gaskin should be well-muscled; shoulders deep; back short, strong and well-muscled. The croup should be long, level and well-muscled and the rear quarters should be deep and heavily muscled.

* ***Structural Correctness***-- (see Figures 3, 4, 5, 6, 7, 8, and 9).

* ***Breed and Sex Characteristics***-- The horse should look like the breed represented. It should possess the breed standards that are characteristic of that breed. The horse must conform to ideal breed type. Mares should be feminine in appearance. Stallions should be masculine in physical development. The gelding should display some masculine characteristics with refinement.

When judging a class of four halter horses, consider these characteristics and use the Score Chart as an aid to rank individual horses. Rank each characteristic first through fourth. Total the numbers for each horse; the horse with the lowest total score is first.

From the Score Chart, the horses would be placed 1-2-3-4. This is an easy way to place classes of horses.

Table 1. Score Chart

Horse #	Balance	Muscling	Structure	Breed & Sexual Characteristics	Total
1	1st	2nd	1st	1st	5 pts.
2	2nd	1st	2nd	2nd	7 pts.
3	3rd	4th	3rd	3rd	13 pts.
4	4th	3rd	4th	4th	15 pts.

James C. Heird, *Colorado State University Equine Sciences Horse Judging Manual*, 1992.

Parts of a Horse

The parts of a horse are shown in figure 1 below. Take time to learn the location of each part. Figures 4.2-4.11 show more detail.

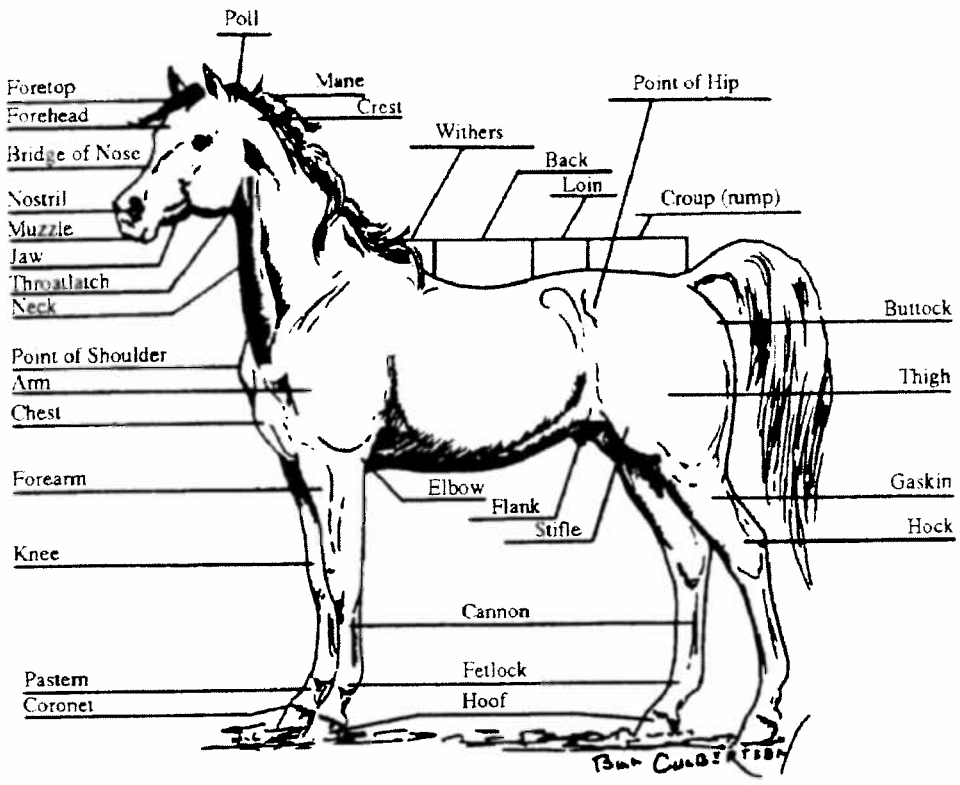


Figure 4.1. Learn and use the correct terms for the parts of the horse.

Learn and use the correct terms for the parts of the hoof, shown in Figure 4.2.

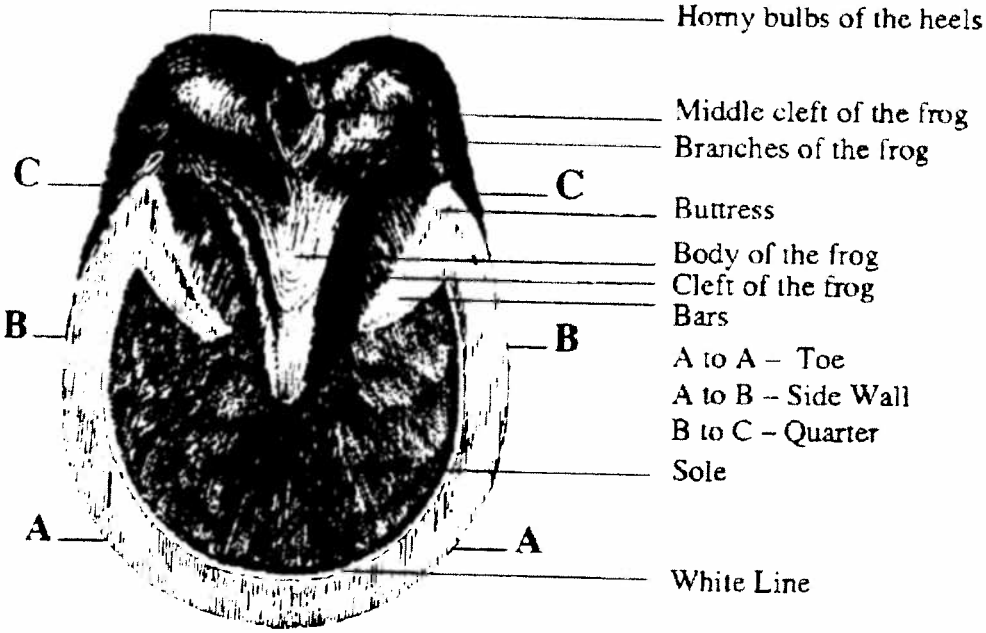


Figure 4.2. Parts of the hoof.

Feet and Legs

The old saying, "no feet—no horse," is very true. Study the following illustration of correct and incorrect leg positions commonly seen in horses.

A vertical line from the point of the shoulder should fall in the centers of the knee, cannon, pastern and foot. It divides the entire leg and foot into equal halves (Figure 4.3). A vertical line from the shoulder should fall through the center of the elbow joint and the center of the foot (Figure 4.4). A vertical line from the point of the buttock should fall in the centers of the hock, cannon, pastern and foot (Figure 4.5). The vertical line from the point of the buttock should touch the rear edge of the cannon from the hock to the fetlock and meet the ground behind the heel (Figure 4.6).

Learn to imagine these lines as you study live horses. This will help you determine if the feet and legs are correct.

The action of a horse should be straight and true. A horse may move in a crooked manner because of crooked feet and legs or because of being pulled off-balance as it is led. Learn to watch.

Since few horses move perfectly true, you must learn which movements may be unsafe. A horse that wings in can be more unsafe than one that wings out. It may trip itself. Some travel close, others travel wide. Learn to observe the difference and know how much value to place on what you see.

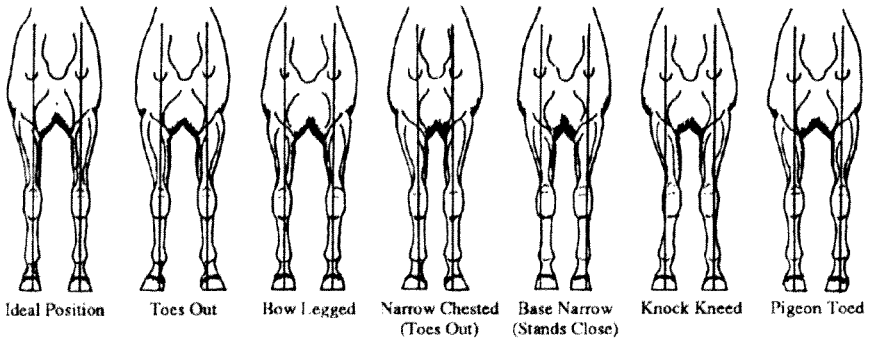


Figure 4.3. A view from the front.

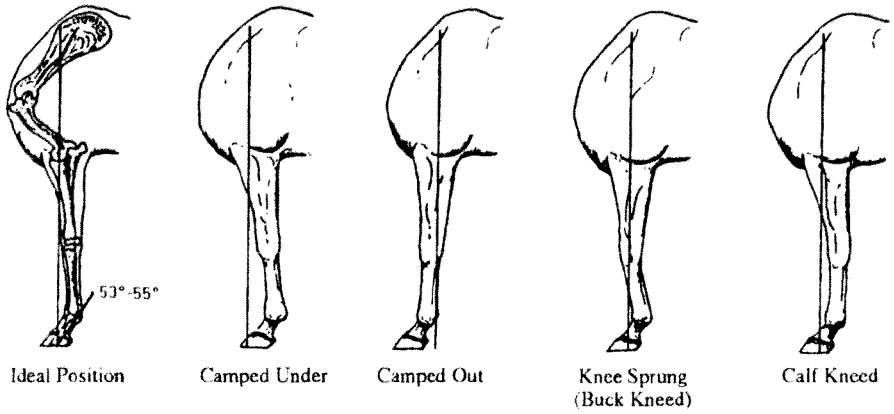


Figure 4.4. The front legs from a side view.

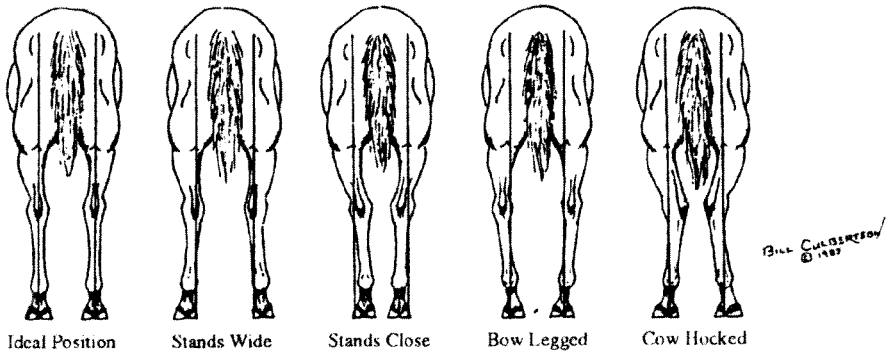


Figure 4.5. The hind legs from the rear.

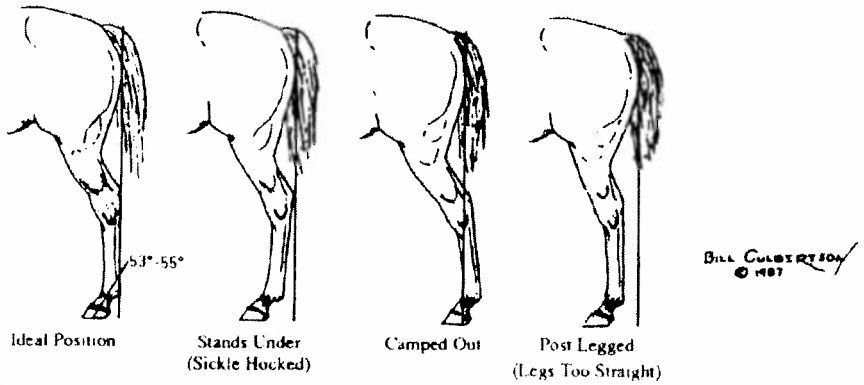


Figure 4.6. The hind legs from the side.

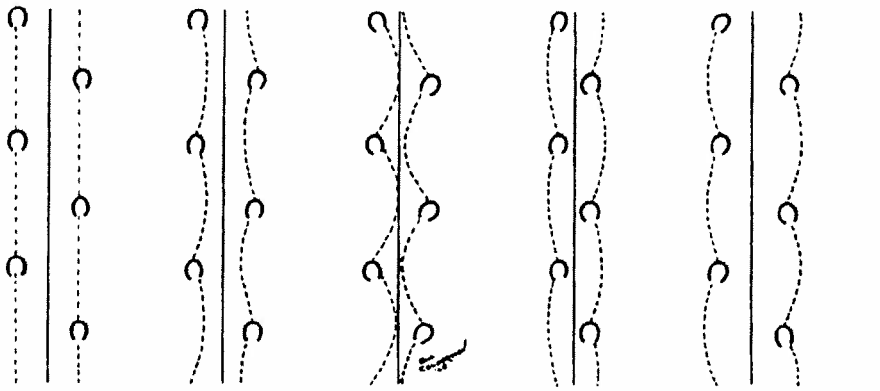


Figure 4.7. The path of flight each foot will take as it relates to the structure of the foot and leg. Example 1 shows normal path. Examples 2 and 3 "wing in," while examples 4 and 5 "wing out."

Figure 4.8 shows how the length and shape of the hoof affects the path of flight of the foot as the horse moves. Trimming and shoeing will influence this. Keep the hoof in its natural shape to avoid leg strain. The correct structure of feet and legs is important because of the shock and strain imposed upon these parts when a horse moves. If the body structure is unsound, the horse may break down in use. Inherited unsoundnesses in body structure are especially important for breeding classes.

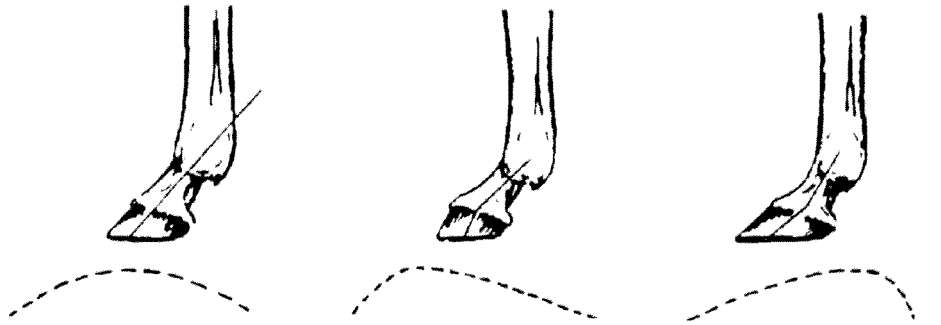


Figure 4.8. Length and shape of hoof affect path of flight.

Blemishes and Unsoundness

Blemishes are imperfections found on horses. Blemishes do not affect serviceability. Wire cuts, rope burns and saddle marks are examples.

Unsoundnesses are imperfections that affect serviceability of horses. Many unsoundnesses are the result of weaknesses in body structure. These weaknesses will worsen when the way the horse is used places too much strain on its weak parts.

No horse is perfect. You must know what the common blemishes and unsoundnesses are and then judge their importance in relation to the way the horse will be used.

Figure 9 shows a horse with the most commonly found unsoundnesses.

Definitions of Unsoundnesses

1. ***poll evil***-- *inflamed swelling of poll between ears.*

2. ***fistula of withers***-- inflamed swelling of withers.

3. ***saddle sore***-- inflammation caused by poor fitting tack.

4. ***thoroughpin***-- puffy swelling on upper part of hock and in front of the large tendon.

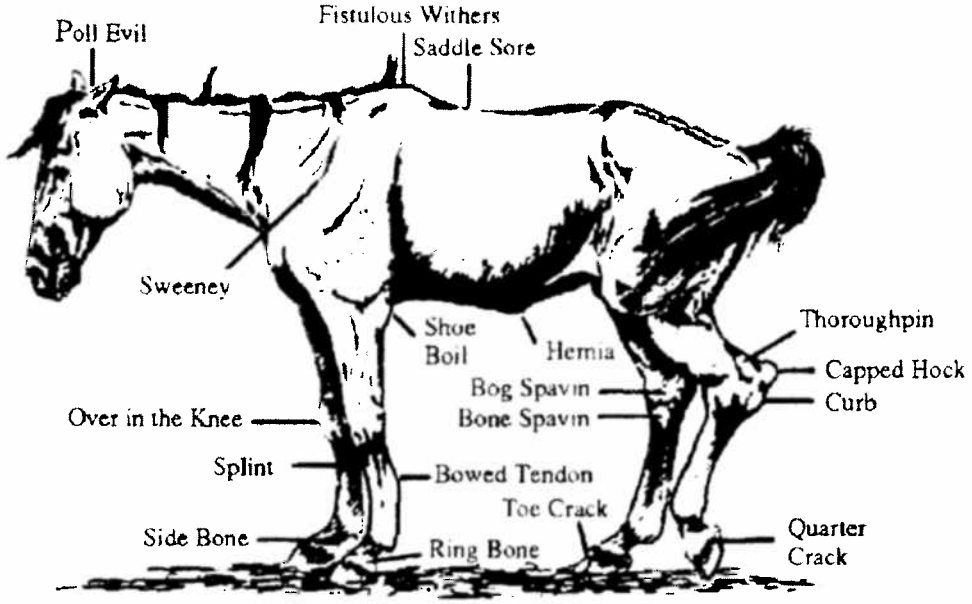


Figure 4.9. Unsoundnesses are weaknesses in body structure.

5. ***capped hock***-- enlargement on point of hock; depends on stage of development.

6. ***curb***-- hard swelling on back surface of rear cannon about four inches below point of hock.

7. ***quarter or sand crack***-- vertical split in the wall of the hoof.

8. ***toe crack***-- vertical crack in the toe of the hoof; similar to a quarter crack.

9. ***bone spavin or jack spavin***-- bony growth usually found on inside lower point of hock.

10. ***bog spavin***-- meaty, soft swelling that occurs on inner front part of hock.

11. ***hernia***-- protrusion of internal organs through the wall of the body; umbilical or scrotal areas most common.

12. ***shoe boil or capped elbow***-- soft, flabby swelling at the point of elbow.

13. ***bowed tendons***-- enlarged, stretched flexor tendons behind the cannon bones.

14. ***ringbone***-- bony growth on either or both sides of the pastern.

15. ***sidebone***-- ossified lateral cartilage, this bony growth protrudes above and toward the rear quarter of the hoof head.

16. ***splint***-- capsule enlargement usually found inside upper part of front cannon.

17. ***wind puff***-- puffy swelling that occurs on either side of tendons above fetlock.

18. ***sweeney***-- atrophy or decrease in size of a single muscle or group of muscles usually found in shoulder or hip.

Body Colors

Know the terms for the various body colors and markings. Use them to correctly describe or identify a horse.

The color descriptions describe body colors of many breeds of horses and ponies. However, each breed has preferred colors which are stated in the literature available from the respective breed associations. Refer to Appendix II for addresses of the horse breed associations.

Bay-- body color that ranges from tan, through red, to reddish-brown; mane and tail are black; usually lower legs are black.

Black-- body color is a true black without light areas; mane and tail are black.

Brown-- body color is brown or black with light areas at muzzle, eyes, flanks and inside upper legs; mane and tail are black.

Buckskin-- body color is yellowish or gold; mane and tail are black; usually lower legs are black; no dorsal stripe.

Chestnut-- body color is dark-red or reddish-brown; mane and tail usually are the same color as body, but may be flaxen.

Cremello-- double dilution of chestnut; off-white or cream body with even lighter mane and tail; also called type A albino—not a true albino.

Dun-- body color is yellowish or gold; mane and tail are black or brown; often has a dorsal stripe, zebra stripes on legs and a transverse stripe over withers.

Gray-- mixture of white and black or any other colored hairs; usually born solid-colored or almost solid-colored and gets lighter with age.

Grullo (Grew'-yoh)-- body color is smokey or mouse-colored (not a mixture of black and white hairs, each hair is mouse-colored); mane and tail are black; usually lower legs are black and may have a dorsal stripe.

Palomino-- body color is golden-yellow; mane and tail are white.

Perlino-- double dilution of bay; off-white or pearl body with rust color on tips of mane and tail and sometimes on lower legs; also called type B albino -- not a true albino.

Red Dun-- this is a form of dun with body color solid-yellowish or flesh-colored; mane, tail and dorsal stripe are red.

Roan-- Blue roan is more or less uniform mixture of white with black hairs over the body, usually with a few red hairs. Red roan is more or less uniform mixture of white with red hairs on the body; usually is darker on the head and lower legs.

Sorrel-- body color is reddish or copper-red; mane and tail usually are the same color as the body, but may be flaxen.

Markings

Appaloosa Coat Patterns-- The Appaloosa Horse Club recognizes six different patterns of Appaloosa markings. You will observe many variations and combinations of these patterns. The area covered by white and the size and number of spots vary widely.

In addition to patterns, Appaloosas have white sclera around the eyes (white surrounding the pupil), parti-colored skin and hooves with narrow stripes.

1. Red or blue roan (usually light in forehead, over the back, loin and hips; and dark down the frontal bones and at the hip and stifle joint).

2. White with colored spots over entire body.

3. Solid-color, white blanket over hips and loin.

4. Solid-color, white hip-blanket spots over loin and hip in blanket area.

5. Solid-color, white spots over entire body.

6. Solid-color, white spots over loin and hips.

Black Points-- black mane and tail; extremities of the body (feet, legs, and so forth) are black.

Pinto and Paint-- The terms pinto and paint are commonly used to describe spotted horses. Other expressions are "piebald" meaning black and white spotted horse and "skewbald" meaning any other coat color that is spotted with white.

Ray or Dorsal Stripe-- darker line found down the backbone of some horses.

Transverse Cross-- a dark stripe (same color as dorsal stripe) that runs across the withers.

Zebra Marks-- dark stripes that run horizontally on the forearm, knees and cannon.

Breeders of spotted horses recognize the following two basic patterns of spotting.

Tobiano (toe-bee-ah'-no):

Head-- usually is dark-colored; may be solid-colored or have a blaze, strip, star or snip. Excessive white splashed irregularly over the face or covering a large area usually is a sign of overo blood.

Legs-- almost always white below the knees and hocks; solid-colored legs are rare.

Spotting patterns-- spots are regular and have distinct edges. The spots may be oval or round. A two-toned tail is common.

Overo (oh-ver'-oh):

Head-- almost always has white on the head in bald, bonnet-faced or apron patterns. Glass or blue eyes are more prevalent in overos than in tobianos. Glass or blue eyes are acceptable.

Legs-- almost never has white below the knees and hocks. Legs are usually dark.

Spotting patterns-- irregular, splashy, scattered markings, often called calico patterns. The tail is solid-colored, usually dark, but may be white. Appears to have been splashed with white from the belly up.

How to Determine a Horse's Age

Look at the horse's front teeth to judge its age. The following illustrations will give you simple clues that determine the age of a horse. Study the facts and then practice judging a horse's age with help from an experienced person.

A mature male horse has 40 teeth. There are 12 front teeth called incisors; four tushes or bridle teeth; and 24 molars or grinders. A mature mare has 36 teeth; the four tushes seldom are present.

The young horse, either male or female, has 24 temporary or milk teeth including 12 incisors and 12 molars. Milk teeth are smaller and whiter than permanent teeth.

First, learn the names of the incisors as shown in figure 10.

From birth to 5 years, the eruption of incisors is used to judge age. At 5 years, permanent incisors are all in place. After 5 years, age is determined by wear on the incisors, shape of biting surface and angle at which incisors meet.

For general purposes, you should learn to judge the approximate age-range by holding the lower lip down for a quick glance to see the shape of the teeth, the angle at which the upper and lower incisors meet, and the degree of wear shown by the length of the teeth. You then can consider the age as being in the foal period, the full-mouth period (5 years), the smooth-mouth

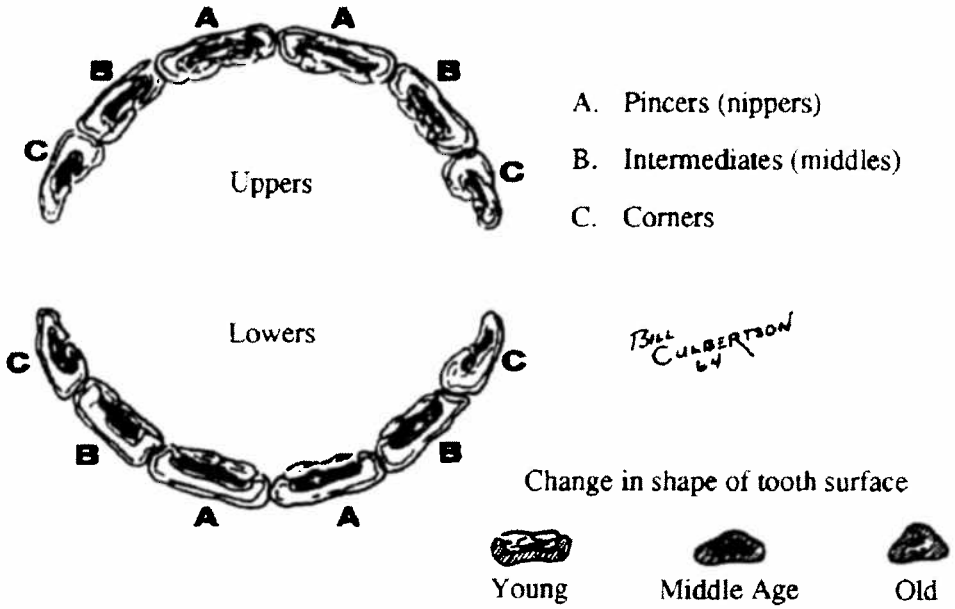


Figure 4.10. Incisors.

period (about 11 years) and the old-mouth. Remember most horses begin to serve their best at 8 years and many still go strong up to 15 years or more.

Study the following illustrations for the points to look for at each year of age. Practice looking at teeth every opportunity you get.

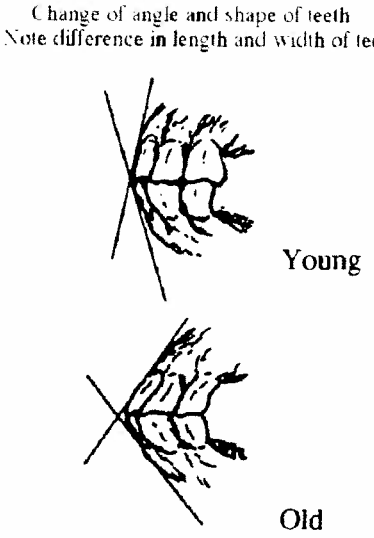
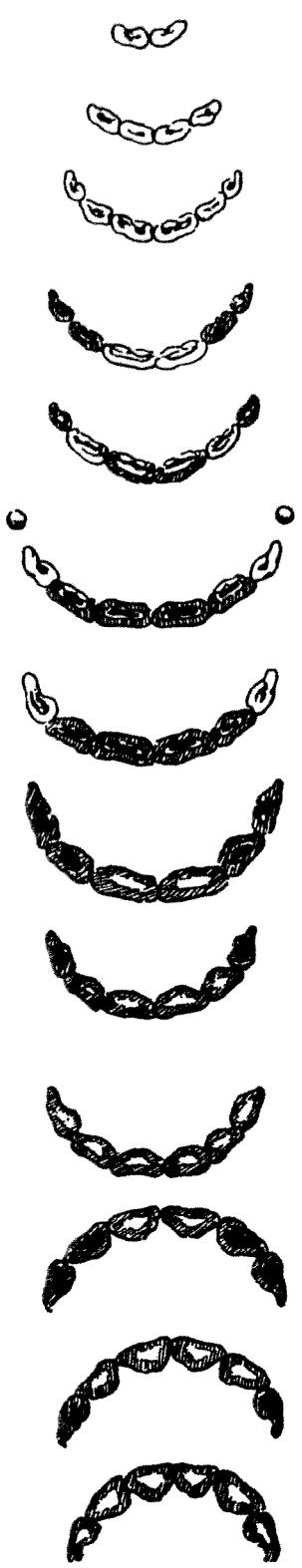


Figure 4.11. Angle of teeth; young vs old horse.



Birth to 10 Days
Temporary nippers erupt

6 Weeks
Temporary intermediates erupt

6 to 10 Months
Temporary corners erupt
Full set of temporary incisors, both upper and lower

2 to 2 1/2 Years
Permanent nippers erupt
All foal teeth show surface wear

3 to 3 1/2 Years
Permanent intermediates erupt
Outer edge of nippers show wear
Corner foal teeth blunted

4 1/2 Years
Permanent corners erupt
Male hooks erupt
Nipppers worn on outer and inner edges
Intermediates worn on outer and inner edges

5 Years
All permanent teeth up and same height
No wear shows on corners

6 Years
Cups disappear in lower nippers

7 Years
Cups disappear in lower intermediates
7-year hook evident (see Fig. 12)
Note angle of teeth as shown in Figure 12

8 Years
Cups disappear in lower corners
Dark spot will show where all cups have been
Do not mistake spots for cups

9 Years
Cups disappear from nippers in upper teeth

10 Years
Cups disappear from upper intermediates

11 Years
Cups disappear from upper corners
Horse is now smoth mouth

Figure 4.12. Determine a horse's age by looking at its teeth.

Chapter 5-- Feeding Horses

When you feed your horse, take into account its age, weight, work and growth to determine its diet. Some horses are easy-keepers because they are easier to feed and require fewer nutrients than others. Other horses, known as poor-keepers, are very difficult to feed and require special attention. It is important to know how to feed your horse and to make sure it gets all the nutrients it needs.

Five Types of Nutrients

A horse requires five types of nutrients. Each nutrient has an important role in the horse's body and is needed to keep the horse healthy. They are:

* energy nutrients (carbohydrates and fats)
* proteins
* vitamins
* minerals
* water

None is more important than another with the exception of water and energy nutrients which make up the greatest bulk of feed.

Water

Water is the greatest single part of nearly all living things. Water performs many tasks in the body. It makes up most of the blood which carries nutrients to cells and carries waste products away. Water is necessary for most of the body's chemical reactions. In addition, water is the body's built-in cooling system. It regulates body heat and acts as a lubricant. A horse will consume an average of 10 to 12 gallons of water daily depending on the work it is doing. In hot weather, a horse may drink up to 15 to 20 gallons of water. In very cold weather, water heaters may be needed to prevent the water from freezing.

Energy Nutrients

Energy nutrients are the body's fuel and make up the bulk of the diet. After digestion, energy is carried by the blood to the cells of the body. Energy nutrients power the movements of muscles—walking, heart beating, breathing, eyes blinking and contractions in the digestive system. At the same time, the heat that is produced maintains body warmth.

Carbohydrates

Carbohydrates are the main energy source. Even relatively simple carbohydrates, such as starches and sugars, are complex compounds made up of carbon, hydrogen and oxygen. Cellulose (carbohydrates found in hay and pasture) is one of the more complex carbohydrates. Horses can digest cellulose (grass and hay) because they have small microbes in their large intestine (cecum) that can break down the cellulose in the grass and hay.

Fats or Oils

Fats or oils are another source of energy. Like carbohydrates, fats are made up of carbon, hydrogen and oxygen. They also provide energy for movement and heat. The energy in fats is more concentrated. Fats have 2.25 times more energy per gram than carbohydrates. Total energy in feeds is measured in Megacalories (Mcal) of digestible energy (DE).

Proteins

Proteins supply the material for body tissue. During digestion, proteins break down into amino acids. Amino acids are the bricks and mortar that build bodies. They enter the blood stream from the intestine, and blood carries amino acids to all parts of the body. They recombine to form body tissue.

Proteins eventually become muscle, internal organs, bone and blood. Skin, hair, hooves and many other parts of the body also are made of protein. If excess protein is fed, the nitrogen portion of the protein separates from the rest of the nutrient and is discarded with the urine. The remaining material converts into energy for the animal. Total protein in feeds is measured by crude protein (CP).

Vitamins

Vitamins are needed in much smaller amounts, but they are just as vital as other nutrients. Each vitamin has a different job in the body.

Feed provides some vitamins while the microbes in the cecum (hind gut) of the horse produce others. Vitamin supplements for a horse depends on the diet it consumes. If a horse grazes on pasture, vitamin supplementation usually is not necessary.

Minerals

Minerals usually are needed only in small amounts. Iron, copper, phosphorous, calcium and magnesium are examples of minerals that are important for the chemical reactions in the body. Without iron in the blood, oxygen can not be carried to the body's cells. Without calcium and phosphorous, proper bone and tooth formation will not take place.

Calcium and phosphorous should be fed in a ratio that ranges from 3:1 (three parts calcium for each part of phosphorous) to 1:1. An imbalance of these minerals can cause developmental bone disease in young, growing horses.

Types of Feeds

Many types of feeds can provide your horse with the essential nutrients.

Roughage

Roughage supplies the bulk in horses feed. Roughage can be fed to the horse as hay or pasture. Hay can be either grass or alfalfa or a combination of the two. Grasses are generally higher in fiber and dry matter than alfalfa, but alfalfa may be higher in proteins, energy, vitamins and calcium.

Hay

Hay comes in four forms that can be fed to the horse—longstem, cubes, pellets and chopped. The most common type is longstem hay. Many horsemen feed straight alfalfa or a combination of grass and alfalfa. Grass hay may include brome, orchard, timothy and native grasses.

Longstem hay is the traditional baled hay cut, cured, and baled or crimped when cut.

Hay cubes are generally about 1- to 1½-inches square and 1- to 3-inches long. Cubes have a number of advantages and disadvantages compared to loose or longstem hay. The advantages are:

* decreased wastage
* decreased storage space required
* less dusty than loose hay if made properly

The disadvantages are:

* if cubes get damp or wet, they break into fine, dusty material that is easily lost or that may cause digestive problems
* it is difficult to determine quality from appearance
* the horse may chew on wood if cubes are the only roughage

Hay pellets are ground and compressed hay. The average size is 1/8-inch in diameter and 1/2-inch in length. They have the same advantages and disadvantages as cubes.

Chopped hay is longstem hay cut in 3- to 4-inch lengths. It is found more in the Midwest. Horses can eat it faster. This results in the horse consuming more feed in a shorter period of time. Chopped hay is not usually fed to horses.

Hay quality is most important. It should be bright-green, leafy and fine-textured. It should have a fresh, pleasant aroma without mustiness or other indications of mold or heating. It should be free of dust, weeds and other foreign material.

Color is an indicator of quality and nutrient content. Good hay is a bright green. Heavy rain on overly dry hay leaches energy and protein from the hay. Hay baled before it is dry enough will lose nutrients through fermentation or heating in the bale. This sometimes starts fires through spontaneous combustion. This type of hay is unacceptable for horses.

Leafiness of hay is an important guide to feed value because most nutrients are in the leaves. Leafiness is influenced by kind and species of forages, stage of maturity when cut, weather conditions while growing and curing, and curing procedures.

Dust is objectionable in any feed for horses. It not only reduces the palatability of feed, but it also can aggravate respiratory problems. Dustiness can be reduced by sprinkling with or dunking in water before feeding. Avoid feeding moldy or dusty hay.

Good Pasture

Good pasture can be an economical feed for horses, but good pasture management must be maintained. Some of the basic requirements for a good pasture are:

* a supply of palatable forages (grass or alfalfa)—don't overgraze—this will result in killing out the grasses
* a paddock or stall to house your horse for part of the day—only use pastures for daily exercise and grazing
* a year-round supply of fresh, clean water
* shelter from wind and sun
* safe, durable fencing
* no poisonous plants

* no equipment, holes or other dangerous materials
* some grain if you work your horse hard or the quality of the grass is poor.

Pastures, like hay, can be of two types—grasses and legumes. Well-managed pastures can reduce feed costs and provide energy, protein, vitamins and minerals.

An exercise lot with a few blades of grass is not a pasture. Such a lot or overgrazed pasture is not a source of nutrients and can be a serious source of internal parasites.

Understocked, overgrown, coarse and unpalatable pastures should be clipped. Lush pasture forages can act as a laxative in early spring and may cause founder. Therefore, horses should be introduced gradually to pastures by slowly increasing their daily time on the pasture.

Concentrates

Concentrates are lower in fiber and higher in energy content than roughages. These are usually small grains such as corn, oats and barley. Grain quality is just as important as hay quality. Grains may be cracked, steamed or rolled. If feeds are ground too finely, respiratory problems or colic may result.

Oats are higher in protein than corn. It is the safest and easiest grain to feed with hay. Corn has the highest energy content of any grain. It can be ear, cracked, rolled or shelled corn. Barley is intermediate in energy and protein content. All grains contain very low calcium, but relatively higher amounts of phosphorus.

Horse Pasture Management Tips

1. Fertilize to meet the nutrient needs of the grass and to increase production. Have soil tests taken to determine how much nitrogen, phosphorus and potassium the pasture needs. A productive, established pasture will require 150 to 180 pounds of nitrogen per acre per year.

2. Divide the pasture into two or three units approximately equal in size. Move livestock before grass is grazed to minimum height, i.e., Smooth Brome—4", Intermediate Wheatgrass—5". Under a three-unit system, graze each unit seven to 10 days, then rest for 14 to 20 days.

3. "Take half, leave half" is a good rule to follow to allow roots to store enough food to produce a healthy plant the following season.

4. Calculate the acreage needed to graze one horse: one 1,000-pound horse requires 600 pounds of air-dry forage per month. Non-irrigated pasture in Colorado produces 500 to 2,500 pounds per acre per year. Horses will trample grass and be selective in grazing, so follow the "take half, leave half" principle. Therefore, 28.8 acres will support one horse for one year on non-irrigated pasture.

   500 lbs./acre ÷ half = 250 lbs./acre/yr.

   600 lbs./mo. X 12 mos. = 7,200 lbs./yr. ÷ 250 lbs./acre/yr./ = 28.8 acres

5. Provide extra feed if stocking rates are too high! Livestock pastured on small lots should be confined to pens and the remaining area used for limited grazing and exercise. Otherwise, your livestock will devour or trample whatever vegetation is left in the pasture.

6. Provide adequate water in each grazing pasture. Locate tanks on well-drained, upslope sites. In large pastures, distribute water tanks equal distances apart to encourage more even grazing throughout the pasture.

7. Control weeds that invade your pastures. Spray with an approved herbicide or mechanically control by mowing before weeds go to seed.

8. Mow uneven growth to prevent spot grazing.

Feeding Tips

These helpful hints will help you care for your horse nutritionally:

* Provide high quality alfalfa or grass roughage with a complementing grain to balance the horse's diet. Feed by weight not by volume.

* Always maintain at least half of the ration as roughage, i.e., hay.

* Never feed moldy or dusty feeds.

* Never feed lawn grass clippings.

* Have fresh, clean water available at all times—except to a hot horse. A hot horse needs to be watered out slowly.

* Keep feed and water containers clean. Check and clean water buckets and tanks regularly.

* Observe your horse during feeding. Inspect feed containers daily to detect abnormal eating or drinking behaviors.

* Check horse's teeth annually to detect sharp points that interfere with chewing. Floating sharp edges of teeth will increase feed efficacy. Dipping mouth in water while eating may indicate a sharp tooth. Tilting head to one side while eating grain may indicate a tooth problem.

* Ration changes should be done gradually—minimum of five days will help prevent digestive disturbances.

* Proper exercise improves appetite, digestion, muscle tone and mental health for horses.

* The horse's stomach is very small and cannot hold a large amount of feed at one time, so horses should be fed at least twice a day on a regular schedule. Some horses benefit from three or more feedings per day. But don't overfeed your horse. Too much feed at one time can cause founder.

Nutrient Requirements for Different Horses

The nutrient requirements of a horse vary with the age, weight and amount of work. Hay is sufficient feed for a mature horse that is ridden very little. With an increase in work, grain should be added to the hay.

The Daily Feed Chart (Table 5.1) can be used as a rule of thumb or you can be more exact and balance your horse's ration. Review Table 5.3: Horse Ration Analysis Worksheet.

Table 5.1. Daily feed requirements for different horses.

	Approximate Amounts	
1,000-pound horse	**Hay**	**Grain**
No work	20-25 lbs.	---
Light (1-2 hrs./day)	15-20 lbs.	1-3 lbs.
		(1-1.5 lbs. grain/hr. of work)
Medium (2-4 hrs./day)	15-20 lbs.	3-8 lbs.
		(1.5-2 lbs. grain/hr. of work)
Heavy (4 or more hrs/day)	15-20 lbs.	5-10 lbs.
		(1.5-2.5 lbs. grain/hr. of work)

Only a horse that is worked extremely hard would ever receive half of its ration in grain. A race horse in heavy training is an example of a horse receiving half of its ration in grain.

When balancing or evaluating a ration, use the National Research Council (NRC) tables as a guideline to determine if sufficient nutrients are available to meet the feed requirements of your horse (see Table 5.2).

To balance a ration, take the following steps:

* Determine the age, weight and level of activity or work of the horse.
* Daily nutrient requirements: Table 5.2: Daily Nutrient Requirement of Horses lists requirements of your horse according to its physiological status and level of activity.
* Determine the actual nutrient content of the feedstuffs you have available. This can be done by sending your feed to a commercial feed-testing laboratory. Contact your local Cooperative Extension agent for the name of the laboratory nearest you. If you cannot have your feed tested to determine the actual analysis, use the average values listed in Table 5.4: Nutrients in Common Horse Feeds.
* Weigh the amount of each feedstuff you plan to use in the ration. If you feed premixed feed, use the ingredient analysis listed on the feed tag for the percent of each ingredient.

* Determine the pounds of forage your horse should eat; this usually is calculated as 1 to 2 percent of the horse's body weight.
* Multiply each nutrient by the pounds of feed fed per day. Do this for each feed and add up each individual nutrient for each feedstuff. See Table 5.3 for a ration worksheet. (Example: CP. If your horse eats 8 pounds per day of a 10 percent protein feed, it consumes 0.8 pounds of crude protein per day: 8 lbs. x .10 = 0.8 lbs.).
* Check your totals against the daily nutrient requirements listed in Table 5.2. If the requirements are greater than the totals in your ration, then the ration is inadequate or not balanced for the horse. If your ration is deficient in a nutrient, you can either add a feed ingredient that is a good source of the deficient nutrient in an amount necessary to balance the diet or increase a feed ingredient you already have that is a source of the nutrient. Always be careful not to create an excess of other nutrients when increasing feed ingredient levels. Excesses of some nutrients can interact or tie up other nutrients. For example, excess calcium can prevent complete utilization of phosphorus in the diet. Check NRC tables for calcium to phosphorus ratios; however, a good rule of thumb is a 2:1 ratio.

Metabolic disorders such a laminitis, osteochondrosis, epiphysitis and others stem from excessive or deficient nutrients in the diet. If you provide your horse with a ration balanced for its individual needs, many of these disorders can be avoided.

Remember, each horse has to be fed as an individual. Feed an amount that is adequate to maintain a body condition similar to that of an athlete. The NRC requirements are average suggested values. The individual horse may require adjustments to these nutrients to maintain condition. Therefore, you should constantly assess the body condition of your horse. A properly conditioned horse will have enough fat so its ribs don't show. However, you should still be able to feel the ribs when you run your fingers over them. See Figure 5.1, for areas emphasized in the Body Condition Score System. Depending on your horse's use, you will want to have its body score between 5 and 6. You will discover some horses are easy-keepers and require less feed while some are poor-keepers and require more feed.

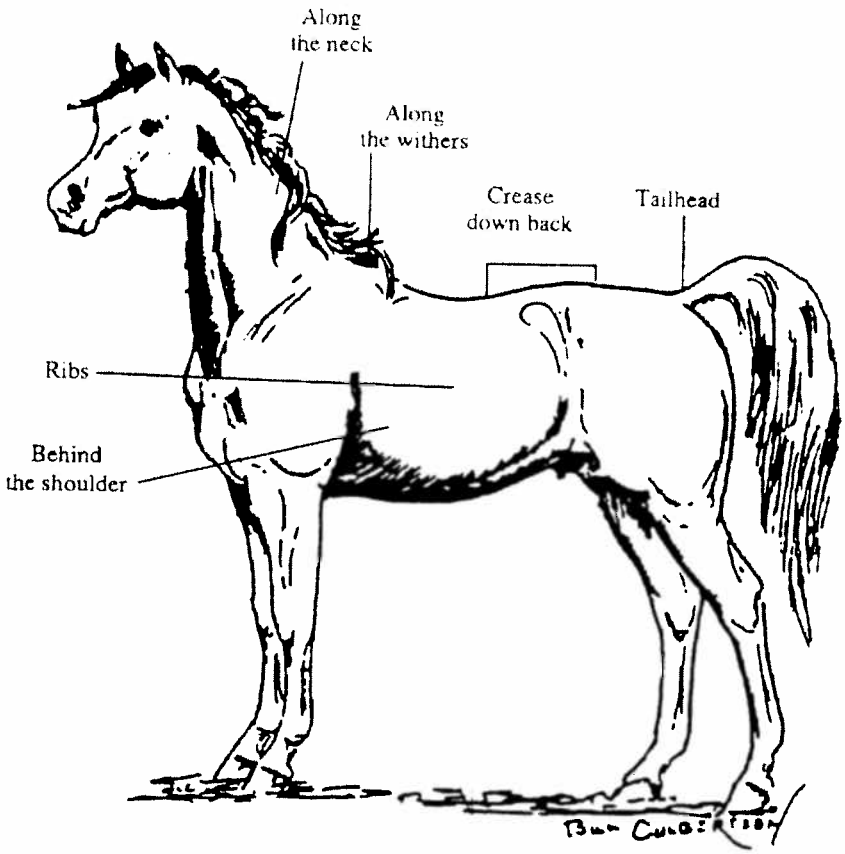


Figure 5.1. Diagram of Areas Emphasized in Body Condition Score. Visual appraisal areas used when determining body condition score.

Table 5.2. Daily nutrient requirement of horses (1,000 lb. mature weight) according to the National Research Council

Animal	Digestible Energy (DE) (Mcal)	Crude Protein (CP) (g)	Lysine (g)	Calcium (g)	Phos-phorus (g)	Magne-sium (g)	Potas-sium (g)	Vitamin A (10^3 IU)
Mature horses								
Maintenance	16.4	656	23	20	14	7.5	25.0	15
Stallion (breeding season)	20.5	820	29	25	18	9.4	31.2	22
Pregnant mares								
9-months	18.2	801	28	35	26	8.7	29.1	30
10-months	18.5	815	29	35	27	8.9	29.7	30
11-months	19.7	866	30	37	28	9.4	31.5	30
Lactating mares								
Foaling to 3-months	28.3	1,427	50	56	36	10.9	46.0	30
3-months to weaning	24.3	1,048	37	36	22	8.6	33.0	30
Working horses								
Light work[a]	20.5	820	29	25	18	9.4	31.2	22
Moderate work[b]	24.6	984	34	30	21	11.3	37.4	22
Intense work[c]	32.8	1,312	46	40	29	15.1	49.9	22
Growing horses								
Weanling, 4-months	14.4	720	30	34	19	3.7	11.3	8
Weanling, 6-months								
Moderate growth	15.0	750	32	29	16	4.0	12.7	10
Rapid growth	17.2	860	36	36	20	4.3	13.3	10
Yearling, 12-months								
Moderate growth	18.9	851	36	29	16	5.5	17.8	15
Rapid growth	21.3	956	40	34	19	5.7	18.2	15
Long yearling, 18-months								
Not in training	19.8	893	38	27	15	6.4	21.1	18
In training	26.5	1,195	50	36	20	8.6	28.2	18
Two-year-old, 24-months								
Not in training	18.8	800	32	24	13	7.0	23.1	20
In training	26.3	1,117	45	34	19	9.8	32.2	20

[a]Examples are horses used in western and English pleasure, bridle path hack, equitation and so forth.
[b]Examples are horses used in ranch work, roping, cutting, barrel racing, jumping and so forth.
[c]Examples are horses in race training, polo and so forth.
Reproduced courtesy of National Research Council's *Horse Nutrient Requirements*, 1989.

Table 5.3. Horse ration analysis worksheet. (Junior and intermediate members should not attempt to complete this worksheet without adult assistance. Senior members should be able to complete this worksheet on their own.)

1. Animal Description

* Body weight (pounds)

* Activity, i.e., maintenance, work (low, moderate, intense); lactation (early, late); growing (nursing, weanling, long yearling, two-year-old)

2. Animal Requirements (from Table 5.2)

Digestible Energy (DE) mcal/lb._____ Phosphorus (P) grams_____

Crude Protein (CP) grams_____ Calcium (Ca) grams_____

3. Feed Used to Balance Ration (from Table 5.4)

Name or Description	**DE Mcal/lb.**	**CP grams**	**P grams**	**Ca grams**
forage:				
concentrates:				

4. Determining Forage Amount

(1 to 2 percent of body weight).

Note: If your horse needs more energy in its diet than what is provided at a forage level of 2 percent of body weight, then rebalance the ration by using less forage, i.e., 1.5 percent of body weight.

Body weight (lb.) _____ x .02 or .015 = _____ lb. forage

_____ lb. forage fed x .90 = _____ lb. forage dry matter (DM)

_____ lb. forage DM x _____ forage DE = _____ Mcal/lb. DE from forage

5. Determining Concentrate (Grain) Amount:

_____ Animal DE Requirement — _____ DE from forage fed = _____ Mcal DE needed from concentrate

_____ DE needed from concentrate/_____ DE of concentrate fed = _____ lb. concentrate needed

6. Total Ration Check:

Digestible Energy (DE):

_____ lb. forage x _____ forage DE = _____ Mcal DE from forage

_____ lb. concentrate x _____ concentrate DE =_____ DE from concentrate

Now total DE from diet adding DE from forage and concentrate _____

* Difference from animal requirement? _____ (when the difference = 0, DE is balanced)

Crude Protein (CP)

_____ lb. forage x _____ forage CP = _____ lb. CP from forage

_____ lb. concentrate x _____ concentrate CP = _____ lb. CP from concentrate

* Total CP from diet adding CP from forage and concentrate: _____ lb. CP

* _____ lb. CP from diet x 454 grams/lb. = _____ grams CP from diet

* Difference from animal requirement? _____

Phosphorous (P)	_____ lb. forage x _____ forage P = _____ lb. P from forage
	_____ lb. concentrate x _____ concentrate P = _____ lb. P from concentrate
	* Total P from diet adding P from forage and concentrate lb. P
	* _____ lb. P from diet x 454 grams/lb. = _____ grams P from concentrate
	* Difference between diet and animal requirement? _____
Calcium (Ca)	_____ lb. forage x _____ forage Ca = _____ lb. Ca from forage
	_____ lb. concentrate x _____ concentrate Ca = _____ lb. Ca from concentrate
	* Total Ca from diet adding Ca from forage and concentrate: _____ lb. Ca
	* lb. Ca from diet x 454 grams/lb. = _____ grams Ca from diet
	* Difference between diet and animal requirement? _____

7. Conversion to Amounts Fed to the Animal

If amounts of nutrients required by the animal and nutrient content of the ration match, then complete the following steps to determine actual amount of feed given to the animal (during a 24-hour period).

_____ lb. forage/.90 Dry Matter = _____ lb. forage to be fed

_____ lb. concentrate/ .90 = _____ lb. concentrate to be fed

_____ lb. (other feed)/ .90 = _____ lb. _____

Table 5.4. Nutrients in common horse feeds.

Type	% DM	% CP	DE (Mcal/lb.)	% Calcium	% Phosphorous
Hay					
Alfalfa					
Early bloom	90.5	18.0	1.02	1.28	0.19
Mid-bloom	91.0	17.0	0.94	1.24	0.22
Mature	90.9	15.5	0.89	1.08	0.22
Dehydrated Meal	90.4	15.6	0.91	1.25	0.23
Native Hay (Mountain meadow)	95.1	8.2	0.73	0.58	0.17
Timothy	89.1	9.6	0.83	0.45	0.25
Orchard	89.1	11.4	0.88	0.24	0.30
Oat	90.7	8.6	0.79	0.29	0.23
Smooth Brome	87.6	12.6	0.85	0.29	0.28
Pasture					
Alfalfa (late veg)	23.2	5.1	0.31	0.40	0.07
Bluegrass (early veg)	30.8	5.4	0.29	0.15	0.14
Crested Wheatgrass (early veg)	28.5	6.0	0.33	0.12	0.09
Orchard grass (early bloom)	23.5	3.0	0.24	0.06	0.09
Smooth Brome (early veg)	26.1	5.6	0.31	0.14	0.12
Concentrates					
Barley	88.6	11.7	1.49	0.05	0.34
Corn	88.0	9.1	1.54	0.05	0.27
Cottonseed Meal	100.0	45.4	1.37	0.18	1.22
Oats	89.2	11.8	1.30	0.08	0.34
Molasses	77.9	6.6	1.20	0.12	0.02
Soybean Meal (solvent extracted)	100.0	54.0	1.70	0.29	0.71
Wheat Bran	89.0	15.4	1.33	0.13	1.13

Table 5.5. Minerals

Type	% DM	% Ca	% P	Sodium
Dicalcium Phosphate (dical)	97	22.00	19.03	0.05
Limestone (calcium carbonate)	100	39.39	0.04	0.06
Monocalcium Phosphate	97	16.40	21.60	0.06
Monosodium or Disodium Phosphate (XP-4)	97	—	22.50	16.68
Steamed Bone Meal	97	30.71	12.86	5.69

Table 1: NUTRIENT COMPOSITION OF ROUGHAGES FOR HORSES

	DRY MATTER %	CRUDE PROTEIN %	DIGESTIBLE ENERGY Mcal/lb	Ca %	P %	VIT. A IU/lb
Alfalfa						
pasture, pre-bloom	23.2	5.1	.31	.40	.07	
pasture, full-bloom	23.8	4.6	.25	.28	.06	
hay, early-bloom	90.5	18.0	1.02	1.28	.19	23,000
hay, full-bloom	90.9	15.5	.89	1.08	.22	10,741
Bahiagrass						
pasture	28.7	3.6	.26	.13	.09	9,500
hay	90.0	8.5	.79	.45	.2	
Bermudagrass, coastal						
pasture	30.3	3.8	.33	.15	.08	18,000
hay	93.0	10.9	.89	.30	.19	
Bluegrass, Kentucky						
pasture	30.8	5.4	.29	.15	.14	27,000
hay	92.1	8.2	.72	.24	.25	
Brome, Smooth						
pasture	26.1	5.6	.31	.14	.12	27,600
hay	87.6	12.6	.85	.25	.25	
Clover, Red						
pasture, early-bloom	19.6	4.1	.22	.44	.07	8,800
pasture, full-bloom	26.2	3.8	.27	.26	.07	9,900
hay	88.4	13.2	.89	1.22	.22	4,400
Fescue						
pasture	31.3	4.7	.32	.16	.12	12,600
hay	90.0	9.8	.80	.37	.27	
Lespedeza, Common						
pasture	25.0	4.1	.25	.30	.07	
hay	90.8	11.4	.88	1.07	.17	
Orchardgrass						
pasture	23.5	3.0	.24	.06	.09	
hay	89.1	11.4	.88	.24	.30	6,075
Ryegrass						
pasture	22.6	4.0	.23	.15	.09	
hay	85.6	8.8	.71	.53	.29	45,100
Timothy						
pasture	26.7	3.3	.29	.11	.07	11,000
hay	88.9	8.6	.80	.43	.20	8,500

Source — National Research Council, *Nutrient Requirements of Horses*. 1989.

forage. Cubed alfalfa will weigh 25 to 30 pounds per cubic foot. Horses fed cubes are less likely to chew wood than horses fed pelleted forages.

Dehydrated Forages

Dehydrating is the removal of moisture by artificial means. The green forage is chopped and passed through a dehydrator at temperatures which may be as high as 600°F. Due to the high moisture content of the green forage and the short time it is in the dehydrator, it does not become hot enough to burn. This method of forage preservation retains a maximum amount of dry matter and protein, and there is no loss of leaves in the process. Young, growing forages are more commonly dehydrated rather than older, mature

Chapter 6-- Shelter

Shelter for most 4-H horses should furnish protection from hot sun, wind or stormy weather. The type of shelter depends on the facilities available to each member. This varies from an open shed in the pasture to a barn with box stalls and tack room. The stable need not be fancy, but it should be well-constructed for safety and arranged well so it can be kept clean. Listed below are some standard dimensions.

Your stable or shelter may not fit the above dimensions exactly. Be certain there is room and plenty of ventilation with no drafts.

Arrange the grain box so your horse cannot get its hoof in the box and so the box can be cleaned easily. The hay manger should be constructed with an open space at the bottom for chaff, dirt and trash to fall out or so that it can be cleaned easily. Don't feed hay or grain on the ground because the horse will pick up dirt and sand with the hay. This will cause colic. Water buckets should be hung high enough so your horse cannot get its hoof in the bucket.

Regardless of where you keep your horse, always be alert for loose boards, nails and any projections that could cause injuries. Keep all wire and hay-bale twine picked up.

Fencing can be constructed of poles, boards or wire. The wire should be smooth -- not barbed wire. Barbed wire injures horses. Electric fences should have smooth wire. Check with a fence-checker to be sure it works.

Most electric charges have a light that shows when there is a break in the fence or if the circuit is incomplete. Remove overgrown weeds from fence lines. Check all fences regularly and keep wire fences tight.

Your facilities reflect your interest in your horse. Keep them clean and in good repair. This will prevent health problems and injuries.

Space Requirements

Box Stall	10' x 10' to 12' x 12'
Tie Stall	5' x 12' including manger
Ceiling Height	8' minimum
Doors	4' wide x 8' high
Hay Manger	28" side, 38" high top edge
Grain Box	24" to 30" long, 8" to 10" deep
	38" to 42" from floor to top edge

Chapter 7-- Your Horse's Health

Learn to observe the health of your horse. You can control many factors that affect your horse's health. Among them are sanitation of stables and feeding equipment; clean, quality feed; exposure to disease as you use your horse; proper fit of riding equipment; hazards around the stables and pasture; constant observation for injuries or signs of disease; and finally, the way you use your horse.

Proper treatment of diseases, injuries and parasites depends on two very important factors: correct diagnosis and knowledge of the proper medication. Your veterinarian knows what health and first-aid measures you can safely handle, and he will teach you the proper procedures.

This includes:

* how to recognize health troubles,
* what to do in case of sickness or injury before help can arrive, and
* simple treatment and remedies that are safe to follow under certain conditions.

Brief descriptions of common diseases, parasites, injuries and general health problems encountered in horses follow.

General

Cleanliness is very important. Feeders and water containers should be cleaned often. Bedding should be dry and clean, and manure should be cleaned out regularly. The stable area should be level and well-drained.

Stabled horses should have proper ventilation. Fresh air is needed even in winter, but watch out for drafts. Urea in horse urine forms ammonia. This ammonia can cause respiratory problems. If you smell ammonia in your horse stable, you aren't cleaning it well enough or the stable needs more ventilation. Keep stable temperature and atmosphere as close as possible to outside climates. Horses do not need to be kept in a heated barn.

First Aid

First aid is the immediate and temporary care given to a horse until the services of a veterinarian can be obtained.

First aid includes preventing your horse from injuring itself further. Remember--horses are creatures of fright and flight. Their instinct is to bolt and run when they experience a trauma situation. For example, if the horse is caught in barbed wire or cast on the ground when caught in a feeder or fence, calm and soothe the horse until it can be freed. Take care that you do not become seriously injured during the process of calming and freeing.

After any accident, it is best to keep the horse quiet and wait for the veterinarian. If the horse begins to go into shock by shaking and quivering after an injury, put a blanket on the horse.

Bleeding

The average volume of blood for a 1,000-pound horse is 36 liters or 8 gallons. This is about 6 to 10 percent of its body weight. A horse can tolerate a loss of up to 25 percent of its blood-- about 9 to 11 liters or 2.25 to 2.75 gallons. Because the horse is such a large animal, it can lose what looks like a lot of blood from an injury or laceration. Blood loss is serious, and it should be controlled even though it may not be life-threatening.

To control bleeding in the horse, use a pressure bandage applied over the injury. Elastic bandages make good pressure bandages. It is important to be careful when you apply the bandage so the horse does not injure you. Many times when there is a serious laceration of the limbs, nerves are severed and are sensitive to touch. The bandage should be applied tight enough to dramatically slow the bleeding. If the bandage is applied excessively tight, it could work as a tourniquet that cuts off the blood supply to the limb beyond the bandage. The injured limb needs blood circulation. Try to control bleeding with a bandage until the veterinarian arrives.

Many people attempt to administer first-aid treatments to lacerations. Many home remedies contaminate the wound and make it more difficult for the veterinarian to clean and prepare the laceration for suturing. Do not use lanolin or petroleum-based products because they are not water-soluble and are impossible to remove from the wound before suturing. Cleaning dirt and manure out of an injury with water and organic iodine solutions (not the strong tincture of iodine) or scrubs is the only first aid you should administer while you wait for the veterinarian. Lacerations should be sutured as soon as possible. Do not exceed 24 to 36 hours before suturing.

Vital Signs

What is normal? Close observation of your horse's eating habits, gaits, activities and attitudes will help determine what is normal. Changes in these habits will indicate a problem. Additionally, measure temperature, pulse and respiration rate if you think your horse is ill.

Temperature

Take the horse's temperature with a rectal thermometer. The thermometer should be lubricated, and the mercury should be shaken below 95 degrees Fahrenheit (F) before inserting it into the rectum. The normal temperature of a horse can range from 99.5 degrees F to 101.5 degrees F, with an average of 100 degrees F. A fever is classified as mild at 102 degrees F and excessive at 106 degrees F. Exercise, excitement and hot weather raises normal body temperature.

Respiration Rate

To measure the breathing or respiration rate, watch the flank and rib movements with each breath. Count the number of these in-out movements in a minute. In an adult horse at rest, the breathing rate should range from eight to 16 breaths per minute. The rate increases with exercise. Younger and smaller horses would have a more rapid rate.

Pulse

The normal pulse rate averages 35 beats per minute. Lower rates are normal for larger, older horses at rest. Younger, smaller horses have a higher pulse rate. A yearling has a normal rate of 40 to 58 beats per minute.

A horse's pulse can be felt in several places: the inner surface of the lower jaw, the back edge of the jaw or cheek, under the tail or inside the left elbow (see Figure 7.1). Usually the pulse is taken from the artery on the inside lower jaw. It is located in front of the large, round jaw muscles and found by moving your fingers up and down on the inside and underside of the jaw bone. The artery feels like a flat, soft cord. By pressing the artery against the jaw bone, you can feel the pulse. As blood flows through the artery, it pulses against your finger. If you have trouble finding the artery, ask your veterinarian to help.

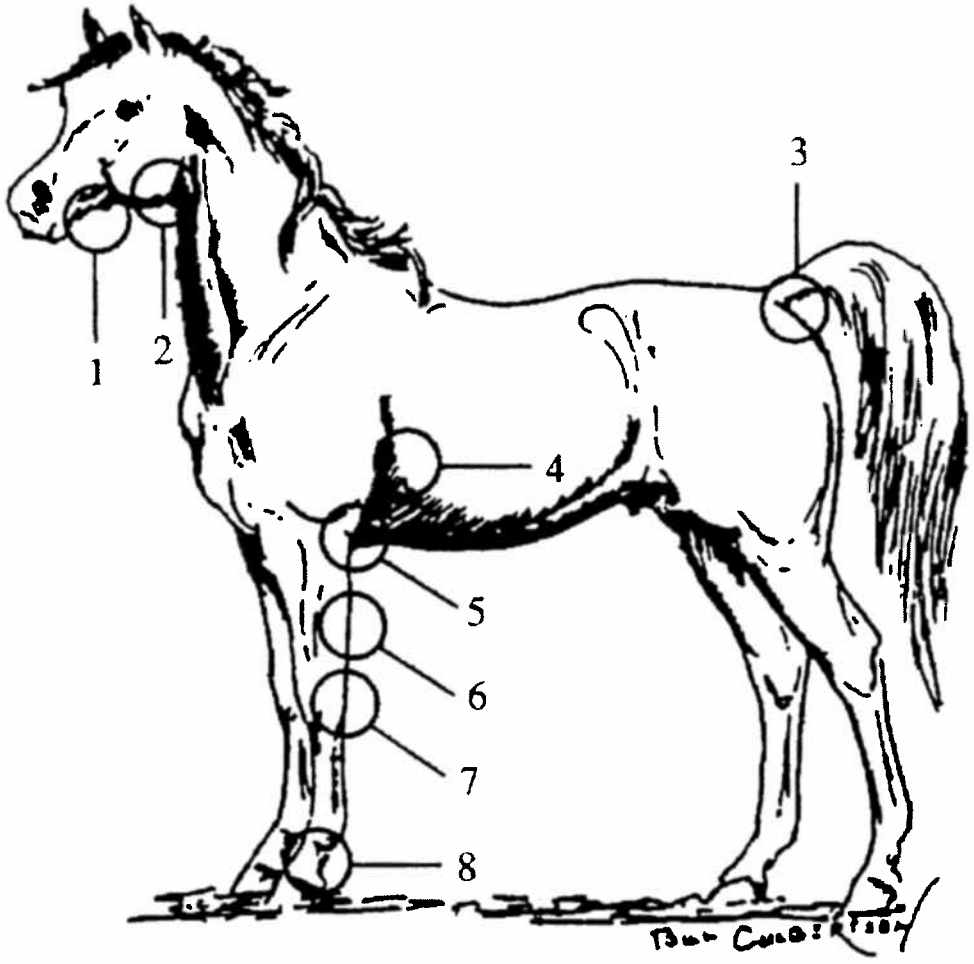


Figure 13. Points at which the horse's pulse can be felt and taken: (1) the inner surface of the groove under the lower jaw (external maxillary artery); (2) the back edge of the lower jaw (the cheek), 4 inches below the eye (facial artery); (3) under the tail, close to the body (medial coccygeal artery); (4) point where heartbeat can be monitored with stethoscope; (5) inside the left elbow, up and forward, against the chest wall (heart); (6) the inside of the foreleg (median artery); (7) behind the carpus, or knee (digital artery); (8) medial or lateral pastern (digital artery).

Capillary Refill Time

Capillary Refill Time (CRT) measures how long it takes for capillaries to refill with blood. It is an easy test to perform. Press the mucous membrane inside the nostril or the gums to measure CRT. As you press on the membrane, you press blood out of the capillaries. When you remove your finger, the membrane appears pale. You can see the blood return as the membrane regains its pink color. It should take 1 to 2 seconds for the membrane to return to the color of the surrounding area. If it takes longer than 1 to 2 seconds, your horse's circulation is

poor, or it may be in shock. Use yourself as a comparison. Squeeze your thumb. Watch the color under your thumb nail. It will be pale pink when you release it, but the color will return rapidly.

Colic

Another emergency that requires first aid is colic. Colic is the number-one killer of horses and can be a serious problem. Colic means acute stomach pain. Call a veterinarian when you suspect colic.

Horses that experience colic will have increased heart rate and body temperature. The horse will sweat, become restless, paw the ground, try to roll, get up and down several times, bite at its sides, kick at its belly, show a change in its manure, or fail to defecate. The pain may be caused by several intestinal problems such as impaction or plugged intestine, sand in cecum, increased activity of the intestine, inflammation of the intestinal membrane lining, blockage of blood supply to the intestine, or stretched digestive track due to gas or undigested feed.

Colic has many causes including abrupt change in feeding practices, over-feeding, parasites, impaction or plugged intestines from feed source, not drinking enough water, eating sand, twisted intestine, or pregnancy.

To prevent further complications if your horse becomes colicy, keep the horse calm. A veterinarian should be called, and the horse kept quiet to protect it from self-inflicted injury.

The severity of pain is not a good indication of how serious the problem may be. Pulse rates over 50 to 60 beats per minute, slow capillary refill time and poor-colored (blue) mucous membranes indicate the serious nature of the problem. Professional care should not be delayed.

The incidence of colic can be reduced by practicing good feeding management, a good parasite control program and reduced stress on your horse.

Health Problems

An elevated or below-normal temperature; rapid pulse; rapid, labored respiration with flared nostrils; lack of appetite; very loose or watery stool; coughing; listlessness; and dull eyes are indications the horse may have a problem.

Influenza (Flu)

Influenza is a respiratory infection caused by a virus which commonly affects 2- and 3-year-olds. However, older horses can come down with the disease if they are susceptible. The virus spreads rapidly between susceptible horses. The disease is common among horses that are concentrated together, such as at sales, shows and race tracks. Crowding and stress may predispose your horse toward getting this disease. It can be prevented with semi-annual vaccinations. Horses at high-risk should receive vaccinations every three to four months.

Horses usually develop signs of influenza two to 10 days after exposure. Signs of influenza include high fever, depression, shivering, inflamed throat, muscle stiffness and soreness, loss of appetite, increased pulse and respiratory rates, and fatigue. A dry, hacking cough later develops into a moist cough. Nasal secretions will be clear and mucous-like in the early stages. Complete rest is necessary for up to 30 days after these signs occur. Horses worked during periods when they have temperatures often develop a bronchopneumonia complication. Horses that don't develop complications usually recover in one to two weeks.

Rhinopneumonitis

A herpes virus causes rhinopneumonitis, it has symptoms similar to flu. The disease has three distinct forms: respiratory, abortion-causing and neurologic. The respiratory form occurs most frequently in young horses.

Respiratory Form-- Signs of the respiratory form include a fever (106 degrees F) which may last for one to seven days. The affected horse will have a clear to yellowish mucus-like discharge from the nostrils. The horse will remain fairly bright and alert with little depression. Coughing is uncommon unless the horse develops a secondary bacterial infection. Older horses infected with the virus have mild symptoms.

Abortion Form-- This form occurs in pregnant mares three weeks to four months after infection or the respiratory form infects horses on the premises. The virus causes the mare to deliver a dead foal during the last three months of pregnancy or to deliver a weakened foal that dies soon after birth.

Neurologic Form-- The neurologic form usually occurs in horses over one year of age. This form may occur following respiratory or abortion forms or may occur without prior signs of other forms. Incoordination or paralysis of the hind legs is one sign of this form.

Vaccination prevents rhinopneumonitis. Because vaccine does not produce lasting protection, consult your veterinarian about proper vaccination times and intervals between booster vaccinations.

Equine Infectious Anemia

A virus causes Equine Infectious Anemia (EIA), also known as swamp fever. Symptoms are a recurring fever, noticeable depression, weakness that worsens as time passes, loss of body condition and weight, swelling in legs and underside caused by fluid accumulation, and anemia (lower than normal number of red blood cells).

The disease has no specific treatments and cannot be prevented by vaccination. In many states, horse shows and horse races require a negative Coggins test for the disease before entering the state or the grounds. Most states require horses that test positive for this disease be kept in a permanent, lifetime quarantine or be put to sleep because they are a lifetime carrier of the virus. Interstate travel also requires a negative Coggins test.

Strangles

Equine distemper, shipping fever or strangles is an acute, contagious disease that primarily affects the upper respiratory tract. Several strains of *Streptococcus* bacteria cause the disease.

Symptoms develop two to six days after the horse has been exposed to the bacteria. Symptoms include a high temperature (103 degrees F to 104 degrees F), nasal discharge, depression, an increased respiratory rate and a dry cough. Lymph nodes in the throat are swollen and very painful. Because of pain in the throat area, the horse has trouble swallowing and therefore has a loss of appetite. The pain also causes the horse to stand with neck stretched and head down. The swelling can be seen in the area where the head and neck join. Swollen lymph nodes can become abscessed (filled with a creamy yellow pus) and break open. Sometimes the bacteria spreads to other lymph nodes in the chest and abdomen and causes serious complications for the horse. Nasal discharge is usually yellow or white.

Direct contact between an infected horse and a susceptible one transmits the disease. The bacteria also can be transmitted on buckets, feeders, fences, clothing, shoes and waterers. You should rely on your veterinarian for vaccination recommendations and treatment.

Tetanus (Lockjaw)

A neurotoxin produced by the bacteria *Clostridium tetani* causes tetanus. It infects the animal in deep puncture wounds that result from nails or splinters. Vaccinating your horse every year prevents tetanus. Booster vaccinations should be given when your horse is injured. The bacteria also can infect the navel of newborn foals. Tincture of iodine or betadine should be used on the foal's navel to prevent tetanus.

Symptoms usually occur within one to two weeks after injury. Tetany is the severe tightening of a muscle, muscle twitch or muscle cramp. Muscles in the jaw are some of the first to be affected. Since they are much stronger than muscles that open the mouth, the horse is unable to open its mouth. Lock-jaw is the common name for tetanus.

Other signs include tetany of the muscles in the hind legs, tail held up and ears erect, head and nose held high with head extended, and tightening of muscles in the body causing legs to assume a sawhorse stance. The horse has trouble moving because all muscles are tied up. They overreact to loud noises and fast movements. Inability to eat or drink, rapid breathing, rapid heart rate, constipation, elevated temperature, and excessive sweating also are common signs of tetanus.

Sleeping Sickness

There are three types of sleeping sickness or Equine Encephalomyelitis, named after the different viruses that cause them: Eastern Equine Encephalomyelitis (EEE), Western Equine Encephalomyelitis (WEE), and Venezuelan Equine Encephalomyelitis (VEE). The three diseases are difficult to tell apart since they produce similar symptoms. Mosquitos transmit the disease.

Eastern Equine Encephalomyelitis (EEE)-- EEE is an acute disease of horses and humans that causes death. It doesn't occur as frequently as Western Equine Encephalomyelitis, but it is more serious. Symptoms in the horse include fever, loss of appetite, depression, sleeping sickness, circling, head pressing, blindness, intense itching, paralysis of the muscles of the face, difficulty in

chewing and swallowing, weakness, incoordination, seizures, respiratory arrest, and death in up to 90 percent of the horses affected.

Western Equine Encephalomyelitis (WEE)-- WEE received its name because it occurs primarily west of the Mississippi River and in western Canada. It is the mildest but most frequently occurring of the three types of sleeping sickness. Symptoms develop within several weeks after the horse is infected. They are similar to those of EEE and last for two weeks or more.

Venezuelan Equine Encephalomyelitis (VEE)-- VEE is found in Central and South America. There was an outbreak of VEE in the United States in the 1970s. It has been eradicated here. It causes high death rates among humans, and horses serve as a reservoir for viruses that infect humans. Vaccinations for VEE are not used currently except for horses entering North Carolina and Texas.

The disease can be prevented through vaccination. EEE, WEE and VEE vaccinations are combined with tetanus and influenza in one dose.

Potomac Horse Fever

Potomac Horse Fever is caused by an organism, *Ehrlichia risticil*, transmitted by insect bites. Symptoms include mild depression, refusal to eat, mild temperature, colic and profuse diarrhea 24 to 48 hours after onset that lasts for up to 10 days. Laminitis develops in one of four horses stricken with the disease. Severe symptoms usually result in death. Treatment usually is not successful. Horses should be vaccinated in regions where the problem occurs most frequently.

Heaves

Heaves and broken wind are common terms that refer to **Chronic Pulmonary Alveolar Emphysema**. It is a condition that affects the lungs and is associated with feeding dusty or moldy hay.

Symptoms of this disease relate to changes in the horse's lungs. Chronic coughing marks the beginning of the disease process. As changes in the lungs become more severe, the horse loses stamina, nostrils flare and the horse suffers shortness of wind. In normal breathing when the diaphragm relaxes, the elasticity of the lungs forces air out. The disease process destroys this elasticity. The horse

compensates by contracting its abdominal muscles to force the abdominal organs toward the chest to force air out of the lungs. This looks as if the bottom of the abdomen is lifting up and occurs at the end of the normal shriveling of the chest during breathing. Because abdominal muscles become larger with this extra work, a line that defines them (heave line) develops along the bottom of the abdomen.

The changes in the lungs are permanent. Treatment consists of treating symptoms. The disease can be prevented by feeding good quality, dust-free hay.

Laminitis (founder)

Laminitis means inflammation of the sensitive laminae in the hoof of the horse. The white line you see in the hoof is the laminae. Laminae are tissues folded inside the hoof wall that keeps the hoof wall attached to third phalanx, a bone (coffin bone) inside the hoof with a similar shape. With this inflammation, attachments break down. Structures under the back of the third phalanx hold the hoof up. After the attachments break down, the front tip of the bone rotates or falls onto the sole and causes intense pain. The horse tries to reduce the pain by walking with its feet out in front and moving in a manner to keep pressure off its toes. Changes most often occur in the front feet but also may affect all four feet.

Laminitis (founder) can be caused by overeating grain, eating lush grass, drinking water before cooling down, trotting or running on hard surface causing a concussion, infections, and stress. A horse that has laminitis has rough rings around the hoof wall. Horses with laminitis may be lame for the rest of their lives.

Teeth Wear

Although tooth wear isn't a disease, tooth care can help keep your horse healthy. The horse's diet consists of fibrous feed materials that require a lot of chewing. This process causes the horse's grinding teeth (premolars and molars) to wear down. Because the upper teeth are set slightly wider than the lower teeth, sharp points develop on the outside of the upper teeth and on the inside of the lower teeth. These sharp points cause the horse to bite its cheeks and tongue as it chews food. Incomplete grinding of feed occurs and results in poor body condition or an obstruction (blockage) in the intestines. Horses, 5 years and

older, should have these sharp points ground off (floated) every year by a veterinarian using a dental float.

Internal Parasites

Internal parasite control is vital for your horse's health from birth to old age. A parasite is a living organism that spends all or part of its life in or on and at the expense of another living organism.

In general, the horse ingests parasite larvae while grazing or feeding from the ground. The larvae migrate through the horse's internal systems. The larvae eventually will settle in or near the intestines where they rob the horse of nutrients. When mature, they lay eggs which pass out in the horse's manure. New larvae crawl on the grass blades to be eaten by other horses.

A horse infected with internal parasites often exhibits a dull, rough coat; weakness; stunted growth; weight loss; colic; diarrhea (sometimes bloody); or tail rubbing. Death may result with heavy infections. Occasionally, healthy looking horses can die from internal parasite damage. Stick to a regular deworming schedule regardless of whether the horse looks like it has parasites or not.

Horses kept in confined areas with several other horses invites constant reinfestation, especially if they feed off the ground. Therefore, owners must take extra precaution against parasites. Keep the area free from accumulated manure, do not feed on the ground and use deworming medications at frequent, regular intervals.

Ascarids (large roundworms), bots and strongyles (bloodworms) are the three most important internal parasites. Deworming medications vary depending on the type of worm. Check with your veterinarian to plan an annual deworming program.

In general, parasites interfere with normal growth and development, cause poor performance in working horses, lower horses' resistance to disease, and transmit diseases.

Roundworms or Nematodes

These are some of the most serious internal parasites. Roundworms are non-segmented, cylindrical worms.

Ascarids

Horse Ascarid (*Parascaris equorum*) is an internal parasite found primarily in young horses. In the life cycle of roundworms, females lay eggs in the intestinal tract. Feces pass the eggs into the environment. Outside the larva develops within the egg. This is first-stage larva (L_1).

Second-stage larvae (L_2) are in the infective stage and form while still in the egg. After the horse eats these eggs, they hatch in the small intestine. L_2 burrow through intestinal walls, get into veins and drain blood from the veins. They go to the liver where they burrow around the liver tissue. Again, they get back into the veins and drain blood from the liver and go on to the lungs. Here they burrow through lung tissue until they get into the air passages. They molt to L_4, migrate into the air passages and cause a tickling sensation. The horse coughs them up and swallows them, and they go back to the small intestines where they molt to adult L_5. Migration takes one to two weeks. The large size of these worms can cause blockages in the intestinal tract. The migration of larvae causes damage to the liver and lungs. Bleeding, as well as secondary pneumonias, can occur in the lungs.

Strongyles

Three species of strongyles, commonly called blood worms, are of major importance to the horse. They are the Single-Toothed Strongyle (*Strongylus vulgaris*), Toothless Strongyle (*Strongylus edentatus*) and Large Strongyle (*Strongylus equinus*). All have the same life cycle up to L_3 when they are injested and go into the large intestine or cecum. From there, life cycles differ.

In the life cycle of *Strongylus vulgaris*, L_1 grows, the egg hatches and L_1 larva is released. The newly hatched larva feeds on organic debris and bacteria. It sheds its cuticle covering, or molts, to form second-stage larva (L_2). It grows slightly and molts to form third-stage larva (L_3). Third-stage larva is the infective stage because it develops into an adult worm when it returns to the digestive tract of the horse. The first three stages (L_1 - L_3) are free-living. L_3 is a non-feeding stage and gains access into the horse by being eaten. Once in the digestive tract, L_3 molts to form the fourth-stage larva (L_4), which in turn molts to the fifth-stage larva (L_5) or adult worm. L_4 and L_5 are the adult stages and are parasitic. Under good environmental conditions, L_1 to L_3 transformation takes three days to a week. After L_3 finds a host, it takes 21 to 30 days to form L_5.

Single-Toothed Strongyle-- The most serious of the three, it burrows through the intestine wall and gets into the arteries. It prefers the artery that supplies blood to the intestinal tract (anterior mesenteric artery). The migrating larvae cause a severe reaction in the arterial wall. The wall weakens so that the artery balloons-- called an aneurysm. This weakened area can rupture and cause the horse to bleed to death. The larvae also cause the body to respond with an inflammatory reaction which produces fiber-like material. This material can plug the artery-- called a thrombus-- or some of the material can break off and flow with the blood through the artery until it reaches a smaller artery that it plugs-- called an embolus. The flow of blood stops-- called an infarct-- when arteries plug. The tissue not receiving blood dies, in this case part of the intestines. This causes severe colic. In most cases, the horse will die without surgery. Eventually the larvae go back to the intestines and form adult worms or L_5. Migration can take six months or longer. Until recently, there were no effective medications to treat migrating larvae.

Toothless Strongyle-- It leaves the intestines, goes to the liver, then to the tissue around the kidneys and back to the large intestine. This journey causes damage to the liver and signs of colic. Because the larvae can carry bacteria, they can cause serious infections in any of the tissues they travel through. They can rupture blood vessels, especially around the kidneys. This can cause hemorrhaging so severe that the horse could die. The trip can take as long as 300 days.

Large Strongyle-- It leaves the large intestine and goes to the liver and pancreas. It causes damage to these organs from its burrowing activities and can cause infections before it returns to the large intestine. It takes about 240 days for the journey.

At least 12 species of small strongyles do not cause disease but lay eggs that look like those previously discussed. This complicates diagnosis of the serious strongyles when feces are examined for eggs.

Some roundworm eggs are very resistant to the environment and can survive as long as five years. L_3 has two cuticles or coverings and can survive up to a year in the environment. Environmental factors that favor egg and larva survival are moderate temperatures, adequate moisture and shade. The most potent weapons to control internal parasites in horses are extreme temperatures, drying and sunlight.

Favorable environmental factors for parasite survival also stimulate the infective-stage larva to move up blades of grass to improve its chance of gaining access to a horse. Conditions are more favorable at dawn and dusk. Running horses on pasture during hot, sunlit days and removing them at dusk through dawn will decrease their exposure to larvae. Since it takes three days to a week for the infective-stage larva to form, removal of fresh horse manure from the stall or paddock every two days will decrease exposure to parasites.

Pinworms

Pinworm females crawl out of the anus and lay eggs that stick to the skin around the anal opening. These drop off in about three days. L_3 develops inside the egg shell and is eaten by the horse. Then, L_3 molts to the adult stages and passes through the large intestine and completes its life cycle. The activity of the female as it crawls in and out of the anal opening and the cementing substance that holds the eggs to the skin cause intense itching. The horse scratches itself by backing up to and rubbing its tail against a solid object like a fence post or barn. This causes an unkempt, ragged appearance to the tail. The horse may lose body condition because it spends more time scratching than eating.

Botflies

Three species of botflies affect the horse. Adults are non-feeding with no mouth parts. Adult females appear as a menacing insect as it lays eggs on the horse. It is the size of a honeybee with a curved tail. The common botfly (*Gastrophilus intestinalis*) deposits its eggs on the horse's shoulder, mane, front legs and sides. The throat botfly (*Gastrophilus nasalis*) lays eggs on hairs of the chin and bottom of the throat. The nose botfly (*Gastrophilus hemmorhoidalis*) lays eggs around the lips and nose. Eggs are yellowish in color, the size of a pinhead and attach to hair.

Warmth of the horse's tongue when it licks stimulates eggs of the common botfly to hatch. Larvae locate under the mucous membrane in the mouth for one month, come to the surface, are swallowed and go to the stomach. The other two types of botfly eggs hatch without any stimulus. They burrow through the skin to a position under the mucous membrane and then begin the life cycle similar to the common botfly. When the larvae enter the stomach, they attach themselves to the stomach lining and cause sores that can penetrate through the wall. This can cause a severe abdominal infection which could result in the

death of the horse. In eight to 11 months, the larvae pass from the horse, burrow one inch into the soil, pupate and return to the surface as adult flies between June and August.

Eggs of botflies can be removed by using a piece of door screen or a knife blade to scrape the eggs off the hairs. This should be done frequently to prevent eggs from hatching and larvae from infecting the horse.

Habronema

Habronema are stomach worms. Several species affect horses. Horses rarely have heavy infestations, however. Fly larvae eat L_1. As the fly develops from the larvae, L_1 develops into L_3. The horse eats infected dead flies in the feed and water. One Habronema species causes benign tumors in the stomach wall. Occasionally, infected flies release Habronema larvae into skin wounds such as saddle-cinch galls. These larvae do not become adults because they must be eaten. They cause intense itching and open, oozing sores called Jack-sores or summer sores.

Others

Lungworms, tapeworms, liver flukes and roundworms that reproduce with microfilaria (prelarval stages) also infect horses, but are rare and fairly innocuous.

Treatment and prevention of internal parasite problems

Many compounds are available to treat internal parasites. Some are powders fed with grain, others are pastes or gels to be squirted in the horse's mouth and some can be given through a stomach tube. These compounds have varying degrees of effectiveness against each of the internal parasites. A veterinarian should be consulted to develop a sound control program that will include the use of all forms.

In general, horses should be dewormed every two months; however, you should develop a parasite control program on the advice of your veterinarian. Horses should be dewormed before being placed on a new pasture or in a newly cleaned corral to prevent contamination of the new area with parasite eggs. Treatment for botfly larvae in the stomach should be delayed until at least one month after the first fly-killing frost of fall.

Removing manure from corrals can remove eggs and larvae and allows the ground to dry. Mowing tall pastures increases the amount of sunlight and allows the ground to dry. Sanitation plays an important role in prevention of parasitism.

External Parasites

Flies

A number of flies cause problems in horses. Not only do they irritate the horse but they transmit diseases.

Stable flies suck blood from horses and other animals. The female lays its eggs in manure, urine and straw. This fly can carry the internal parasite larvae of Habronema which cause summer sores. Cleaning destroys breeding sites.

House flies do not suck blood but can transmit many serious diseases including the Habronema larvae. This fly lays its eggs in manure and straw.

Face flies irritate the eyes. The fly is quite similar to the house fly.

The horse fly is a large, black fly. Its bite is painful and may leave a bleeding wound. The **deer fly** is smaller and lighter in color with dark bands across its wings. Both flies can transmit diseases to horses. Larvae form from eggs deposited in muddy, wet areas. They burrow into the mud and pupate for 10 to 11 months before emerging as adult flies.

Horse lice are uncommon but do occur. Two primary kinds of lice parasitize the horse. One is a chafing louse and the other a sucking louse. Both cause intense itching so that the horse rubs against solid objects and bites or gnaws at affected areas. As a result, large areas on the neck, shoulders, flanks, and hips lose hair and become red and inflamed. These symptoms are the worst in the winter and early spring when lice populations peak. Adult lice are about 1/10-inch long, chestnut brown in color and clearly visible. Their eggs (nits) appear as whitish, small structures attached to fine hairs on the horse's body.

Blow flies. Decaying and dead tissue attracts blow flies. They deposit eggs in infected wounds. Their eggs develop into fly larvae

called maggots. Keeping wounds clean and uninfected along with using fly repellents around these injuries will prevent blow-fly maggots.

Wohlfarthia flies deposit larvae on the skin which penetrate the skin forming abscess-like bumps containing the larvae. Maggots must be removed before the condition improves.

Mites

Three types of mites (mange or scabies) parasitize horses. They produce a condition similar to lice that cause large areas of skin to become bald, reddened and inflamed. Intense itching causes the horse to rub or scratch the infected areas and makes the injury to the skin worse. Mites are small (1/40 inch) and can't be seen without a microscope. Because they burrow into the skin, some skin layers must be scraped off to find mites. The tissue must be examined with a magnifying lens or a microscope to see mites.

Funguses

Funguses also parasitize the skin and produce a condition commonly called ringworm. It is not caused by a worm, but some of the sores caused by the funguses appear ring-shaped with reddened patches covered with scabs. A better name for fungal infections of the skin is dermatomycosis.

These sores can be small to fairly large. They are hairless and inflamed with crusts. The funguses can be highly contagious, not only to other horses but also to humans. Care should be taken when handling horses with this problem. The funguses can be transmitted on infected tack and brushes to uninfected areas and to different horses. During an outbreak, care must be taken to prevent this kind of spreading.

Table 7.1. Equine immunization programs.

Disease	Product	Procedure	Booster	Comments
Tetanus (Lockjaw)	Antitoxin (passive or temporary immunity).	15,000 units or more as indicated when no prior vaccination status is unknown.	Usually not done	Can be given in conjunction with tetanus toxoid.
	Toxoid.	Primary immunization-- 2 doses, 4 weeks apart.	Single dose annually	Often in combination with either encephalomyelitis or influenza vaccine products.
Equine Encephalomyelitis (Sleeping Sickness) Eastern Western Venezuelan	Numerous products available-- all are killed virus. Most often all species are combined.	Primary immunization-- 2 doses, intermuscular, 2-4 weeks apart.	Single dose annually	Greatest benefit obtained if vaccinated in spring before insect season.
Influenza (Flu) 2 virus strains	Numerous products available. All are killed virus, all have both viral strains present.	Primary immunization-- 2 doses, intermuscular, 2-4 weeks apart.	Every 2-12 months as indicated by situation	Variability in frequency of booster would relate to horse's potential exposure. Very common disease in the equine population.
Rhinopneumonitis (Equine Herpes virus, viral abortion)	Modified live virus. Killed virus.	Primary immunization-- 2 doses, intermuscular, 2-4 weeks apart with either product.	Every 2-12 months as indicated by situation	Virus produces several clinical situations including upper respiratory diseases, central nervous system disease, or abortions in mid- to late- pregnancy.
Streptococcus equi (Strangles)	Products available are either killed bacterin or specific protein from cell wall.	Primary immunization can be multiple doses at varying intervals depending on exact product used.	Every 3-12 months as indicated	Controversy as to effectiveness of various products. Generally used only in specific circumstances.
Rabies	Killed vaccine only approved for use in horses.	Primary immunization-- 2 doses, intermuscular, 2-4 weeks apart.	Annually	Indications for use are now common, especially in endemic regions.
Erlichia risticii (Potomac Horse Fever)	Single product available. Killed vaccine.	Primary immunization-- 2 doses, 3-4 weeks apart.	Singe dose annually	Try to have vaccinated one month prior to insect season.

Chapter 8-- Grooming and Care

Regular grooming will achieve several goals, including

* a clean, shiny coat and skin;
* stimulation for muscle tone;
* gentles most horses; and
* an opportunity to examine the horse closely.

Basic grooming tools include a rubber currycomb or rubber groom-mit, a coarse-bristle dandy brush, a fine-bristle body brush, a wool cloth or cotton towel rub rag, a hoof pick, electric shears, a coarse-toothed mane and tail comb, and a shedding blade, a stick or one with a hacksaw-type blade. The shedding blade, bent double with the two ends fastened, is a handy tool to use during the spring when the horse sheds its winter hair. It can be turned over and used as a sweat scraper in the summer. A sponge can be used to clean muddy legs and other dirty areas. Keep your tools clean. Remember how you use the tools, not their quality, determines the results. Metal currycombs of the spring- or bar-type are not recommended for the show horse because they pull and break the hair.

Allow extra time each day to groom your horse before you ride. If you follow a definite system, you will thoroughly clean the horse each time, and it will require less work. Be thorough. Start with the rubber currycomb or rubber groom-mit at the head and work back on the near side including the legs. Then go to the off side and work back. Don't neglect the head (be gentle here) and the area around the tail. Do not use a metal currycomb around the head or below the knees and hocks. There is no fat or muscle in these areas to cushion the comb's hard edges. Use a wet sponge or soft brush to remove dirt from the head, knees or hocks. You may use a rubber currycomb to carefully remove caked dirt from below the knees and hocks.

When brushing, start with the coarse-bristle dandy brush and brush in short, brisk strokes. Flick the bristle up at the end of each stroke so it will throw the dirt away from the hair. Brush with the lay of the hair. It changes direction at different points on the body so watch for these changes. Use the dandy brush on the body and legs but not the head.

Use the fine-bristle body brush on the head, body and legs. Again, brush in the direction the hair grows. Rub the horse from head to tail with the wool cloth or cotton towel rub rag to remove dust.

Many old-time grooms use their hands and fingers to rub and massage hair and muscles. When training a young foal, use your hands to rub, scratch and massage every part of its body. This is better than "babying" the foal, and the foal will like it much better.

Trimming and Clipping

Clippers and shears are additional tools used for grooming. Use clippers for cutting bridle paths and leg hair; to trim around head, ears and lower jaw; and to remove whiskers from the muzzle. Shears can be used in place of clippers for horses that are clipper-shy.

Mane and tail styles vary with breed preferences. Refer to Chapter 11--Showing at Halter, for an explanation.

Regardless of the styles, the foretop, mane and tail should be kept neat. Tangles in the mane and tail should be worked out with your fingers and brushed with a dandy brush. Use caution when using a comb. Over a period of time, a coarse-toothed comb or currycomb will pull out hair and leave it thin. Never try to pull tangles out; they just become tighter. Pick at them to loosen snarls. Watch for burrs and sticks caught in the mane and tail. Remove them carefully. When grooming the tail, always stand at the horse's side and never directly behind the rear of the horse.

The Feet

Proper cleaning of feet requires you to pick up each foot. Every foal should be taught to allow its feet to be picked up and handled. Begin when it is small so you can get it accustomed to the feel of your hands. If you trim the foal's feet as it grows, you should have no trouble when the horse becomes full grown.

Figures 8.1 through 8.4 show how to properly pick up your horse's feet.

Near Forefoot (Figure 8.1): Slide your left hand down the cannon to the fetlock. Lean with your left shoulder against the horse's shoulder. Reverse for picking up the off forefoot. When the horse shifts weight and relaxes on the foot, pick it up.

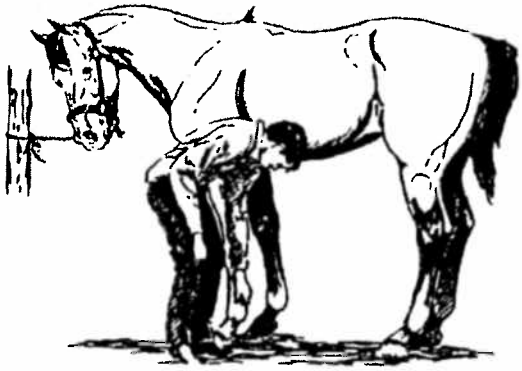


Figure 8.1. Picking up the near forefoot.

Figure 8.2. Picking up the the near hindfoot.

Near Hindfoot (Figure 8.2): Stand forward of the hindquarter and stroke with your right hand from the point of the hip down the hip and leg to the middle of the cannon. As you move the right hand down, place the left hand on the hip and press to force the horse's weight to the opposite leg. Grasp the back of the cannon just above the fetlock and lift the foot forward.

For a quick cleaning (Figure 8.3): Hold the hoof in your free hand. When shoeing or a long cleaning job, it will help to place the horse's foreleg between your legs. Hold your knees together to help support the weight of the horse's leg.

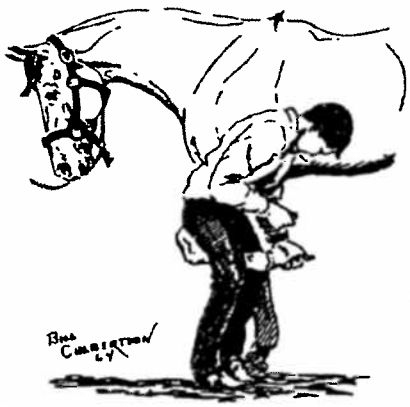


Figure 8.3. Holding foot for shoeing--left forefoot.

When the horse is settled, move to the rear, keeping the leg straight, and swing your left leg underneath the fetlock to help support the horse's leg (Figure 8.4). Never pull the foot to the side—your horse will resist. Reverse sides for picking up the off leg.

Clean the hoof from heel to toe. Pay particular attention to the area around the frog. Clean out the depressions thoroughly between the frog and the bars to prevent thrush and other foot infections. Watch for rocks, nails, injuries and loose shoes. Check the growth of the hoof periodically; trim and change shoes when necessary.

Proper hoof trimming is very important for it will keep your horse standing squarely and moving straight. Trim every six to eight weeks depending on the rate of growth. The hooves of young horses should be watched closely as they grow. Keep the feet trimmed regularly so the muscles and bones of the feet and legs will develop correctly. A healthy hoof grows about 3/8- to 1/2-inch a month. The fastest growth is at the toe of the hoof. Do not let the hooves grow long during winter months or when you are not using your horse and then expect the horseshoer to correct your horse's feet at first shoeing. Keep hooves trimmed. If your horse is idle during winter months, it should be left unshod so its hooves have a chance to expand without being limited by shoes. This will prevent contracted heels.

Figure 8.4. Holding foot for shoeing--near hindfoot.

Corrective trimming and shoeing is done on some horses in an effort to improve or to correct defects that result from inherited faults in conformation. The work should be done only by a person fully experienced in the structure of the foot and leg who has the knowledge of corrective measures. Ask your farrier for the size shoes your horse wears on the front and back and if he did any corrective work on your horse. If so, ask what correction was needed and exactly what was done to correct the problem. Learn the basic points of proper shoeing so you will know when your horse is shod correctly. A poor job of shoeing can cripple your horse for long periods. Know what is correct and insist the job be done right.

The hooves of a horse will dry out rapidly in the dry climate and soils of the west. Keep your horse's hooves moist. A dry hoof will become brittle and crack; the frog will lose its elasticity. If a hoof is left dry too long, the frog will shrink and the heel will contract. Hoof dressing may be applied. One of the best preventions is to have some moist ground, possibly around the watering facilities, where the horse will stand long enough for moisture to go into the hooves. However, do not keep the hooves too moist because thrush infections grow in wet, manure-packed feet. If your horse gets thrush, apply a commercial germicidal preparation or a 7-percent iodine solution to the frog area of the hoof.

Chapter 9-- Training

An untrained or improperly trained horse is a nuisance. The cute little tricks a foal learns will soon become bad habits and even dangerous when the foal grows up. Don't "baby" your horse, young or old. Be firm about what you want it to do. Use discipline when needed, but don't be harsh or cruel.

Training methods vary with the trainer and the individual horse. A good trainer knows many methods and when to use them. This takes experience. You never stop learning. Do not attempt to handle and train a foal or yearling until you are old enough, large enough and have the maturity and experience to properly manage all situations.

The secret is to get the horse to do what you want without fighting. The horse learns to do this by habit. Some learn faster than others, but in either case you, as trainer, must know what you want and ask for it in exactly the same way each time. Be patient, and remember one of your best aids is your voice. Talk to your horse with a soft, reassuring tone. Give it love pats when it has been good. Don't confuse your horse by asking too much too soon. Start out slow and be consistent with your training and commands.

Training can be separated into two parts, ground training for a young horse and saddle training.

Halter-breaking

Place a halter on the foal when it is a few days old. Halter-break a foal when it is still young. At this time, it should learn not to fight the halter and tie-rope. This is important since you will use a lead rope, tie-ropes and reins to control your horse for the rest of its life. It must respect the control this equipment gives. Use large diameter cotton rope (3/8- or 7/16-inch diameter) during early training. This rope is soft and will not give rope burns to your horse. The size is much easier to grip and hold.

Many trainers tie the haltered foal near its dam for short periods of time. Others halter-break by leading the foal separately when the dam is led. Still others will tie the foal to a stout fence or pole for a short time and let it learn to respect the halter and tie. To prevent injury to neck muscles, tie a non-slip loop tied around the foal's body immediately behind the withers and elbows with the end between the front legs. Tie end through the halter

ring and tie it to the post or wrap it around the post and back through the halter ring. When the foal pulls back, the pressure of the body loop will increase and the foal will stop.

This is not cruel as long as you watch the foal to ensure that it does not become entangled and injure itself. A good trainer will keep watch but will leave the foal alone to learn by itself. The foal must learn to respect the rope and halter if you want control and obedience later.

The foal should be taught to respond willingly to the lead rope. This is easier if it has learned to respect the halter. A good practice is to make a loop with your lariat and drop the loop over the rump of the foal (see Figure 9.1 below). The loop should lie just ahead of the point of the hip and drop back to the rump under the buttocks. The rest of the lariat is held so a slight pull will give pressure at the loop if the foal holds back. Never jerk or pull at the head if the foal balks. This will cause the foal to fight back harder. Take it easy, and pet the foal when it responds correctly.

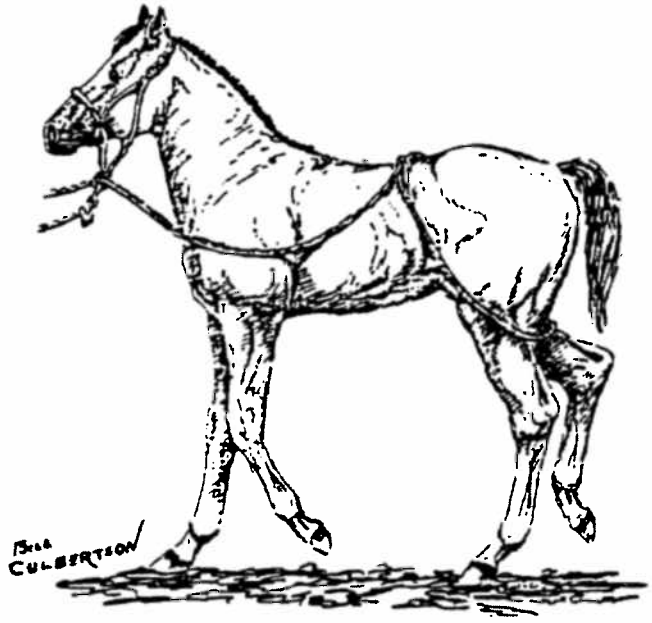


Figure 9.1. Loop lariat over foal's rump.

A foal or horse taught to lead properly will move with you in any direction and at any speed. It will keep its head about even with your shoulder, or slightly in front, so you are about halfway between its head and shoulder. The foal should not crowd you or stay far away. It should keep a moderate distance away from you and work on a loose lead line. When you wish to stop, apply a slight resistance on the lead rope by making your hand passive—do not pull back. Your foal should stop when it feels this resistance. When it stops, it should stand straight and quietly, again on a loose lead. These points are very important for correct halter showing.

Don't forget to praise your horse with your voice and give him a pat when he responds correctly to your training. Also you can teach your horse to

back up by using your voice along with pressure on the halter and pushing it's chest with your other hand. A step or two at first is good enough. Later on, you can ask for more steps.

Lunge Line (Ground Training)

Many trainers use a lunge line for both training and conditioning horses. You will find lunge line training useful, especially for early training of young horses and exercising older horses.

A lunge line may be a lariat or light nylon rope at least 25 feet long. Fasten one end to the halter. The rest of the lunge line is held in the hand. You stand in a small area and work the horse as it circles around you on the line. Walk forward in a small circle as your horse moves in a larger circle. Keep the lunge line loose, but not dangling—a tight lunge line can spoil a natural gait. Do not attempt to use small diameter ropes since they do not coil properly and tangle. This is dangerous.

It takes patience to teach a horse to circle. Up to this time, your horse was trained to walk by your shoulder. Start to train your horse to circle by teaching it to walk in a small circle around you. As the horse learns and responds, increase the size of the circle by increasing the amount of line you let out. A long, light whip may be used as an extension of your hand to make your horse move out, but never strike hard. The snap of the whip behind its fetlock or a touch of the whip or light flick on its hindquarters will give all the signal needed. Soon you will not need the whip.

Figure 9.2 shows your position to keep the horse moving around you in a circle. It is possible to train your horse to stop when you step forward from this position.

After your horse has learned to circle freely at a walk and stop when you step forward and say "whoa," you can begin training it to trot and canter slowly. Always circle both directions equally so your horse will develop muscles and skill to work in both directions of the circle. This is an excellent way for your horse to learn and use the correct leads at the canter and develop its natural balance and grace without the weight of a rider.

Do not work your horse at faster gaits in a small circle. This will cause it to develop a winging action of the feet and legs. Keep the circle large. A tight circle is hard on a young horse's joints.

Always use the same voice commands. Soon your horse will respond to these words.

Use a lunge line for regular exercise and training periods. Also, this is a good way to exercise your horse at a show. Both young and older horses should be trained to respond to the lunge line. In addition to lunging, you can ground drive your horse. This prepares a young horse for direct reining when put under saddle.

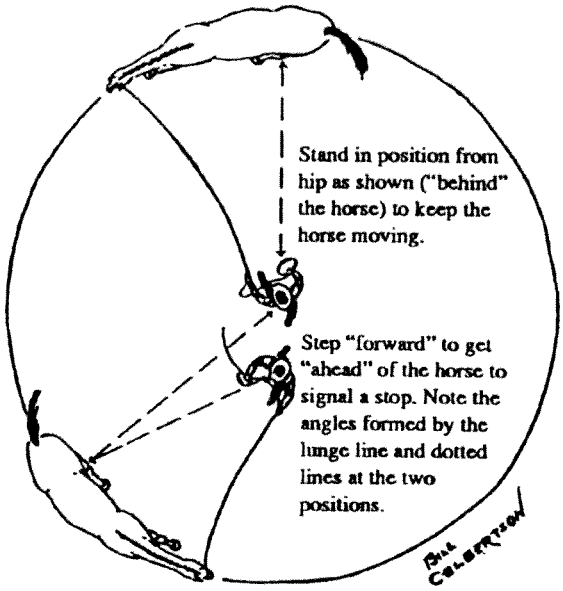


Figure 9.2. Lunge line or ground training.

Learn the fun of training and working your horse from the ground. You will experience a difference in the way your horse responds when you ride.

Breaking a horse to saddle is beyond the scope of this manual. Reference material about saddle breaking is available elsewhere.

Reining (Saddle Training)

Think of reins as another form of a lead rope. Try to get the same willing response from your horse as you get from your lead rope and halter. Correct reining is a must. A well-reined horse will turn so easily and quickly on a light neck rein that the rider will have the feeling the horse is ducking out from under the saddle. This is true neck reining. How to use reins to cue in training is explained more fully in Chapter 14--Basics: Western Horsemanship and Chapter 15--Basics: English Equitation. Reining as discussed here is to make you aware of good reining practices and encourage you to use these practices long before your horse is ready for more advanced training.

Neck reining is the western style of reining a horse. Much neck reining used today is not true neck reining. It is direct reining in the opposite direction the rider wants the horse to turn. True neck reining is accomplished by signaling the horse with the weight of the rein against the neck, not by the pull of the rein.

Most trainers use **direct reining**, also known as **plow reining**, when starting to train young horses under saddle. Some use a snaffle bit, while others use a bosal. Many use both at different stages. The purpose is to school the horse to give its head to the light signal of the reins. After the horse responds properly, the trainer begins to teach neck reining along with direct reining until the horse responds to the neck rein alone. You can use light neck rein and some direct rein in combination during this phase of training.

Before you begin schooling your horse to respond to reining, make your horse settle down. If your horse begins to charge when you take up the reins or shift your weight, you cannot train it properly. Gain control of your horse and settle it down before training. First, school it at a walk. Progress to a slow trot and finally to a slow, collected lope, but only after you get results. Forget speed.

Don't hesitate to use both hands on the reins. Remember you are schooling, not showing. After some practice and response from your horse, you will find you can go back to one hand and signal with your fingers. Some call this cheating but it is good schooling. The measure of success is how willingly your horse responds after you have schooled it.

Neck rein to turn but do not pull on the rein (see Figures 9.3 and 9.4). Lay the weight of the rein on the neck. With your other hand, give a light pull on the inside rein. Pull lightly with your fingers and then relax the rein. Pull lightly again, then relax.

Figure 9.3. Correct neck reining.

Continue pulling lightly and relaxing until the horse gives you its head. Don't worry about the full turn yet. You want to school your horse into giving its head to the direction of the turn. Work your horse in both directions until it responds to the weight of the neck rein. This is true neck reining.

As you work more with your horse, you will find your style of riding will change. You will be lighter in the saddle and more in balance with your

horse. You no longer will brace your body to get force to lift your horse around. You will shift your body to be in balance with your horse which will help the horse turn more smoothly.

Schooling takes time and patience. Your horse must be schooled when it is calm and under control. Don't try to rush things. If you do, you will find yourself right back where you started. As you ride around home or over the trail, use the reining discussed above to turn your horse around natural objects encountered in your path. Stay at a walk. This gives your horse a reason for turning, and it will learn to follow the shifting of your body naturally when you want to turn at other times.

Figure 9.4. Incorrect neck reining

Chapter 10-- Fitting and Training for Show

Competition when showing horses, either at halter or under saddle, is keen. If you intend to compete, you must plan to spend the time required to have your horse fitted and trained.

Proper fitting takes time. It requires a good worming program, proper feeding, balanced exercise schedule, grooming and the necessary training. You cannot fit a horse properly in a day, a week or a month.

Worming Program

The worming program should keep the horse free of internal parasites mentioned in Chapter 7--Your Horse's Health. If your horse has worms, it cannot make the best use of the feed you use.

Feeding Program

Plan a feeding program that will furnish all the required nutrients. Consider the size of the horse, its growth rate if young and the amount of exercise or use it gets. Feed to get a good covering of flesh but not an overly fat body condition. You must balance your feeding with exercise to keep the horse's body hard and its muscles in good tone.

Exercise

Exercise is necessary to build muscles and develop wind. Circumstances will dictate how you exercise the horse. It should receive some planned exercise daily. Training and exercising can be combined, but keep them in balance. Train for short periods. Plan to get the horse out on long, relaxed rides where it can walk and trot. Walking builds muscles; trotting builds muscles and develops wind; loping develops wind. If you ride for an hour, a conditioning guideline to follow is to walk the horse for 45 minutes at a good pace; trot for 10 minutes; and lope for 5 minutes.

Lunge the horse for 20 to 30 minutes on school days when your time may be short.

Grooming

Regular grooming is a must. The horse should be cleaned and brushed at least once a day. Brushing will stimulate the skin and bring out the natural hair oils that make the coat shine. A quick brushing when a horse is warm after working will help bring out body oils.

Wipe the entire body with a cloth after brushing. As you use the cloth, it will accumulate oil from the hair coat. This oil will help shine the hair. The cloth will pick up more dust from the hair. You may dampen the cloth and use it as a temporary substitute for a full bath.

Bathing

When you bathe your horse, use a mild soap and rinse thoroughly. Use only water on the horse's face—avoid using soap. After rinsing the horse's body, scrape the remaining water off with a sweat scraper. Then rub the horse dry with a clean towel. Keep the horse out of drafts until dry. The horse's coat may be fluffy and not lay flat after washing. If bathing can be done at least one day prior to a show and the horse kept clean until show time, the hair will lay flatter and smoother.

Cleanliness is very important, especially in showmanship classes. Clean the horse around eyes, nostrils, muzzle, under the tail and between its legs. The sheath on a gelding also should be clean.

A blanket or sheet placed on the horse overnight will help keep the coat clean. The decision to keep a blanket on your horse will depend on circumstances. If you plan to show early or late in the season, it is necessary to blanket the horse when a short-hair coat is desired during the winter months.

Clipping

Train the horse to allow you to use electric clippers to trim the long hairs on the muzzle, under the jaws, the ears, the bridle bath, and roach the mane, if this is preferred. Breed and show customs will influence what you clip, but the goal is to have the horse looking trim and neat.

Shoeing

Keep the horse's hooves trimmed and in a healthy condition. If the horse is shod, the shoes should be reset or replaced about every six to eight weeks. Replace worn shoes before a show.

The feet should be clean when you enter the show ring. A hoof dressing may be applied, but avoid those that leave a greasy appearance and attract dust. Use of artificial hoof coloring varies from breed to breed, so know your breed rules.

Compare the appearance of the two horses in Figure 10.1. The well-groomed horse is shown in the bottom illustration.

None of the tricks practiced in fitting a horse for showing replaces the need for good feeding, grooming, exercise and training. Be observant and learn new ideas as you watch others. Add these ideas to your fitting knowledge, and use those that appear to help. Don't be misled by fads or fancies.

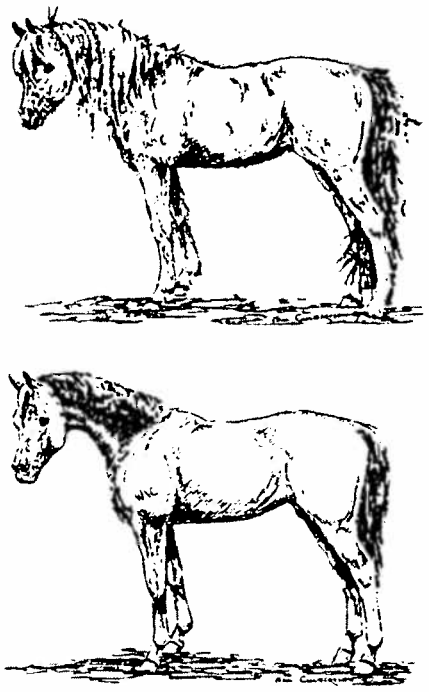


Figure 10.1. A well-groomed vs. a poorly-groomed horse.

Training

The training required depends upon how you plan to show. Training is explained more fully in other chapters. The important point is that training should be done as you are fitting your horse. All of these points go together long before show day.

Chapter 11-- Showing at Halter

Halter showing is an art. You, as an exhibitor, are in the arena to show your horse to the best advantage. Remember the judge wants to see your horse's conformation, soundness and natural action. Have pride in your horse and your ability to show it. Learn to show your horse in a manner that will bring out its natural grace and beauty as it stands or moves. Refer to the "Showmanship at Halter" class rules in the *Colorado 4-H Horse Rulebook* for details on showing at halter. Study the following points given on halter showing.

The Horse's Appearance

Have the horse in condition and properly trained for show day (see Figure 11.1). The hair coat should be smooth and glossy. The horse's skin should have a clean, healthy appearance. The horse should show hard, rippling muscles. Its actions should indicate alertness and vigor. Have the feet clean and trimmed. The mane and tail should be trimmed or combed, depending on breed preferences. Clipping and trimming should have a neat, clean appearance. Tack should be neat, clean, and in good repair and well fitted to the horse.

The Exhibitor's Appearance

Your equipment and personal dress should be neat, clean and well-fitted (see (Figure 11.1). Use equipment and clothing styles that compliment and do not detract from you and the horse.

In the Show Ring

Be on time when the class is called. If an individual pattern is used, the show management will normally post the pattern well in advance of the time the class is called. If no pattern is posted, enter the ring at the direction of the ring steward and watch the ring steward for instructions on where to go. Remember, even though the ring officials may be checking entries, the judge may be sizing up contestants as they come in, so stay awake.

When instructed to line up, enter the line from the rear in the position indicated. Line up evenly with the others and stand-up your horse. Stand your horse quickly, then watch the judge. Do not crowd the other horses.

Allow room between your horse and those on either side. When the class is lined up or leading head to tail, do not crowd the horse in front— you might get kicked.

Leave one horse length between your horse and the one ahead. Note how the poor exhibitor on the left in Figure 11.2 crowds the exhibitor on the right.

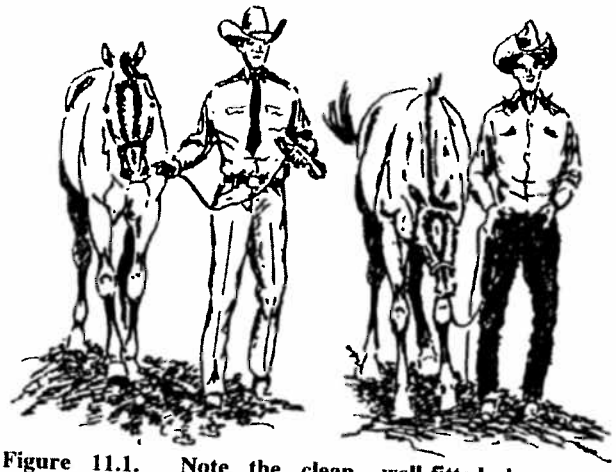


Figure 11.1. Note the clean, well-fitted horse and competitor on the left.

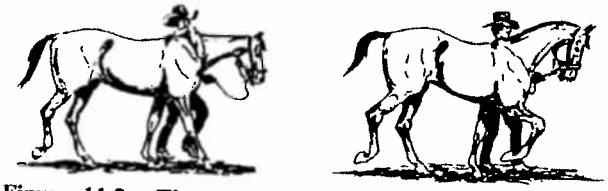


Figure 11.2. The poor exhibitor on the left crowds the exhibitor on the right.

Posing

The horse should set up quickly, stand squarely and move forward or backward freely. Pose the horse according to your breed standards. The horse is trained to pose by use of the lead strap and soft voice commands. A horse should be trained to pose and change positions from signals on the halter and soft voice commands. Kicking the horse's legs into position is prohibited. Occasionally, it may be necessary to touch its shoulder when training at home.

The horse should move backward and forward freely, executing a full step or just a slight shifting of weight. Always attempt to move the leg that is most out of position first.

To change a back leg, move the body accordingly, forward or backward, to shift weight and touch the opposite shoulder. To change a foreleg, turn the head to the opposite side and shift the body accordingly. Turning the head slightly forces the weight on the leg that is in position, freezing it in place and frees the other leg for easy movement.

You should train at home until the signals given are understood by the horse.

Note the safe zone areas in Figure 11.3. These are the safe areas for someone who handles a strange or unschooled horse. When using the safe areas, you are out of the direct line of a sudden lunge, a strike from the front legs or a kick from a back leg. Since a horse uses its head and neck to balance its body, the safe areas are the positions where maximum control can be exerted by pulling the horse's head to the side. This forces the horse off balance in hope of preventing further action if the horse becomes unruly.

Halter showing and showmanship customs today, especially in showmanship classes, encourage the exhibitor to move to either side of the horse. This is safe only if the horse is properly trained before entering the show ring. A horse acts independently on each side; therefore, you must train it to lead, stand and show from each side. Always handle a strange or untrained horse from the near (left) side since the majority of horses are started and handled from this side.

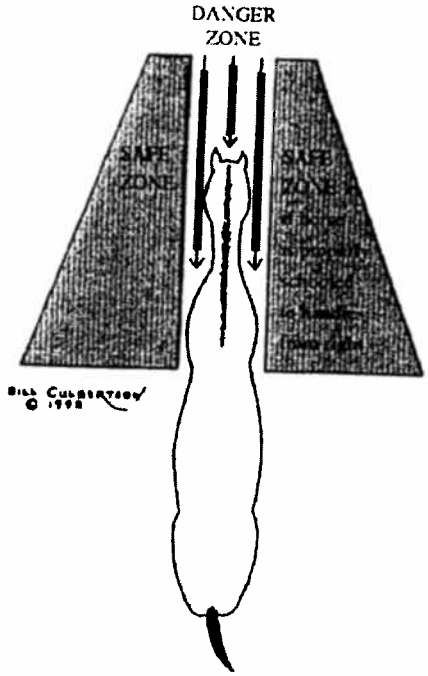


Figure 11.3. Safe zones for showing a horse.

The shaded areas in Figure 11.3 indicate the safe areas for showing a horse from either side. Note the danger zone directly in front of the horse. Learn to stand toward the front, not in the danger zone and out of the direct line of action of a strike or lunge. It is permissible to cross the danger zone to get from one side of your horse to the other. Remaining in the danger zone is considered a fault. Use positions within the safe zones where both the horse and the judge can be observed.

The Quarter System

The quarter system of showmanship has become accepted for showing in 4-H and some breed-association classes. With this method, the position of the exhibitor depends on the quarter the judge is in.

The four quarters can be visualized by an imaginary line drawn down the center of the body extending from front and rear to divide the horse into left and right sides. Another line drawn across the horse at the base of the withers, extending out from both sides at right angles to the first line, divides the horse front and rear. This is shown by the dotted lines in Figures 11.4 to 11.7. Visualize the judge moving in a clockwise direction around the horse or around the class of horses as you move from Figure 11.7 through Figure 11.7.

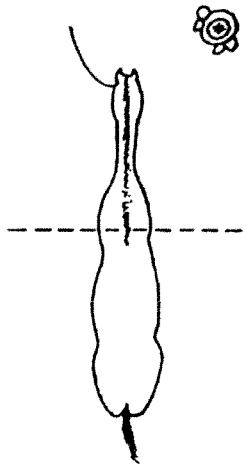


Figure 11.4. Quarter system--first position.

First, the exhibitor is in the basic position--safe zone at horse's left--and the judge at the horse's right front or in the right front quarter (Figure 11.4).

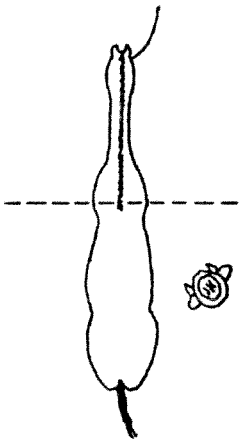


Figure 11.5. Quarter system--second position.

Second, as the judge moves across the imaginary line to the right rear quarter, the exhibitor steps across to the horse's right side (Figure 11.5).

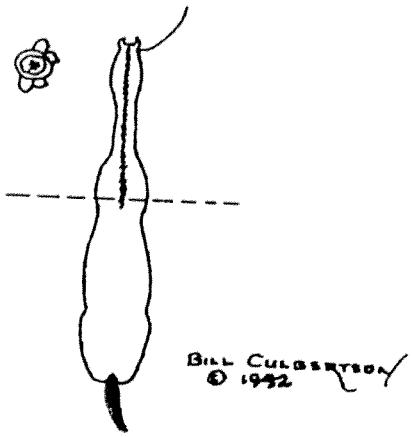


Figure 11.7. Quarter system--fourth position.

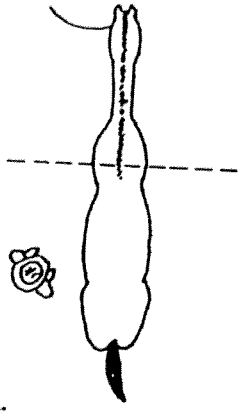


Figure 11.6. Quarter system--third position.

Third, the judge moves into the left rear quarter, and the exhibitor steps back to the left to be on the same side as the judge (Figure 11.6).

Fourth, as the judge moves to the left front, the exhibitor steps back to the right to avoid blocking the judge's view (Figure 11.7).

Note that the exhibitor is always in a position to watch both the judge and the horse and never blocks the judge's view of the horse. The only exception is when the judge passes across the line in front of the horse, and the exhibitor must step between the judge and horse to take the position on the opposite side. The judge may stop directly in front of the horse. The exhibitor should not switch sides until the judge has viewed the front of the horse and moved on. Avoid blocking the judge's view beyond the moment required to step quickly and quietly to the other side. Remember when the judge is at the front of the horse, the exhibitor is on the opposite side. When the judge is at the rear of the horse, the exhibitor is on the same side as the judge.

Showing From the Left Side

It is acceptable to show a horse from the left side only, even though the quarter system is most generally accepted. In the "one-sided" method, the exhibitor remains in the safe zone on the near side. The exhibitor takes a position toward the middle of the safe zone, facing slightly toward the front at about a 45 degree angle from the horse when the judge is at the front of the class. When the judge is at the rear of the class, the exhibitor

should step toward the front of the safe zone, facing at about a 45 degree angle to the rear.

Leading

Lead from the left side of the horse with the lead shank held in your right hand about 8 to 12 inches from the halter. Smaller exhibitors may need a longer hold. Light control of the horse with a minimum of pressure on the lead shank allows the horse to hold its head naturally. A loose, flopping lead strap is objectionable. Hold excess strap loosely in the left hand in a figure-eight or use a large circular coil for safety. The horse should move readily and freely at a walk or trot with a minimum of urging. You should stay in position by the near side of the horse's neck, preferably halfway between the horse's head and shoulder. A well-trained horse will move readily at a speed of gait equal to the speed you are moving.

Showmanship Patterns

Three patterns of moving are acceptable for showing your horse. Show management should designate the pattern to be used in consideration of show ring space and judge's preference. The basic points of proper handling apply for all three patterns given in the following examples.

Suggested Pattern #1

Class remains in line with horses facing the judge. Each exhibitor leads the horse at a walk to the judge upon a signal, halts a horse-length away, turns to right upon judge's signal, trots away from judge to the line, walks through the line, turns to the right and re-enters the line quietly. This pattern may be run in reverse by trotting to the judge and returning to the line at a walk.

The judge then moves to a position opposite the next horse in line and indicates to the exhibitor when to begin. This is repeated to the end of the line.

Suggested Pattern #2

The class is lined up head-to-tail at one side of the arena or outside the entry gate. Each horse is led to a point indicated by the ring steward. This point should be in a straight line to the position assumed by the judge. The horse should be set up for inspection by the judge unless

otherwise directed. The exhibitor should use care to travel in a straight line toward and beyond the judge so the horse's action will be balanced and true. The exhibitor then turns and assumes a place at the end of the class line. The judge may call for the exhibitor to set the horse up between the walk and the trot.

Suggested Pattern #3

Lead the horse to the line indicated. Stop a horse-length away from the person at the end of the line and face in the direction you are to go. Hesitate just long enough to set up the horse squarely, or according to breed standards, on the line, ready to walk out in a balanced, true way of going.

Walk the horse in a straight line to the person standing at the other end. Move in a brisk, alert manner and allow enough slack in the lead rope for the horse's head to move freely. Stay on one side and don't block the judge's view of the horse's feet.

When you reach the end of the line, stop a horse-length away from the person at this end. Wait for a signal to turn and go back. Be ready to stand up your horse if this is where the judge stands, for the judge may wish to examine the horse.

At the signal to turn and trot back, always turn to the right. This will cause the horse to pivot in a collected, safe manner. Hold your right arm straight, grip the lead strap close to the halter and begin walking to the right around the horse. This will force the horse to turn its head and then its body within the circle with you circling around the horse. Holding the horse back slightly will force it to pivot on its hind legs. A proper turn will result in the horse standing squarely in its own tracks facing in the same direction.

It may be necessary to make the horse take a step back halfway through the turn if it does not pivot correctly on its hind feet. As the horse completes the turn, it will step forward and be in line. This is called the "Y" turn.

When completed, the horse faces the starting point. Hesitate just long enough to allow the horse to gain its balance and be ready to move out. Don't stop and pose the horse. It should be trained to assume a square, balanced position immediately.

Chapter 12-- Equipment (Tack)

Good usable equipment is basic. Equipment needs to be well made and fit both you and your horse. Fancy equipment usually is a fad and not necessary for your 4-H project.

Western

For 4-H, your riding gear should consist of a saddle, saddle pad or blanket, bridle with a good bit, halter, and lead rope. Other equipment such as a slicker, chaps or lariat will depend on the type of riding you do. Spurs are optional in most show classes. If you use spurs, they should be used as aids and not as punishment or force.

Bridle

The headstall and bit are two very important pieces of equipment that need more attention. The headstall should be of strong leather and narrow in width to cut down on weight. The bit should be as light and as mild as necessary to maintain control of your horse. Too often severe bits are used as a substitute for good training. Do everything possible to keep your horse's mouth soft and responsive.

The **bit** is one of the many controls used on a horse. The three main western bits are snaffle, curb and spade (see Figure 12.1). The bit should fit the horse's mouth and be properly adjusted. When it fits in the mouth, it should create small wrinkles in the corners of the mouth.

Curb straps made of leather are necessary on all curb bits. Some have a flat chain that must be at least 1/2-inch wide. Adjust them so you can place two fingers between the horse's chin and curb strap or curb chain.

Figure 12.1 illustrates three main styles of bits: snaffle, curb and spade. The variations in the cheekpieces and mouthpieces allow for many combinations.

Headstalls come in various styles as shown in Figure 12.2. The hackamore is a headstall with a rawhide bosal. This is an excellent

training tool which eliminates pulling on the mouth of the horse being trained.

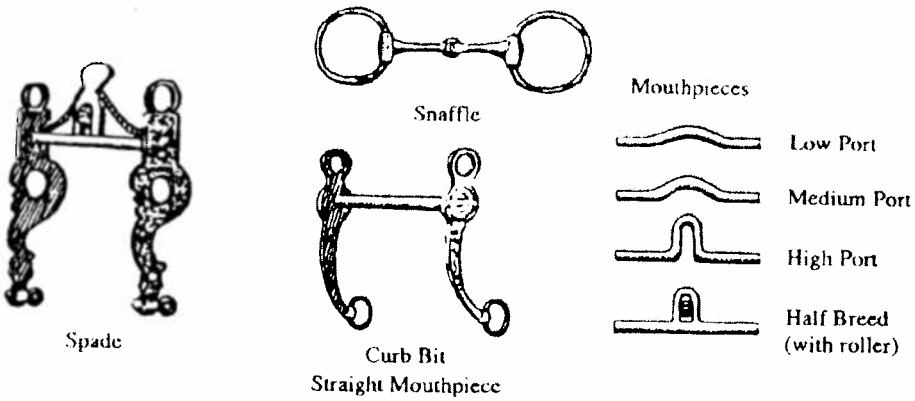


Figure 12.1. Snaffle, curb and spade bits.

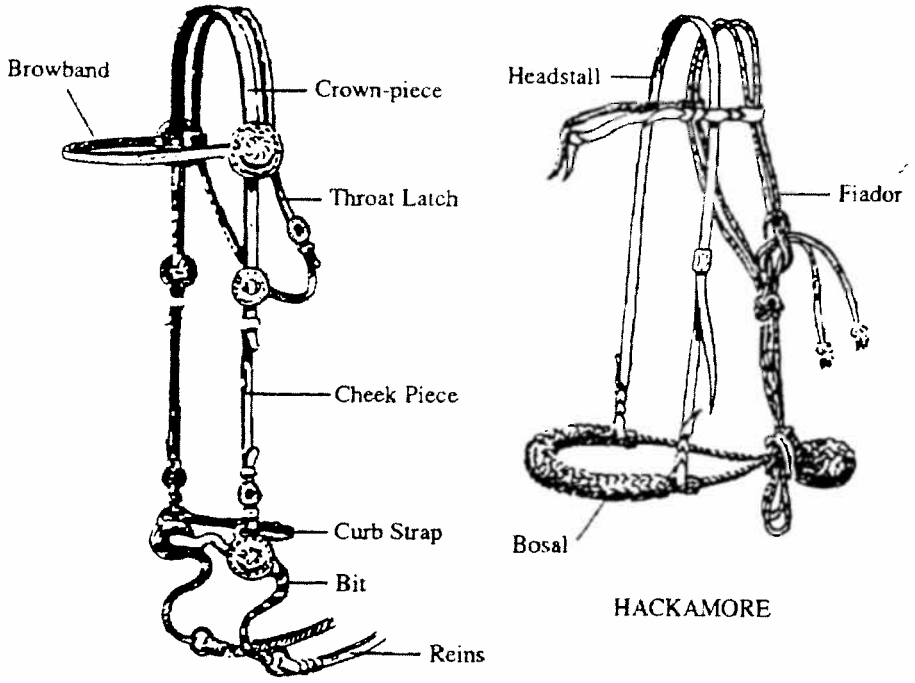


Figure 12.2. Two types of headstalls.

Saddles

The western saddle was developed for working cattle and riding long distances. It has a horn, cinch strap, wide-stirrup leathers called fenders and a rear cinch billet that attaches to the flank girth. Leather-tooled designs often decorate western saddles. The horn is used to wrap the rope or lariat when roping cattle. Wide fenders protect the rider's legs.

The flank girth keeps the saddle in place when roping and working cattle. A western saddle is heavy and requires thick saddle pads.

Saddles that receive proper care will last a lifetime. Always keep them clean and well-oiled. Replace worn or broken parts. Clean leather saddles with saddle soap. Use neatsfoot oil to make the leather soft and pliable.

Always use a clean and dry saddle pad on your horse. There should be enough pad thickness to keep the gullet of the saddle off the withers. You should be able to place your fingers between the withers and the saddle at the gullet.

Store your equipment properly. Keep it out of the dirt and weather. Build a saddle rack to store saddles. This will help your saddle keep its shape.

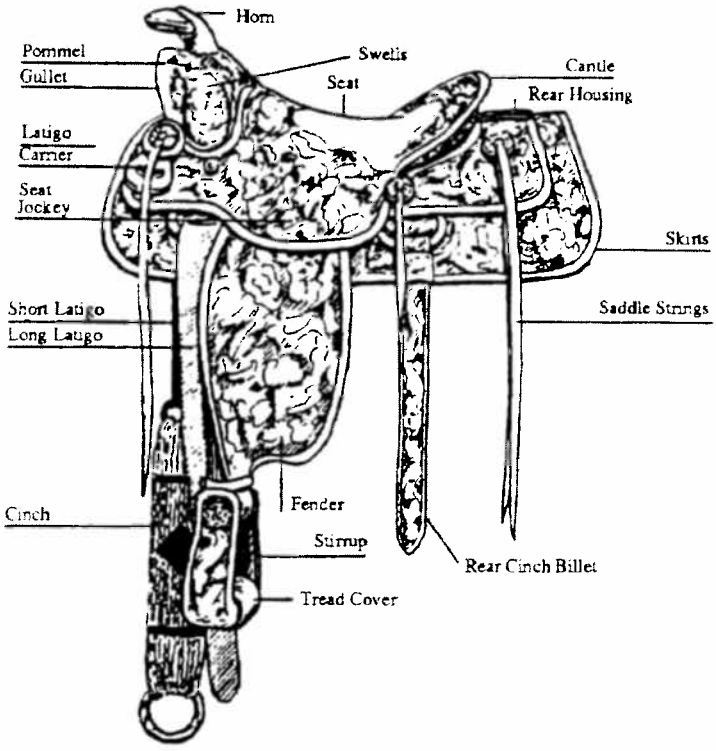


Figure 12.3. Western saddle.

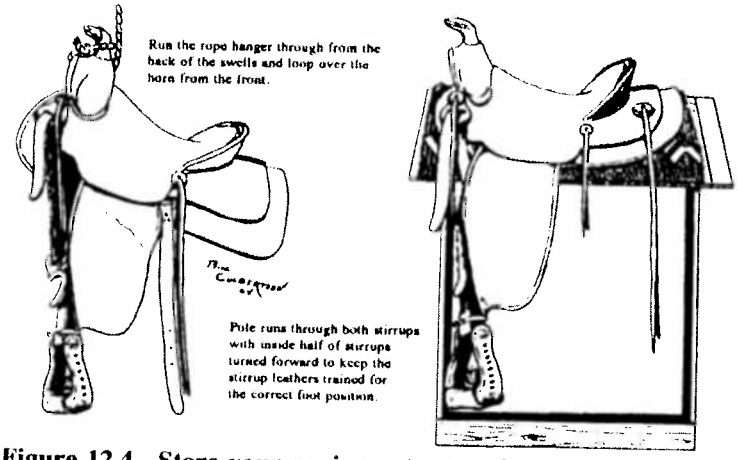


Figure 12.4. Store your equipment properly.

English

The English styles of riding are hunt seat, dressage and saddle seat.

Hunt or Dressage Seat

Regulations require snaffles, pelhams and full bridles, all with cavesson nose bands. Martingales, either running or standing, are permitted in classes over fences and in classes that require both jumping and hacking. Martingales are not allowed in under saddle classes. The bit should fit with 1/4-inch space on each side of horse's mouth.

The **snaffle bridle** is used for hunt seat, 4-H programmed riding or dressage, and often for training western and saddle seat horses. The bridle is made of plain leather (raised or flat) with a browband, cavesson, throat latch and a single rein. A dropped noseband, a training device, fits below the snaffle bit and serves to keep the horse's mouth closed.

The **pelham bridle** uses a curb bit or pelham bit. This bridle differs from the snaffle in that it has two reins attached to the curb bit. The bit also has a curb chain. When the top rein or snaffle is pulled, pressure is placed on the corners of the horse's mouth. The curb or lower rein causes the bit to pivot in the mouth and, at the same time, puts pressure on the chin groove. The pelham should **not** wrinkle the corners of the mouth.

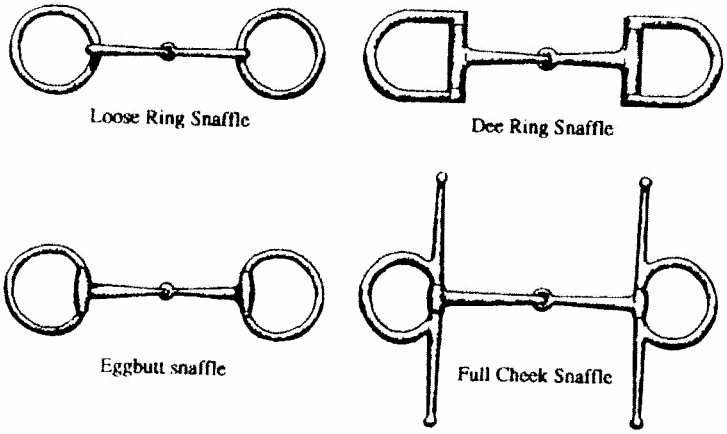


Figure 12.5. Snaffle bits.

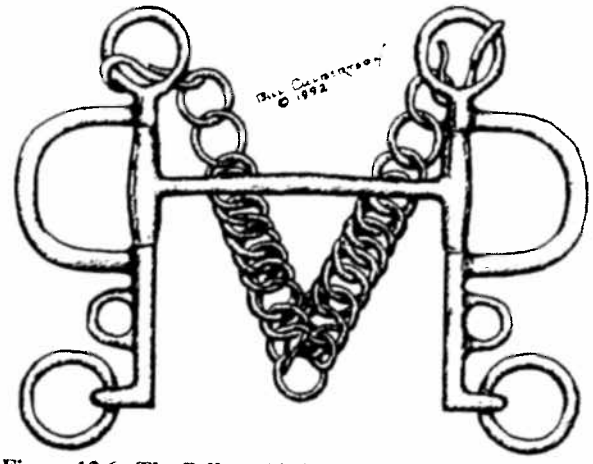


Figure 12.6. The Pelham bit functions similarly to a curb bit.

The **Full Bridle** or **Weymouth** has two bits (a snaffle and a curb), two reins, two cheek pieces and a curb chain. The curb bit pivots in the horse's mouth as the curb rein is pulled. This tightens the curb chain on the chin groove of the horse. The curb should fit just below the corners of the horse's mouth without pinching. The snaffle puts pressure on the corners of the mouth. It should rest just above the curb on the corners of the mouth. The curb chain must be twisted flat and rest under the snaffle and behind the curb. The curb chain should be loose at rest and tighten when the curb rein is pulled. There is a lip strap attached to the curb bit and the chain. The lip strap keeps the curb chain in place.

The browband of the bridle keeps the headstall in place and should not pinch the ears. The cavesson keeps the horse's mouth from opening too wide. It fits between the cheek pieces and the horse's cheek. The

cavesson should be adjusted to fit so that it is not too tight or too loose. The throat latch adjustment should allow two to three fingers between it and the throat of the horse to permit the horse to flex its neck.

Saddle Seat

Full bridles are required in saddle seat. Martingales are not allowed. A flat English-type saddle is required.

English Saddles

The English saddle is made in many styles. It differs from the western saddle in that it has no horn. The girth is attached to two or three billet straps which are under the flaps. It has metal stirrups and is lightweight. The flaps protect the rider from the horse's sweat. Some saddles have knee rolls to help riders keep their legs in place. The skirt of the saddle protects the thighs of the rider from the stirrup bars and buckles.

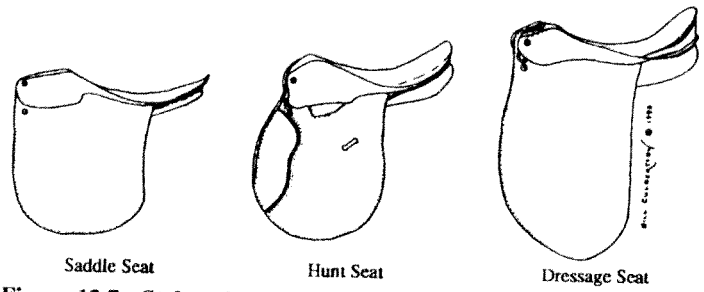


Figure 12.7. Styles of English saddle.

When you purchase a new saddle, whether English or western, pay attention to the seat and its fit. The length and depth must be suitable to the rider for a proper seat. A good rider cannot look good if the saddle does not fit properly. The saddle also must fit the horse properly.

Knots

Use of the proper knots is important for both the safety and appearance of your gear. Knot tying and braiding is fun to learn, does not take long and makes your equipment look neater.

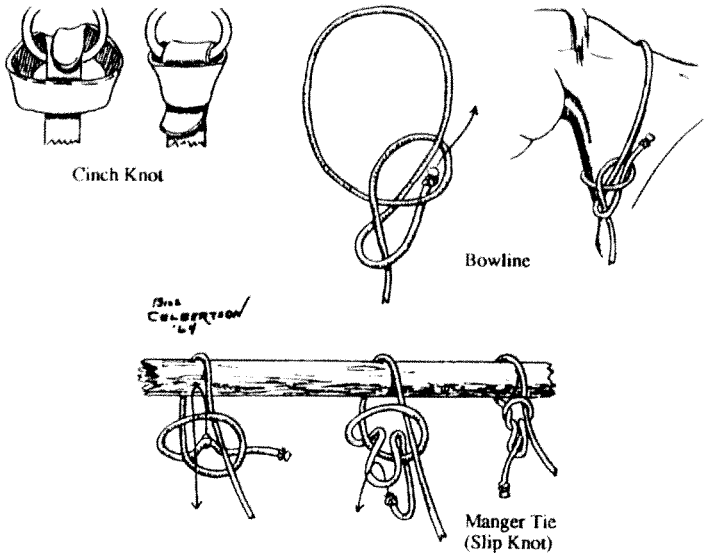


Figure 12.8. The illustrations show how to tie and use simple knots.

Chapter 13-- Saddling and Bridling

Develop good habits when saddling and bridling your horse. Be firm but gentle when you work around its head.

When you catch your horse, it is best to use a halter rather than a bridle. To let the horse know of your presence, speak softly to him and gently touch the horse on the shoulder. Always approach from the left side and slip the lead rope around the horse's neck. This gives you control of the horse until you have the halter in place. As soon as you catch the horse and have its halter securely in place, be sure to give the horse a small reward—a pat on the neck or some rubbing will do.

Tie the horse and give it a thorough grooming before you saddle and bridle it. Check its feet. Be certain that the body areas covered by the saddle, cinches or girths are clean.

Many people leave the horse tied while they saddle. It is preferable to untie the horse and have someone hold it by the lead shank while you saddle it. This gives you actual control of the horse.

If the horse is tied and you move from side to side, you should walk behind the horse at a safe distance. **Never cross under the lead rope between the tied horse and fence or post.** If you get into the habit of untying the horse and holding the lead rope as you saddle, it is a simple and safe matter to get a short, light hold of the head as you cross back and forth.

You are ready to saddle up. Lay the saddle blanket or pad on the horse's back. Be sure it is even on each side. Always lay the blanket or pad several inches forward and slide it to the rear. This makes the hair under the blanket or pad lie smooth. Remove all wrinkles.

Tacking Up the Western Saddle

Fold the off stirrup, cinches and saddle strings over the seat of the saddle. If the stirrup leathers are short, hook the stirrup tread over the horn. Slip your right hand into the hole formed by the fork in front of the seat and lift the saddle over the horse's back. Lift just enough to clear the withers and hold the saddle steady at the top of the lift so it will settle easily on the horse's back. You can steady the saddle at the top of the lift by placing your left hand on the edge of the front skirt. Smaller riders will find it

necessary to use both hands and hold the saddle under the gullet with the left hand while grasping the rear skirts or cantle with the right hand. Many western riders have the habit of swinging the saddle up with the off stirrup and cinches flying. Stirrups are heavy and cinch rings are hard. Watch how horses flinch to absorb these hard knocks when stirrups hit. Do not get into this habit. Instead, lift the saddle and settle it on the horse's back.

Next ease the off stirrup and cinches from the seat or go to the off-side to let them down. In either case, you must move to the off-side to check the stirrup, cinches, saddle strings and blanket to ensure they are straight.

Return to the near side. Check the position of the saddle, raise the blanket edge where it lays over the withers to allow air space, swing the near stirrup over the seat and cinch up.

Several safety precautions should be followed when cinching. As you reach for the front cinch, stay in a position so you can watch both ends of your horse. Fasten the front cinch first. Pull it up smoothly and slowly—do not jerk it tight. Fasten it snugly but not tight. Then fasten the rear. Finally, fasten the buckle and breast collar or martingale straps. Remember on double-rigged saddles: saddle front cinch first, then back cinch; unsaddle back cinch first, then front cinch.

Tighten the front cinch just enough to allow your hand, with the fingers held flat, between the horse's body and the cinch. The rear cinch should be loose but not dangling so low your horse can catch a foot in it.

Tacking Up the English Saddle

Lift the saddle up and over onto the horse's back. Attach girth to the off side billet straps. Slide girth through the martingale loop (if you use one) and pull girth up and attach to near side billet straps. Do not pull up tight! Recheck the girth after you walk your horse to the mounting area. Pull stirrups down just before you mount. Always put stirrups up after dismounting.

Bridling

When bridling a horse with a western bridle, fasten the crownpiece of the halter around the neck or loop the bridle reins over the neck so you will have something to hold if the horse jerks back. Loop the reins over the

neck to keep them off the ground and possibly from being stepped on by the horse. Follow the steps shown in figure 38.

When you bridle for English riding, put the reins over the horse's head onto the neck. Place the headstall or crownpiece in right hand. Continue as shown in Figure 13.1.

Figure 13.1. Be safe when bridling the horse.

In Figure 13.1, note how the rider stands close to the horse's neck just back of its head. This position is safe since the horse cannot throw its head and hit your face. The right arm held over the neck and poll will help keep the head down and may be dropped around the neck if necessary to help hold the horse. Work firmly but gently. With the right hand, pull the headstall up so the mouthpiece of the bit is pressing against the teeth. Use your left hand to guide the bit between its lips. When the jaw relaxes and the mouth opens slightly, pull up with the right hand. The bit will slide smoothly between the teeth. If the horse is stubborn about opening its mouth, press the lip against the jaw bone with your left thumb at the gap between the incisors and the the molars. Do not jerk or pry at the mouth with the bit. Move your left hand to hold the crownpiece of the headstall above and in front of the horse's ears. Be gentle as you bring the headstall over its ears. Use your right hand to protect and guide the ears under the crownpiece. Use caution when bridling strange horses since some are extremely shy about their ears and will resist by slinging their head. Be sure to know the horse.

After one more step, you are ready to ride. Lead your horse for a few steps. Then check your front cinch or girth again. You will be able to tighten it several notches. Check the front cinch or girth again after riding a short distance.

When your ride is over and you are ready to unbridle, be certain to fasten the halter around the horse's neck first. Remove the bridle, halter the horse and hold the lead rope as you unsaddle.

The proper way to remove the bridle is to slide the crownpiece forward over the ears with your left hand. When free of the ears, hold the headstall loosely just long enough for the horse to "spit out" the bit. You will feel this happen. Then lower the headstall to allow the bit and curb strap to fall freely from the mouth and chin. Continue holding the horse and rub its head and poll where the headstall rested. Your horse will soon learn to expect this rubbing and will wait patiently instead of trying to break away.

When unsaddling, always lift the saddle slightly before pulling it off. This loosens the grip of the sweaty leather and blanket on the horse's hide.

Chapter 14-- Basics: Western Horsemanship

Horsemanship or equitation is the art of riding in a manner that makes it appear as if it is the easiest thing in the world to do. This can only be achieved when you and your horse work together as a happy, relaxed team. To get to this point takes time and patience.

The following suggestions will help you become a better rider. This basic information can be applied to every type of riding with slight modification.

Mounting

There are two positions considered proper for mounting. In the first position as shown in Figure 14.1, the rider stands by the horse's left shoulder with the rider's body facing a quarter turn to the rear of the horse. The rider's head is turned so both ends of the horse can be watched. This is the safest position to use when you mount green-broke horses or horses unfamiliar to you.

It also is easier to place your left foot into the stirrup from this position. Use care to prevent the toe of your boot from raking the horse along its side as you swing up. Brace your knee against the horse for support to keep your foot away from the side.

When you use this position, take one hop on the right leg and go into the second position briefly as you swing into the saddle.

The second position as shown in Figure 14.2 is used when you are tall enough to stand and place your left foot in the stirrup without moving back to the rear of the horse. You should face squarely across the seat of the saddle. Turn your left foot so the toe of your boot is pointed forward or into the cinch.

In both positions, hold the reins in your left hand with the left rein slightly shorter so that it gives enough tension to steady your horse. Place your left hand on the neck just in front of your horse's withers. Steady the stirrup with your right hand until your left foot is in the stirrup. Then place your right hand on the saddle horn and your left knee against the horse. Swing up and into the saddle with a spring by pushing with your right leg. Your body will be balanced by the triangular base of support formed by your hands and knee.

Figure 14.1.

First position. Use this method to mount green-broke or horses unfamiliar to you.

Figure 14.2.

Second position. Use this method when you are tall enough to place your left foot in the stirrup without moving back to the rear of the horse.

Spring hard enough with your right leg to carry you up and over the saddle with a minimum of weight on the left stirrup. Lower yourself smoothly and lightly into the seat of the saddle. Learn through practice not to swing too high and plop your seat into the saddle.

If you consistently pull the saddle to the side, you are not springing up hard enough. With practice, you will mount in a smooth, easy motion--faster than these instructions can be read.

Dismounting

When you dismount, use the same hand position. Take the slack out of the reins to steady the horse. While holding the reins, place your left hand on the neck of the horse, grasp the saddle horn with your right hand, loosen your left foot in the stirrup, shift your body weight slightly to your left leg and keep your left knee in close to the horse. Your right foot should be free of the stirrup.

Swing out of the saddle and keep your right leg as close to the horse as possible without hitting the cantle of the saddle or the horse's rump. Do not swing your right leg in a wide arc. Keep it close to the near side of the horse so you will face slightly forward when your right foot touches the ground.

Push down on your left heel to allow your foot to slip out of the stirrup. Do not roll your left foot on its side to slip it out of the stirrup.

The Seat Position

Position in the saddle is very important for correct use of aids and to maintain balance and rhythm for ease of riding.

Sit "tall in the saddle" in a balanced, relaxed manner. Keep your back erect and flex with the horse. Do not slump in the saddle and never sit back on the cantle with your feet shoved forward. You will find it necessary to change your seat slightly for different types of riding, but the basic principles remain the same. You should sit where the horse can be controlled with aids in a comfortable riding position. Keep your body weight where it will help rather than hinder your horse's movements.

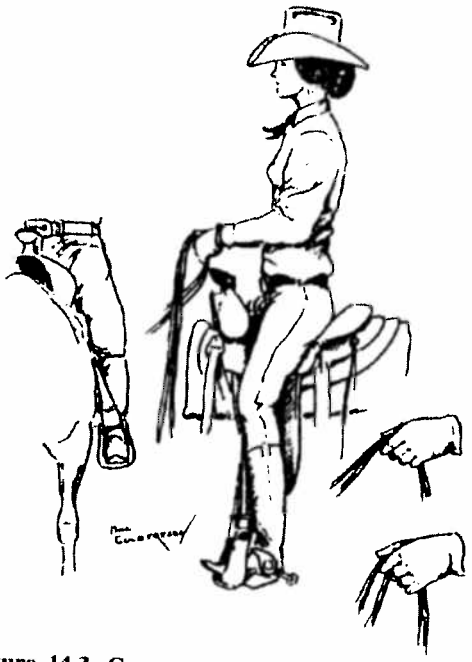


Figure 14.3. Correct seat position is necessary for control and comfortable riding.

Study Figure 14.3. Note how the rider sits erect and securely in the saddle. The rider's seat is deep in the seat of the saddle and not on the cantle. The point of contact is the rider's crotch and not the fleshy part of the buttocks. Light contact with the horse's body is maintained through the rider's inside thigh and upper calf. The rider's feet are turned out slightly at a natural angle with the weight on the balls of the feet and the heels lower than the toes.

You should train the stirrup leathers on your saddle to turn at right angles to the horse's body to prevent pressure on your feet and help you hold your stirrups more securely. When you store your saddle, twist the stirrups inward and insert a broomstick in both stirrups.

As the rider sits in the saddle, the rider's legs are under the rider to form a straight vertical line through ear, center of shoulder, center of hip and back of heel. Stirrup length should allow heels to be lower than toes with knees bent slightly and toes directly under the knees. The body should always appear comfortable, relaxed and flexible. The back should be nearly flat. Feet may be placed home in the stirrup with the balls of the feet in the stirrup.

Your body position will change slightly when riding different gaits. Remember not to overexaggerate the degree of change. Learn to flex your

body and stay supple, poised and balanced in rhythm with your horse's motion.

The Aids

Your voice, hands, legs and weight are the basic natural aids used in controlling your horse. Your horse must be trained to respond to them. All aids must be applied in a very definite manner in the early stages of training. As you progress, you will find your horse will respond to very light applications of the aids until they become undetectable.

The following discussion of specific aids for the different movements indicate how different aids affect your horse.

Voice

Your voice is a very important aid when working your horse. Certain words such as "whoa," "easy" and "back" are readily understood by a horse. Many show horses have learned the words "walk," "trot," "lope" or "canter" from hearing them when being lunged or when used repeatedly in the show ring. Some riders do not use complete words but develop voice sounds such as "hup" to mean something to their horses. Many show ring judges do not like to hear voice commands, so use them very softly when showing or try to get response without using them in the show arena.

Be consistent. Use the same word or cue each time. Repeat it often. This is the secret for your horse to learn what you mean.

Your tone of voice means as much to your horse as actual words. It indicates irritation, displeasure or pleasure. Learn to always use a low, soft voice when working around your horse. Screaming and yelling will only frighten it.

Hands

Your hands control the forehand (forequarter) of your horse directly by use of the reins. In advanced riding, your actions on the reins will have an indirect influence on the hindquarters.

Hold your hands and arms in a relaxed manner with the shoulders back and down and the upper arm in a straight line with the body. The

forearm forms a straight line from the elbow to the horse's mouth as you hold the reins. Some movement of the arm is permissible, but excessive movement will be penalized by a judge. Carry the reins immediately above or slightly in front of the saddle horn.

Good hands are steady, light, soft and firm in their actions. You can achieve this only if your body is in balance and rhythm with your horse.

As you begin reining and rein cues, remember the importance of holding your arms, elbows, wrists, hands and fingers in a relaxed, flexible manner. Hold your reins with a small amount of slack to relieve pressure on the bit and still allow you to keep light contact with the horse's mouth. The degree of contact should be just enough to keep your horse working "up into the bit."

Learn to use a flexing motion as you signal or cue with your reins--a give and take action. This can be done by a simple opening and closing of your fingers if you have the correct degree of contact with your horse's mouth. It is especially important to learn to use both hands on the reins when schooling or polishing the performance of your horse. The proper use of two hands is the mark of a good equestrian who uses them to guide and set the horse until it learns to respond to cues and handle itself correctly. As your horse responds, you may gradually switch to the use of a single hand on the reins. But remember, at any time outside the show ring when you think your horse isn't handling as smoothly as you desire, it is wise to use two hands until your horse learns to respond correctly.

Learn what it means to "finger" the reins and how your horse responds to cues given by light fingering. This is not cheating--it helps your horse learn to react to cues in a feather-light manner.

If you plan to show your horse, you should study the rules on how to hold the reins and learn to use the rein that allows you to have the softest hand on your horse's mouth.

Legs

Your legs control the forward motion of your horse and its hindquarters.

When you squeeze your legs, your horse should learn this is a signal to shift its weight to its hindquarters and lighten its weight on its forequarters ready to move out. Some western trainers call this "getting its hind legs under it." Getting response to this cue is very important because you will need it every time you move your horse or call for a change of gait. It is a preliminary cue for stopping, preparation for backing and a corrective cue when your horse stops forward motion, gets behind the bit or rears.

Your legs control the hindquarters of your horse by pressure of your calves and heels. As you press with one leg or the other, your horse must respond to that leg by swinging its hindquarters away from the pressure or by holding them from swinging against the pressure. When your horse responds to your leg cues properly, you will find that less cuing is required by your reins.

Use spurs, whips, bats and crops only to help your leg cuing. First, press the horse with the calves of your legs--really squeeze. If your horse doesn't respond, use your heel. Finally, it may become necessary to tap with your bat or touch with a spur--always in the spot where your leg will touch. Give the lightest cue first. If your horse doesn't respond, use increasingly more forceful cues. In this way, you tell your horse to respond or light discipline will follow. Remember, however, to give the horse time to learn what the cue means before using punishment.

Learn to ride in balance by maintaining your position by contact in the seat of your saddle and your thighs. Use only light contact from your knees down so your lower legs can be used for cuing.

Weight

Your body weight becomes a cue when you shift position in the saddle. This does not mean that you "throw your weight" by leaning excessively. You can give a weight cue by placing more pressure on one stirrup than the other by shifting your seat to press more firmly on one seat bone (the same as shifting your seat on a hard chair or bleachers) or by inclining the upper part of your body slightly to be in rhythm with your horse.

As you school your horse, you will find responses come from very slight weight shifts. If you study the effects of your weight on the

horse's back, you will observe that the horse shifts its balance to match your balance. As this takes place, certain parts of the horse, especially its legs, are either held in place by weight or left free to move because they bear little weight.

Learning to be a good equestrian really is learning the effects of the aids, combining them to make your horse perform, using them in schooling and showing your horse with them. It is a challenge to pit your knowledge and skill with that of a horse and then experience pleasure from what you achieved.

Body Position and Aids in Motion

The change in position of your body, the degree of contact with your horse's mouth through your reins and the contact pressure of your legs all change as you ride the different gaits. A common fault is to overdo the degree of change. This results in a loose form of riding. You should learn to stay poised, supple and balanced just as you want your horse to move in a supple and balanced manner.

Forward Motion

Before your horse can make any kind of move, there must be "forward motion." Backing is forward motion in reverse.

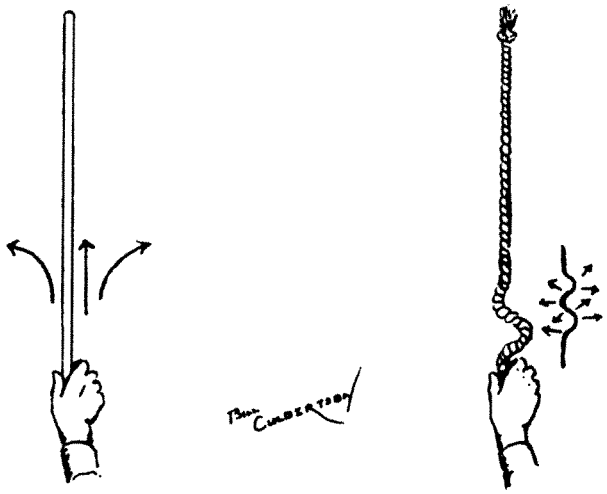


Figure 14.4. Visualize the thrust of the stick on the left. It demonstrates the forward motion of a horse, while the rope on the right cannot move forward, backward or be turned.

You can bend your horse's head completely around to its side and nothing will happen. It won't move. Also, if your horse tucks its nose against its chest and stops when you are trying to make it back, you can do nothing until you move it ahead. In both instances, you have lost forward motion. When forward motion begins, you will be able to control your horse's movements.

Think of forward motion as the thrust of the horse's hind legs with all power going through the horse's spine and moving the body straight from the point of thrust. Study Figure 14.4. The stick can be moved forward, backward or turned, but the rope cannot. Keep your horse moving straight and true from the thrust of its quarters. If you don't, it will be like trying to guide a rope.

Walk

The walk is a four-beat gait in which your horse should stride out freely and willingly. It is a natural, flat-footed, forward working gait. Your body is more relaxed during the walk, but do not get into the [illegible]lowing your back and shoulders to slouch. Sit erect with your weight on your crotch--not on your buttocks. This position will help keep your horse walking in a brisk, alert manner.

[illegible]e for a walk, settle your position in the saddle, take up the reins [illegible] your legs. These cues alert your horse to [illegible] get prepared for action. Think of the horse "collecting" itself as shifting its weight back, lightening its front quarters and poising its body to spring out.

[illegible]s collected, release pressure on the reins and [illegible]nough to signal the horse to move forward. You control [illegible] motion by tension on the reins and leg pressure.

The upper part of the body is very still, the waist is supple and allows the lower part of the body to move with the horse.

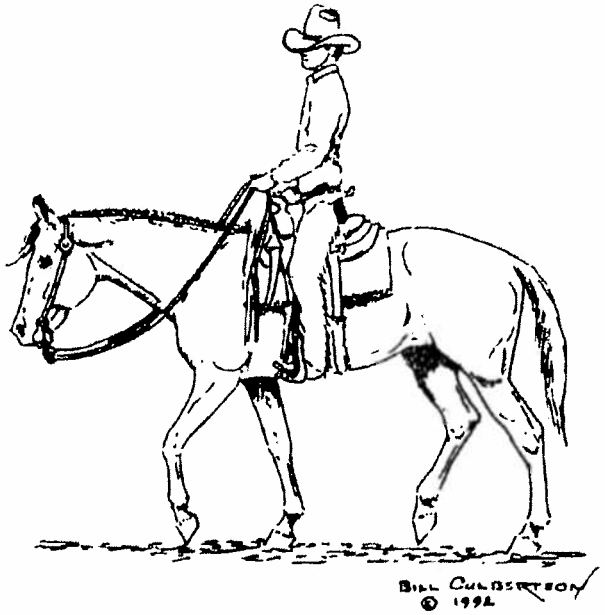


Figure 14.5. When the horse walks at a brisk rate, it is relaxed and bobs its head. The rein tension should be very light to allow free movement of the head. You should be relaxed but alert in the saddle.

General Pointers

The rider should maintain a natural position during all gaits. Practice proper cuing until your horse moves into any of the gaits lightly and smoothly. This will help keep your balance and avoid punishing your horse's mouth and side which occurs if you lose balance.

Make it a habit to get light control of your horse with the reins before cuing with your legs to avoid the horse charging out and then being pulled back.

Try not to pull back on the reins when checking or stopping your horse. If you keep your horse working "on the bit" lightly, you can check it or stop it by applying resistance on the bit when you close your fingers or by holding your hand steady instead of flexing it.

At all times the horse's head should be carried at an angle that is natural and suitable to the horse's conformation at all gaits.

Jog

The trot is a smooth, ground-covering two-beat gait. The horse works from one pair of diagonals to the other. The jog should be square, and relaxed with a straight, forward movement of the feet. Horses that walk with back feet and trot with the front are not performing the required gait. When asked to extend the jog, the horse moves out with the same smooth action.

The western rider should sit to the trot and not post. The western rider also should sit at the extended jog.

The English rider should post the trot unless instructed otherwise. Sit with your seat deep in the saddle with just enough weight in the stirrups to help absorb some of the motion.

To cue for the trot, apply more leg pressure and move your horse up into the bit. Maintain just enough rein pressure to hold your horse at the desired speed. It will be necessary to shorten your rein length to allow for the natural raising of the horse's head when it trots.

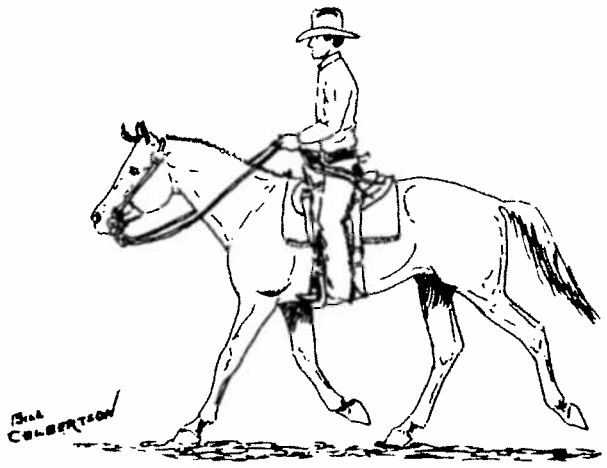


Figure 14.6.

In the trot, the upper part of your body should be still and the waist movement should allow the lower body to move with the horse. Your body balance is important so you do not get into the habit of balancing by "riding" your reins. Your arms should remain close to your body with your hands and fingers relaxed but flexing lightly with the action of your horse's mouth.

Lope or Canter

The lope or canter is an easy, rhythmical three-beat gait. Horses that move to the left should lope on the left lead. Horses that move to the right should lope on the right lead. Horses traveling at a four-beat gait are not performing a proper lope. The horse should lope with a natural stride that appears relaxed and smooth. It should be ridden at a speed that is a natural way of going. Relaxed hands are very important at this gait to allow rhythm with the movement of the horse's head.

Cueing for a lope is done by collecting your horse, shifting your weight back to the horse's outside hind leg and applying sufficient pressure with your outside leg to instruct the horse to strike out in the proper lead. Train your horse to assume a lope from a standstill, walk or trot. You will learn the proper cuing under the sections on right and left leads.

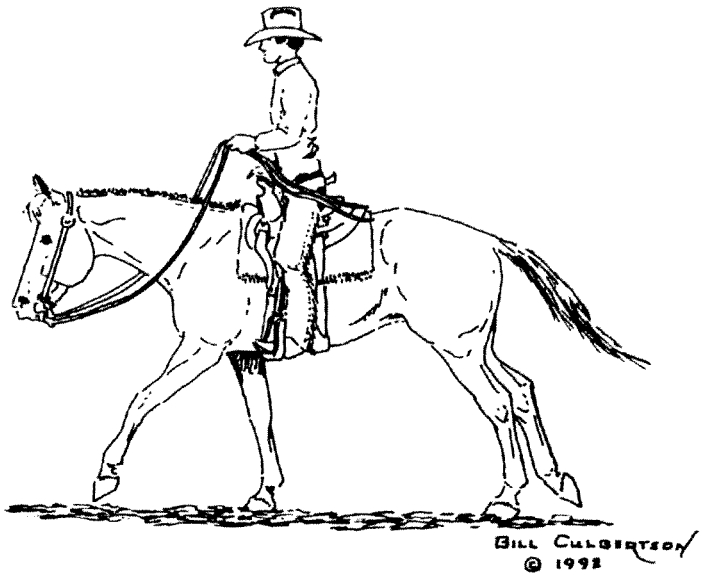


Figure 14.7. A lope is not a fast gait. The horse works from its hindquarters, light in the forequarters, with a rhythm in its action that makes this gait a pleasure to ride if you are in balance.

Work on urging your horse from a trot into a lope in a smooth, fluid change of gait. This will make it easier for you to stay in balance and rhythm as the change occurs, and you can concentrate on cuing and proper timing.

Keep your body weight over your feet with slight pressure in the stirrups to help keep your balance and to allow your ankles to flex to absorb some of the weight. Your heels should be down, toes forward and turned out at a natural angle and your lower legs kept in light contact with your horse's body.

Hand Gallop

The hand gallop is similar to the lope or canter, however, the stride is lengthened.

Backing

Your body position for backing should be erect in the saddle. Grip with your thighs. Squeeze with your legs to collect the horse while you maintain light rein pressure to prevent the horse from moving ahead. When your horse is collected, use the word "back." Flex your reins gently by lightly fingering each rein alternately and continue to squeeze with your legs. You are asking for forward motion but in reverse.

Hold the reins low to allow your horse to flex at its poll and tuck its nose. Use a light flexing pull on each rein alternately so your horse will keep its jaw and neck muscles relaxed. If the horse stiffens its jaw and neck muscles and refuses to move, you must loosen the rein pressure and use your legs to urge it ahead a few steps. Then start over as soon as the horse relaxes. Work to keep your horse relaxed and light in its head, neck and forequarters.

Control the direction of backing by varying the degree of pressure of one leg or the other.

Backing is unnatural and hard on a horse. Be patient and ask for a step at a time. Stop before the horse begins to resist enough to stiffen and refuse to move. Relax it by stepping it ahead and reward it with a pat and soft words. Then try again.

Increase the length of backing as schooling progresses to the point where your horse will continue to back until you release your leg pressure and drop the reins on the neck. Proper backing is smooth and performed easily without excessive jawing or resistance by the horse.

Stops

A good stop is not necessarily a sliding stop. A good stop is balanced and smoothly executed. The horse's hindquarters are well under its body to balance its weight. The forequarters, neck and head are kept light. The horse is balanced and ready to do what is required next, whether it be to settle and stand, move on ahead, pivot, or roll back and dash off in another direction.

Timing is very important when you ask for a stop, especially from a lope. You should use some preliminary cue to alert your horse that a stop is coming, which will allow it time to adjust its balance in preparation.

Cuing for a stop should involve the following action. Squeeze with your legs to get your horse to bring its hind legs under its body to balance for the stop. A firm, flexing give and take pull of your reins (preferably alternating from one rein to the other) should be given in time with the horse's rhythm. Try to flex your reins in rhythm with the horse's leading foreleg hitting the ground--this is the moment when the horse brings its back legs forward.

Sit erect, "settle" your seat into the saddle with your body weight forward and grip with your thighs. Push down on your heels to absorb the shock. Do not get into the bad habit of thrusting your feet forward, throwing your weight back and "hauling" back on the reins.

School your horse to stop easily on the cues at a walk, then a trot, and finally, at a slow lope. This will allow you time to perfect your cuing and time. It will give your horse time to learn what the cues mean. And you will work more softly on the horse's mouth by going slowly at first. Get the rhythm and feel the response from your horse before attempting to stop at a fast gait.

When stopping at slower gaits, always make your horse stop completely and stand, preferably on a slack rein. Do not let the horse walk out. It is wise to vary the time of standing so your horse will not anticipate a short stop and begin to move.

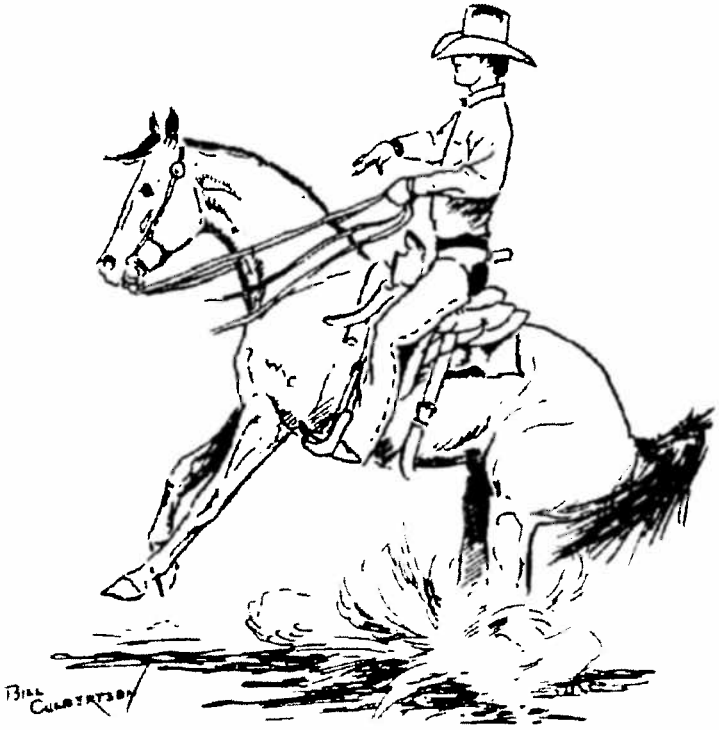


Figure 14.8.

A proper stop includes the voice command "whoa," a light flex of your reins, a squeeze of your legs and increased action of rider's seat to cause the horse to halt and stand square and quiet.

Don't rush your schooling. You are making progress when you feel the horse's hindquarters sink under you slightly when you stop. Keep working for light response and don't overdo the number of times you ask for stops. As you work, be sure to vary the places where you ask your horse to stop so it will not begin to anticipate each time it passes a certain point.

Turn on the Forehand

Your horse should be taught to move or hold its hindquarters in response to pressure from your heel or the calf of your leg just behind the front cinch or girth. This control is very important in backing, side-passing, two-tracking, holding the hindquarters on pivots and roll-backs, and obtaining correct leads.

Turning on the forehand means that your horse will hold its forelegs in a small area and step with its hind legs in a circle around the forelegs in

response to pressure from the rider's leg that is on the outside of the circle made by the hind legs.

Training for this movement can be started from the ground. In fact, a horse trained properly for halter showing will respond quickly and easily to your cues.

Begin with a turn to your left. Stand by your horse's near shoulder and grasp the lead shank with your left hand. Pull your horse's head very slightly to the left to bend its backbone. Use a short hold on the lead shank so you can steady the head and keep your horse from moving forward or back. Now push with your right hand at the same spot on your horse's barrel where you will cue with your heel when you are mounted.

You may need to push or tap with a stick or when riding the stirrup, the butt of a crop, but use care. Push or tap just enough to get your horse to take one step at first--then reward it with a pat on the neck. Don't expect a full circle right away.

Now go to the off side and work on a turn to the right. Hold the lead shank in your right hand and push on the horse's barrel with your left hand. Work from both sides as you school.

Halter-train your horse to respond to your cues to turn left or right.

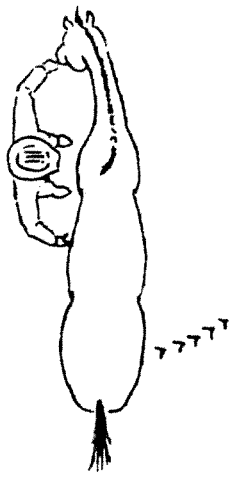


Figure 14.9.

After your horse responds well to cues from the ground, try to work when mounted. You must use both hands or direct reining at the beginning and learn the degree of tension needed on each rein to bend the horse's head while steadying the head and forehand in the position required. Do not neck rein--this is a cue to move the forehand. As shown in Figure 14.10, use the inside rein to bend the horse's head and the outside rein to steady the horse when you have the proper bend. Keep your hands and reins out to the side. Bend the horse's head until you are just able to see the horse's eye. Keep your hand light, soft and flexible.

When you feel the front of the horse is steady, lightly brace against the reins and begin cuing with your outside leg behind the girth or heel to start your horse moving its hindquarters away from your leg. Use your outside

leg--the left leg for a turn to the left and the right leg for a turn to the right.

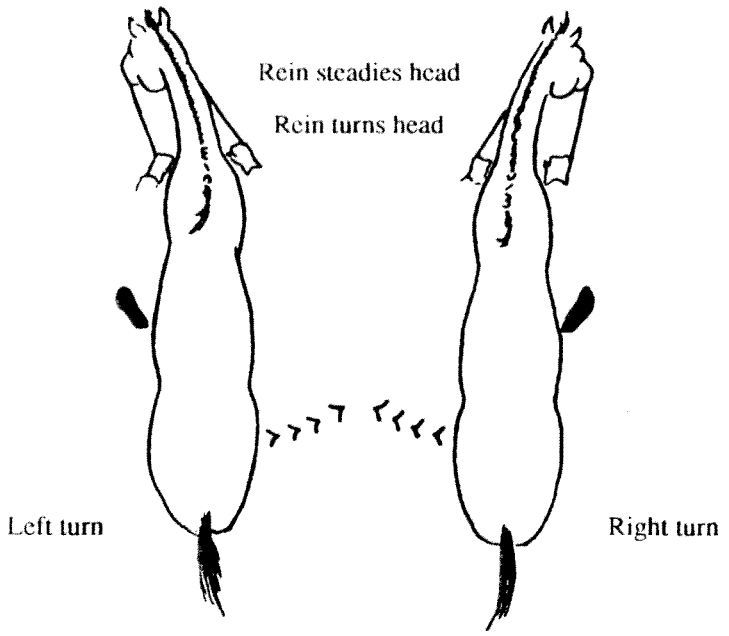


Figure 14.10. Note the position of the reins and the foot used to cue for turn on the forehand.

Work patiently and firmly. When you get the first couple of steps, let your horse relax and reward it with a pat on the neck and a few kind words. Work a step or two at a time until your horse learns to balance its body. Then try a 90-degree turn. Control is important. After the horse can do 90-degree turns, advance to the 180-degree half circle and eventually a full 360-degree circle. Be under control so that you can stop the horse at any point of the movement you choose. Do not let the horse get into the habit of moving around out of control.

Turn on the Hindquarters

The turn on the hindquarters is opposite of the turn on the forehand. Your horse will walk its forehand in a circle around its hindquarters. The back feet remain within a small area at the center of the circle. The inside back leg is the pivot leg, and it stays in the same spot.

The turn on the hindquarters is the basic movement for controlled, smooth, fast turns in pivots, roll-backs, pole-bending, barrel-racing and working cattle. The horse learns to roll back over its hocks.

As shown in Figure 14.11, tuck the horse's nose very slightly opposite the direction of the turn to take weight off the inside foreleg. At the same time, bring your hands and reins back in the direction of your inside hip which is also in line with the horse's inside pivot hip. Shift your seat body weight slightly back to the horse's inside hip and press lightly with your outside leg to stop the horse from swinging its hindquarters.

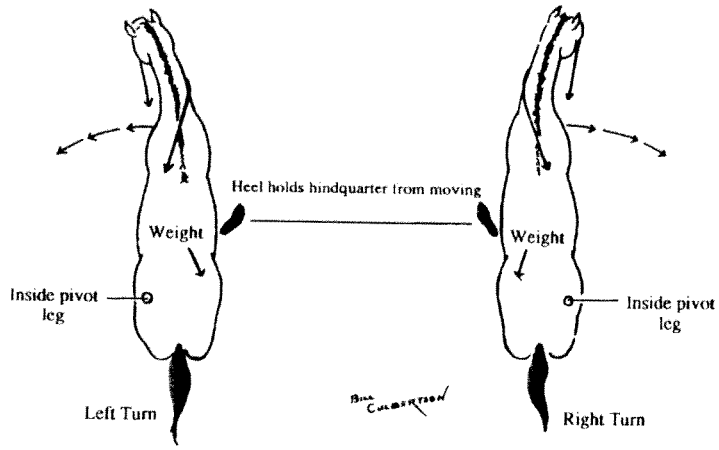


Figure 14.11. Note position of the reins and the foot used to cue for turn on the hindquarters.

To turn to the left, tuck the horse's nose slightly to the right. Rein back to your left hip as if to lightly lift the horse's front around. Shift your weight toward the horse's left hip. You actually will shift weight to your left buttock. Hold your right leg against the horse.

For a right turn, use the opposite cues. Tuck the nose to the left. Rein back to the right hip. Shift your weight toward the horse's right hip or your right buttock and hold your left leg against the horse.

This is a hard movement to master. It requires study, patience and practice. Repeat the 90-degree and then 180-degree movements before you ask for a complete circle. It is natural for a horse to get high and lunge around or to spin around a center point of its body like a spinning bottle. Then you attempt to shift the pivot point back to the hindquarters--back to the inside hind leg and make your horse turn under control. To keep control, begin a step at a time. Do not let your horse rear and spin.

The crucial moment of control occurs at about each one-quarter of the circle. After moving about one-quarter turn, your horse must move its back legs. It is natural for the horse to step sideways rather than to lift its feet and put them back down. At these moments, you must be alert to stop your horse from stepping sideways with its hind legs.

You should be able to stop the swing of the hindquarters by pressing with your outside leg. This leg cue may not be enough to stop some horses. If this happens, you will need to add another cue. When you feel the horse beginning to shift its hindquarters, apply pressure with your outside leg and shift your weight to the horse's outside hip or your outside buttock, as shown by the dotted arrow in Figure 14.11. This will put weight on the horse's outside hind leg to help prevent this leg from stepping out. You must learn to "feel" the movements of your horse through the "seat of your pants" to know what is happening and just the right moment to shift your weight.

Move the front quarters a step at a time, always under control. When you are about to complete a quarter turn, stop. Hold your horse until it has shifted its back legs and is balanced again before asking for the next quarter turn. As your horse learns to balance over its hindquarters, you will find the forequarters moving around in a smooth, controlled circle.

When this movement is accomplished, you can add speed and pivot or roll back your horse without rearing, lunging and uncontrolled turns.

Side-Pass

The side-pass is a lateral movement of your horse sideways by stepping to the right or left with both the forequarters and hindquarters moving evenly together. The horse should have slight forward movement so the legs cross in front of the opposite supporting legs.

Side-passing is necessary for smooth opening and closing of gates and is excellent for suppling your horse. Figure 14.12 shows the cues used to side-pass. You will cue with the reins, your weight and your legs.

To side-pass to the right, use the left rein to turn your horse's head slightly to the left and hold light contact with the right rein to make the horse move to the right. At the same time, shift your body weight to the left away from the direction of the side-pass and use your left leg or heel to move the hindquarters to the right. The reverse cues are used to side-pass

to the left. The right rein tucks the nose to the right slightly. The left rein moves the forequarters to the left. Your weight is shifted to the right. You use your right leg or heel to move the hindquarters to the left.

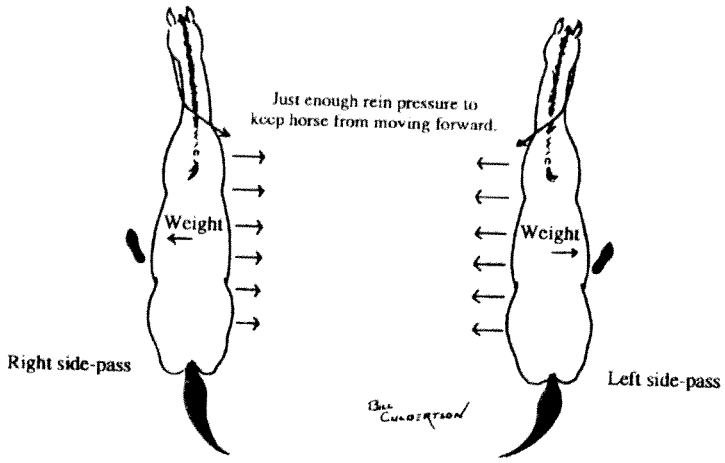


Figure 14.12. Note position of reins and the foot used to cue for left and right side-passes.

You will need practice to learn the "feel" of the correct rein tension necessary to move the forequarters to the side without making it back or move forward. Face a fence or the side of a barn to help you at first by keeping the horse from moving forward. If the horse backs, you must relax tension on the reins slightly and use your legs to move it up into the bit again.

You will get a see-sawing action at first so be patient and work quietly until you get the proper "feel" and your horse learns what you want and how to balance its body while doing the movement. When your horse is trained, you will be able to neck rein the forequarters with light rein action while cuing the hindquarters with your legs.

Two-Track

Two-tracking is a lateral movement in which your horse moves forward in a diagonal direction with its front feet and back feet making two sets of parallel tracks. A horse trained to two-track quickly will learn to take the simple change of leads and the flying change of leads when you are ready for these two movements.

Two-tracking is excellent for developing muscle, coordination and a supple athletic body. Begin at the walk, and then go to the trot and lope.

Cuing for the two-track is the same as cuing for a side-pass; however, your rein tension must be lighter and you will need more leg or heel pressure. You want your horse to move forward at an angle so more forward motion is needed. This is obtained by holding the rein in the same positions but much lighter. Push your horse forward as well as sideways with more leg pressure.

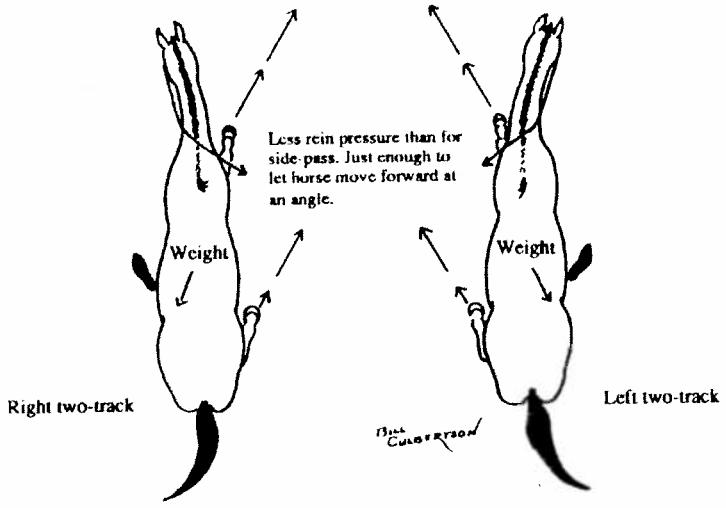


Figure 14.13. Note position of reins and the foot used to cue for left and right two-track.

Some horses will begin a two-track more easily at a jog trot because they have forward motion to help them move. Take advantage of this to get the feel of cuing and then school at the walk. Two-track movements at the walk are more difficult to perform. After your horse will two-track at the walk and trot, try the lope.

Leads

The Correct Lead--When your horse lopes, canters or hand-gallops, its body moves at a slight angle to the direction it is traveling. This happens because one pair of legs, one foreleg and one hind leg, on the same side of the horse's body, reach farther ahead, or "lead" the pair on the other side of its body. If the left foreleg and left hind leg are moving ahead, the horse is in the "left lead." In a "right lead," the right foreleg and right hind leg are reaching farther ahead. If one foreleg and the opposite hind leg are

leading, the horse is "cross firing." This is an uncomfortable gait, because the horse is not balanced.

The correct lead is very important when your horse circles or makes tight turns. The legs on the inside of the circle should lead. A horse will naturally take the proper lead or change leads when it runs free, but it will not do this when it carries a saddle and rider. Show ring rules place a great deal of emphasis on proper leads in performance events. A well-trained horse will change leads at the will of the rider.

You should learn which lead your horse is in from the feel of its motion. You can check by looking down at the point of your horse's shoulders. The point of the leading shoulder is moving farther ahead of the other shoulder. Do not get into the habit of leaning forward to see the horse's legs.

Training your horse to assume the lead you want requires patience and practice. Most horses favor one lead over the other. Work on getting either lead, but spend a little more time on the weaker lead by loping in a circle that requires that lead. Keep the lope slow and easy when schooling so you can cue properly.

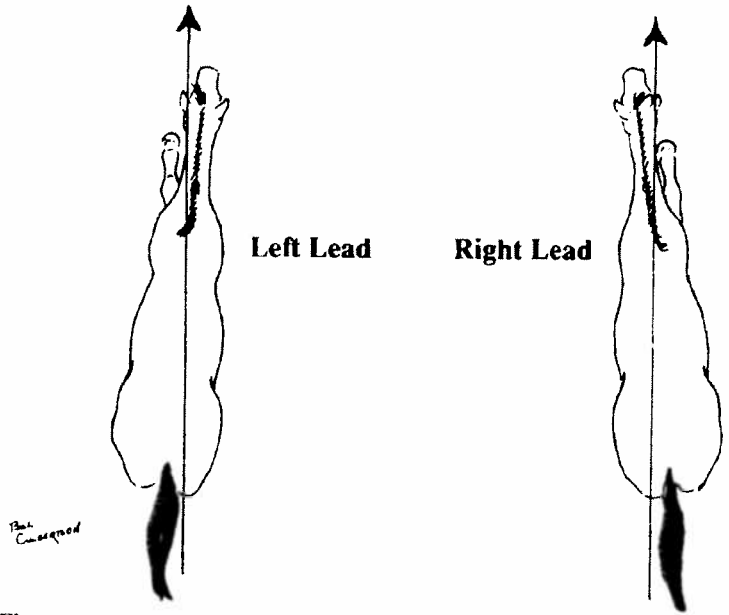


Figure 14.14. Note foreleg and hind leg on the same side reach farther ahead.

Your horse should be trained to assume the correct lead at a lope directly from the walk and trot. At any time the correct lead is not taken, you should slow the horse to a walk or trot and try again. Patience is necessary--don't rush.

The following paragraphs describe the cues for obtaining either lead. You should study and learn these cues and use them until they become habit. Be sure to have control of your horse's head before cuing with your legs or your horse will charge out, throw you off balance and disrupt your cues. School your horse to move smoothly into a lope. This will make it easier to apply your cues with proper timing. Work on cuing your horse into a lope from a smooth trot.

At the trot, there is more forward motion, yet the gait is slow enough to allow you to think through your cues and apply them in the proper timing. The trot is a diagonal, two-beat gait with alternate fore and hind legs working together. Time your leg cues for a lope when your horse is supported on the hind leg opposite the desired lead side. This will allow the horse to push off with the correct hind leg and bring the leading hind leg forward.

When your cues and timing are correct and your horse is working willingly, you will feel a slight lifting of your horse's body on the lead side as it takes off. This is the result of the horse shifting its weight back to the rear leg, ready to lightly spring forward and reach out with the leading hind leg. This gives a smooth, gliding sensation--and you are loping with the correct lead.

Remember, if you rein your horse into changing leads, it will change in front but does not have to change in back. Use leg pressure to get the horse's hindquarters changing first. If you get the change in the hindquarters, the front quarters must change.

Many riders use the following cues. In early schooling, these cues must be applied more firmly. But as your horse progresses, you will find it responds to lighter applications of the cues. When used properly, you will find an improvement in riding circles, figure-eights, serpentines, quadrilles or just plain turning.

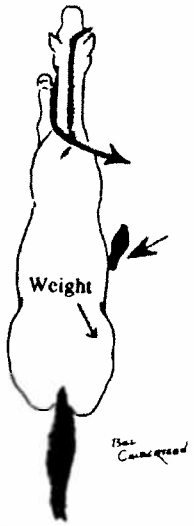


Figure 14.15. Left lead.

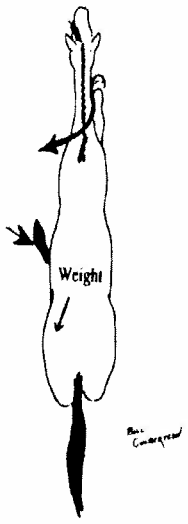


Figure 14.16. Right lead.

The Left Lead--Use your reins to slightly tuck the horse's head to the right to take the weight off the left foreleg. At the same time, sit back and shift your seat very slightly to the horse's right hip. Apply pressure with your right heel to signal your horse to move out.

The Right Lead--Tuck your horse's head slightly to the left. Sit back and shift your seat very slightly to the horse's left hip. Apply pressure with your left heel.

Some General Tips

Learn to use both hands on the reins when schooling your horse. Keep the horse working "up in the bit" with a light feel of its mouth in your hands. This is necessary so you can get the feel of your horse and help it learn to position its body. As your horse learns and responds, you will get results by light fingering of the reins. Senior horses, five years or older, must be shown with a bit. Junior horses, four years or younger, may be shown with a bit, hackamore or snaffle bit.

Using both hands also will help your body balance. Your horse will work more smoothly, and you will find yourself more in rhythm with its motion.

Don't try to neck rein too soon and don't overdo it. Learn to neck rein by laying the weight of the rein against the horse's neck -- don't pull on the neck rein. Until your horse learns to respond lightly to the neck rein, use the inside rein to tuck its nose into the turns and then follow with the neck rein. Rein first. If the horse does not follow the neck rein pressure, follow with direct rein. It will gradually learn to follow the neck rein.

You will need heavier applications of cues at the beginning of schooling, but you should work patiently toward response to light, undetectable cues.

As your horse learns to respond to your leg cues, you will find it less necessary to use full rein cues. Your horse will respond to light fingering and vibrations through the reins to the bit.

Your horse will become lighter and more responsive as you school and apply these cues correctly. It will develop "handling" abilities, and you are on the road to becoming a true horseman or horsewoman.

Chapter 15-- Basics: English Equitation

The skills required for English-style riding are similar to those used for western-style riding. The rider must adopt a balanced position that does not interfere with the horse's balance or ability to perform as an athlete.

Diagonals at the Rising Trot

With some exceptions, English and western styles of riding and training are basically the same. One difference in respect to riding which must be noted and practiced is the use of posting diagonals at the trot. In the rising trot, your upper body is inclined slightly forward from the hips so you remain in balance with the horse's movements. Your body raises by the movement of the horse, and your seat returns to the saddle without any loss of balance.

The rule for correct diagonal is simply: post with the outside diagonal pair. This means, the rider rises out of the saddle when the horse's outside front leg (in relation to the rail) and inside hind leg reach forward, and sits when these legs touch the ground. For example, if riding in a clockwise direction, the rider will rise and sit with the left foreleg and right hind leg. Conversely, when riding in a counter-clockwise direction, the rider rises and sits with the right foreleg and left hind leg. Should the rider be on the incorrect "diagonal," he or she merely sits for one extra beat of the two-beat trot. This will change the diagonal.

An English rider uses the sitting trot on a trained horse to allow the rider to remain close to the saddle for advanced work.

Hunt Seat

Basic Position-- Rider's eyes should be looking up and shoulders back. Toes should be at an angle best suited to the rider's conformation; ankles flexed in, heals downs, calves of legs in contact with horse and slightly behind the girth. The ball of the foot should rest on the stirrup iron.

Hands-- Hands should be over and in front of horse's withers, knuckles 30-degrees inside the vertical, hands slightly apart and making a straight line from the horse's mouth to rider's elbow. The method of

holding reins is optional and bight of reins (excess reins) may fall on either side. However, all reins, must be picked up at the same time.

Position in Motion-- The rider's body should be vertical at the walk and slow trot. It should be inclined forward in the posting trot, canter, gallop and jumping. Move the inclination of the body more for the gallop and jump than for the posting trot.

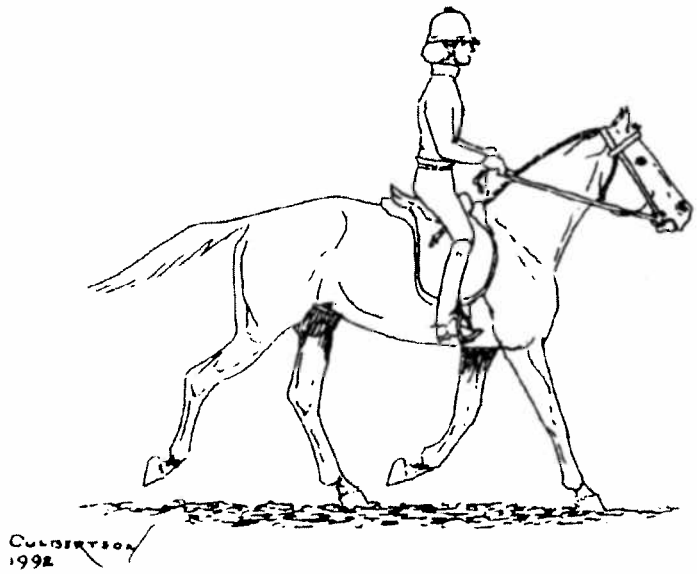


Figure 15.1. Hunt seat.

Movement-- Hunters under saddle should be suitable to the purpose. They should move in a long, low frame and be able to lengthen their stride and cover ground. They should be obedient, alert and responsive to their riders. They should be serviceably sound and be judged on free movement and manner. Quick, short strides receive penalties. Horses that move in an artificial frame, are over-flexed and behind the bit are penalized.

Jumping

Training the jumping horse requires patience and knowledge of jumping distances. Confidence is the key for a horse to jump safely and competently.

The two-point position, sometimes referred to as the jumping position, is exactly the same with the exception that the straight line from shoulder to

hip to heel is broken as the shoulders incline slightly forward. The purpose of the two-point is to adjust the rider's balance to match that of the horse during jumping and galloping. The rider also must remember that the stirrups will be at least one or two holes shorter than for flat work.

The first skill a horse must acquire is an ability to move through ground poles without adjusting stride or rhythm while stretching its head and neck and rounding the back. This is accomplished by introducing horses to one pole at a time until the horse can negotiate a series of four to five poles without anxiety or rigidity. Poles must be placed from 3 to 5 feet apart. Four feet is the most common distance.

After establishing confidence and balance using ground poles, the horse may be introduced to a small fence. Crosspoles are used to help the horse remain centered so it will use its body more effectively and reduce the chances of a run-out refusal. (Run-out refusal is when a horse dodges to the side to avoid jumping.) A horse should be comfortable jumping single crosspoles at a trot or canter without changing attitude, rhythm and flexibility before moving on to any other demands.

After working on single fences, one can introduce small combinations of fences. A combination is a line of fences one to three canter strides apart. A line of fences would be two or three fences in a row that have four or more cantering strides in between. The distances for combinations are:

* one canter stride, 21 to 24 feet apart
* two canter strides, 33 to 36 feet apart
* three canter strides, 45 to 48 feet apart

Lines are in increments of 12 feet, allowing 6 feet for take off and 6 feet for landing. For example, if one constructed a four-stride line, one would place the fences 60 feet apart.

When teaching a horse to jump, it is important to expose the horse to as many varieties of obstacles and as many courses, including lines and combinations, as possible. Do not assume your horse will be as willing to jump strange obstacles in a strange environment as it is at home. The more effort you invest in your and your horse's training, the happier you will be with both performances.

Saddle Seat

Basic Position-- To obtain proper position, place yourself comfortably in the saddle and find the horse's center of gravity by sitting with a slight bend at the knees without use of irons. While in this position, adjust the leathers to fit. Irons should be placed under the ball of the foot, not the toe or "home." The foot position should be natural.

Hands-- The distance of the hands from the horse's withers is a matter of how and where the horse carries its head. The method of holding the reins is optional. However, both hands must be used and all four reins of the double bridle must be picked up at one time. Bight of rein should be on the off side.

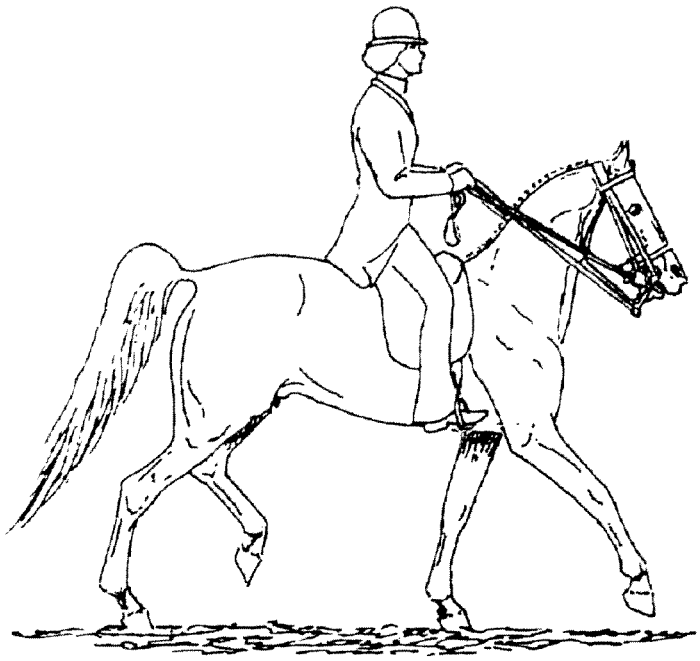


Figure 15.2. Saddle seat.

Dressage Seat

Basic Position-- The rider sits deep, erect and supple in the saddle. The rider's leg position should be relaxed, yet with a strong calf, a deep knee position with flexed heel and supple, absorbent ankle. The stirrups should be close to the toe.

Hands-- The rider's lower arms, wrists, and hands, and the reins are in a straight line connecting the rider's elbows to the horse's mouth. The thumbs stand up and press against the forefinger, and the reins run under the little finger or ring finger.

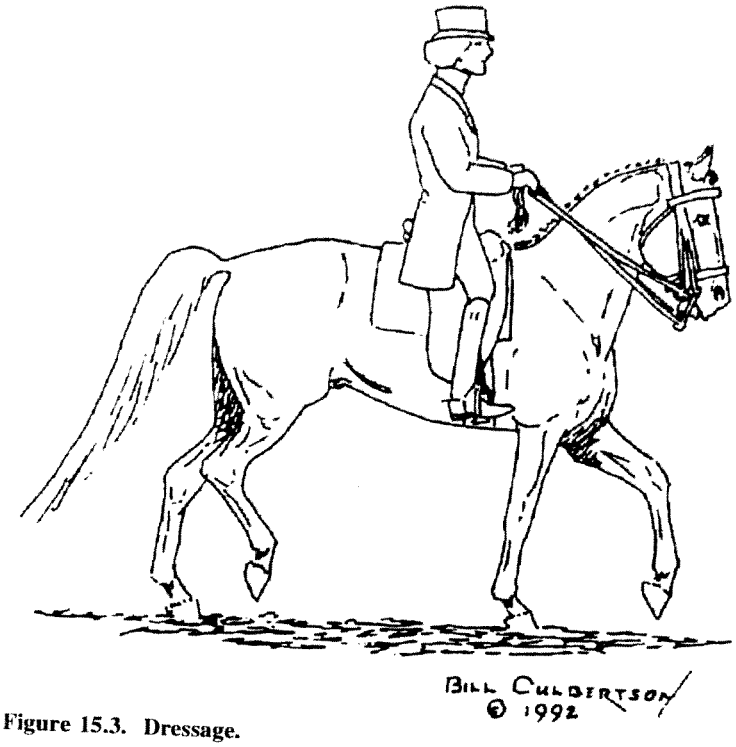


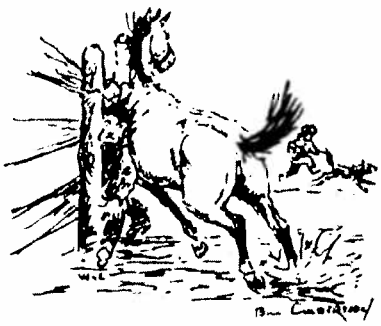
Figure 15.3. Dressage.

Chapter 16-- Horse Safety Guidelines

Approaching

1. A horse's vision is restricted directly in the front and in rear, but its hearing is acute. Always speak to a horse as you approach it. Failure to do so may startle the horse and result in a kick.

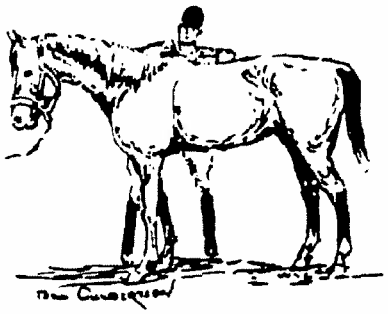
2. Always approach at an angle, never directly from the front or rear. Speak to the horse, let him know you are there.



3. Pet a horse by first placing a hand on its shoulder or neck. The touch should be a rubbing action. Don't "dab" at the end of a horse's nose.

4. Always walk around a horse out of kicking range. Never walk under or step over the tie rope.

Handling



1. Be calm, confident and collected around horses. A nervous handler causes a nervous, unsafe horse.

2. While you work around a horse, stay close to the horse so that if it kicks you will not receive the full impact of the kick. Stay out of kicking range whenever possible. When you go to the opposite side of a horse, move away and go around out of kicking range.

3. Know your horse, its temperament and reactions. Let it know you are its firm and kind master. Control your temper at all times.

4. Always let a horse know what you intend to do. When you pick up a foot, for example, do not grab the foot hurriedly. This will startle the horse and may cause it to kick. Learn the proper way to lift feet.

5. When you work around a horse, the safest method is to tie or hold the head.

6. Work around a horse from a position as near the shoulder as possible.

7. Never stand directly behind a horse to work with its tail. Stand off to the side, near the point of the buttock, facing the rear. Grasp the tail and draw it around to you.

8. A good equestrian will keep in balance at all times. An accidental slip or stumble can result in unintentional injury by the horse.

9. Do not drop grooming tools underfoot while grooming. Place them where they will not cause you to trip or be stepped on by the horse.

10. Know the horse's peculiarities. If someone else rides your horse, tell him or her what to expect.

11. To tease a horse may cause it to develop dangerous habits for the rest of its life and put your safety in serious jeopardy.

12. Punish a horse only at the instant of its disobedience. If you wait, even for a minute, it will not understand why it is being punished. Punish without anger. Never strike a horse about its head.

13. It is not safe to leave a halter on a horse that is turned loose. When necessary to do so, the horse should be checked daily.
    a) Some halter materials will shrink so be certain to check the fit.
    b) There is a possibility of the horse catching a foot in the halter strap.
    c) A halter might catch on posts or other objects.

14. Wear footgear that will protect your feet from being stepped on or from stepping on nails around the stable and barnyard. Boots or hard-toed shoes are preferable. Never go barefooted.

Leading

1. Make the horse walk beside, not run ahead or lag behind, when leading. A position even with the horse's head or halfway between the horse's head and its shoulder is safest.

2. Always turn the horse to the right and walk around it.

3. Use a long lead strap with excess strap folded in a figure-eight style in your left hand when leading. It is customary to lead from the left, or near side, by using the right hand to hold the lead near the halter. Extend your right elbow slightly toward the horse. If the horse makes contact with you, its shoulder will hit your elbow first and move you away from it. Your elbow also can be used on the horse's neck to keep the head and neck straight for control as well as to prevent the horse from crowding you. A horse should be trained to be led from both sides.

4. Your horse is larger and stronger than you. If it resists, do not get in front and try to pull.

5. Never wrap the lead strap, halter shank or reins around your hand, wrist or body. A knot at the end of the lead shank aids in maintaining a secure hand grip when needed for control.

6. When leading, tying, or untying a horse, avoid getting your hands or fingers entangled. Use caution to prevent catching a finger in dangerous positions such as halter and bridle hardware that includes snaps, bits, rings and loops.

7. Be extremely cautious when leading a horse through narrow openings such as a door. Be certain you have firm control and step through first. Step through quickly and get to one side to avoid being crowded.

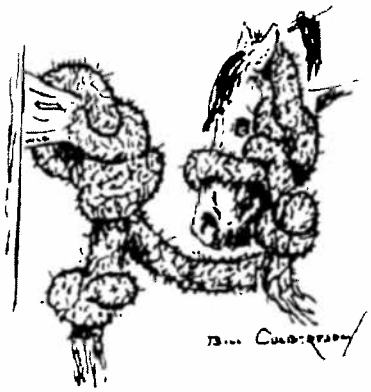
8. At any time you are dismounted or leading the horse, the stirrup irons on an English saddle should be run up or dressed. Also be cautious of the stirrups catching on objects when using a western saddle.

9. Use judgment when turning a horse loose. It generally is safest to lead completely through the gate or door and turn the horse about facing the direction from which you just entered. Then release the lead strap or remove the halter or bridle. Make the horse stand quietly while you pet it. Avoid letting a horse bolt away from you when released. Good habits prevent accidents.

10. Avoid use of excessively long lead ropes to prevent it from becoming accidentally entangled. Watch the coils when using lariats or lunge lines.

Tying

1. Know and use the proper knots for tying and restraining a horse.



2. Tie your horse far enough away from strange horses so they cannot fight.

3. Always untie the horse before removing its halter.

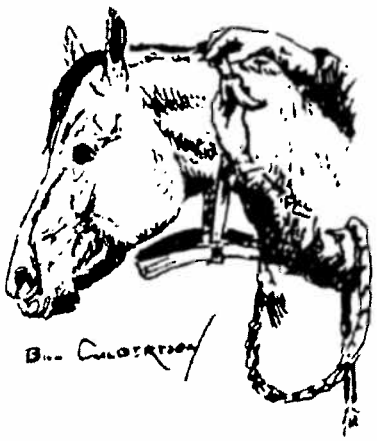
4. Avoid use of excessively long lead ropes to prevent the horse from becoming accidentally entangled. When using lariats or lunge lines, watch the coils.

5. Always tie a horse in a safe place. Use the halter rope, not the bridle reins.

6. Tie a safe distance from other horses, tree limbs or brush where the horse may become entangled.

7. Be certain to tie the horse to an object that is strong and secure to avoid danger of breaking or loosening if the horse pulls back. Never tie below the level of the horse's withers.

Bridling



1. Protect your head from the horse's head when bridling. Stand close, just behind and to one side (preferably on the left side) of the horse's head. Use caution when handling the horse's ears.

2. Keep control of the horse when bridling by refastening the halter around its neck.

3. Be certain the bridle is properly adjusted to fit the horse before you ride. Three points to check are placement of the bit, adjustment of the curb strap and adjustment of the throatlatch.

Saddling

1. Check your saddle blanket and all other equipment for foreign objects. Be certain the horse's back and the cinch or girth areas are clean.

2. When using a western double-rigged saddle, remember to fasten the front cinch first and rear cinch last when saddling. Unfasten the rear cinch first and front cinch last when unsaddling. Be certain the strap connecting the front and back cinches (along the horse's belly) is secure.

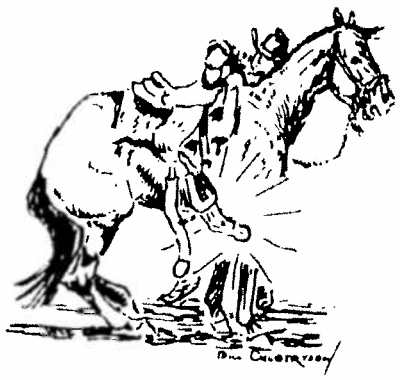
3. Fasten accessory straps (tie-downs, breast collars, martingales) after the saddle is cinched. Unfasten them before loosening the cinch.

   On English equipment, it is sometimes necessary to thread the girth through the martingale loop before the girth is secured.

4. The back cinch should not be so loose that your horse can get a hind leg caught between the cinch and its belly.

5. When saddling, it is safest to keep the off cinches and stirrup secured over the saddle seat and ease them down when the saddle is on. Do not let them swing wide and hit the horse on the off knee or belly. That hurts.

6. Swing the western saddle into position easily, not suddenly. Dropping the saddle down too quickly or hard may scare the horse.



An English saddle is much lighter than a stock saddle. Do not swing the saddle into position. You do not need to lift it and place it into position.

7. Pull up slowly to tighten the cinch. Check the cinch three times:
   a) after saddling,
   b) after walking a few steps (untracking), and
   c) after mounting and riding a short distance.

Mounting and Dismounting

General

1. Never mount or dismount a horse in a barn, near fences, trees or overhanging projections. Sidestepping and rearing mounts have injured riders who failed to take these precautions.

2. A horse should stand quietly for mounting and dismounting. To be certain this is done, you must have control of its head through the reins.

Using English Equipment

1. Immediately upon dismounting, the rider should "run up" the stirrups. A dangling stirrup may startle or annoy the horse. It is possible for the horse to catch a cheek of the bit or even a hind foot in a dangling stirrup iron when he is going for a fly. The dangling stirrup also can be caught on doorways and other projections while the horse is being led.

2. After running up the stirrups, the reins should immediately be brought forward over the horse's head. In this position, they can be used for leading.

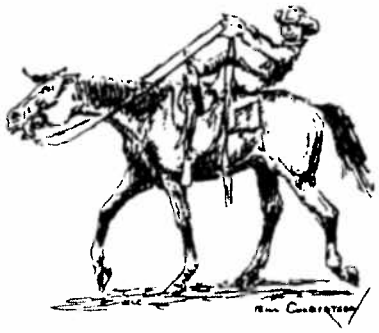
Using Western Equipment

Closed reins or a romal should be brought forward over the horse's head after dismounting.

Riding

1. Keep your horse under control and maintain a secure seat at all times. Horses are easily frightened by unusual objects and noises.

2. Until you know your horse, confine your riding to an arena or other enclosed area. Ride in open spaces or unconfined areas after you are familiar with your horse.



3. If your horse becomes frightened, remain calm, speak to it quietly, steady it and give it time to overcome its fear. Then ride or lead the horse past the obstacle.

4. Hold your mount to a walk when you go up or down a hill.

5. Allow the horse to pick its way at a walk when riding on rough ground or in sand, mud, ice or snow where there is danger of the mount slipping or falling.

6. Do not fool around. Horseplay is dangerous for you and your friends as well as for others who may be nearby.

7. Riding on roads:
   a) Be cautious if you ride bareback.
   b) Always bridle the horse. Riding with just a halter does not give control.
   c) Use judgment when riding in pairs or in groups. Be certain there is sufficient space.

d) Try to avoid paved or other hard-surfaced roads. Walk the horse when crossing such roads.
e) In areas of heavy traffic, it is safest to dismount and lead across.
f) Ride on the shoulders or in barrow pits but watch for junk.

8. Never rush past riders who are proceeding at a slower gait as it startles both horses and riders and frequently causes accidents. Instead approach slowly, indicate a desire to pass and proceed cautiously on the left.

9. Never ride off until all riders are mounted.

10. Ride abreast or stay a full horse's length from the horse in front to avoid the possibility of being kicked.

11. Walk your horse when you approach and pass through underpasses or ride over bridges.

12. When your horse is full of energy, lunge it or ride it in an enclosed area until it is settled.

13. Do not let a horse run to and from the stables. Walk the last mile home.

14. Know proper use and purpose of spurs before wearing them.

15. Dogs and horses are good companions but they may not mix. Keep your dog under control at all times around horses.

16. Wear protective headgear when riding. This should be strictly adhered to in any form of jumping.

Riding at Night

1. Riding at night can be a pleasure, but it must be recognized as more hazardous than daytime riding. Walk the horse; fast gaits are dangerous.

2. If necessary to ride at night on roads or highways, follow the same rules as for pedestrians. State laws vary regarding which

side of the road you should ride. Wear light-colored clothing and carry a flashlight and reflectors. Check your state regulations for details.

3. Select a location with care. Choose controlled bridle paths or familiar, safe open areas.

Equipment and Clothing

1. Learn to handle a rope before carrying one on a horse. Always use caution when working with a rope if the horse is not "rope-broke." Never tie the rope "hard and fast" to a saddle horn while roping off a green horse.

2. Bridle reins, stirrup leathers, headstalls, curbstraps and cinch straps should be kept in the best possible condition; your safety depends on these straps. Replace any of the straps when they begin to show signs of wear such as cracking.

3. Be sure all tack fits the horse. Adjust your tie-downs to a safe length that will not hinder the horse's balance.

4. Spurs can trip you when you work on the ground. Take them off when not mounted.

5. Wear neat, well-fitting clothing that will not become snagged on equipment. Belts, jackets and front chap straps can become hooked over the saddle horn.

6. Wear boots or shoes with heels as a safeguard against your foot slipping through the stirrup.

7. Keep the horse's feet properly trimmed or shod.

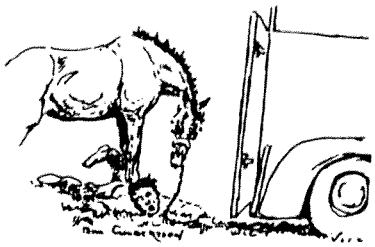
8. Infectious organisms are prevalent around barns, corrals and fences. Gloves are a safeguard against cuts, scratches, splinters and rope burns.

9. Do not wear rings or dangling jewelry around horses. They can catch on the halters and other equipment.

Trailering or Other Hauling

1. Trailering should be done with two persons if at all possible.

2. Always stand to one side, never directly behind, when loading or unloading a horse from a trailer or truck.



3. Circumstances involved in loading a horse will vary, but the following methods are given in order of preference.
   a) Train the horse so it can be sent into the trailer.
   b) Lead the horse into the left side while you stand on the right side of the center divider or vice versa.
   c) It is least desirable to get in front and lead the horse in. Never do this without an escape door or front exit. Even with a door, use caution--most are awkward to get through. Also, horses have been known to follow the handler out.

4. Be certain the ground area behind and around the truck or trailer affords safe footing before loading or unloading.

5. It is safest to remove all equipment (bridles, saddles and so forth) before loading. Use your halter.

6. Always speak to a horse in a truck or trailer before you attempt to handle it.

7. If you have trouble loading or unloading, get experienced help.

8. Secure the butt bar or chain before you tie the horse. Use care when you reach for it. Ease it down when you unfasten it to avoid bumping the horse's legs.

9. Always untie a horse before opening the gate or door.

10. Avoid slick floors. Use matting or some type of bedding for secure footing.

11. Check your trailer regularly for the following.
    a) Rotting or weakened floor boards.
    b) Rusted and weakened door hinges.
    c) Hitch welds.
    d) When serviced, have a competent mechanic check the spring shackles and wheel bearings.

12. Be certain the trailer is of adequate construction and meets state requirements for brakes and lights.

13. The trailer should have sufficient height to afford a horse ample neck and head room. Remove or cover any protruding objects.

14. When you drive, always observe the following.
    a) Double-check all connections (lights, brakes, hitch and safety chains).
    b) Be certain all doors are closed and secured.
    c) Drive carefully. Turns should be made slowly. Start and stop slowly and steadily.
    d) Look far ahead to avoid emergencies. Drive in a defensive manner.

15. It is safer when hauling a stallion with other horses to load the stallion first and to unload him last.

16. Distribute the weight of the load evenly. When hauling one horse, it is safest to load it on the left side of the trailer.

17. Never throw lighted cigarettes or matches from a car or truck window because of the danger of fire in the area or of the wind sucking them into the trailer.

18. Check the horse and trailer hitch at every stop before you continue on.

19. Opinions vary on whether to haul a horse tied or loose. If you tie, allow sufficient length of rope so the horse can move its head for balance. Use a safety release or a quick-release knot.

20. If hauling in a truck or other open carrier, you should protect the horse's eyes from wind and foreign objects. Use goggles or some type of wind shield.

21. Horses are like people--some get motion sickness. Adjust the feeding schedule to avoid travel when the horse is full of feed and water. Feed smaller amounts or avoid feeding grain before the trip.

Trail Riding

1. If you plan to ride alone, tell someone where you are going and when you expect to return.

2. Ride a well-mannered horse.

3. Do not play practical jokes and indulge in horseplay.

4. Watch where you ride--avoid dangerous ground. Note landmarks. Study the country and view behind you so you will know how it looks when you ride out.

5. Courtesy is the best safety on the trail.

6. Think of your horse first. Watch its condition, avoid injuries and care for it properly.

7. Carry a good pocket knife to cut ropes in case of entanglement.

8. Do not tie the reins together.

9. Ride balanced and erect to avoid tiring the horse or causing a sore back, legs and so forth.

10. Check the equipment.
    a) Have a halter and rope. Hobbles are fine if the horse is trained to them.
    b) Have clean saddle blankets or pads.
    c) Be certain the equipment is in good repair and fits the horse.
    d) Include bad weather clothing.
    e) A pair of wire cutters is handy in case the horse becomes entangled in wire.

f) A lariat is handy for many needs but know how to use one and be certain the horse is accustomed to a rope.
g) Extras should include pieces of leather or rawhide for repairs, spare horseshoe nails and matches.

11. When you unsaddle, store your gear properly. Place the saddle blanket where it will dry. Keep your gear covered overnight.

12. Do not water your horse when it is hot. Cool the horse first.

13. Always tie a horse in a safe place. Use the halter rope--not the bridle reins. Tie a safe distance from other horses and tree limbs or brush where the horse may become entangled.

    Never tie below the level of the horse's withers. Be certain to tie to an object that is strong and secure to avoid danger of breaking or coming loose if the horse pulls back.

14. Be extremely cautious of cigarettes, matches and fires. Know they are out before discarding or leaving.

15. Obtain current, accurate maps and information on the area. Become familiar with the terrain and climate.

16. If you ride on federal or state lands, seek advice from the forest or park officials. Know their regulations on use of trails and fire instructions.

17. Be certain the horse is in proper physical condition and its hooves and shoes are ready for the trail.

18. Use extreme caution at wet spots or boggy places.

19. Speed on the trail is unsafe. Ride at safe gaits.

20. Avoid overhanging limbs. Warn the rider behind you when an overhanging limb is encountered. Watch the rider ahead so a limb pushed aside doesn't snap back and slap the horse or you in the face.

Fire Safety Guidelines

"In case of fire, break glass" is certainly a familiar phrase that sets forth simple instructions. However, a response to horse barn fire is not a simple matter.

Most horse owners assume "it couldn't happen to me" and continue building a companionable relationship between themself and their horse.

Today's horse owner provides adequate training for horse and rider, proper equipment, balanced nutritional needs of the horse, and stabling facilities. Missing from books, lectures and instructions is a chapter on fire prevention and the course of action to take in case of fire. Young people receive the best available instruction in equitation, but few have any idea of how to react in a disaster situation such as fire. Fire is the most terrible death that can befall an animal, especially the horse, because the horse is penned securely within its corral and stable. The horse owner almost surely has committed to memory the telephone number of the veterinarian but does not know the number to dial in case of fire.

Fire prevention and safety are the duty of every person involved with and around horses. Many of the preventative measures apply whether the facility be at a track, a training barn, summer camp stable or backyard barn. Fire safety involves common sense and a trained response.

The responsibility of ownership does not lie solely in the daily care of the horse. The horse is totally dependent upon the owner's awareness and consideration of his needs when an emergency arises.

The increased number of horses throughout the United States clearly indicates a need for information about fire safety.

Be safety conscious at all times. Fires give little warning. Rehearse the necessary course of action to be followed with members of your family, your boarders, youth in training and others directly involved with the animals in the barn in the event of fire. Conspicuously post the number of the local fire department by all telephones.

Fire prevention is easier to preach than practice, but it is a vital part of horse ownership and management.

Stable Fires

The official records of the National Fire Protection Association show that the majority of fires in stables (figures compiled from reported fires at racetracks, breeding farms and fairgrounds) are caused mainly by misuse of electrical apparatus, heaters and careless smoking. Other causes of fires are lighting, arson and spontaneous combustion. We will not concern ourselves here with large racetrack and fairground facilities, but rather with the smaller scale training and boarding facilities, summer camp stables and individual owner facilities.

Almost all horse barns have the following in common:

1. wood construction, either totally or partially;

2. bedding straw or shavings in stalls;

3. storage of hay, bedding straw or shavings in close proximity to the barns;

4. highly combustible materials within (leather, blankets, ropes, oils, and so forth); and

5. people.

A horse standing in a bed of straw might just as well be standing in a pool of gasoline should a fire occur. The burning rate of loose straw is approximately three times that of the burning rate of gasoline. The horse in a stall where the fire originates has only 30 seconds to escape. The flame spread and heat is so rapid that a fire, once started, is out of control in a matter of minutes. These startling statistics dramatically emphasize the fact that a stable fire, once underway, does not give much time for evacuation of horses.

Automatic sprinkler systems are advocated for commercial facilities such as racetracks and large breeding establishments and other commercial-type enterprises. However, from a monetary point of view, automatic sprinkler systems generally are not included in the smaller scale operations.

Water-type fire extinguishers are effective if used within the first minute. Since stable fires develop rapidly due to the abundance of combustible materials, fire extinguishers are of little or no use once the fire has gained burning time (60 seconds).

Fire spreads rapidly, as does panic. Quick action is necessary to save the life of a horse. The person who is knowledgeable in the correct course of action will be more effective than five people in a panic state.

Fire prevention and safety should be taught along with basic equitation by trainers, organizations and parents. As schools have fire drills for the students, so should the barn manager and trainer instruct students in the course of action to follow in case of fire.

The barn manager should be responsible for posting fire rules.

Know What to do in case of fire

30 Seconds Is All Your Horse May Have

Plan Now

1. Know where fire alarms are located.
2. Know where fire equipment is located.
3. Know where water is located.
4. Know how to use fire equipment.

Post the Fire Department Number in a Prominent Place

Plan of Action

1. Call the fire department.
2. Begin evacuating horses.
3. Open all outside access gates to the stable area.
4. Keep roads clear for fire equipment access.
5. Use first aid fire fighting equipment (hand extinguishers, buckets, and so forth).
6. Meet the fire department apparatus and direct it to the fire.

Procedures To Be Followed In The Event Of Fire

1. Call fire department.

2. Evacuate horses.
   a) Use halters and lead ropes.
   b) Blindfold, if necessary, using scarves, handkerchiefs or gunny sacks.
   c) Move to holding area away from barn site and out of the way of fire fighting equipment such as adjacent riding arena.

3. Open all access gates to the barn area.

4. Use available fire fighting equipment until help arrives such as
   a) extinguishers,
   b) hoses,
   c) wet gunny sacks, and
   d) shovels and dirt.

5. Keep roads clear for fire equipment.

Fire Prevention Measures:

In the general barn area,

1. clean up and dispose of debris.

2. have adequate water outlets and hoses attached.

3. have an outside phone with prominent display of fire department number.

4. store feed, bedding straw or shavings at a safe distance from barns.

5. spray for weeds surrounding general area.

Within the barn,

1. ensure no smoking is allowed in barn.

2. have adequate water outlets and hoses attached.

3. dispose of oily rags immediately after use.

4. check all electrical wiring periodically for frayed ends, doubled-up extension cords and so forth.

The above rules apply to any size barn whether it houses one horse or 50 horses.

The stable owner, barn manager and homeowner have a responsibility to the horses entrusted to their care.

Don't wait until the last possible moment to move your horses. Brush fires travel with alarming speed and can cover many miles in a matter of minutes. Winds fan the flames and can carry firebrands that cause the fire to jump ridges and spread to different areas within minutes.

Fire fighting crews will, as a last resort, turn horses loose in immediate danger.

Other Possible Fire Situations

Trail riding in the mountains*

1. Absolutely no smoking on the trail.

2. Advise a responsible party of your route and estimated time of return whether you ride in a group or by yourself.

3. Familiarize yourself with the terrain.

4. Any organized ride, as a safety rule, should have an alternate escape route planned. (Fire fighting crews always plan an escape route.)

5. In the event you come upon a fire, the personal safety of you and your horse is your primary concern.

   a) Assess the situation and use your best judgment.
   b) Under normal conditions, try to get away from the fire area.
   c) Proceed to a safe area.

* This is a subject with no definite guidelines. So much depends upon the particular situation. However, for those who ride in such areas, thought should be given to the proper reactions when faced with a fire.

Transporting Horses

In the event of an accident with possible danger of fire

1. use quick-release snaps to tie the horse.

2. lead ropes should remain on horses while traveling.

3. fire extinguishers should be readily accessible, not locked in trailer tack compartment.

Horse Shows

1. Follow proper parking procedures. Do not block street entrances or fire hydrants.

2. Never padlock your horse in a stall.

Stable Construction

The majority of barns (training, boarding, rental and backyard) are constructed of combustible materials such as wood. Brick, stone or cement-block barns are thought to be fairly fireproof, but exterior construction does not slow the internal spread of fire, which is fed by the highly combustible materials within (wood, straw, shavings, leather, tack, ropes, oils and so forth).

Fire retardant paints are most effective and desirable in checking or retarding a fire, but of course they have no effect upon bedding materials used in stalls or the interior contents of the barn.

Building manufacturing companies now feature a line of prefabricated metal barns. In addition, there are also a number of companies that feature a complete line of metal corrals and fence panels. Overhead shelter installations used with these corrals also are of a lightweight metal. This type of installation offers the most as far as being "fireproof."

Overhead sprinkler systems, such as those developed exclusively for use in horse barns, are highly effective in extinguishing fires within barns.

Unfortunately, this type of installation is very expensive and not in widespread use.

Thought should be given to installing extra large water lines with adequate outlets inside and outside the barn, all equipped with large water hoses.

The type construction that allows air to flow freely to ventilate a stabling facility unfortunately aids in ventilating and fanning a fire.

In the interest of safety, all stalls should have outside doors whether or not there are adjoining paddocks. In the case of paddocks, they also should have outside gates.

Recommendations For Fire Prevention*

Much can be done to diminish the ever-constant threat of fire. The precautionary measures previously stated are common sense. Those who live and work around horses must know the proper actions to take in case of fire so the lives of individuals and horses and the loss of property can be minimized.

Due to the materials involved, it is doubtful there ever will be a "fireproof" barn, but certainly these basic steps will help reduce the threat of fire, if followed.

A horse owner must be aware of the dependency of the horse. The owner not only must provide the horse's daily requirements but must recognize the almost total dependency the horse has upon quick action of the owner in case of fire.

Procedures to follow in the case of fire should be as important as instructions in grooming, equitation and common ailments of the horse.

Fire prevention is everyone's duty--24 hours a day.

1. Smoking in horse stalls, feed rooms and under sheds is prohibited.

2. No sleeping will be allowed in any of the feed rooms or stalls at any time.

3. Stalls occupied by horses will not be blocked at any time. Tack rooms will not be locked unless occupied.

4. No open fires will be allowed anywhere in the stable area.

5. No oil or gas burning lanterns or lamps will be allowed in the stable area.

6. All electrical appliances used in stable areas must be in a safe working condition. When in use, they must be kept a safe distance from walls, beds and other furnishings. They should not be left unattended when in use.

7. No flammable materials, such as cleaning fluids or solvents, will be used in the stable area.

8. No hay or straw may be stored under the sheds or outside feed rooms at any time.

9. The alleyway in front of stalls must be kept free of debris and open at all times to give easy acccess to each stall door in case of fire.

10. All pets, such as dogs, cats, poultry, goats, and so forth, will not be allowed to run at large in the stable area but must be properly and suitably confined at all times.

Care Should Be Taken To Plan What To Do In Case Of Fire*

1. What to do with the horses?

2. How to fight a fire?

3. Where is the alarm?

4. Where is the electrical master switch?

5. Do all horses have halters and lead ropes hanging on the stall door?

* Recommendations of The National Association of State Racing Commissioners Committees on Public Safety and Security.

Commandments For Horse Safety

1. Buy or ride a safe horse.
2. Don't be overmounted.
3. Know your horse.
4. Don't surprise your horse.
5. Check your tack.
6. Small children must be watched.
7. Tie your horse with care.
8. Know trailer safety.
9. Don't crowd others.
10. No clowning please.

Appendix 1--Terms and Definitions

Action	The manner in which a horse travels and moves.
Aids, artificial . . .	Spurs, whips, martingales and so forth.
Aids, natural . .	Legs, hands, weight and voice, as used to control a horse.
Appointments . . .	Equipment and clothing used in showing horses.
Arabian	Foundation breed for most of today's breeds of horses. Bred and selected for over two thousand years. Originated in the Middle East and Northern Africa. Later located on the desert of the Arabian peninsula.
Artificial gaits . . .	Taught rather than natural. Includes the running walk, slow gait, rack, and in some instances, the pace. All are modifications of the walk.
Balance	Refers to the overall appearance of the horse. All parts of the body are in correct proportion to each other and result in a pleasing, "balanced" appearance.
Bearing Rein . . .	Rein pushed against the neck in direction of the turn, neck rein.
Bloom	A condition of the hair and coat. They appear clean, healthy and fine-textured with a distinct, clear shine. Healthy appearance.
Bosal (boh-zal) . .	Noseband of the hackamore, usually made of braided rawhide.
Bowed tendon . .	An inflammation and enlargement of the flexor tendon at the back of the front cannon.
Brand	A mark of identification. A private registered mark burned, frozen or tattooed on the horse.
Buck-kneed	Knees bent forward.
By or sired by . . .	The male parent of a horse.
Calf-kneed	Opposite of buck-kneed. Knees angled backward.
Cast	To lie down or roll close to a wall so it is impossible or difficult to get up without assistance.
Catch rope	Working rope or lariat.
Cavesson	A noseband on a bridle.
Coarse	Used to express a lack of quality or a rough, harsh appearance.
Coggins test	An agar gel-immunal diffusion test to determine equine infectious anemia known as swamp fever.
Colic	Various conditions of the digestive tract in which abdominal pain is the chief symptom.

Collected	Controlled gait. A correct, coordinated action.
Colt	A young, male horse under three years of age.
Conformation	The build of a horse—the structure, form and symmetrical arrangements of parts.
Contracted heels	Occurs most often in the fore feet, characterized by a drawing or contracting of the heels.
Cribbing	Biting or setting teeth against the manger or some other object, arching the neck and gulping or swallowing air into the stomach, not the lungs.
Crossbreed	The result of breeding two different breeds of horse to produce an individual that possesses the characteristics of both breeds.
Cryptorchid	A male horse whose testicles have not descended into the scrotum.
Dental star	A star-shaped or circle-like structure near the center of the wearing surface of the permanent incisors.
Direct rein	Using one hand on each rein with a snaffle bit or bosal. Teaching the horse to turn and give to the pressure caused by the pull of the rein.
Disunited or firing	When a horse is on the right front lead and left hind lead at the cross time or vice versa.
Dressage	Exercise and training that develops the physique and ability of the horse.
Equine	Of or pertaining to horse.
Equitation	Art of riding horseback.
Farrier	A horseshoer.
Filly	A young female horse under three years old.
Floating teeth	Filing off the sharp edges of a horse's teeth.
Foal	A young horse of either sex up to yearling age.
Gait	Describes a specific foot fall pattern or beat, i.e., walk, trot, canter.
Gelding	An altered or castrated horse.
Grooming	Removal of dirt and other irritants from the horse prior to saddling. Massages muscles.
Gymkhana	A program of competitive games on horseback.
Hackamore	A type of western headstall or bridle without a bit. Commonly used in breaking horses and teaching them to neck rein.
Hand	The unit by which the height of a horse is measured. A hand equals four inches.
Hand gallop	Three beat gait, similar to a lope or canter but the stride is lengthened.

Handy . . . . . Describes a horse that moves quickly and willingly. Always in control of its movements in a balanced, rhythmic, alert manner.

Headstall . . . . . Part of a bridle or hackamore that fits over the horse's head.

Heaves . . . . . Pulmonary emphysema. A condition in which the lungs do not work efficiently. Reduced elastic recoil reduces the amount of air that can be forced out of the lungs. A "heave line" may develop due to this condition.

Hinny . . . . . Cross between a jenny and a stallion.

Hobbles . . . . . Straps fastened to the front legs of a horse to prevent him from straying.

Honda . . . . . Eye on the working end of a lariat or riata through which the rope passes to form a loop or noose.

Jack . . . . . Male donkey.

Junior horse . . . Any horse four years old or younger.

Laminitis . . . . . Founder. Noninfectious inflammation of the sensitive laminae of one or more of the hooves.

Lead . . . . . The first stride in the canter.

Lunge . . . . . A long line, about 20 to 30 feet, used to train and exercise a horse.

Mare . . . . . A mature female horse three years of age and older.

Monkey mouth . Opposite of parrot mouth--lower jaw protrudes in front of the upper jaw.

Morgan . . . . . Breed that originated in New England. Believed to be descended from Justin Morgan, an outstanding Arabian-Thoroughbred cross. Used for pleasure riding and shows.

Mule . . . . . A cross between a mare and a jack.

Natural gaits . . . Walk, trot and gallop and, in some horses, pace and running walk.

Near side . . . . . The horse's left side.

Neck rein . . . . . A signal to the horse with the weight of the rein against the neck.

Off side or far side The horse's right side.

Open class . . . . . A show class in which any horse of a specified breed may compete.

Out of or Dam of Refers to the female parent of a horse.

Parasite . . . . . A small organism that lives on or in and at the expense of a larger organism called the host.

Parrot mouth . . . The upper jaw overhang the lower jaw, the incisors do not properly meet and cause uneven wear and growth.

Parturition	The act of giving birth.
Posting	The rising and lowering of a rider with the rhythm of the trot.
Purebred	Bred from members of a recognized breed without mixture of blood from other breeds.
Quality	Fineness of feature, fine hair and lack of coarseness.
Quarter Horse . .	Breed developed in the colonial era in North America. Foundation came from crosses of Arabian, Barb and Turk breeds brought to North America by Spanish explorers. Used to race the quarter mile, work cattle and show.
Riata	Braided rawhide rope.
Restraint	Usually tying, to prevent escape or injury.
Ribbon colors . . .	First place - blue; second - red; third - yellow; fourth - white; fifth - pink; sixth - green; seventh - purple; eighth - brown.
Roached	A mane that has been cut short.
Roached back . . .	A convex back, one that forms an outward arc.
Saddlebreed	Breed originated in the United States. Developed as an easy-riding,general purpose horse historically for plantation use. Used today as a show horse. Can be three- or five-gaited.
Seat and hands . .	A term that refers to the ability of a rider to sit in the saddle with grace and control the mount.
Senior horse	Any horse five years old or older.
Slicker	A raincoat made of oiled canvas or plastic.
Smooth mouth . .	Refers to the smooth, biting surface of the upper and lower teeth after the cups have disappeared at 12 years of age.
Sound	A term that means the horse is physically fit and shows no signs of weakness or illness which interfere with its usefulness.
Stallion	A mature male three years of age or older.
Stud	Refers to a horse-breeding farm or ranch. Corrupted in common usage to mean stallion.
Stylish	To have a pleasing, graceful, alert general appearance.
Suppleness	The ability of the horse to bend and flex its entire body.
Sway-back	A concave or sagging back that forms an inward arc.
Tack	Riding equipment or gear for the horse, such as saddle, bridle, halter, and so forth.

Tapaderos or taps Leather covering or shields over the front of the stirrups.

Thoroughbred . . . Breed developed from crossbreeding of native British ponies with Barb, Turk and Arabian horses. Used for flat track racing, show jumping and dressage.

Thrush . . . . . A disease of the frog in which a black discharge and foul smell are emitted from the frog.

Type . . . . . The arrangement of the body parts into distinct recognizable patterns. All horses have the same basic conformation, but each breed has distinct conformation types that make it differ from other breeds.

Vice . . . . . A bad habit that may affect a horse's usefulness, dependability or health.

War Bridle . . . . . An emergency bridle made of rope for use in leading unruly horses.

Warm-Blood . . . . Result of crossing heavy horses with fine thoroughbreds. They were mainly for pulling carriages. Today, used in dressage, show jumping and eventing.

Weanling . . . . . A foal, colt or filly, under one year old, that has been taken away from its mother.

Wolf teeth . . . . . Small pointed teeth that sometimes appear at the base of the first pre-molar tooth.

Yearling . . . . . A foal that is between one and two years of age. A foal is considered one year of age on January 1, regardless of what month in the year it was born.

Appendix 2-- Breed Associations

International **American Albino Association**
Rt. 1, Box 20
Naper, NE 68755-2020

International **Andalusian** Horse Association
1201 S. Main, #D-7
Boerne, TX 78006

Appaloosa Horse Club, Inc.
P.O. Box 8403
Moscow, ID 83843-0903

Appaloosa Sport Horse Association
10808 Georgetown Pike
Great Falls, VA 22066

Araappaloosa and Foundation
Breeders' International
Rt. 8, Box 317
Fairmont, WV 26554

Arabian Horse Registry of America, Inc.
12000 Zuni St.
Westminster, CO 80234-2300

International **Arabian** Horse Association
P.O. Box 33696
Denver, CO 80233-0696

International **Arabian** Horse Registry of North America
P.O. Box 325
Delphi Falls, NY 13051-0325

Azteca Horse Registry of America
P.O. Box 490
Vancouver, WA 98666-0490

American **Bashkir Curly** Registry
P.O. Box 246
Ely, NV 89301-0246

North American **Bay Horse** Club
P.O. Box 417
Wichita Falls, TX 76307

Belgian Draft Horse Corporation of America
P.O. Box 335
Wabash, IN 46992-0335

The National **Black Horse** Registry, Inc.
P.O. Box 296
Rouzerville, PA 17250-0296

Brazilian Association of Sport Horse Breeders
10 Harbor Point Blvd., #408
Boston, MA 02125

American **Buckskin** Registry Association, Inc.
P.O. Box 3850
Redding, CA 96049-3850

International **Buckskin** Horse Association
P.O. Box 268
Shelby, IN 46377-0268

Canadian Horse Breed Association
68 Des Lauiers
Pierre Fonds, Quebec
Ontario, Canada

Chilean Corralero Registry International
230 E. North Ave.
Antigo, WI 54409

National **Chincoteague Pony** Association
2595 Jensen Rd.
Bellingham, WA 98226

Florida Cracker Horse Association, Inc.
P.O. Box 186
Newberry, FL 32669-0186

American **Dominant Gray** Registry, Inc.
10980 "8" Mile Rd.
Battle Creek, MI 49017-9560

The American **Donkey and Mule** Society, Inc.
2901 N. Elm St.
Denton, TX 76201

North American **Draft Cross** Association, Inc.
742 Rebecca Ave.
Westerville, OH 43081-9998

Draft Horse and Mule Association of America
Rt. 1, Box 98
Lovington, IL 61937

American **Exmoor Pony** Registry
Box 477
Pittsboro, NC 27312-0477

The **Friesian** Horse Association of North America
4127 Kentridge Dr., SE
Grand Rapids, MI 49508-3705

Galiceno Horse Breeders Association
Box 219
Godley, TX 76044-0219

International **Generic Horse** Association
P.O. Box 6778-D
Rancho Palos Verdes, CA 90734-6778

Golden American Saddlebred Horse Association, Inc.
Rt. 1, Box 67
Oxford Junction, IA 52323-9724

Gotland Horse Registry (USA)
P.O. Box 14551
Oklahoma City, OK 73113-0551

American **Hackney** Horse Society
4059 Iron works Rd. #A
Lexington, KY 40511-8694

Haflinger Association of America
14570 Gratiot Rd.
Hemlock, MI 48626-9416

Haflinger Registry of North America
14640 State Rt. 83
Coshocton, OH 43812

Half Quarter Horse Registry of America
29264 Bouquet Canyon Rd.
Sangus, CA 91350

Half Saddlebred Registry
319 S. 6th St.
Coshocton, OH 43812-2119

The American **Hanoverian** Society, Inc.
4059 Iron Works Pike
Lexington, KY 40511

Purebred **Hanoverian** Association of American Breeders and Owners, Inc.
Box 429
Rocky Hill, NJ 08553

The American **Holsteiner** Horse Association
222 East Main St., #1
Georgetown, KY 40324-1712

United States **Icelandic Horse** Federation
38 Park St.
Montclair, NJ 07042

American **Indian Horse** Registry, Inc.
Rt. 3, Box 64
Lockhart, TX 78644

American Mammoth **Jackstock** Registry (AMJR)
P.O. Box 1155
Pulaski, TN 38478-1155

Lipizzan Association of North America
P.O. Box 1388
Flagstaff, AZ 86001

United States **Lipizzan** Registry
Rt. 4, Box 89Y
Amelia, VA 23002

American **Miniature Horse** Association, Inc.
2908 SE Loop 820
Fort Worth, TX 76140-1078

American **Miniature Horse** Registry
P.O. Box 3415
Peoria, IL 61614-3415

American **Minor Breeds** Conservancy
P.O. Box 477
Pittsboro, NC 27312-0477

Missouri Fox Trotting Horse Breed Association, Inc.
P.O. Box 1027
Ava, MO 65608-1027

International **Morab** Breeders Association
S. 101 W. 34628 Hwy. 99
Eagle, WI 53119

North American **Morab** Horse Association
W3174 Faro Springs Rd.
Hilbert, WI 54129

American **Morgan** Horse Association, Inc.
P.O. Box 960
Shelburne, VT 0542-0960

American **Mule** Association
P.O. Box 3545
Visalia, CA 93278

American **Mustang** Association, Inc.
P.O. Box 338
Yucaipa, CA 92399

North American **Mustang** Association and Registry
P.O. Box 850906
Mesquite, TX 75185-0906

The **Spanish-Mustang** Registry, Inc.
Rt. 3, Box 7670
Willcox, AZ 85643

American **Mustang** and **Burro** Association
P.O. Box 7
Benton City, WA 99320-0007

National Show Horse Registry, Inc.
11700 Commonwealth Dr., #200
Louisville, KY 40299-2344

New Forest Pony Association, Inc.
P.O. Box 638
Harrisville, RI 02830-0638

Norwegian Fjord Association of North America
24570 W. Chardon Rd.
Grayslake, IL 60030

Norwegian Fjord Horse Registry
8008 Sackett Rd.
Bergen, NY 14416

Older Horse Registry
17356 Meadow Pkwy.
Townsend, WI 54175-9778

American **Paint Horse** Association
P.O. Box 961023
Fort Worth, TX 76161-0023

Palomino Horse Association
Box 24, Star Route
Dornsife, PA 17623

Palomino Horse Breeders of America, Inc.
15253 E. Skelly Dr.
Tulsa, OK 74116-2637

Part Thoroughbred Stud Book
P.O. Box 1901
Middleburg, VA 22117-1901

American **Part-Blooded Horse** Registry
4120 S.E. River Dr.
Portland, OR 97267-6899

Paso Fino Horse Association, Inc.
100 W. Main; P.O. Box 600
Bowling Green, FL 33834-0600

Percheron Horse Association of America
P.O. Box 141
Fredericktown, OH 43019-0141

American **Performance Horse** Association
2347 William St.
Kirkwood, NY 13795-2347

Universal **Perkehner** Society
P.O. Box 1874
Cave Creek, AZ 85331-1874

American Association of Owners and Breeders of
Peruvian Paso Horses
P.O. Box 30723
Oakland, CA 94604

Peruvian Paso Horse Registry of North America
1038 4th St., #4
Santa Rosa, CA 95404-4319

Peruvian Paso Part-Blood Registry
1038 4th St., #4
Santa Rosa, CA 95404-4319

National **Pinto Horse** Registry
P.O. Box 486
Oxford, NY 13830-0486

Pinto Horse Association of America, Inc.
1900 Samuels Ave.
Fort Worth, TX 76102-1141

Pony of the Americas Club
5240 Elmwood Ave.
Indianapolis, IN 46203-5990

Foundation for the Preservation and Protection of the **Przewalski Horse**
Univ. of Georgia, Dept. of Animal & Dairy Science
322 Livestock-Poultry Bldg.
Athens, GA 30602-2771

The United **Quarab** Registry
P.O. Box 12754
Odgen, UT 84412-2754

American **Quarter Horse** Association
2701 I-40 E.; P.O. Box 200
Amarillo, TX 79168-0001

Standard Quarter Horse Association
12820 Willow Lane, #22
Golden, CO 80401

American **Quarter Pony** Association, Inc.
P.O. Box 30
New Sharon, IA 50207

Quarter Sport Horse Registry
1463 Country Ln.
Bellingham, WA 98225

Racking Horse Breeders Association of America
Rt. 2, Box 72-A
Decatur, AL 35603

Rocky Mountain Horse Association
1140 McCalls Mill Rd.
Lexington, KY 40515

American **Saddlebred** Horse Association
4093 Iron Works Pike
Lexington, KY 40511-8434

North American **Selle Francais** Horse Association, Inc.
P.O. Box 646
Winchester, VA 22604-0646

North American **Shagya** Society
2520 60th Ave., SW
Rochester, MN 55902

American **Shetland Pony** Club
P.O. Box 3415
Peoria, IL 61614-3415

American **Shire** Horse Association
2354 315 Ct.
Adel, IA 50003

North American **Single-Footing Horse** Association
Box 1079
Three Forks, MT 59752-1079

Spanish-Barb Breeders Association
P.O. Box 641
Lyons, CO 80540-0641

Southwest **Spanish Mustang** Association
Box 148
Finley, OK 74543-0148

International **Sporthorse** Registry
P.O. Box 957045
Hoffman Estates, IL 60195

American Council of **Spotted Asses**
P.O. Box 121
New melle, MO 563365

National **Spotted Saddle Horse** Association
P.O. Box 898; 108 N. Spring St.
Murfreesboro, TN 37133-0898

Ridden **Standardbred** Association
1578 Fleet Rd.
Troy, OH 49373

United States Trotting Association **(Standardbred)**
750 Michigan Ave.
Columbus, OH 43215-1191

International **Striped Horse** Association, Inc.
Box 209
Silver Cliff, CO 81249-0209

American **SuffolkSport** Horse Association
Rt. 1, Box 212
Ledbetter, TX 78946-9707

Swedish **Warmblood** Association
P.O. Box 1587
Coupeville, WA 98239-1587

Tennessee Walking Horse Breeders' and Exhibitors' Association
P.O. Box 286
Lewisburg, TN 37091-0286

The Jockey Club **(Thoroughbred)**
821 Corporate Dr.
Lexington, KY 40503

Thoroughbred Horses For Sport
10808 Georgetown Pike
Great Falls, VA 22066

American **Trakehner** Association, Inc.
1520 W. Church St.
Newark, OH 43055

North American **Trakehner** Association
1660 Collier Rd.
Akron, OH 44320

International Trotting and Pacing Association, Inc. **(Trottingbred)**
575 Broadway
Hanover, PA 17331-2007

Walkaloosa Horse Association
3815 N. Campbell Rd.
Otis Orchards, WA 99027

American **Walking Pony** Registry
P.O. Box 5282
Macon, GA 31208-5282

American **Warmblood** Registry, Inc.
P.O. Box 395
Hastings, NY 10706-0395

American **Warmblood** Society
Rt. 5, Box 1219A
Phoenix, AZ 85043

Koninklijk **Warmblood**
Paardenstamboek in Nederland
P.O. Box 828
Winchester, OR 97495-0828

North American **Warmblood** Association
2400 Faussett Rd.
Howell, MI 48843

American **Welara Pony** Society
P.O. Box 401
Yucca Valley, CA 92286-0401

Welsh Pony and Cob Society of America, Inc.
P.O. Box 2977
Winchester, VA 22601-2977

Wild Horses of America Registry
6212 E. Sweetwater Ave.
Scottsdale, AZ 85254