



Normal Vital Signs of the Adult Horse

Temperature - 100.5°F

Pulse - 36-40 beats per minute

Respiration - 12-16 breaths per minute

Capillary Refill Time - less than 2 seconds

Mucous Membranes - pale pink

Horse owners should become familiar with the normal parameters of their horse and learn how to properly check vital signs. Ask your veterinarian to show you how to properly take your horse's temperature, pulse and respiration, and check capillary refill time and mucous membranes. In the event



of an illness or emergency, this information will enable you to give your veterinarian a more complete medical history and profile. After learning the protocol, practice taking your horse's vital statistics regularly so that you will be fully prepared and comfortable taking vitals in an emergency situation.

Basic First Aid Priorities for Horses

Whether you are a first time horse owner, or have had horses for many years matters little. You will be surprised how many horse owners and caretakers do not recognize life threatening injuries or illnesses. For the most part, minor injuries or illnesses can be cared for by the owner or barn manager. These types of injuries include minor cuts or abrasions and should be tended to the moment they are discovered. These can be treated with a mild antiseptic or alternative products such as Tea Tree oil or calendula cream. Always clean the area thoroughly with mild soap and water, inspecting the abrasion for any foreign matter, then apply the appropriate cream or ointment. You may find that an initial treatment with effective or beneficial microorganisms or bentonite clay enriched with tea tree oil and honey will be even better than creams and ointments. Minor abrasions should be checked or monitored daily to insure that no infection occurs.



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Non-life threatening injuries or illness can be accompanied by severe pain. These may include a fracture, burns, lacerations that do not include extensive bleeding but may require stitches. Isolate the animal and inspect the injury for any secondary injuries, as well as call on your veterinarian.

Life-threatening injuries or illness include severe bleeding where blood is pulsating or flowing freely from a wound or, no sign of breathing, or a rapid, uncontrollable heartbeat. These require immediate attention from a veterinarian. Stop bleeding by first remaining calm, and immobilize the horse. Apply pressure directly to the site with a clean cotton gauze or cloth in hand. Apply an ice pack to the site if the source of the bleeding is inaccessible. Do not dab or wipe the site as this will promote bleeding. Do not clean the site until the bleeding has stopped. Aggravating the area may encourage fresh bleeding again.

Pulse and Heartbeat

A normal pulse of the horse varies according their breed, age and weight. However, the normal pulse rate ranges from 30 to 42 beats per minute (bpm). Faint digital pulses are normal and indicate there are no major issues in the hoof.

There is some natural variation in pulse strength. All horses are different, so checking pulses frequently will help you learn your horse's normal.

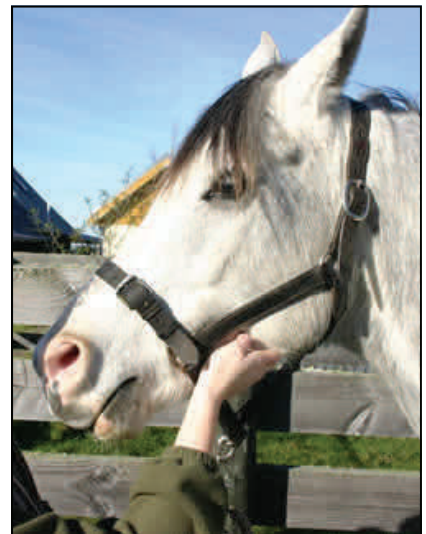
A pulse rate of 50 or higher in an adult horse at rest may mean the horse is in physical distress. The average pulse rates for young horses are:

Foals (70-120 bpm), Yearlings (45-60 bpm), 2yr. olds (40-50 bpm).

Red Flags

An easily felt equine digital pulse is commonly called a bounding digital pulse. The sensation is like a throbbing headache or an injured finger. It is not an increase in speed, but instead an increase in strength.

A bounding digital pulse is a red flag. It is telling you that your horse may





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have a health issue. Slightly stronger is not as alarming as very strong. If the pulse seems stronger than normal, make sure to check a few times before assuming something is wrong.

Stronger pulses indicate inflammation and/or pain. Compare pulses in all four feet. This way, abnormalities in one hoof will be more apparent.

If there are bounding pulses going to just one hoof, then suspect a localized issue, possibly an abscess or a bruise. More than likely this is a pain response to an injury.



Stronger pulses in two or four feet indicate a systemic problem. Your horse may have laminitis. Before you panic, look at

your horse carefully. If he appears normal, happy and comfortable, then it may be a common variation in his pulses. If, on the other hand, you are noticing foot discomfort, personality changes or anything that leads you to believe he is not doing well, then suspect laminitis.

The strength of the pulse and your horse's behavior will help you determine what you should do. Strong bounding digital pulses and hoof sensitivity are often the first signs of laminitis. If the conditions causing inflammation are addressed quickly, the horse should improve rapidly with very few complications. This is why taking pulses is such a useful management tool.

If the horse looks miserable or you are overly alarmed, call your veterinarian. Use your common sense. Trust your horse and your instincts.

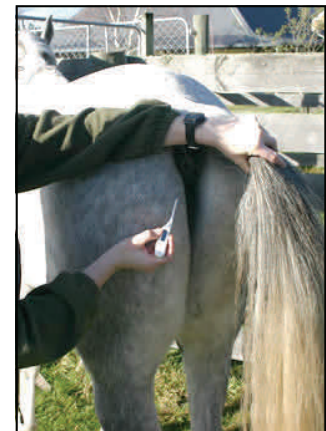
Learn to take digital pulses before there is a problem.

To get a good reading on the pulse the horse must be kept calm and quiet.

Place a finger on the artery that passes under the lower jaw or on the leg as indicated in the picture. It would be good for you to locate this spot now, while your horse is well, and make a note of his pulse rate in your record book.

Temperature

While you checking for this artery, this might be a good time for you to check your horses temperature and record that as well. The normal temperature for a horse ranges between 37.7 degrees C (99.5 degrees F) and 38.6 degrees C (or 101.5 degrees F).





If the temperature remains outside that range, it is a good indicator that the horse has an infection or some other illness. You may use an ordinary household thermometer. Shake the mercury down to below 37.7 degrees C (or 99.5 degrees F). Smear the thermometer with a non-irritant lubricant such as petroleum jelly or egg-white (saliva will do nicely as well).

Holding the tail back with one hand, insert the thermometer into the horse's anus and hold the thermometer securely for 2 minutes before checking. Many veterinarians use a thermometer that is approximately 5" in length. Some have a ring on the end where a cord can be attached. This is an excellent safety measure, insuring the horse does not suck the thermometer inside. We recommend that you keep a thermometer like this in your first aid kit.

Respiration

The average respiration rate of an adult horse at rest is 12-16 breaths per minute. A horse's respiration rate increases with hot or humid weather, exercise, fever or pain. Rapid breathing at rest should receive veterinary attention, and keep in mind that the respiration rate should **never** exceed the pulse rate. A horse should also spend equal time inhaling and exhaling.



How to check the Respiration Rate: Watch or feel your horse's ribcage/belly for one minute. Be sure to count 1 inhale and 1 exhale as one breath (not as two). Each breath is fairly slow. If you are having difficulty seeing the ribcage move, try watching the horse's nostrils or place your hand in front of the nostrils to feel the horse exhale. An even better method is to place a stethoscope to the horse's windpipe to listen to his breathing. This will also give you strange sounds if the horse's windpipe is blocked by mucous or if the he has allergies or heaves.

Gut Sounds

The gut sounds that come from your horse's stomach and intestines can be very important information for your vet to diagnose an illness. Gut sounds should always be present. The absence of gut sounds is more indicative of a



problem than excessive gut sounds.

Usually, an absence of gut sounds indicates colic. If you don't hear any sounds, contact your veterinarian.

How To Check for Gut Sounds: Press your ear up against your horse's barrel just behind his last rib. If you hear gurgling noises, he's fine. Be sure to check

gut sounds from both sides. If you do not hear any sounds, try using a stethoscope in the same area.



Dehydration

Healthy horses drink a minimum of 5 gallons of water per day. If your horse is dehydrated, it is very important that you urge him to drink. If he refuses to drink water, try adding flavor to it (Gatorade or apple juice is ideal), and contact your veterinarian if he still won't drink.



How To Perform a Pinch Test: Pinch the skin on your horse's neck. If the skin flattens back into place when you let go in less than 1 second, the horse is fine. If it doesn't, it means he isn't drinking enough water, he is dehydrated. The longer the skin stays pinched up before flattening, the more dehydrated he is.

Capillary Refill Time (CRT) is the time it takes for blood to return to blanched tissues in the gums. This is an indicator of blood circulation. Normal refill time is 1 to 2 seconds.

How To Check CRT: Lift your horse's upper lip up and firmly press your thumb against his gums for 2 seconds to create a white mark. This white mark should return to the normal pink color within 1-2 seconds after releasing the pressure. If the CRT takes longer than 2 seconds, the horse may have shock

The **mucous membranes** are the lining of a horse's eyelids, his gums and the inside of his nostrils. The color of the mucous membranes are another indicator of blood circulation. A healthy horse's gums are slightly more pale



than a humans. If a horse's gums are very pale, bright red, grayish blue or bright yellow, call a veterinarian immediately.

Color of Mucous Membranes:

Moist Pink: Healthy normal circulation.

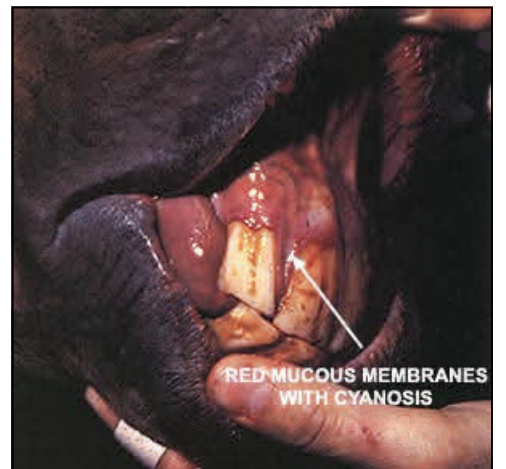
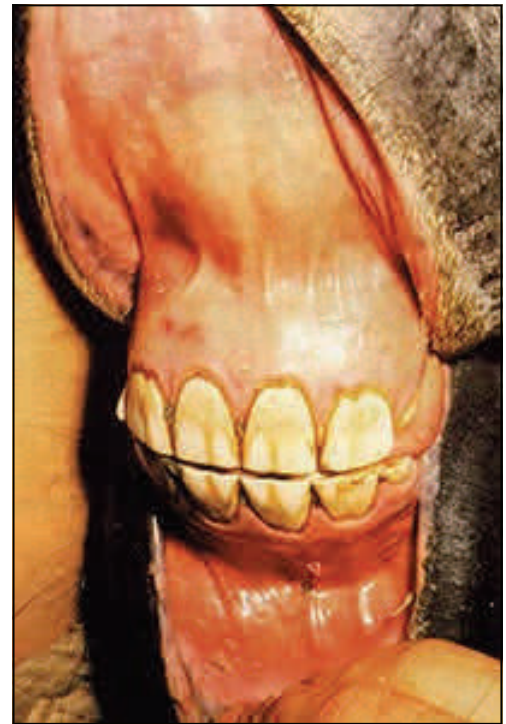
Very Pale Pink: Capillaries contracted, indicates fever, blood loss or anemia.

Bright Red: Capillaries enlarged, indicates toxicity or mild shock.

Gray or Blue: Severe shock, depression and illness.

Bright Yellow: Associated with liver problems.

Also in your record book, highlight your veterinarians name and telephone number. Make note of the horses age, average weight, general appearance and condition when normal. Also mark down his normal temperature and pulse rate. These will be a good reference for an emergency that may arise later. Always mark the date of any injury or treatment and what was administered to your horse. These logs can prove invaluable in case of an emergency.



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