EQUI-PRO® Premium Senior Horse Feed

NEW FORMULATION

Poulin Grain has reformulated Equi-Pro® Premium Senior Horse Feed. The new formulation has several added benefits that make this product a true "premium" senior feed. Included in the changes is an increased Omega 3 fatty acid content. Omega 3 fatty acids have anti-inflammatory properties that allow cells to heal and aid in the maintenance of senior horses. Flax is the major source of Omega 3 fatty acids utilized in this product. Equi-Pro® Premium Senior now includes high-fat stabilized rice bran as both a palatable and highly digestible source of fat and fiber. Equi-Pro® Premium Senior continues to include glucosamine as an anti-inflammatory to make your horse more comfortable, as well as, highly digestible fiber sources to provide senior horses with the critical fiber component of the diet. If you haven't already tried the new Equi-Pro® Premium Senior Horse Feed please give it a try, we are confident you will see a positive difference in your horse.

PoulinGrain
A Family Feed Company
24 Railroad Square
Newport, VT 05855

PoulinGrain® Equine Feed Quarterly
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Esophageal Obstruction "Choke"

Stephen Duren, Ph.D.
Performance Horse Nutrition, LLC

Have you ever been to a restaurant and choked on your food? This experience causes panic since you are unable to talk or breathe. Food has become trapped in your trachea (windpipe) preventing you from breathing. Lucky for you the burley gentleman that has been making eye contact with you all night, and possibly made you choke in the first place, is trained in the Heimlich maneuver and quickly dislodges the food. Choke in horses is different compared to choke in humans. Horses that choke do not have instantaneous breathing problems since the food is stuck in the esophagus, the tube that connects the mouth with the stomach, not the trachea. Therefore, choke in horses is not immediately life threatening. However, if the horse is not treated or the choke issue is not resolved, horses can die from not being able to eat or drink.

Causes of Choke

The cause of choke is esophageal obstruction; something is stuck in the esophagus. Typically the material that is blocking the esophagus is food or feed. Horses have been known to choke on any and all ingredients in the diet including forage (hay, pasture grass, hay pellets, hay cubes, beet pulp), grain (sweet feed, pelleted feed, extruded feed) and treats (apples, carrots). Horses have also been reported to choke on items that were not intended for consumption including paper, plastic, baling twine, bedding materials and my favorite a riding crop. The general rule for choking is that if a horse can put it into its mouth, they can choke on it. The underlying cause of the choke is that feed material was not properly chewed (ground) prior to attempting to swallow. Failure to properly chew could be due to poor teeth or missing teeth. In this case, horses would certainly benefit from a dental exam to correct chewing problems. If a dental exam cannot correct the chewing problems because of missing teeth, the diet must be pelleted (ground into small particles) and soaked in water prior to feeding it to the horse. Horses may also not properly chew due to rapid feed intake (bolting) or simply taking large mouthfuls of feed. To slow this aggressive feed intake, the feed should be placed in a shallow feeder that includes a salt block or LARGE flat rocks that slow the rate of intake. Both the salt block and the rocks need to be too large for a horse to swallow. Another potential cause of choke, although much less common, is an esophageal defect or scar tissue associated with the esophagus. This makes the esophagus narrow or constricted in damaged areas increasing the likelihood of a choking incidence. A veterinarian can determine if the esophagus is defective or if the esophagus has been scarred with an endoscopic exam.

– continued on page 2

Poulin Grain Inc.,

Heather Hollay-Farr

I hadn't heard much about Poulin Grain until a very knowledgeable representative stopped by my farm to discuss our current feeding program. I wasn't unhappy, but I wasn't thrilled with the way some of my horses looked or were performing. I was amazed to learn that the EQUI-PRO® Senior formula contained glucosamine for less than I was paying per bag for my current Senior formula! I started to wonder what other advantages this grain company had over my current system. I decided to start by switching my most problematic (and pickiest) horse over to Poulin Grain. The results were fantastic! So much so, that I ended up switching all my horses over to Poulin. Now all my horses are shiny AND best of all, I feed them less grain!The representative worked with me to develop a custom plan for my customers' horses and my own to meet their needs while training and competing. She even helped me calculate how much grain I would need to go to Florida for the winter, and when to buy it so it would be fresh! I decided to feed Poulin exclusively because they have proven to me to not only provide SUPERIOR products, but to provide SUPERIOR customer service.

Esophageal Obstruction – continued from page 1

Signs Your Horse Is Choking

There are several signs that help horse owners determine if a horse is choking. Horses that are choking will not be able to swallow food or water. They will frequently drool saliva or saliva mixed with feed. If horses attempt to drink, water will run out of the nostrils and the horse will cough. Horses will often extend their heads or necks repeatedly in an effort to swallow. The horse may also give the appearance of yawning which is another sign the horse is trying to swallow. These frequent efforts to swallow can lead to aspiration pneumonia which is a serious complication of choking. Aspiration pneumonia occurs when food or liquid is inhaled into the lungs. The clinical signs of aspiration pneumonia typically do not occur until 24-48 hours after the choking incidence. Occasionally, the horse owner may be able to identify their horse is choking by seeing a lump on the left side of the horses' neck. The esophagus is situated on the left side of the neck and depending on the location of the blockage, may be visible.

If you suspect your horse is choking, you should call a veterinarian immediately. Horses that choke can easily become dehydrated and suffer from electrolyte imbalances. However, you should not let your horse attempt to eat or drink until a veterinarian has examined the horse. A veterinarian will confirm the horse is choking by conducting a physical exam and attempting to pass a tube from the nostril to the stomach. If the tube cannot be passed, this is an indication the horse has a blockage causing the horse to choke.

Treatment

The treatment protocol for a horse with an esophageal obstruction depends on the severity of the blockage. Conservative treatment consists of sedating the horse which serves to relax the horse. Once the horse is relaxed, the esophagus will dilate and often allow the horse to swallow and move the blockage. More aggressive treatment consists of sedating the horse and passing a nasogastric tube. Once the tube is in contact with the blockage, gentle pressure and flushing with warm water are utilized to move the blockage. In horses with severe blockages, surgery may be necessary to remove the blockage. Once the obstruction is passed, the horse usually undergoes an endoscopic exam to view the esophagus. The endoscopic exam allows the veterinarian to determine if the esophagus has been damaged, ulcerated or if the esophagus is abnormally constricted in the area of the blockage. This exam helps the veterinarian determine the follow-up care for the horse as well as determine if the horse will likely have future bouts with choke.

Prevention of Choke

The primary cause of choke is that feed material was not properly chewed (ground) prior to swallowing. Therefore, the most important method to avoid choke is proper dental care. Horses should have routine dental care, and any new horses in the barn should have a dental exam to ensure they will not be a victim of choke. The other main cause of choke is aggressive (rapid) intake of feed. To slow down the aggressive eater, feed should be provided in large, shallow feeders. This will help prevent horses from getting big mouthfuls of feed. Large stones or salt blocks can also be placed in the feeder to force horses to nibble around the stones to take in their feed slowly rather than taking large bits. Horses that are prone to aggressive intake should also be fed individually to avoid the competitive nature that horses experience in herd situations. Horses will often try to eat their feed very rapidly if they fear another horse may take it from them. It is also recommended to place feed tubs on the ground during feeding. This stimulates normal eating posture with the neck fully extended. Finally, many of the new feeds on the market feature high fiber content. Feeds that are high in fiber have an increased capacity to absorb water. These feeds actually swell when they come in contact with water or saliva. To prevent these high fiber feeds from potentially causing choke, they should be soaked or wetted prior to offering to horses. Wetting feeds will not destroy their nutrient content and it is a great method to avoid a potential choke. In fact, wetting feed (either the hay or the grain) is a very practical means to prevent choke in horses that may be new to the barn. Finally, horses should always be fed hay and water at least 30 minutes prior to offering any grain type meal. This will allow a horse to partially fill up on hay before being fed grain. This will serve to slow down aggressive eating.

Research Update

Equine Anhidrosis

Performance Horse Nutrition

Equine anhidrosis, dry coat, and nonsweating are all terms used to describe the disease in horses characterized by the inability to sweat effectively in response to appropriate stimuli. The disease commonly occurs in areas with hot, humid climates. Horses with normal thermoregulatory abilities are able to reduce their body temperature to within normal limits in approximately 30 minutes after exercise, and the inablity to cool down to normal temperatures within this time is indicative that a horse may be suffering from anhidrosis. The predominant sign of impending anhidrosis is usually rapid breathing. Affected horses will have increased when compared with those of control horses under identical conditions. Horses showing evidence of respiratory distress will have respiratory rates between 60 and 120 breaths per minute. Partially anhidrotic horses will breathe rapidly for extended periods of time after being overheated. Horses with acute onset anhidrosis may demonstrate a partial or complete absence of sweating when exposed to hot weather or exercise. A decrease in the rate of sweating also indicates the possibility of anhidrosis. The sweating rate will however, depend on the intensity of exercise, duration of exercise, and ambient temperature. Horses with long-standing anhidrosis may reveal dry, flaky skin, hair loss, lethargy, anorexia, and a decreased water intake. Areas on the body that may retain the ability to sweat include those under the mane, in the saddle and halter areas, and in the perineal regions.

Treating Anhidrosis

Because there are no know proven treatments for anhidrosis, all of the therapies described for this condition are anecdotal. Treatment of anhidrosis can be categorized into management changes or medical therapy. A combination of both categories is usually necessary for any success in the management of this condition.

Management Changes

The most reliable treatment for anhidrosis is environmental control. This involves management changes directed at removing anhidrotic horses from hot humid climates and moving them to a cooler, drier environment. Ten to 30 days in such an environment for affected horses has been reported to relieve the signs. In lieu of moving the affected animal, other management changes that are directed to providing a cooler environment may be of some benefit. These changes may include placing the animal in an air-conditioned stall. The use of misting fans and cooling the roof of the barn by running the water on it will help maintain a cooler environment. Exercising the horse during the coolest part of the day is another adjustment that will help manage the disease.

Electrolyte Supplementation

Horses with anhidrosis have reported serum electrolyte values within normal limits. However, hypokalemia is often suspected in the etiology of anhidrosis. Some practitioners report some success in supplementing with 60 g of KCI or lite salt in the feed.

Dietary Supplements

A nutritional feed supplement that contains L-tyrosine, ascorbic acid, niacin, and cobalt is commerically available (One AC, MPCo., Phoenix, AZ). Tyrosine is potentially involved in the resensitization of sequestered b2-receptors, and is a precursor for the formation of dopamine and thus catecholamines. However, plasma tyrosine levels are not decreased in anhidrotic horses. Anecdotal reports among practitioners indicate a success rate of 30-80% using One AC, with the best results seen in moderately affected horses and by placing previously affected animals on the product prior to the beginning of the anhidrotic season. Best results are reported if strenuous training or work is reduced for approximately 3 weeks when starting on the supplement. It should be noted that a lessening of the intensity of training or work alone has been reported to relieve the clinical signs of anhidrosis.

Drug Therapy

Using drugs such as methyl dopa to decrease sympathetic drive has been used by some practitioners with reported success. Despite anecdotal reports of success there are no controlled studies of the efficiency of this agent in anhidrotic horses.

Thyroid Supplementation

Administering iodinated casein orally at 10-15 g per day for 4 to 8 days has been reported to be beneficial in the literature. Practitioners have reported success supplementing with levothyroxine (THYRO-L, Vetamix, Shenandoah, IA) at a dose of 0.5-3.0 mg per 100 lb once a day. Care should be taken when treating a horse with levo-thyroxine supplementation, as the resultant increased metabolic rate could be harmful with the completely anhidrotic horse overheating when exercised in extremely hot and humid weather.

Clenbuterol

There have been anecdotal reports that clenbuterol is effective in causing sweating in some anhidrotic horses. The authors do not recommend the use of clenbuterol as a prior report indicates that stimulation of the sweat glands of anhidrotic horses with an exogenous b2-agonist results in enhanced anhidrotic prolonged desensitization.

Alternative Therapies

There have been anecdotal reports of return to sweating following acupuncture. This response has been reported to last from a few days to several weeks. Lay persons have reported success by feeding dark beer daily.

Hubert, JD., R.E. Beadle, G.N. Norwood., 2002. Equine Anhidrosis. The Veterinary Clinics: Equine Practice. 18: 355-369.

Do you have a question on Equine Nutrition?

Ask your question here and mail it to:

Poulin Grain, Inc.
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24 Railroad Square
Newport, VT 05855

PHN
PERFORMANCE HORSE NUTRITON, LLC

Question & Answer

What are electrolytes, and should they be supplemented in a performance horse's diet?

Electrolytes are small, charged particles (ions) that are responsible for maintaining the electrical system of the horse. Movement of electrolytes within the horse's body allows for many cellular functions, including muscle contraction, which ultimately allows performance horses to work.

Horses lose electrolytes primarily through sweating. The more a horse sweats, the more electrolytes lost. Performance horses that sweat extensively without electrolyte replacement can show signs of exercise intolerance, fatigue, and muscle weakness. If a horse is working to the point that it sweats, electrolyte supplementation is a good idea. The primary electrolytes needed by the horse are sodium, chloride, potassium, magnesium, and calcium. These electrolytes are found in many natural feedstuffs such as hay and salt. There are also a number of quality electrolyte supplements on the market that will satisfy the requirements of performance horses. When buying an electrolyte, make sure it contains electrolytes and not a surplus of sugar. Electrolytes should have one or more of the electrolytes listed as the first ingredient, not sugar.

During the summer, my 10-year-old barrel racing gelding typically begins to lose weight. Why does this occur and what can I do?

Weight loss in mature horses can occur for a number of reasons. The fundamental cause for the weight loss is simple- the horse is expending more calories (energy) than it is taking in. The main energy expenditure for a mature gelding is forced exercise, such as riding, training, or in your case running barrels. It is normal for horses to be at both their peak level of training and competition during the summer months. Because of this intense calorie demand, horses require larger amounts of high-quality feed. How much feed required depends on the size of the horse and quality (calorie content) of the feed. Horses that are being fed a typical hay and grain diet will generally need their grain intake increased to provide additional calories. The addition of vegetable oil (corn oil or soybean oil) is also a good way to provide extra calories to horses. For horses being fed pasture, it is important to realize that pasture at this time of year is beginning to decrease in energy content. Many horses will do fine on pasture until the pasture begins to mature and then they will begin to drop weight. For these horses, supplemental forage (hay) and additional grain with vegetable oil will help the horse maintain body weight.