

Got Glucosamine?

Poulin Grain Premium Senior Horse Feed Does!

Poulin Grain Premium Senior has been the feed of choice for many horse owners all over the New England States and New York State. Now it's even better with the inclusion of glucosamine HCl. Poulin Grain is the first feed manufacturer in our market area to add glucosamine to a horse feed.

What is glucosamine? It is a combination of glutamine derivative and glucose. Glucosamine is an integral part of all connective tissue in the body, including cartilage, ligaments and tendons.

What does pure glucosamine HCl do with regard to joint health? Glucosamine has been recognized as an anti-inflammatory, making horses more comfortable. Glucosamine is also a building block to joint cartilage, and may be beneficial to cartilage repair.

Questions? Call the Poulin Grain Technical Support Office at 800-334-6731



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Newport, VT 05855

Feeding the Senior Horse

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

It is estimated that nearly 20% of the United States horse population is 15 years old or older. It is not uncommon to hear of individual horses that may be in their upper 20's or early 30's. Why are horses living so long? Several potential reasons exist including improved internal parasite control, better nutrition, advances in veterinary care, and less strenuous work. As horses become old their bodies naturally begin to fail. This leaves their owners with the responsibility of providing proper care for their senior horses.

A common question many owners have is "When does a horse become a senior?" In general, horses between 18 and 20 years of age are thought to be approaching their senior years. However, a better description of senior is when a horse becomes a "Nutritional Senior". A nutritionally senior horse is one that can no longer eat its normal diet and maintain proper body condition. Nutritionally senior horses typically have one or more of the following conditions:

decreased nutrient absorption, dental problems, increased sensitivity to stress and an increased likelihood of disease. Understanding these conditions will allow care givers to modify feeding programs to ensure proper nutrition.

Decreased Nutrient Absorption

Exposure of horses to intestinal parasites causes scarring of the digestive tract. These scars result in damage to the lining of the intestine which decreases nutrient absorption. Improvements in de-worming products have delayed and minimized damage from internal parasites, but over a lifetime this damage still occurs. To further compound digestion problems, the horse's digestive tract begins to lose efficiency with advancing age. Research studies have shown that "Nutritionally Senior" horses require additional protein, phosphorus, and certain vitamins. Proper protein intake is particularly important in senior horses.

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Poulin Grain Put to the Test

Jessica Coffield
www.northshirefarm.com

When I purchased my farm, it was important to me that since I wanted my horses to be the best, I had to feed the best. We have all heard the old adage "You are what you eat". I did lots of research and chose Poulin Grain for the quality, innovation and variety of their products, not to mention that Community Feed in Westminster, Vermont, my supplier, is reliable, knowledgeable and provides great service. I currently feed Poulin Grain Senior, which includes Glucosamine, to my retired FEI horse and he looks better than he did in his prime. I have "full-figured" ponies that eat MVP and are able to get all of their nutritional requirements without all the calories. The rest of the barn eats the Performance 10:12 and I could not be happier. Whether you are showing your horse or are just looking to have the happiest, healthiest horse possible, I recommend Poulin Grain, you will see a difference.



Jessica Coffield
Northshire Farm, Bondville, Vermont

Senior horses with inadequate protein intake will break down muscle tissue to provide essential protein for other body functions. Muscle wasting is common in aged horses that are not getting the proper amount of protein in the diet. In creating feeds for senior horses, the protein content of the diet is similar to that which would be fed to a yearling rather than that of a mature horse.

Dental Problems

As horses age their teeth wear down from chewing and grinding their feed. As a tooth wears, an additional tooth erupts from the jawbone in a constant cycle. The process continues until the roots holding the teeth in place become short and the tooth is lost. Old horses often loose teeth and have difficulty properly chewing their feed. Horses begin the digestive process in the mouth by reducing the physical size of feed to a suitable size for proper digestion. Without proper chewing of feed, the horse will not effectively digest its feed. Old horses will often drop or spill grain from their mouths, or they wad up hay or grass into partially chewed balls and drop them on the ground. Inefficient chewing of feed can lead to digestive upset, weight loss and nutrient deficiency. While the loss of teeth cannot be prevented, proper care of the teeth can delay problems. Feed products for senior horses can also be modified to account for chewing difficulties. Grinding and processing both the forage (hay) and grain portions of the diet into a pellet effectively does the chewing for the horse. Soaking the pellets in water prior to feeding makes them soft and easy to swallow.

Stress

Old horses are very sensitive to stress. This stress can come in the form of changes in temperature, changes in housing, dealing with the pecking order imposed by other horses, or pain. Old horses are particularly sensitive to changes in temperature, predominantly cold temperatures. Sensitivity to cold may result from decreased fat cover that acts as insulation to the cold. Sensitivity to cold could also be a result of the senior horse's inability to chew and take in adequate amounts of fiber. It is the fermentation of fiber in the horse's hindgut that produces heat to help warm the horse. Senior horses are also sensitive to changes in their surroundings. Changing paddocks, stalls or routine tend to cause weight loss in senior horses. Adding horses to, or taking horses out of, a pasture containing an old horse changes the herd dynamics and sends the old horse to the bottom of the pecking order. This can also lead to weight loss since the old horse is not given adequate access to feed. Finally, old horses may have old

injuries or arthritis that causes them to be in constant pain. Horses that experience pain will suffer from loss of appetite and drop in body condition. To alleviate the weight loss associated with stress, senior horses should be provided shelter, water proof blankets, and be kept with a consistent group of horses in familiar surroundings. Senior horses should also be fed a high quality senior horse feed to facilitate maintenance of body weight. This senior feed should also be fortified with glucosamine for its potential anti-inflammatory properties, helping keep old horses comfortable.

Disease

Senior horses are subject to many age related diseases. Chronic infections, liver or kidney failure, anemia, Cushings Disease, and respiratory problems are but a few disease conditions that affect old horses. Each of these diseases requires veterinary treatment and nutritional support. The nutrition support provided depends on the specific disease, but proper nutrition is a key to recovery and strengthening of the immune system. Further, proper nutrition will go a long way to helping prevent many of the health conditions that plague old horses.

The Diet

The most important component in the diet for senior horses is forage (hay/pasture). Many old horses maintain good body condition on pasture, but lose condition when forced to rely on hay. Weight loss associated with being fed hay is likely the result of the inability of the old horse to properly chew the hay. Replacing the baled hay with hay that has been ground and compressed into a pellet or cube will aid in digestion. Soaking these pellets or cubes will further soften the product and enhance consumption. Senior horses also require vitamins and minerals to maintain good health. Poulin Grain Equi-Pro Premium Senior combines forage, small amounts of grain, vitamins and minerals in a pellet as a balanced diet for older horses. Equi-Pro Premium Senior also includes glucosamine HCl at a rate of 660 mg per pound for potential relief of the pain and inflammation of arthritis.

Do you have a question on Equine Nutrition?

Ask your question here and mail it to:
Poulin Grain, Inc.
Marketing Dept.
24 Railroad Square
Newport, VT 05855

Research Update

Exercise in Older Horses

Dr. Stephen Duren

Performance Horse Nutrition

With 15% of the horse population in the United States older than 20 years of age, many older horses are still healthy and can be utilized for athletic competition. Therefore, it is important to understand the changes in exercise capacity associated with aging. In horses most of the exercise physiology research has concentrated on young horses with only limited data published regarding the exercise capacity of the aged horse. In humans the ability to perform strenuous work decreases with age, with much of the decline attributed to the effects of aging. Old horses (> 20 years old) have been shown to have a decrease in maximum heart rate, a decrease in the maximum amount of oxygen that can be consumed and a decreased tolerance to high-intensity exercise. Old horses also accumulate lactic acid at lower exercise speed compared to young horses. These cardiovascular changes that occur with aging result in old horses becoming fatigued at lower exercise intensities compared with young animals. Old horses have also been shown to have difficulty regulating their core body temperature. Increases in core body temperature increase twice as fast during strenuous exercise in older horses compared with young horses. These increases in body temperature are thought to be the result of reduced circulation and decreased cardiovascular function in older horses. If the excess metabolic heat generated during exercise is not dissipated, life-threatening elevations in body temperature may develop and the horse's athletic performance is reduced. Research is beginning to concentrate on training methods to modify exercise frequency, duration and intensity to maximize health in old horses.

Reference: K.H. McKeever, 2002

Exercise physiology of the older horse. Veterinary Clinics Equine 18:469-490.



Question & Answer with Dr. Stephen Duren

Can feed tags be used to compare different horse feeds?

Feed tags can be used to compare different feeds, but not without some explanation. Government regulations mandate that feed tags are attached to all feed bags to reduce the incidence of fraud. Each state is responsible for monitoring tagging systems for all products sold in the state.

Over the last several years, feed tag regulations have been redefined and therefore have become more useful to consumers. Feed tags must contain the name of the product and a purpose statement, two pieces of information which should give the purchaser a clear understanding of the type of animal for which the feed is intended. All tags must list a guaranteed analysis for the following nutrients: crude protein, crude fat, crude fiber, calcium, phosphorus, copper, zinc, selenium and vitamin A. Not long ago, feed tags were only required to list values for protein, fat and fiber. Feed tags must also include an ingredient list. Ingredients should be listed in order of highest concentration to lowest concentration. Ingredient lists can be written in one of two ways depending upon the state in which the feed is manufactured. First, individual terms can be used. If oats, barley and corn are ingredients in a feed, for example, each would be listed separately. Alternatively, collective terms can be used. In this instance, oats, barley and corn could be collectively referred to as "grain products" with no mention of them individually. Finally, a feed tag is required to list feeding instructions.

From a practical standpoint, a feed tag will generally explain what class of horse the feed is intended. For example, a tag may state a feed is "for maintenance of mature horses." The guaranteed analysis tells the nutrient profile of the feed but does not indicate the quality of those nutrients. The ingredient list does tell you the components used in the formulation but will not tell the absolute amounts of those ingredients. Further, if the state requires only collective terms, a consumer may never determine the exact ingredients. More often than not, simple feeding recommendations are given with very little explanation or detail. If a horse is not being fed the amount recommended by the manufacturer, the feed may not be appropriate for that horse. Unfortunately, with the limited information available on a feed tag, comparing feed tags to determine a superior feed is difficult.

What is the difference between feeding wheat bran and rice bran?

Wheat bran is a by-product of the wheat milling industry whereas rice bran is a by-product of the rice milling industry. The main nutritional difference is rice bran contains a high amount of fat, usually 20% fat, while wheat bran contains less than 4% fat. Due to the high fat content, rice bran is typically fed as an energy supplement to help thin horses gain weight, or as a hair coat conditioner for show horses. The fat in freshly milled rice bran is very unstable, and it will become rancid quickly. To avoid rancidity, the rice bran intended for horses is usually stabilized through a heating process. Wheat bran is fed to horses as a fiber and phosphorus source. When mixed with water, wheat bran is considered a mash, and this is often fed to horses.