



# The Horse's Vital Signs

by Horse Education Online

## Reading Vital Signs: A Lifesaving Skill

Being able to read a horse's vital signs is an essential skill for anyone who interacts with horses, whether as an owner, rider, or professional.

A horse's temperature, pulse, respiration rate, and capillary refill time are key indicators of its health. Recognizing subtle changes in these vital signs can help detect early signs of illness, injury, or stress, enabling prompt action before a condition worsens. This knowledge can save a horse's life in emergencies.

## Every Horse is Different: Learn Your Horse's Baseline

Familiarizing yourself with a horse's baseline vital signs while they are healthy is crucial for effective health monitoring.

Each horse is unique, and understanding their normal temperature, pulse, respiration, and other indicators provides a reference point for identifying potential problems. The variation in what is considered "normal" vital signs is dependent on the horse's fitness, age, breed, etc.

Regularly checking these baselines not only sharpens your skills but also ensures you can detect subtle changes early, giving you a head start in addressing health concerns. This proactive approach promotes better care and can prevent minor issues from becoming major emergencies.

In the event of an illness, your veterinarian will also appreciate knowing what is "normal" for your horse.

Remember: your horse's vital signs should be taken while the horse is at rest and recorded regularly along with any of your horse's individual peculiarities, like appetite and behavior.

## Respiration: 8 to 16 Breaths per Minute

The normal respiration rate of a horse is between 8 to 16 breaths of air per minute. Of course, exercise will increase that rate, so the respiration should be taken when your horse is at rest.

If your horse's respiratory rate exceeds the heart rate, your horse is in serious distress. If this occurs while you are riding, you must stop immediately and allow the horse to rest. If this doesn't correct itself you must call a veterinarian.

There are several methods to determine respiratory rates in horse. One, you can watch your horse's flanks move in and out, counting the rate per minute.

STwo, you can watch the nostrils flare and count them for 30 seconds and then double that amount for breaths per minute.

A horse's respiration rate may increase due to excitement, exercise, fear, work, pain or illness. If your horse has an elevated respiratory rate play detective and see if you can find the reason and monitor the rate to see if it returns to normal.

## Temperature: 99.5 to 101.5

A horse's temperature is taken rectally. If using a standard glass thermometer, it must be shaken to get the red mercury below the horse's normal temperature range, so at least below 95. Dip the thermometer in a Vaseline-type lubricant. Be sure to insert the thermometer all the way to avoid breakage.

A "Veterinarian" thermometer has a string and a clip so that the string can be clipped to the horse's tail for ease of removal and to prevent it from dropping. A digital thermometer is easier to use, but a cleaning process must be observed.

When inserting the thermometer make sure you are standing in a safe position, off to the side (usually the horse's left side), go slow and keep talking to your horse.

Taking your horse's temperature on a regular basis will let you know the baseline temperature for your horse so you will know if the temperature is high.

Carefully insert the thermometer all the way and leave for a full three minutes. After the three minutes quickly remove the thermometer and wipe it clean, wash and clean again with disinfectant solution, rinsing again before storing.

Temperatures over normal:

- 101 - May not be a concern for some horses. If this is not within your horse's normal range, continue monitoring.
- 102 - The horse should rest and temperature should be taken frequently.
- 103 - A veterinarian should be called.
- 104 - This is considered a moderate temperature that requires a veterinarian.
- 106 - This is a very sick horse.

## Heart Rate:

28 to 40 BPM in Adults

40 to 60 BPM in Yearlings

60 to 80 BPM in Foals

A horse's heart rate is a very good indication of fitness. Endurance horses are required to stop at intervals in the race to have their heart rate and respiration monitored. An endurance horse may enter a checkpoint with a heart rate over 130 beats per minute and drop below 70 within 15 minutes. A cross-country horse may reach a heart rate of over 200.

The amount of time it takes to recover is an indication of fitness. An out-of-shape horse may take an hour to recover.

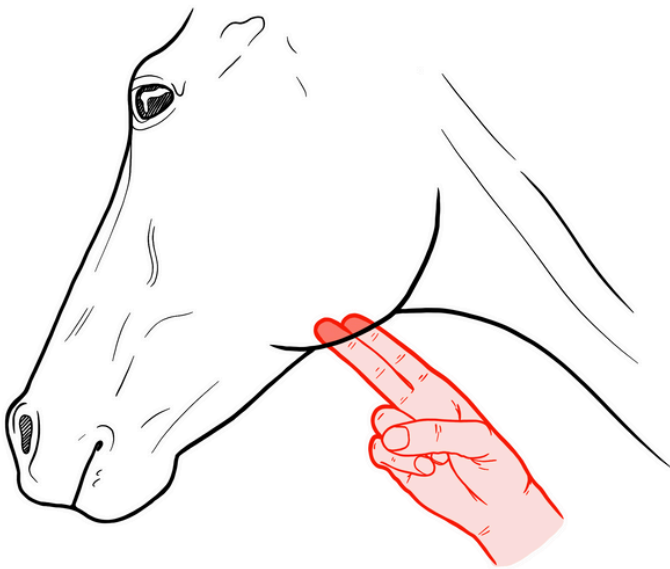
Some factors may increase heart rate besides exercise. Any excitement or stimulus that frightens your horse will increase his heart rate. Hot weather will increase heart rate and respiratory rates. Pain will increase heart rate as well as sickness. If your horse has an elevated heart rate, play detective and see if you can find the reason. Monitor the rate to see if it returns to normal.

An owner should record their horse's heart rate over a period of time so they have a baseline with which to compare future readings.

This will help owners determine whether something wrong is happening with their horse.

For instance, a horse entering an episode of laminitis may not show outward signs in the developmental stage but will show an increase in heart and respiratory rates.

You can take your horse's heart rate from several places where you can feel an artery. However, this takes practice, so don't wait until your horse is distressed to attempt to find the heart rate. Heart rate can be felt under the horse's jaw or above or below the fetlock.



The most accurate and simplest way to determine heart rate is with the use of a stethoscope. The stethoscope is placed on the chest just behind the elbow.

You will hear a “lub” then a “dub”, this counts as one heart-beat. Count the number of heart beats for 30 seconds and multiply by two to find the heart beats per minute.

## Gut Sounds (Borborygmi)

The intestines of horse are a place constant movement and motion, making sounds as they process what they eat. You can hear the gut sounds by placing your ear on your horse's flank, though it is best to use a stethoscope.

You should learn what normal gut sounds are like in your horse, so you can detect changes that may indicate a problem. Loud or excessive sounds may be signs of inflammation of the intestines as in diarrhea.

If your horse's gut is completely quiet along with other signs such as fever, or pawing, laying down a lot or loss of appetite, you should consult your veterinarian.

For a deeper dive into gut sounds, read our article “A Guide to Gut Sounds (Borborygmi)”

## Capillary Refill Time (CRT)

Capillary refill time is the time it takes for color to return to a blanched area, such as a horse's gums, indicating blood circulation efficiency.

{Press on your horse's gum with your finger, and count how many seconds it takes the blanched, whitish area you just pressed on to return pink.

Taking more than 3 seconds might indicate dehydration, illness or poor circulation. A veterinarian should be contacted.

# Mucous Membrane Color

Although several areas of the horse have mucous membranes (eyelids, nostrils, and genital area) the gums are most often used for health assessment.

Normal mucous membranes should be a moist pink in color.

Dry mucous membranes indicate dehydration.

Membranes that are not moist and pink indicate problems for the horse that a veterinarian should address.

Light pink to white membrane indicates blood loss, anemia or shock.

Membranes that are bright red to red-purple may indicate toxicity and/or mild shock.

Membranes that are gray to blue indicate severe shock and loss of oxygen.

Yellow membranes indicate liver disease.

## Mistakes in Taking Vital Signs

1. Taking the thermometer out too early, 3 minutes for a glass tube thermometer is required for an accurate reading.
2. Not having a base line on your horse's vital signs so you do not know what is normal for them.
3. Trying to take vital signs on a horse that is frightened or nervous or has been running around.

4. Allowing your horse to sniff your hand and counting nostril flares. Sniffing your hand will increase the respiration rate as they may be sniffing hay, grain or treats on your hands.

5. Counting the "lub" then a "dub" as two heart beats.