

Winter Health Care Basics for Horses

Generally, horses are not used as heavily during the winter months, but their proper care is every bit as important as in other seasons. Winter provides different stresses on horses than they experience during the rest of the year, and horse owners should know the basics before winter arrives.

HOW COLD TOLERANT ARE HORSES?

Given some protection from the wind and wet (shelter), a healthy horse can easily tolerate -40 degree Fahrenheit temperatures. The single greatest factor allowing horses to be so cold tolerant is their size. There is a simple scientific reason for this: The larger an animal is, the lower the surface to volume ratio.

In other words, the heavier the animal, the less skin surface area per pound is exposed to the outside world, so the slower the body temperature responds to changes in air temperature. Young foals lack this surface to volume ratio, but have much higher metabolisms that compensate otherwise.

The horse's winter hair coat is a very important barrier against cold. It is a surprisingly sophisticated system that traps an insulating layer of air against the skin. The hair coat functions well as long as it is "fluffed" and stays dry. Wind and rain act to flatten this system and reduce the barrier to cold. Muscle and fat also play very important insulating roles. A horse that goes into winter in good flesh is more able to tolerate cold weather than one that goes into winter thin. A fit horse of good body muscle mass and a normal layer of fat has advantages over an unfit horse who has a thick layer of fat and less muscle.

There is a critical temperature at which healthy horses must produce extra heat to maintain their body temperature. This

critical temperature depends on many factors, but is around 15 degrees Fahrenheit. Horses with health problems, thin horses, and those with little coat have higher critical temperatures. The extra heat required to maintain body temperature uses extra energy, which must come from extra feed.

FEEDING HORSES IN WINTER

There is a lot of confusion regarding how much more feed horses need during the winter months. Horses do not need more feed until the temperature averages at or below their specific critical temperature, which depends on the factors discussed above. Generally, horses need about 15-20% more feed for every 10 degrees average the environment is below their critical temperature. In many areas, the average 24-hour temperature is above the critical temperature for a healthy horse, meaning that extra feed is not necessary. Unless it is an unusually cold winter, here in the desert Southwest horses generally do not need much more feed in the winter.

TIPS ON WINTER FEEDING

- Less mature, high quality grass or mix hay should form the basis for the healthy horse diet. Less mature hays are more palatable and hold water better in the gut. Over-mature, straw-like hay may create problems with intestinal impaction.
- A simple and safe bet for winter feeding is to simply increase grass or mix hay in the diet 20% over warm weather feeding amounts. Make any feeding changes gradually, over a few days.
- Whatever method of feeding you choose, do not vary it with daily weather changes. If you do choose to change it, simply feed a little more hay, not grain.
- Once cold weather sets in, it is difficult to put weight on horses, especially thin ones. It is easier to maintain a horse's good flesh in the winter than it is to put weight on a thin horse.
- A long winter hair coat makes it more difficult to

assess body condition visually. Regularly check condition by using your hands to feel fat and muscle cover on your horse's ribs and bones of the pelvis and spine, through his winter hair coat.

- Winter pasture is much lower in nutrients and is often sparse. Horses must work harder for less nutrients. Keep this in mind when wintering horses on pasture.
- Easy keepers may do well on grass hay alone. Hard keepers or those in work will require alfalfa hay or concentrated feeds (grains or pelleted feeds) as a supplement. How much of these supplements required depends on that horse's specific needs.
- Only feed as much grain as needed for maintenance.
- One way to increase energy in feed without increasing grain is with high-fat rice bran or corn oil. Feeding a few ounces of corn oil, top-dressed on a small amount of grain, can provide as much energy as another scoop of grain, without the carbohydrates.
- All horses should have access to a mineral block or loose minerals.

WHAT ARE "HOT FEEDS"?

It is a misconception that a "hot feed" (like corn) produces extra body heat and therefore should be fed to wintering horses. A "hot feed" is a horseman's term for a feed with high caloric content. The term generally refers to grains (especially corn) or rich hay. Corn has a large number of calories per unit weight. High caloric content means high energy but does not translate to body heat production. Irregular feeding of "hot feeds" may cause other health problems, like colic or laminitis. The best feed for heat production through digestion is hay. Hay is broken down in the hindgut by the process of fermentation. This directly produces heat, which is an important part of body heat maintenance.

WATER

Winter is a critical time to provide plenty of access to clean water. Certain types of colic are more common in winter. This may relate to decreased water consumption during the winter. Snow does not provide adequate water for horses. Horses fed hay drink more water than pastured horses because of hay's low water content. Horses will drink more warm water than ice-cold water. Water can be kept warm with electric tank heaters, or different designs of insulated watering tubs. If you do not provide warmed water, you should break ice at least twice daily. Horses often drink right after a hay meal, so their water source should be available to them then. Electrolytes added to feed or supplemented in paste form may increase water intake, but are usually not needed.

GENERAL HEALTH CONSIDERATIONS

- Horses should be properly vaccinated, because the incidence of certain diseases can be higher during winter.
- Horses should be current on dentistry. Proper dental function is critical to proper feed utilization, which is especially important for wintered horses.
- Winter is an important time for maintaining proper parasite control.
- Winter often brings alternating wet and frozen footing, which can mean a higher incidence of foot problems like sole abscesses.
- Slick, frozen footing can result in slips and falls. Because of this, we see a higher incidence of certain fractures and other injuries during the winter.
- Most horses (those that won't be used heavily) should have their shoes pulled for winter.
- Snow-covered cattle guards are a real risk. Horses try to cross cattle guards obscured by drifting snow and fall through, suffering severe trauma. Keep your horses away from cattle guards during the winter months.

SPECIAL CONSIDERATIONS

Late term pregnant mares, growing youngsters, old horses, and horses with health issues must receive extra attention during winter for the reasons we have discussed. Older horses are less able to resist winter's stresses in general. Be sure that they go into winter in good condition, and that their condition is monitored carefully. Once an older horse loses condition it is difficult to regain, especially during the winter months. A healthy horse over 20 years old should be fed about 25% more than a horse in its prime.

Pregnant mares generally only require special nutrition in their last trimester of pregnancy. The key for managing foals in cold weather is to ensure their general health and nutrition and to provide some shelter from wind and moisture.

HORSES KEPT IN USE OR WORK DURING WINTER

If horses are used through the winter, then using rim pads or special snow pads may prevent buildup of ice on the soles. Horses can be exercised intensely even at very cold temperatures, but warm ups and cool downs should be about 50% longer to account for cold muscles, tendons and ligaments. Exercised horses should be dried and brushed well after use.

BLANKETING HORSES IN WINTER

Healthy horses do very well without blankets, even in the very coldest weather. The major exception to this is horses that have been clipped for performance or work during the winter months.

Think of blanketing as a commitment to take over the horse's intricate control of its own body temperature. Blankets have the potential to cause problems, so the blanketed horse must be carefully monitored. Horses can become tangled in their blanket straps or blankets can shift, causing problems. It is important to remove the blanket routinely to monitor condition and watch for skin problems. Overheating under blankets is a common and potentially serious problem.

CONCLUSION

There is still much science that remains to be learned about winter horse care. The bottom line is that each horse must be managed according to its individual needs and with common sense. A good guideline is to provide excellent basic care, keep things as simple and regular as possible, and let nature do the rest.

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Last Updated August 2011