



# More Than Just Horsing Around: Learning the Basics of Equine Care and Safety

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Go to <https://www.youtube.com/watch?v=YGYYs2av5C4&t=1s> for a video description of this project as well as a demonstration of some important equine care and safety concepts.

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# Basic Horse Handling Safety

## Handler Safety

It is important to remember that no matter how well trained the horse, or how experienced the handler, horses are large animals with minds of their own, so care must always be taken to avoid accidents. Even for old, or very relaxed horses, one should never assume that they will always act predictably. Especially in stressful situations, such as a vet or farrier visit, a horse may act unpredictably so constant care in handling is vital to safety for the horses and humans involved.

- *Approaching:* Speak to the horse before catching it to avoid startling, approaching from the side rather than their blind spots directly in front and behind. Never walk directly behind a horse, and if you must walk near their hind legs, keep close to the horse to minimize the momentum if they were to kick.
- *Leading:* Use a lead rope attached to a halter to catch and lead a horse. Never loop the extra lead rope around your hand, instead fold it back and forth, holding the middle of these folds. If the horse spooks, the rope will not tighten and pull on your hand this way.
- *Tying:* Tie the horse no lower than its chest on a sturdy vertical fence post, or a horizontal hitching post, with no more than an arm's length of rope between the halter and the knot but enough to allow the horse to turn its head. Horizontal fencing slats are not meant to be tied to and can easily be pulled out by a spooked horse. Only tie using a halter and lead rope with a quick release knot (one that can be untied by pulling on the free end), never a bridle and reins. When tied up, never climb under or over the rope directly in front of the horse. Cross ties are another method to tie a horse, with two ties from opposite walls/posts that clip to either side of the halter. The ties should be attached to the wall/posts at about the horse's eye height and long enough that the clips can just barely touch in the middle. For cross ties, quick-release snaps or another form of panic strap should be used so that a horse will not injure itself.

To tie a quick release knot:



1. Pass the free end of the lead rope behind the tying post, from right to left. Leave less than an arm's length of rope between the halter and the post.
2. Make a "4" shape by passing the free end over the end clipped to the halter.
3. Twist the left corner of the "4" once to form a loop. This twist should be as close to the tying post as possible to make the knot stay tight.
4. Reach down through the loop and grab the middle of the free end to pull it halfway through the loop. This should form a new loop, and the free end should release the knot when pulled on. Step 4 may be repeated multiple times using the new loop if there is too much rope or the horse figures out how to undo the simple version.
5. Tuck the last of the free end through the final loop

For a demonstration, watch the video overview of this manual.

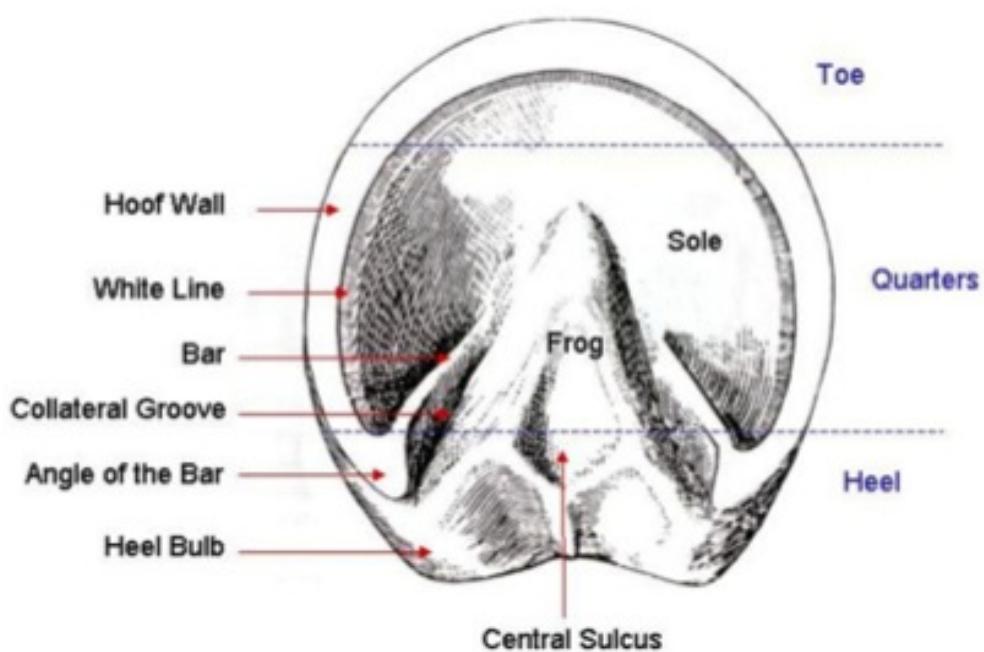
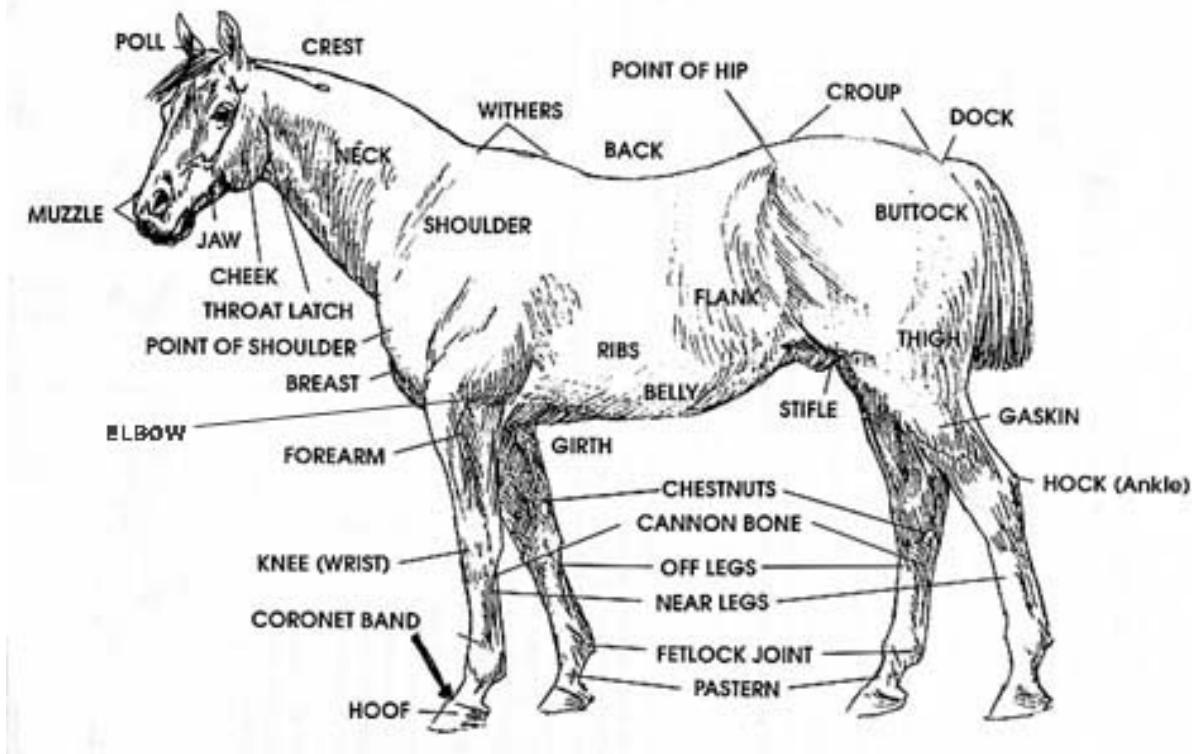
- *Grooming:* It is important to groom horses to promote skin and coat health, particularly before tacking up and riding to prevent irritation. Use soft brushes carefully on the legs and face, only using curry combs (hard brushes for removing dirt) on muscled areas not on the legs or face. While grooming in smooth, slow strokes in the direction of the hair, keep an eye out for injuries, heat or inflammation, and other possible symptoms of illness or injury. Make sure to clean the belly (especially where the girth will rest before tacking up) and the mane and tail to prevent matting. Another important part of grooming is picking out the horse's hooves. Hooves should be picked often, including before and after riding. This prevents thrush (pg 13) and removes potentially painful rocks lodged in the horse's hooves. To safely pick up a horse's feet, face the opposite direction as the horse and run your hand down the leg, starting at the shoulder (or hip on the hind legs). If they do not already pick up their foot, lightly pinch the tendon or tap the fetlock (directly above the hoof on the back side). Once their foot is up, hold their hoof in hand closest to the leg for support and use a blunt hoof pick in your other hand to remove debris from the underside of the hoof, avoiding the frog (sensitive, triangular part of the hoof).

### Child/Rider Safety

Before interacting with the horses, riders- especially children- should be reminded of safe behavior around horses.

- Running and yelling in the barn area should not be allowed to ensure horses are not startled to create a dangerous situation.
- Just like handlers, riders should avoid walking behind horses, instead either staying close to their hind legs and gently placing a hand on the croup or giving the horses a wide berth behind them.
- No matter the experience level of the rider or the calmness of the horse, they should always wear a helmet while mounted. A properly fitting helmet should cover part of their forehead and be snug but not give them a headache.
- Treats should always be given on a flat, outstretched hand to avoid being accidentally bitten.

## Horse and Hoof Anatomy



## Dieting and Weight Management

In order for horses to be the healthiest and happiest they can, it is important to manage their weight by feeding them according to their activity level, size, and age. Overweight and underweight horses have more of a risk of illness, may develop bad attitudes, and they may have difficulty performing to the best of their ability.

*Measuring weight:* Horses are obviously a bit too big to put on a household scale, so measuring their weight is a bit different. Without a horse-sized scale, weight can be estimated most accurately by measuring the heart girth and body length and inserting them into a formula or an online calculator as found in Resources. The heart girth is measured using a measuring tape around the girth of the horse (from the top of the withers all the way around the horse, staying vertical as close to the elbows as possible). To find the body length, use a tape measure to find the distance between the point of the shoulder to the point of the buttock. Both should be found in inches.

For adult horses, the formula is: (Heart Girth x Heart Girth x Body Length) / 330 = Weight (lbs)

*How Much and What to Feed:* The bulk of any horse's diet- 1.5 to 2% of their weight every day- should come from roughage (hay and grass instead of grains). When determining how much hay to feed your horses, remember to take pasture grazing into account; horses in a stall, pasture in the winter, or dry lot will need more hay than a horse in a lush pasture during the summer months. Many horses working a light or moderate amount may not need much/any grain in addition to forage, but horses that are breeding, working hard, or growing need more energy in which case grain and feed concentrates are helpful. These should not take up more than 30% of their nutrition and it is most beneficial to feed it in smaller, frequent meals to help digestion. For horses that are fed on only forage, a forage balancer is important in order to provide them with correct amounts of vitamins, minerals, and protein. A moderately exercised adult horse needs to be fed about 2% of its body weight each day, so an 800 pound horse would need 15 pounds of forage and 1 pound of forage balancer daily. Some instances to change a horse's diet include if it is over or underweight, their level of activity changes, or it is recommended by a vet. Change a horse's feed gradually, ideally over a few weeks. One way to do this is to change 25% of their old food to their new food every three days so that after nine days, the horse is eating entirely their new food, preventing colic (pg 13). Salt licks should be made available ideally 24/7.

*Water:* Horses should always be provided with access to plenty of clean water as they drink about five to ten gallons of water each day. The only exception is when the horse is extremely hot in which case small sips of luke-warm water should be given until recovery after exercise.

*Healthy Weight:* There is no one healthy weight for horses since each breed and each individual horse is so different. One globally trusted system of finding a healthy horse weight is the Henneke Body Condition Scoring System. This can be done by vets or horse caretakers to assess if steps must be taken to improve a horse's weight. A five on a scale of one to nine is considered to generally be the optimal state for horses to be in, with larger numbers indicating a horse is more overweight and smaller numbers representing more underweight.

Table 1. Characteristics of Individual Condition Scores

Condition	Neck	Withers	Loin	Tailhead	Ribs	Shoulder
1: Poor	Bone structure easily noticeable, animal extremely emaciated, no fatty tissue can be felt.	Bone structure easily noticeable.	Spinous processes project prominently.	Spinous processes project prominently.	Tailhead (pinbone) and hook bones project prominently.	Bone structure easily noticeable.
2: Very Thin	Faintly discernible, animal emaciated.	Faintly discernible.	Slight fat covering over base of spinous processes. Transverse processes of lumbar vertebrae feel rounded. Spinous processes are prominent.	Tailhead prominent.	Slight fat cover over ribs. Ribs easily discernible.	Shoulder accentuated.
3: Thin	Neck accentuated.	Withers accentuated.	Fat buildup halfway on spinous processes but easily discernible. Transverse processes cannot be felt.	Tailhead prominent but individual vertebrae cannot be visually identified. Hook bones appear rounded but are still easily discernible. Pin bones not distinguishable.	Slight fat cover over ribs. Ribs easily discernible.	Shoulder accentuated.
4: Moderately Thin	Neck not obviously thin.	Withers not obviously thin.	Negative crease along back.	Prominence depends on conformation; fat can be felt. Hook bones not discernable.	Faint outline discernable.	Shoulder not obviously thin.
5: Moderate	Neck blends smoothly into body.	Withers rounded over spinous processes.	Back level.	Fat around tailhead beginning to feel spongy.	Ribs cannot be visually distinguished but can be easily felt.	Shoulder blends smoothly into body.
6: Moderately Fleshy	Fat beginning to be deposited.	Fat beginning to be deposited.	May have slight positive crease down back.	Fat around tailhead feels soft.	Fat over ribs feels spongy.	Fat beginning to be deposited.
7: Fleshy	Fat deposited along neck.	Fat deposited along neck.	May have positive crease down back.	Fat around tailhead is soft.	Individual ribs can be felt, but noticeable filling between ribs with fat.	Fat deposited behind shoulder.
8: Fat	Noticeable thickening of neck, fat deposited along inner buttocks.	Area along withers filled with fat.	Positive crease down back.	Tailhead fat very soft.	Difficult to feel ribs.	Area behind shoulder filled in flush with body.
9: Extremely Fat	Bulging fat. Fat along inner buttocks may rub together. Flank filled in flush.	Bulging fat.	Obvious positive crease down back.	Building fat around tailhead.	Patchy fat appearing over ribs.	Bulging fat.

From Henneke et al. Equine Vet J. (1983) 15 (4), 371-2.

## Hoof Trimming and Shoeing

A horse's hooves should be trimmed regularly to maintain a healthy and comfortable way of moving. Hoof trimming removes excess hoof wall growth to allow the horse's natural movement and prevents long hooves from interfering with their sense of balance. Much like a human's fingernails, a horse's hooves grow continuously throughout their lives, so even horses that are not ridden must have their hooves trimmed. The interval between trimmings depends upon the particular horse's hooves, activity, and environment, but the average time is 6-9 weeks (depending on the horse and situation, it can be as often as every 4) between hoof trimmings.

A professional farrier is important to get the best quality of hoof trimming with very little risk of injuring the horse. You can trim hooves yourself, but only do so if you are very familiar with proper technique and have the right materials. A hoof pick, rasp, and clippers are necessary for a basic trim and can be found at most tack stores. After cleaning out the entire hoof thoroughly with the hoof pick, the clippers should be used to trim some of the excess hoof wall beyond the white line, keeping it as level and symmetrical as possible. The rasp is then used to file down the wall to even and smooth it out. The base of the hoof should be a level plane perpendicular to the bone column above it. Only trim a horse's hooves if you have been trained by an experienced person, as accidental damage to the hoof can easily cause lameness.

Many horses can be "barefoot" without shoes but horses should be shod if:

- The wear on a horse's hooves exceeds their growth
- It will enhance performance for shows or competition
- It will act as a treatment for a medical or conformation (the shape/structure of a horse) concern
- The horse is in a particularly rocky environment that could cause bruises or sores.

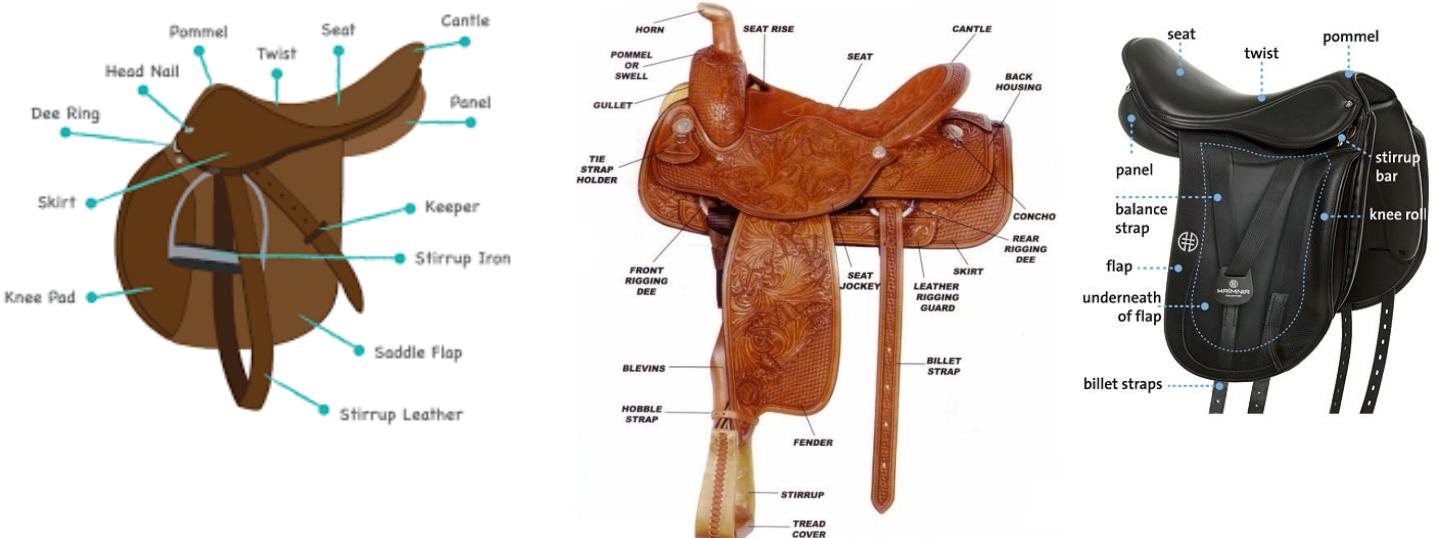
There are many shoe options depending on a horse's needs, so make sure to ask a farrier about options. For instance, some horses may only get shoes on their front or back hooves depending on their natural movement and build. Horses with shoes should be reshod every 6-9 weeks on average, depending on the horse. It is important to have a professional, a farrier, shoe horses, since it requires more specialized tools and skill to do so properly. Correct shoeing and trimming is particularly important for gaited breeds of horses, ideally by a farrier with experience with gaited horses.

## Tack Fit

Just like clothes for humans, not all tack fits all horses. Ill-fitting tack can cause soreness and irritation and can be dangerous to both the horse and rider, so it is important to evaluate and adjust all tack for proper fit.

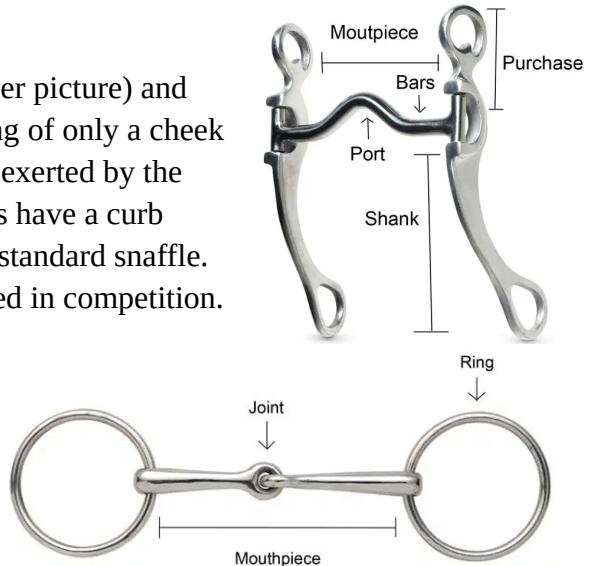
**Saddles:** English, Icelandic, and Western saddles should be placed behind the shoulder blades, not placing any pressure on them when riding. Often, the girth/cinch rests about a hand width back from the elbows, but it all depends on the horse's conformation. Here are some tips to determine if a saddle fits correctly:

1. Clearance above the withers should be about the width of 2-4 fingers.
2. The seat should appear parallel to the ground when positioned on the horse's back.
3. On the underside of the saddle, you will see a space, called the channel or gullet, between the two panels running the length of the saddle. The panels should rest on either side of the horse's spine, allowing the gullet to completely clear the spine.
4. The panels are meant to distribute pressure evenly, so checking their fit is crucial. Pressing down on the saddle with one hand, run the other hand around the front, sides, and back of both panels.
5. The weight-bearing area of a horse's back is supported by the ribs, therefore, the saddle should not be longer than the last rib when it is properly positioned. Some saddles reach beyond the last rib, especially the skirt of western saddles, but it is not an issue unless there is pressure put on the lumbar.
6. The girth/cinch should be tightened so that four fingers can fit snugly under it when riding. The rear cinch on a western saddle should be slightly looser, but still no more than a fist should be able to fit between it and the horse's abdomen.



*Icelandic Saddle positioning:* An Icelandic saddle should be placed behind the shoulder blades like English and Western saddles. Leaving room for the shoulder to move is particularly important for Icelandics, allowing for their large, extended shoulder movements. Feel for the edge shoulder blade and position the saddle about four fingers behind it. The saddle should never be placed so far back or be so long that it extends behind the horse's last rib, as this can cause "saddle lameness" and be very harmful to the horse.

*Bits:* There are two main types of bits: the snaffle bit (lower picture) and the curb bit (upper picture). Snaffles are simpler, consisting of only a cheek piece (or ring) and a mouthpiece. If one pound of force is exerted by the rider, then the horse feels one pound of pressure. Curb bits have a curb chain/strap, port, and shank in addition to the parts of the standard snaffle. They are rarely used for Icelandic horses and are prohibited in competition. The shank adds pressure to the horse's poll, so if the rider gives one pound of pressure then the horse could feel up to four pounds of force. Curb bits can be alright for some horses and riders, but should be used with care just like any bit due to the sensitivity of horses' mouths. No matter what type of bit you use, they should fit properly to be the most effective and comfortable.



1. Length: take a piece of baling twine or string and place it in the horse's mouth horizontally, holding it in the corners of the mouth where the bit would rest. Mark right up against each cheek and measure the distance between the two marks. This will be the bit size you need. You should not be able to see more than a half inch of mouthpiece between the lips and the bit ring on each side, but the rings should not press against the face.
2. Width: The width of a bit refers to its circumference and is usually measured in inches or millimeters. In most cases, thinner bits are more severe in a horse's mouth and thicker ones are more gentle. However, if a bit is too thick for the height of the roof of a horse's mouth, it can cause continuous pressure in the mouth. If you are unsure of what bit width to use, ask a professional and try moderately thicker bits first before moving to thinner bits if needed.
3. For curb bits, larger ports and longer shanks will be stronger, so start with smaller curbs and shorter shanks before trying bigger ones if needed.

*Bridles:* When attached to the bit and placed behind the ears, the cheek piece should not be slack but not be tight. It should look as if the horse was smiling with only a couple of wrinkles at the corners of the mouth. At least four fingers should be able to be slid under the throat latch to ensure it does not interfere with breathing. You should be able to fit two fingers under the browband (the strap horizontal on the forehead or sometimes a loop in front of one ear) and it should not pull the crown or cheek pieces out of a straight line.

**Nosebands:** Nosebands can be very helpful to stabilize a snaffle bit in the horse's mouth while riding. In order for them to be most useful and comfortable, they should be properly adjusted for the individual horse. Note that nosebands are not used for curb bits since drop nosebands interfere with their movement and cavessons are not necessary to keep the horse from opening its mouth to evade the bit.

1. Cavesson nosebands: the top edge of the noseband should sit roughly a finger width below the bottom of the cheekbone. It should be tightened so that one finger can fit in the noseband under the jaw. The cheekstrap of the bridle should rest outside of the noseband.
  
1. Drop nosebands: this noseband should rest about four fingers width above the nostril, on the bony part of the nose. It should be buckled underneath the chin to leave about two fingers' room between it and the jaw bone. Drop nosebands should be placed overtop of the bridle and bit to secure them in place.



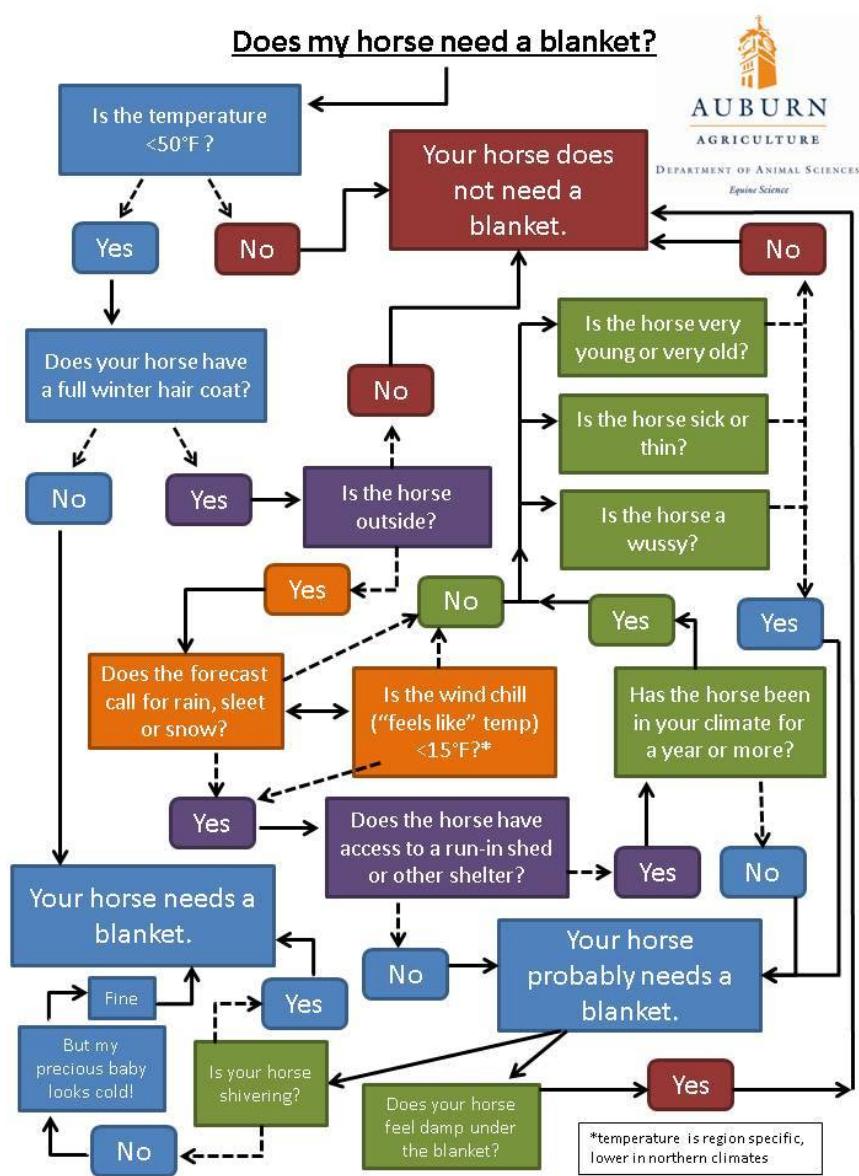
**Cruppers:** Cruppers attach to the back of a saddle and loop around the tail to keep the saddle from sliding forward. Correctly fitted saddles do not need cruppers, so if one is necessary to keep the saddle in place, the saddle does not fit the horse.

**Breastplates:** Much like cruppers, breastplates clip onto the saddle to keep it from sliding too far out of place. Breastplates attach to the front D-rings of a saddle on either side and the girth between the front legs. It should leave room for the shoulders to move freely, but still prevent the saddle from sliding backwards.

## Winter Horse Care

**Water:** Just like in the summer, horses should have access to water 24/7 throughout the winter months. Depending on the temperature, a heater may be needed to prevent water troughs from freezing over.

**Blanketing:** No matter the time of year, allowing horses to spend time outside is great for their mental and physical health. In the winter, however, some horses may need blankets to keep warm, especially when outside. Clipped horses, horses that are accustomed to blanketing and so have not developed a thick coat, and older horses may require blanketing. Most Icelandic horses with a nice winter coat do not need to be blanketed in the winter since blankets weigh down the hair and reduce its insulation.



Clipped horses, especially those with a full-body clip, need more blanketing in cold or rainy weather.

Note that the temperatures mentioned on this flowchart are for most horse breeds, not Icelandics. Since Icelandic horses have much more hair, they do not need blankets at such high temperatures.

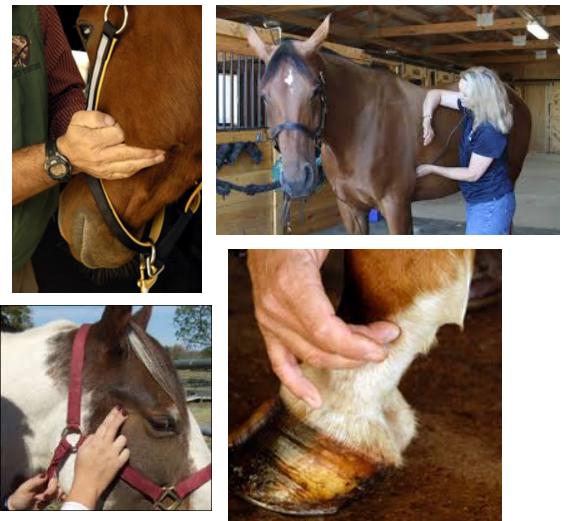
**Feeding:** Moderating their temperature expends energy, so horses in the winter may need more calories than they would in the summer with the same amount of exercise.

## Measuring Vitals

When a horse is healthy, it is a great idea to pay attention and take note of their baseline vitals in order to have something to compare with when you suspect they may be sick.

**Temperature:** To take a horse's temperature, first lubricate the thermometer with Vaseline or water. Stand by the side of the horse's hip to reduce the chance of being kicked and gently slip the thermometer into the rectum, aiming slightly upward. Leave it in place for about a minute or until it beeps. Always attach one end of a string to the thermometer and hold the other end to prevent it from getting pulled in. A healthy equine temperature is between 100.0F and 101.3F.

**Pulse:** Run your fingers along the bottom of the jaw bone to find the artery, feeling like a small cord. Press lightly and count the pulse for fifteen seconds, then multiply by four to get the number of beats per minute. You can also check the heart rate by using a stethoscope just inside the left elbow or gently pressing on the pastern or behind the eye, as shown. Depending on the horse's size, a healthy pulse ranges from 28-44 beats per minute (smaller horses have more per minute).



**Respiratory Rate:** Stand beside your horse's tail and count the number of times the rib cage expands in fifteen seconds. Make sure to count either inhales or exhales, not both. Multiply that measurement by four to find the number of breaths per minute. Another way to do this is to watch the nostrils or place a hand in front of them to feel each exhale. Breathing should be even and between 10-24 breaths per minute.



**Mucous Membranes:** The horse's gums should appear moist and a healthy pink color.

**Capillary Refill Time:** After putting pressure on the gums, the point of pressure should return to a pink color in less than two seconds.

**Manure and Urine:** A horse should pass manure about 8-12 times per day and urine should be a clear or slightly cloudy wheat color.

**Behavior:** Horses should appear alert and interested in their surroundings, but not unusually agitated. They may shift their weight off of a leg while standing, but should not lift it in the air or have trouble bearing weight on it. Rolling occasionally is perfectly normal, especially after being turned out or washed, but they will usually shake the dust off afterwards. If a horse rolls frequently and/or does not shake afterwards, it could be colicking (pg 14).

*Appetite:* A loss of appetite is an important sign of illness, but could also be caused by tooth problems or other mouth discomfort. Taking the horse's temperature is the first step in checking whether a horse might be ill.

*Lameness:* Many injuries of varying severity can lead to lameness in horses. Lameness can be anywhere from obvious limping to more subtle unevenness while moving or standing. This indicates pain in one or more limbs of the horse, and therefore should be brought up to a vet.

## Common Equine Illnesses

If you suspect your horse has any of the following illnesses, contact a veterinarian immediately. See the (pg 19) for more information on when to call a vet.

**Colic-** a horse stomach ache ranging from a slight discomfort to a life-threatening emergency:

Symptoms include: biting/kicking/looking towards stomach, rolling (repeatedly or without shaking afterward), lying down more often, loss in appetite, high pulse, sweating, heavy breathing, restlessness/pawing, not passing manure

Prevention: Stick to a feeding and exercise routine, make sure diets include enough roughage (fiber) and avoid feeding too many energy-dense grains, regulate parasites by deworming, avoid putting food on the ground- especially on sandy soil, and reduce stress as much as possible, and consider feeding a psyllium supplement for horses that live in sandy areas or eat off the ground

What to do: Measure vitals and check for new manure, if worried about colic call a vet, check on the horse at least every 15-20 minutes, do not feed hay or grain but always allow access to water, and only medicate according to vet advice. If the horse is showing severe or violent symptoms, it is an emergency and you need to immediately get in contact with a vet and may need to trailer the horse to the nearest animal hospital, preferably in a trailer with no dividers to prevent a horse getting cast (stuck) under one if it lays down or rolls.

**Parasites-** organisms that live inside the horse's body, and can often cause weight loss:

Prevention: Run a Fecal Egg Reduction Count Test (FERCT) before and after deworming to determine which dewormer is most effective; contact a vet to test manure annually in order to classify your horse as a high, medium, or low shedder and treat accordingly

	Low Shedder <200 eggs/gram feces	Medium Shedder 200-500 eggs/gram	High Shedder >500 eggs/gram
September	Ivermectin Praziquantel	Ivermectin Praziquantel	Ivermectin Praziquantel
November	_____	Oxibendazole or pyrantel	Oxibendazole or pyrantel
December	_____	_____	Moxidectin
March	Moxidectin Praziquantel	Moxidectin Praziquantel	Moxidectin Praziquantel

**Thrush- fungus in the hoof:**

Symptoms: Thick, black, smelly discharge indicating an infection of the frog of the hoof

Prevention: Picking and cleaning of hooves, regular exercise and turning out of horses, a healthy diet, and a clean, dry environment.

**Equine Encephalomyelitis (sleeping sickness):**

Symptoms include: loss of appetite, more excitable, walking into things, drooping lower lip

Prevention: Annual revaccination in the spring for the western or eastern strains depending on location in the US, for horses with lessened immunity or at high risk a veterinarian may elect to vaccinate more often

**West Nile Virus- a mosquito-borne disease:**

Symptoms include: lack of hind end coordination, depression, heightened stimulation to stimulus, stumbling, leaning to one side

Prevention: Annual vaccination in the spring, horses with limited immunity may be revaccinated more often according to a vet's recommendation.

**Strangles- a highly contagious infection:**

Symptoms include: fever, nasal discharge, cough, loss of appetite, trouble swallowing, swollen lymph nodes around the throat

Prevention: Discuss vaccination with your vet, don't overstock your facility, quarantine sick horses including decontaminating clothing, hands, and equipment

Treatment: Isolate affected horse, contact a veterinarian, keep horse dry and at a comfortable temperature, provide soft food, and apply hot compresses to abscesses to promote rupture and drainage. Contact a vet immediately if you suspect strangles, since it is extremely contagious

**Tetanus (Lock jaw)- a bacterial infection from Cl. Tetani spores in manure, soil, or dust entering through a wound:**

Symptoms include: A wound from a dirty material, fever, muscle spasms, stiffness in the jaw or neck and hind limbs, inability to chew, dilated nostrils, sweating, and inability to move, so-called sawhorse stance. Contact a vet immediately if you suspect a tetanus infection as this is a life-threatening condition.

Prevention: Vaccinate annually. If unvaccinated, an antitoxin should be administered after a wound could be at risk of a tetanus infection

**Potomac Horse Fever- bacterial infection carried in flatworms (flukes) and transmitted to other insects horses inject while grazing or drinking out of natural bodies of water:**

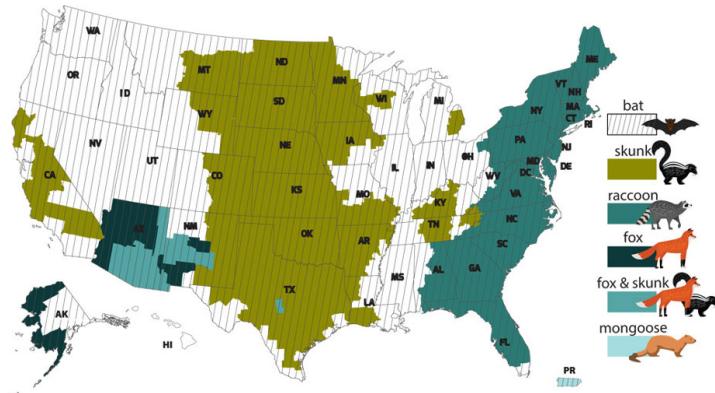
Symptoms include: fever, lameness, diarrhea, mild colic, and decreased abdominal sounds

Prevention: Vaccination on a 6-12 month schedule for horses living in the eastern United States or sometimes on a 3-4 month schedule for horses in an endemic area based on veterinarian recommendation

#### Rabies- virus from animal bites:

Symptoms include: Bite mark, other symptoms such as colic, lameness, depression, and agitation, arise after it is too late to save an unvaccinated horse

**Prevention:** Annual vaccination and immediate vaccination if exposed to a rabid animal



Found from [https://www.cdc.gov/rabies/location/usa/surveillance/wild\\_animals.html](https://www.cdc.gov/rabies/location/usa/surveillance/wild_animals.html)

Botulism- illness caused by ingesting toxins from bacteria:

Symptoms include: looking sleepy, drooling from the corner of the mouth, loss of tongue control, “Playing” with food, muscle trembling, sweating, heavy breathing, paralysis, sudden death.

Prevention: Check hay for contamination including animal carcasses and keep healing wounds free from infection. Vaccines may be available depending on location. Contact a vet immediately if you suspect your horse is suffering from botulism as this is a life-threatening disease.

## Common Equine Injuries

**Stocking up-** fluid pooling in the lower legs causing swelling:

Symptoms: swollen lower legs, especially hind legs, without pain to the touch, pitting edema (if you press on the swollen area, it leaves an indent)

Prevention: regular exercise and turnout, possibly stable bandages while not working

Treatment: swelling will dissipate with exercise, cool and wrap the affected leg after exercise; call a vet if the leg is heated or tender

**Sunburns-** sun damage to skin especially on lightly colored or shaved areas:

Symptoms: Pink, tender, and possibly flaky areas on skin, especially areas with little hair such as the nose

Prevention: Apply sunscreen to nose or ears prone to sunburn, especially with white hair; limit turnout during times of direct sunlight

Treatment: For minor sunburns apply a thick layer of sunscreen to the area and prevent further burning; call a vet if it is serious enough to cause blistering

**Cuts and scrapes:**

Prevention: Check fencing and paddock area for potential dangers

Treatment: Clean the wound with water and cover it with antibiotic ointment (for minor surface scrapes, simply wash with no ointment to avoid dirt becoming trapped in); depending on size and location, consider adding some gauze dressing and wrapping it in vet wrap to prevent infection and irritation (check twice a day for infection); for injuries around the eyes, joints, or mouth or major wounds that need stitches or pain medications call a vet

\*Any puncture wound or infection (shown by swelling or foul discharge like pus) should be treated by a vet.\*

**Mouth sores:**

Symptoms: tenderness to the bit, eating slowly or less often resulting in weight loss if it continues without intervention

Prevention: Check bit and bridle fit (See pg 8); regularly have teeth checked by a vet

Treatment: Treat the cause, like ill fitting tack or sharp teeth; get the horse's teeth floated (filed down) by a vet every year; if they are blisters, call a vet as this may be a symptom of a disease that must be treated

**Saddle sores:**

Symptoms: bald spots caused by tack rubbing or white hair from tack pressure, commonly located along the back or girth area

Prevention: Use well-fitted tack (pg 8); use a saddle pad that reduces chafing; clean tack and groom horse often

Treatment: Do not irritate the area further and apply balm; adjust or change tack to

address the issue; do not attempt to add more padding since it will only add more pressure to the area

**Hoof abscesses-** pus trapped behind the hoof wall or sole:

Symptoms: Lameness possibly seeming to begin suddenly; often palpitation of the hairline or heel is painful; clearer pulse in the limb, indicating blood flow changes causing hoof throbbing

Prevention: Maintain a clean and dry environment for your horse; trim hooves routinely; remove nails, glass, etc from your horse's area

Treatment: Call a vet who will likely drain the abscess; keep the area clean and bandaged as indicated by the vet

**Insect bites:**

Symptoms: Small lumps that may be itchy or painful

Prevention: Remove manure from the horse's surrounding and make sure the manure pile is far enough away; use fly spray, masks, and/or sheets; use fly traps and tapes

Treatment: Bathe with a mild shampoo and use topical anti-itch ointment like calamine lotion or zinc oxide cream; apply vinegar or lemon juice to a wasp sting; bathe bee stings in baking soda and try to remove the stinger with tweezers

## When to Call A Vet

Often the true cause or severity of an illness or injury is unclear which can make determining when to call a vet a difficult decision in some situations.

Check for the four Bs:

1. Bleeding- profuse or persistent, or injuries requiring stitches
2. Behavior- abnormal like lack of appetite or significant fatigue
3. Breathing- labored or raspy breath sounds
4. Basic vitals- anything significantly out of the ordinary for your horse (see pg 12)

And remember... when in doubt, call a vet!

Possible emergency vet calls include:

- Bleeding profusely that will not stop
- Any cut that requires stitches
- Injury from an object that could cause tetanus, such as a rusty nail
- Obvious or suspected fractures
- Lameness accompanied by heat and swelling
- Difficulty breathing
- Choking- extended neck and saliva or food particles may exit through the nostrils
- Seizures
- Watery diarrhea- could lead to dehydration
- Eye injuries or a horse holding its eye shut
- Colic- especially if horse is rolling or in pain
- Abnormal vitals, like elevated pulse while at rest or a high temperature (see pg 12) or significant changes in behavior like a loss of appetite.

## Resources

At <https://www.youtube.com/watch?v=YGYYs2av5C4&t=1s> you can find a video explanation of this project as well as a demonstration of some key concepts of horse care and safety.

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<https://aaep.org/horsehealth/signs-healthy-horse>.

Colic: "Colic Prevention Tips: AAEP." *AAEP*, <https://aaep.org/horsehealth/colic-prevention-tips>.

Parasites: Castro, José, DVM. "Equine Parasite Control." *University of Tennessee*.  
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Tetanus: Nelson, Winnie. "Lockjaw." *Rutgers Equine Science Center*. <https://esc.rutgers.edu/lockjaw/>

Stocking up: "Swollen or Filled Legs: What's Wrong With Your Horse?" *Kentucky Equine Research*. <https://ker.com/equinews/swollen-filled-legs-whats-wrong-horse/>

Saddle sores: Thomas, Heather. "Saddle Sore Spots." *The Horse*.  
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