EMERGENCY HORSE CARE

All of us have faced circumstances where we had an injured or ill horse to care for and it can be a stressful situation. By preparing yourself ahead of time, you can relieve some of the stress by having the right equipment on hand and knowing when to call the vet.

Do you know your horse’s normal vital sign readings? Would you be able to tell if his vital sign readings were not normal if he were to get sick or injured? If not, put this at the top of your list of things to learn! This is valuable information that you can provide to your vet over the phone in the event of an illness or injury to help them determine the seriousness of the situation. Take your horse’s vitals repeatedly over several days to determine a good baseline. If you need help learning how to take vital signs, don’t hesitate to call your vet or the Extension office. Here is a list of the vitals and how to read them:

**Temperature** – An adult horse should have a temperature between 99-101°F. A reading of 102°F or higher is a trigger to call the vet. Also, a below normal temperature could be cause for concern. A digital human thermometer can be used to take the horse’s temperature and you’ll need petroleum jelly or KY jelly for lubrication before inserting it in the horse’s anus.

**Pulse** – An adult horse’s resting pulse rate should be somewhere in the range of 35-45 beats per minute. You can determine this by finding the horse’s pulse under the edge of his jaw. Then count the beats for 15 seconds and multiply by 4. A higher than normal pulse can indicate stress or pain.

**Respiration** – An adult horse’s respiration rate is in the range of 8-12 breaths per minute. You can easily determine this by watching his sides rise and fall. When his sides rise and he’s breathing in, count 1 breath. Or you can put your hand in front of his nostrils and count each time you feel him exhale. A third option is to buy an inexpensive stethoscope and use it near his windpipe to listen to him inhale. Count the number of breaths he takes within 15 seconds and then multiply by 4. A higher than normal respiration rate can be caused by stress, pain, illness, heat stress, or just exercise. If the horse appears to have shallow, irregular, labored, or unusually noisy breathing, this is reason to call your vet.
**Mucous membranes** - Your horse’s gums should normally be pink and moist. Bright red gums can indicate illness or fever. Pale gums can indicate anemia. Dark red or bluish gums can indicate poor circulation or shock.

**CRT** - Capillary Refill Time (CRT) helps us monitor how quickly the capillaries that carry blood can refill. You can test this by pressing on your horse’s gums with your thumb. After releasing pressure on the gum, there should be a pale area left behind. Under normal conditions, the gums should return to normal color within 1-2 seconds. If it takes longer than 3 seconds, then call your vet as this could indicate poor circulation or shock.

Opinions vary among horse owners as to when a vet needs to be called to treat an injury or illness. Use good judgment and follow a few simple rules of thumb. Call the vet immediately if the horse is non-weight bearing on a leg or has a fever above 102°F, eye injury or swelling or the eye lid, excessive bleeding that won’t stop, respiratory distress, colic symptoms, cuts that may require stitches, or abnormal vital signs. If the horse has punctured his hoof with a foreign object, do not remove the object without first consulting your vet because sensitive structures may be damaged inside of the hoof. Also, do not give banamine or bute prior to the veterinarian’s arrival without their “ok” to do so. These drugs may mask symptoms and hinder the veterinarian’s ability to properly diagnose and treat the horse.

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**FIRST AID KITS**

It’s always helpful to have a first aid kit in the barn. Here are some of the most useful items you may need in your kit. Consult with your vet to see what addition items he or she recommends.

1) Waterproof, sealable container to keep all of your supplies dry and clean. (Label it as First Aid Kit!)
2) Antibacterial soap – such as Betadine or Chlorhexadine solution – to wash minor wounds
3) Saline solution – to flush out wounds or for eye treatment
4) Sterile gauze pads – to cover mild wounds
5) Disposable newborn diapers or wrapped sanitary pads – absorbent and provides pressure to stop bleeding
6) Adhesive tape and gauze wrap – duct tape for hoof boots, Elasticon or other adhesive tape, Vetwrap, sterile gauze roll – to help hold bandages
7) Epsom salt – for soaking abscessed hooves or creating a saline solution for flushing wounds
8) Quilted or padded wrap – roll of sheet cotton or quilted cotton wraps
9) Bandage scissors
10) Antibiotic ointment – such as Neosporin
11) Zinc oxide ointment – can help with sunburn, “scratches”, and other minor skin irritations
12) Tweezers
13) Thermometer – include petroleum or KY jelly for lubricating
14) Disposable gloves
15) Ice packs
16) Flashlight
17) Watch with a second hand for taking vitals

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**TOXIC PLANT ID**

Extension agents in south central NC have put together an excellent guide on toxic plants that can be found in NC. Generally horses will avoid these plants in the pasture as long as there is other forage for them to eat. The problems with toxic weeds usually occur when the weeds are accidentally baled in hay and the horses are unable to distinguish between the dried weeds and the dried grass. The “Weed ID in Pastures and Hayfields” publication is available online at http://bladen.ces.ncsu.edu - click on animal agriculture in the menu on the left and then scroll down to “featured links”.

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MINIMIZE YOUR HAY LOSSES

Hay losses can cost you a great deal of money throughout the year. Whether these losses are from heat damage, fire, or feeding, there are ways that you can manage your hay supply to help reduce their effects.

Hay that goes through a heating process can sometimes lead to fires that are started internally in the bales. This heating process happens as a result of microorganism activity in hay that has been stored at a high moisture level. Even if the heating doesn’t result in a fire, it will greatly reduce the forage quality of the bale.

The best way to avoid internal heating is to avoid baling hay at high moisture levels. Hay in round bales should be no more than 18% moisture and hay in small, square bales should be no more than 20% moisture. Bales that contain higher levels of moisture are at a much greater risk of combustion. If you suspect that the hay has been baled too wet, the bales should not be stored inside the barn for two to three weeks until the risk of combustion due to heating has passed.

It’s best to monitor the temperature of hay for the first week or two after baling to ensure that there is no danger of fire. A compost thermometer available at many home and garden stores is very useful for this. Just insert the thermometer down into the bale and wait for the temperature reading to hold constant. As long as the temperature remains below 120º, the hay is at a safe temperature. If the hay is in the 120º to 140º range, then there is a slight risk and the hay should be monitored further until the temperature drops. If the hay reaches 160º or higher, the hay is at a very high risk of catching fire.

The most important part of hay storage is to protect hay bales from moisture. The amount of moisture from the soil absorbed into hay bales can be decreased by storing bales off of the ground on wooden pallets, telephone poles, or cross ties. Gravel or rock pads can be put down in areas where bales will be stored outside on the ground. The goal is to avoid having the bales in direct contact with the soil but allowing some air flow under the hay is also desirable.

Storage barns or shelters are most ideal for protecting bales from the weather but hay that must be stored outside can be protected from moisture by covering it with tarps or plastic covers. Direct contact with the soil should still be avoided so rock pads or wood pallets are still useful in these situations.

Feeding losses of up to 60% have been observed in feeding trials where no attempts were made to reduce the losses. Simple changes in management can save a great deal of money by reducing the amount of hay lost during feeding. These losses occur when the hay is trampled, urinated or defecated upon, weathered, or refused by the animals.

It’s important to consider the location where hay is normally fed. Low lying areas that may remain wet should be avoided as well as bare areas that could become muddy. It is best if feeding areas are moved to different areas around the pasture. This is because feeding areas tend to become muddy and have compacted soil in the areas where animals linger around the hay. If the feeding area remains in the same area, gravel can be used to fill the area and provide a solid foundation for feeding.

Always use a round bale feeder to keep animals from lying on or trampling the hay and to keep the bales from sitting directly on the ground. Shelters can also be useful to protect bales from rainfall but the more important management consideration would be to protect the bale from soil contact.

HAVE YOU CHECKED ON YOUR DUNG BEETLES LATELY?

That pile of manure you just stepped around may contain some important helpers in your efforts to maintain good pastures. That’s right… dung beetles! These little guys may be small but they play an important role. Dung beetles feed on manure and use it to provide food and protection for their young. As a result, nutrients are recycled and soil structure and forage growth are improved.

There are three types of dung beetles: rollers, tunnelers, and dwellers. The “rollers” actually roll balls of dung away from the manure pile and then bury it. “Tunnelers” dig down under the manure pile and carry balls of manure down with them. You can usually find small piles of soil
near the manure pile indicating that there are tunnelers at work there. The “dwellers” will live within the manure pile and usually don’t do much digging.

Dung beetles can be as small as 0.1 inches or as large as 2.5 inches and are black, brown, and red in color. Some may even have a metallic appearance. The males will often have one or two horns.

Many adult dung beetles are specific to a particular species, meaning they may fly up to 10 miles searching for a particular type of dung. They can usually start working on a dung pile within seconds after it drops. Some even travel near the tails of some animals and wait for the pile to drop.

Dung beetles provide many benefits to horses and pastures. Horn flies and face flies, two very annoying pests, use manure as a breeding ground. As many as 60-80 horn fly adults can come from just one pile of manure if they are protected from competitors. Dung beetles can damage the flies’ eggs within the dung pat and will compete with the larvae for food. This can greatly decrease the fly populations in areas that have a large number of dung beetles.

Dung beetles may also be an important part of internal parasite control. Because the eggs of most parasites are carried in the manure, the activity of the dung beetles may break the life cycle. The manure pile may be broken down before the eggs are able to hatch and become infective to the animals.

The ability of the dung beetles to quickly remove the dung pats is very beneficial to the availability of forage within the pastures. Horses will often not graze close to their own manure pats. This means that quality forage is being wasted in those areas, which can be up to 5% to 10% per acre per year in some cases! If dung beetles are able to quickly carry away the manure, the efficiency of grazing can be improved.

The dung beetles that tunnel in the soil also help to improve the soil’s ability to absorb water, and by bringing manure down into the tunnels, they help to add nitrogen back to the soil. If the manure was left on the surface, up to 80% of the nitrogen might be lost. Since the dung beetles are able to quickly incorporate the manure into the soil, sometimes in as little as 24 hours, they’re able to make this nitrogen available for plant use.

The use of Ivermectin for internal parasite control will harm the larvae of dung beetles. It may be difficult to completely avoid using Ivermectin since it is such an important tool in controlling parasites in horses. Because of this, horses and other animals treated with Ivermectin can be left off of major pastures for short periods of time after treatment to help decrease the impact on the dung beetles. Using controlled grazing systems will also encourage dung beetle populations. Manure is concentrated in a smaller area, which limits the amount of time that dung beetles will need to search for food.

If you’re wondering how strong your dung beetle population is, watch the length of time that it takes for piles of manure to disappear from your pastures. It shouldn’t take any longer than a few days before the pile is gone. Longer periods of time mean that your dung beetle population is low. They also may not be as active during long cold spells in the winter months. Good management is the key to encouraging the number of dung beetles in your pasture.

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**Upcoming Events**

**FEBRUARY**

3<sup>rd</sup>-5<sup>th</sup> – Southern Farm Show – State Fairgrounds, Raleigh

5<sup>th</sup> – Southern National Draft Horse Pull – Hunt Horse Complex, Raleigh

6<sup>th</sup> – 4H Youth Horse Judging Clinic – Hunt Horse Complex, Raleigh

20<sup>th</sup> – NCSU College of Vet Medicine’s Horse Owners Symposium

20<sup>th</sup> – Gaming Show – Equine Country, Jacksonville


**MARCH**

6<sup>th</sup> – State 4H Horse Bowl and Hippology Contest – NCSU A&T State Univ., Greensboro
February is American Heart Month
By Robin Seitz

Cardiovascular diseases, including stroke, are our nation's No. 1 killer. A healthy diet and lifestyle are the best weapons you have to fight heart disease. It is important to remember that it is the overall pattern of the choices you make that counts. As you make daily food choices, base your eating pattern on these recommendations.

- Choose lean meats and poultry without skin and prepare them without added saturated and trans fat.
- Select fat-free, 1% fat, and low-fat dairy products.
- Cut back on foods containing partially hydrogenated vegetable oils to reduce trans fat in your diet.
- Cut back on foods high in dietary cholesterol. Aim to eat less than 300 mg of cholesterol each day.
- Cut back on beverages and foods with added sugars.
- Choose and prepare foods with little or no salt. Aim to eat less than 2,300 mg of sodium daily (less than 1,500 mg if you are in a high risk group for high blood pressure).
- If you drink alcohol, drink in moderation (no more than one drink per day if you're a woman and two drinks per day if you're a man).

Choosing to add physical activity to your daily life is another important step to preventing heart disease. Current guidelines for adults suggest doing a minimum of 2 hours and 30 minutes of moderate-intensity aerobic activity, or 1 hour and 15 minutes a week of vigorous-intensity aerobic activity, or combinations of moderate- and vigorous-intensity aerobic activity. To determine your activity level, try the talk test. If you are able to carry on a conversation comfortably while still exercising, you are exercising at a moderate intensity. If you cannot carry on a conversation comfortably, you are exercising at a vigorous intensity. Aerobic activity should be performed in episodes of at least 10 minutes, and preferably spread throughout the week.

For more information about keeping your heart healthy contact Robin Seitz, Family and Consumer Sciences Extension Agent at 910-455-5873 or robin_seitz@ncsu.edu.