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A Tradition of Leadership and Excellence in Equine Medicine

Know your horse

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This month's edition of **Vet Notes** is designed to help you establish normal parameters for your horse and enable you to detect a potential problem earlier. You must know what is normal before you can determine what is abnormal.

Plan a daily check

The following is a list of things you should check on a daily basis:

Posture

This may be the first clue that something serious is wrong. Animals that are sick often assume unusual positions, stances, and attitudes. Abnormal posture alone does not always indicate disease, so look for other signs. An example would be a horse that stretches out. This may be a normal routine for a horse or could be a sign of abdominal discomfort (colic). A horse that shifts its weight from one leg to the other constantly usually has pain in one of its legs, a horse that is reluctant to move may have founder, and a horse that completely refuses to bear weight on a limb could have a severe stone bruise, a foot abscess, a joint infection, or a fracture. Movements such as pawing, shaking the head, yawning or scratching may indicate a problem or may only signify that the animal is annoyed. Watch your horse's movement or "way of going". Stumbling, clipping, interfering, or forging may be the first sign of lameness or may indicate a neurological disorder. A normal gait or "way of going" for one breed may be abnormal for another.

Appetite

Watch your horse as you approach at feeding time. Is the horse alert and eager to be fed? A good appetite is one of the best indicators of overall health. If your horse eats lightly at one meal, do not panic. Look closely for a cause, instead. Check to see if someone else is feeding the horse or overfeeding him/her at other meals. Also, make a mental note of what food is left behind. Is the horse not eating hay, grain, or both? A horse that dives into its grain at first and then stops eating after a few bites may have stomach ulcers. Stomach ulcers can also cause horses to eat sand. Some horses eat sand out of boredom or accidentally while eating their hay / grain. You can avoid accidental ingestion of sand (and the resultant problems) by feeding the horse away from sandy areas in a stall or outside feeders. Mineral deficiencies can also cause horses to eat peculiar things.

Water

Start by examining the horse's water pail or trough. Horses tend to drink an hour or so after they begin eating the roughage portion of their rations. A few hay stems or grains in the water are no cause for concern. However, if the water pail is packed with hay and or grain, your horse may be having trouble eating and using the water to soften the feed. This could be due to dental problems and pain. Monitor the amount of water your horse is drinking. Some sick horses will stop eating and drinking, while others continue to drink or drink more water than normal. Horses that drink more water than normal may have a fever, kidney problems or a digestive system problem. If you have an automatic waterer and you suspect your horse is ill, it is a good idea to shut it off. Hang a water bucket so you can monitor the horse's intake.

Manure

A normal horse will pass 8-10 piles of manure per day. The manure pile should have well formed fecal balls with enough moisture so that the pile stays heaped. When the fecal balls become separate and somewhat dry, it may indicate that a horse is not drinking enough water. This sometimes happens during cold weather. Firm fecal balls covered in mucous are an indication that the horse is taking longer than normal to pass feces and may be due to dehydration. Loose manure could be due to a sudden change in feed, nervousness, or mechanical / bacterial irritation to the horse's gut. Some mares have loose manure when they are in heat. Diarrhea is not common in horses and can be a sign of a severe problem. These horses need to be monitored closely for loss in appetite, colic, fever, or lethargy. It is best to call you veterinarian when you notice your horse has diarrhea, especially if it is accompanied by a fever. Extremely dry feces or lack of feces are also indications to call your veterinarian.

Vital signs

If you have performed your daily exam and found that something is abnormal, then the next step is to take your horse's vital signs. Vital signs are a good indication of a horse's overall health. You should learn how to take your horse's temperature, pulse and respiration as well as measure capillary refill time and examine the mucous membranes. To establish normals for your horse, take the vital signs twice a day for three days and average the readings. Choose various times of the day, but always when the horse is at rest, not when he has just been working or is excited.

Temperature

Try to take the horse's temperature near the same time twice per day for several days in a row. The horse's temperature is typically higher in the afternoon than in the morning by a degree or so. A horse's temperature can also be slightly higher one or two hours after a meal. By taking the temperature at the same time each day, a more accurate record of your horse's normal range in temperature can be made.

Take the horse's temperature while standing near the left hind leg, with your body in contact with the horse, facing the rear. Lubricate the thermometer with petroleum jelly or



a similar product before inserting it. Lift the horse's tail to the right side with your left hand and insert the thermometer with your right. Several types of thermometers are available. We typically use rapid reading digital thermometers because they only take 15 seconds to read a temperature.

A normal temperature for an adult horse ranges from 99-101.4 degrees F. Foals and yearlings may have a normal temperature up to 102 degrees F, especially if they are nervous or excited. A horse's temperature may be slightly elevated during in hot, humid weather; if it has been in direct sunlight; if in unfamiliar surroundings; if handled by strange people; if the horse has recently been trailered; or it has recently been exercised. Under such conditions, it is not uncommon for an adult horse's temperature to reach 102 degrees F. Conversely, exposure to cold winds, cold weather, or drinking large amounts of cold water may lower a horse's temperature slightly.

Fever is a term used when a horse's temperature is above normal. Heat stroke, seizures, and illness may cause fever. By knowing your horse's normal temperature, you will have a baseline to determine if the horse is warmer than usual when showing other clinical signs of illness. Do not worry unless the horse's temperature is over 102 degrees F, especially if the animal is excited or the day is particularly hot. Your horse may show outward clinical signs that he is running a fever. He may be trembling, sweaty, have skin that is cool to the touch, the coat may "stand on end", the horse may have little or no appetite, be thirsty, and may be hunched up and miserable looking. Remember that a *moderate* fever **itself** is not a problem. It is the body's natural defense mechanism. The key is to find out the cause of the fever. Contact your veterinarian.

Pulse

You can take a horse's pulse anywhere you can hear or feel his heartbeat. The pulse that you feel in an artery is caused by blood being pushed through the artery by the beating of the heart. Start by feeling an artery close to the skin such as the facial artery at the edge of the jawbone. Simply press your first and second fingers gently against the jawbone. Be sure not to use your thumb, as you may pick up your own pulse and get an inaccurate reading. You can also check your horse's pulse on the inside and outside of the horse's leg, just above the fetlock. Again, be sure not to use your thumb. By taking the pulse in this location, you can also check for changes in the character and strength of pulse and this may be helpful in determining if your horse has a foot problem. Another place that you can take your horse's pulse is just behind his left elbow; simply press the back of your hand against the chest wall to feel the heart beating in this location.

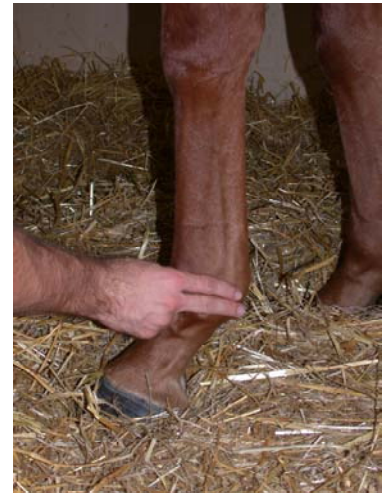


Some animals show a pulse in the jugular vein if their head is level or down. This can be normal. However, if the pulse travels half way up the jugular vein with the horse's neck elevated, it can indicate a heart problem. If other signs of heart problems are present, such as an increased heart rate while resting after being worked, shortness of

breath during this rest period, or if he seems weak / faints - call your veterinarian. These may be signs of fatigue or heart problems and the horse should not be worked until a cause is determined.

Normal heart rates (pulses) vary with age of the animal. A foal less than 1 week of age has a resting heart rate of 60-120 beats per minute (bpm); a 1week-6month old foal 40-60 bpm; and an adult 28-46 bpm. The pulse is usually slightly elevated in the evening. It may also increase with hot weather exercise, excitement, pain, nervousness, elevated body temperature, infectious disease, and shock. The pulse will be lower on fit horses and in cooler weather.

A heartbeat of more than 50bpm in a resting adult horse should be considered abnormal, especially if there are other signs of a problem such as colic.



Call your veterinarian immediately. A heart rate over 80 bpm in an adult is a very unfavorable sign. It is usually seen in horses with a severe colitis or colic, which can be fatal. Heart rates over 200 bpm have been recorded in horses during extreme work efforts such as 3-day event competitions or racing. Well-conditioned horses can reach a heart rate of 100 bpm when ridden hard up steep inclines. However, both of these horses should recover to a heart rate of 72 bpm or less after a 10-minute rest stop. If the horse does not, he may be ill or poorly conditioned. Do not continue to ride the horse or he may collapse, develop thumps, or exhaustion.

Respiration rate

Respiration rate is measured by adding the number of breaths per minute. One inspiration and expiration is counted as one breath. It can be counted by watching the ribs moving in and out, by watching the nostrils dilate and relax, or placing a hand in front of the nostrils and feeling each breath the horse takes. The normal respiratory rate for an adult horse is between 8-20 breaths per minute. As with temperature and pulse, respiration is usually higher in foals. It increases with hot weather, work, pregnancy, and overfilling of the stomach. Fat animals will have respiratory rates higher than normal. The respiratory rate is also related to body size, exercise and temperament. It can become elevated when the horse is in an unfamiliar location or is examined by a stranger or veterinarian.

Mucous membranes and capillary refill time

You can get additional information on your horse's overall health status by looking at his mucous membranes. These are the membranes that line body openings and include: nostrils, mouth, eyelids, anus, prepuce, and vagina. They are usually examined by looking at the horse's gums. They should be pink and moist. If they are very pale or white, the horse is probably suffering from blood loss. If they are bright pink or red, the horse is suffering from a toxic condition. If the mucous membranes are gray, purple, or dark blue in color, the horse is suffering from a lack of oxygen and is probably in shock. Yellow coloration is called jaundice or icterus and usually indicates a liver problem. Sometimes small red spots or hemorrhages can be seen and indicate a serious illness.

When you notice a change in your horse's mucous membranes as mentioned above, contact your veterinarian. Dry mucous membranes can be due to dehydration or may be caused by the administration of certain drugs, such as those given to treat heaves. While examining the mucous membranes, take note of any change in the horse's breath. An infected tooth or sinus infection can cause foul odors in the mouth.

The capillary refill time can give you an indication of your horse's hydration status. Simply press your thumb against the gum above the upper incisors for a couple of seconds. When you remove your thumb, a blanched area will remain. The capillary refill time (CRT) is the amount of time it takes this blanched area to return to the normal color. Normal CRT is 1-2 seconds. In dehydrated animals, the CRT increases to 2-4 seconds. With severe dehydration, the CRT can increase to 5-6 seconds.

It is important to know your horse well so abnormalities are easy to recognize. Record your horse's normal vital signs and store them with the rest of the health information.

