

Equine Winter Starvation Syndrome

During the winter season, horses can suffer from what is called equine starvation syndrome, despite the fact that they are being fed what seems to be enough feed.

In cold temperatures, horses can require from 10 to 20 percent more energy to maintain body condition. Horses need to produce more body heat as outside temperatures drop.

The primary cause of starvation is not feeding horses enough to account for this extra energy need. It often occurs during the winter when the long hair coat makes it difficult to observe the horse's body condition.

Carbohydrates, fat, or extra protein in the diet will be utilized by the horse for extra energy. If the ration does not contain adequate amounts of these nutrients, horses will draw on their own fat reserves first until they are depleted, then use protein from muscle tissue in an attempt to produce energy and body heat.

As the horse gets thinner, there is less of a fat cover over the ribs for insulation, and the horse must use more energy to stay warm. If the ration continues to be deficient in energy, a vicious cycle will occur with more and more weight loss. Starvation and death may be imminent if the energy drain and weight loss are not stopped.

Usual symptoms of starvation syndrome are depression, weakness, decreased body temperature, a rough hair coat, poor body condition, cold extremities, dehydration, inability to rise from the ground and, surprisingly, decreased appetite.

The best way to prevent equine starvation syndrome is to keep horses fed properly throughout the year. Most adult horses that are not working can maintain themselves on free-choice, good-quality, first-

cutting hay (alfalfa/grass mix) plus trace-mineralized salt and adequate water.

However, it is essential that each horse be observed on a daily basis to watch for health problems and to make sure they are eating and drinking. Weekly, horse owners should check their horses' body condition by palpating (touching) the rib and back areas of the horse. When horses have a long hair coat, it is difficult to determine their body condition just by observation.

A horse's body condition score (BCS) is judged on a 1-9 scale, with 1 equaling emaciated, and 9 equaling very obese.

Pleasure horse owners should try to maintain their horses between 5.5 and 6.5 BCS. This is a healthy BCS for the horse. At this body score, the ribs are nicely covered with a layer of fat but are easily felt.

A slight or no fat cover indicates that the horse's BCS is between 2 and 4, and that the horse is too thin.

Horse owners that suspect their horse's BCS is less than 4 should contact their veterinarian for help in determining whether this is a dietary or medical problem, or both.

Owners that are uncertain about their horse's BCS should contact a veterinarian to do a physical examination.

When winter approaches, owners should allow time for horses to adjust to colder temperatures by letting them grow a longer hair coat. Horses that have been housed inside should be turned out for short periods initially to stimulate hair growth before leaving them outside entirely.

Horses that live outside are generally healthier. Still, they need to stay dry and sheltered from strong winds. A run-in shed will usually provide enough

protection. The open side of the shed should face away from the prevailing winds. In Michigan, this means the opening will usually face south, east, or southeast.

Grain is not needed if they stay in moderate-to-good body condition. Hay provides more body heat per pound than grain because of the way it is digested by a fermentation process in the intestinal tract.

A 1,000-pound, mature, idle horse will need from 20 to 25 pounds of total feed per day during the winter. If weather is severe, feed an additional five pounds of hay.

If hay is of poor quality due to over-maturity at the time of harvest, digestible energy decreases, and horses cannot consume enough hay to meet their energy needs. They will lose body condition and have difficulty maintaining a comfortable body temperature despite the fact that they are eating what appears to be an adequate amount of hay.

Regardless of season, idle adult horses require a minimum of 10 to 12 gallons of water per day. However, water should be available free choice, because individual water consumption varies.

Water should be good quality and be provided at a reasonable temperature, from 40 to 60 degrees Fahrenheit. Horses will drink less if the water is very cold or has ice in it.

A recent study with ponies during cold weather showed water consumption could increase by 40 percent if the water temperature was raised to about 90-degrees Fahrenheit. Heated water probably would benefit some horses, especially older ones that tend to have more sensitive teeth. Horses can be encouraged to increase water consumption by adding salt/electrolytes to the ration.

Consultation with a veterinarian can assist owners in developing a suitable parasite control program so that internal parasites are not affecting a horse's health. Deworming most adult horses with appropriate medications an average of four times a year is usually adequate.

Horses should be dewormed after the first heavy frost to kill bots and decrease the parasite burden prior to winter.

If the horse owner observes any of the symptoms of starvation described in this article, they should contact their veterinarian immediately. The veterinarian will conduct a physical examination to check the horse's health and body condition, including the horse's teeth. The appropriateness of the horse's ration should also be evaluated at this time.

If starvation has not progressed too far, adjustments in management, such as increasing the energy content of the ration, will be enough to help the horse. When starvation symptoms are pronounced, the veterinarian will need to provide supplemental nutrition by stomach tube or IV administration. Even with heroic measures, the horse may not survive.

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