

First Aid

The Basics

Temperature	37.2°C – 38.5°C
Heart Rate	24 – 44 beats per minute
Respiration Rate	8 - 16 breaths per minute
Gums	pink and moist, good capillary refill
Gut Sounds	present in all quadrants
Digital Pulses	should barely be able to feel them

These can all vary based on environment and horse fitness. They should be regularly monitored and recorded. When taking your routine readings take them at in many situations and environments to become familiar with their normal values.

Temperature **37.2°C-38.5°C**

- Should be taken rectally
- A digital thermometer is the easiest to use

Pulse **24-44 beats per minute**

- Pulses can be taken in multiple locations
 - Under the jaw
 - Beneath the tail
 - Side of foot
- Count for 15 seconds then multiply by 4 to get beats per minute

Respiration **8-16 breaths per minute**

- Watch or feel ribcage, watch the nostrils or place your hand in front of nostrils or place stethoscope on chest or on the windpipe
- One inhale and exhale is one breath
- Count for 20-30 seconds and multiple by 3 or 2 to get breaths per minute

Mucous Membranes

- These are the lining of eyelids, gums, inside of nostrils (if pink)
- They are an indication of circulation and hydration
- CRT: Capillary refill time normal 1-2 seconds
- Colour:

pink:	healthy, normal
very pale pink:	anemia, blood loss
bright red:	toxicity, shock
grey/blue:	severe shock, illness
bright yellow:	liver problems

Gut Sounds

- Gut sounds should always be present
- Absence of gut sounds is more indicative of a problem than increased sounds
- Toi check, press your ear or a stethoscope on horse just behind last rib
- Always check both sides!

Hydration Status

- Pinch the skin on the horses neck. If it flattens in about a second then horse is ok
- Tacky (your finger kind of sticks) mucous membranes may indicate dehydration

- Most average sized (1000 pound) horses drink about 20 liters (5 gallons) of water every day under normal conditions

Digital Pulses

- Taken on the inside of the fetlock near the back of the leg
- These are especially important to check when a horse is sick for a prolonged period of time or if they are suddenly lame.
- Increases indicate inflammation and/or pain in the foot that the pulse is increased on.
- The most common causes of increased pulses are laminitis (founder) and abscesses

What do do in an emergency

1. Keep calm and assess the situation
2. Take temperature, heart rate, respiration rate, assess mucous membranes, hydration status, gut sounds – record everything
3. If bleeding – take measures to stop the bleeding with a pressure bandage
4. Call vet for further instructions – make sure to ask if it is safe to transport the horse or not. In some situations it is illegal to transport animals.

Colic

It's simply a belly ache! There are a multitude of causes of colic. Some of these are quite severe, some of them are not. It's important to call your vet if you think a horse is colicing. They have the best knowledge to determine if they need to be seen or if you can do something at home to help relieve their pain. Do not give any medications or home remedies unless ok'd by a veterinarian. When calling your vet you should have some information ready for them. This includes the age and gender of your horse, any recent feeding changes, medications, vaccines, deworming, a current temperature, heart rate, respiratory rate, gum colour and if they have produced any feces or urine recently.

Signs of colic include:

- Decreased appetite
- Lethargy
- Laying down longer than normal
- Single animal off by itself
- Sudden lameness
- Squinting, tearing or holding the eyes closing
- Fever
- Purple or red gum colour
- Increased respiration rate

Eyes

As a general rule eyes are **ALWAYS** an emergency that needs veterinary attention. Do **NOT** use any cleaners except for water on an eye as most cleaners cause a lot of damage to the surface of the eye. Most of the time eye injuries can be healed at home with appropriate medication and some dedication.

Sudden Lameness

When horses come up suddenly lame there are many possible causes. Some of the reasons can include abscesses, cellulites, founder, navicular disease, foreign bodies and fractures. A detailed in depth exam is needed to determine the cause, but a general rule is that 90% of lameness in the horse occurs in the front feet. When assessing your horse you should look for heat or swelling anywhere on the leg and an increase in digital pulses. If you aren't sure if something is normal check the other side on the same horse, or check the same area

on another horse. If you find a foreign object in any part of the leg, especially in the foot, leave it in place. This can be essential to determining if any vital structures have been involved in the injury.

Once you've assessed your horse make sure to call your veterinarian before giving any medications or making any other treatment decisions. The use of some medications can alter or mask the clinical signs of what is happening and may make a definitive diagnosis difficult. Always check with your vet before transporting a lame horse – in some instances it is illegal to transport an animal.

Lacerations

If a wound is bleeding profusely, stop the bleeding with a very tight bandage. These can be used for short periods of time to reduce blood loss without compromising circulation to that area of the body. Wounds greater than 8 hours old are harder to heal and take longer to resolve than those that are caught right away. Any wounds over a joint are of utmost importance and need to be assessed by a veterinarian to ensure the joint is not involved. If a joint is involved in a wound significant infection can settle into the joint and this infection can cause irreversible damage. Good wound healing depends on a combination of appropriate oxygen levels, decreased movement and cleanliness.

If your vet cannot attend your animal right away or if you cannot get a hold of a vet then you can gently clean the wound with warm, clean water. To do this use an 18 gauge needle on a 30 or 60cc syringe. This needle and syringe combination creates the right pressure to remove debris without flooding the tissues or causing further damage. Do not cold hose a wound if it is over a joint. Once the wound is clean, take a picture and place a clean, dry bandage overtop. Make sure that you speak to your veterinarian as soon as possible. The use of antibiotics and anti-inflammatories depends on the wound location, depth, what the cut was caused by and how long it's been since the wound occurred.

It's also important to remember to administer a tetanus vaccine booster if your horse has not had a vaccine in the last 6 months. Horses are 10x more susceptible to tetanus than any other species and open wounds are the route which the bacterium gains entrance to the body.

You can speed healing of wounds through a variety of different techniques. These will differ a little based on the type of wound that has occurred. One thing to remember is that horses are quite good at developing proud flesh, especially on the lower limbs. With the right combination of materials proud flesh can often be avoided. In cases where a wound will not heal as expected, or where it heals and then reopens at a later date with no explanation then a sequestrum (a dead piece of bone) or a foreign body may be present and need to be removed. These are found through the use of x-rays and often do not show up for at least a month, and sometimes occur years, later.

Cleaning wounds is a delicate process. When getting ready to clip, clean and bandage the wound you should have everything you need ready to do the job. Before clipping the hair, place a large amount of clean KY jelly in the wound to prevent hair contamination. Once you've clipped the wound and you go to clean it, the hair should come off with the KY jelly and make the job of cleaning the wound much easier.

Antibiotics and Pain Medications

Do not give anything until you speak to your veterinarian. Do not give injectable bute or banamine in the muscle as it can cause a potentially fatal disease called clostridial myositis. Do not give antibiotics unless told to do so by a vet – depending on wound location, how chronic it is, using the wrong one may not work, and if we have to switch may cause a severe colitis (diarrhea/inflammation in the intestines).