

Caring for the Older Horse: Common Problems and Solutions

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Horses, compared to other livestock and companion animals, have relatively long life spans, often living into their late 20's and early 30's. Many horses have productive careers into their 20's. In fact, in many disciplines, horses do not peak until their teenage years. Good nutrition, maintenance, and veterinary care have allowed horses to lead longer and more productive lives. However, as the horse ages, his needs change and additional care may be required to keep him as healthy as possible. The older horse can often be cared for and managed well, as long as the owner and/or caregivers understand the special needs a horse may have as it ages. It is important to recognize there is not a predetermined age when an individual horse becomes "old". Like people, individuals age at different rates. Some areas of aging we can have an effect on as caregivers and some we have little effect or control. Genetics and previous care, or the lack of, as well as previous use are areas that we as horse owners cannot do much about.

The key to caring for an older horse is to understand how the horse's body changes as it ages and how these changes impact the horse's requirements. Important areas that must be considered when caring for the older horse are nutrition, lameness, vision, immune response and hormone changes. In this article, we will address changes in the aging horse's body that impact its requirements along with possible ways to meet these requirements and solutions to problems that may occur. It is important to recognize that not all older horses have problems; some are maintained easily without much change in routine. However, some horses begin to

have problems as they age and are referred to as geriatric. These horses may require special attention and a change in management.

Nutrition

Nutritional needs of aging horses will vary greatly between individuals. One of the biggest concerns is providing adequate nutrition to meet all needs of the horse. For some horses, it becomes harder for them to meet their nutritional requirements as they age for a multitude of reasons. One of these reasons is poor dentition. Proper and routine care of the horse's mouth by a qualified equine dentist will help the horse maximize nutrients from the food he is eating. Horses chew in a circular motion from one side of their mouth to the other. This motion naturally wears away the horse's teeth. Often times, this chewing motion will lead to sharp points developing on the outside of the horse's upper molars and the inside of the horse's lower molars. These sharp points must be filed down by floating the horse's teeth regularly (one to two times per year). Keeping the horse's teeth floated will improve the horse's chewing ability and allow him to better digest foods that he is eating. It is also important to understand the growth pattern of horses' teeth. When horses first develop molars, they are very long and folded into the dental socket of the horse. The length of the entire tooth is around 5 inches in a young horse with only a small portion being visible above the gum line. As the horse chews and wears away its teeth, the teeth continue to push upwards to replace that which has been worn. This continues throughout the life of the horse, but by the time the horse approaches his 30's, most of the tooth may be worn down to the roots. This leaves the older horse with little ability to chew and digest foods it would ordinarily

eat. This problem can be alleviated relatively easily by changing the type of food the older horse might eat. Some feed companies make senior horse feeds which tend to be softer in texture than ordinary horse feeds. Concentrates fed in the form of pelleted feed can be wet down and softened to make a gruel that is easy for the horse to chew. Forage can be provided in the form of alfalfa or other hay cubes which can also be wet down and softened for the horse to chew easily. In some horses one must be careful when feeding alfalfa as this may cause some problems. In general, reducing the particle size of the food and feeding foods that can be wet down and softened will greatly ameliorate any nutritional problem the horse may have due to chewing difficulties. While dentition problems are usually relatively easy to manage, if the horse is not cared for properly (i.e. turned out to pasture with no additional care) it may quickly become emaciated due to inability to eat the food that it is able to access.

Dentition is not the only nutritional challenge that must be overcome when caring for the geriatric horse. As horses age, some may become less able to glean nutrients from what they eat due to the fact that they are less able to absorb nutrients, have lowered ability to digest fiber, and have lowered motility of the gastrointestinal tract. Some of these problems may be due to intestinal damage from parasites if the horse was not on a regular parasite control program throughout its life. Routine deworming is critical in maintaining the horse's health and longevity. Regardless of the reason, when feeding geriatric horses that are having difficulty holding their body condition, it is very important to provide them with highly digestible, high energy feeds. One commonly used practice is to feed older horses beet pulp in some form. Beet pulp is a highly digestible fiber source for horses. It is sometimes incorporated into commercial feed or can be bought separately to be wet down and fed in

addition to grain. Another common practice is to improve the digestibility of grains by processing them (crimping, cracking, rolling, or steam flaking). This will break the seed coat of the grain so that the horse may better digest it. Energy content of the diet may be increased by supplementing fat to the diet. This is a highly digestible energy source and will help to meet the energy needs of the horse. However, it is critical not to just increase the energy content without also insuring that other nutrient needs are met. Protein content should also be increased (to roughly 14%), along with vitamin and mineral content. However, care should be taken not to feed vitamins and minerals in such excess as to cause toxicities. Fat soluble vitamins (A, D, E, K) are stored readily in the body which, over time, can lead to toxicities. Excesses in certain minerals can interfere with absorption of other minerals. An excess of calcium and phosphorus should be avoided as this will potentially cause kidney stress and renal calculi. A free choice loose vitamin/mineral mixture should be made available to the horse to consume ad libitum.

It is important to be sure to feed good quality grain and forage free of mold and dust. Moldy, dusty feeds can cause gastrointestinal tract problems such as colic and are generally not as digestible to the horse as compared to better quality feeds. Older horses often are more susceptible to respiratory irritation, and feeding dusty feeds will only aggravate these conditions. Horses that suffer from persistent respiratory problems may benefit from wetting their hay to control dust. It is important if feeding hay to feed good quality hay that was cut at the appropriate stage of maturity. Hay that is too mature when cut is generally not very digestible for the horse since it has an increase in lignin content, which is completely indigestible by the horse. This hay often appears to have a very high stem content and should

be avoided, particularly in older horses that already have decreased forage digestion. Feeding alfalfa hay to older horses should be done with caution. Alfalfa, while often very digestible, is very high in calcium and therefore can contribute to renal calculi. If alfalfa is fed to older horses, it should be mixed with grass hay.

Horses That are Too Fat

Not all older horses are hard keepers. Some will hold their weight easily and may have the opposite problem and become too heavy. Often times, older horses are not exercised as often or as intensely as their younger counterparts. These horses may begin to accumulate fat at a rate which may be detrimental to their health. Horses that become too heavy may stress their bones and joints and may aggravate any lameness conditions such as arthritis and navicular syndrome. It is important to ensure that the horse is meeting all of its nutritional requirements without gaining an excessive amount of weight. For horses that are not in a routine riding program, allowing ample turnout time will provide the horse with some exercise and therefore allow it to maintain muscle tone and a healthy body condition. Not overfeeding horses that are easy keepers will also help to alleviate stress on bones and joints.

Some horses may develop metabolic conditions as they age which lead to unhealthy obesity. This is commonly caused by imbalances in hormone levels (such as insulin) caused by conditions such as tumors. An example of this is Cushing's disease. Cushing's disease is caused by a small, benign tumor in/on the pituitary gland. This condition often develops in older horses (average age is 20 years). Horses with this disorder produce excessive amounts of cortisol from their adrenal glands. Cortisol has many functions in the body including

maintaining blood pressure, reducing the body's inflammatory immune response, regulating the function of nervous tissue, regulating muscle tone and connective tissue repair, and regulating the breakdown of carbohydrates, proteins, and fats by controlling insulin levels in the body. The excessive amount of cortisol produced in horses with Cushing's disease leads to many problems including recurring laminitis, muscle atrophy, susceptibility to disease, slow wound healing, excessive hair growth along with failure to shed and lethargy. This disease can be controlled with medication if caught early enough. Horses with this and similar metabolic disorders can be managed with routine quality hoof care, vaccinations, deworming, and a specialized diet. A commonly used management practice for horses with Cushing's is to feed them a diet with a low glycemic index. The glycemic index of feeds is a representative number to convey how much of a glucose and insulin spike a particular feed elicits in the blood. It is strongly correlated to the amount of sugar and starch present in the feeds that the horse is eating. Feeds that are high in sugar and starch will cause blood glucose levels to rise sharply and quickly. This is followed by a spike in insulin levels in the blood. For horses with metabolic conditions such as Cushing's, this spike in insulin is undesirable. Feeding a diet with a lower starch content (i.e. feeding more highly digestible fiber and fat) will keep insulin levels in the bloodstream stabilized. It is important to be sure that the horse's diet is meeting all of its protein, mineral, and vitamin requirements as these nutrients are critical for muscle tone and tissue repair, as well as wound healing and prevention of infection and illness. These horses can be managed by feeding them a diet which meets their requirements but has little starch and sugar. Examples of feeds that may be used are good quality forage, highly digestible fiber

sources (i.e. beet pulp), fat supplementation if needed to maintain weight, and protein, vitamins and minerals in the form of a ration balancer.

Lameness in Older Horses

One of the most common soundness problems seen in older horses is arthritis. Arthritis can begin at any stage of the horse's life but often worsens as the horse ages. It is questionable whether arthritis can be prevented to any extent, but it can often times be managed with considerable success. There are numerous feed supplements designated for use in improving joint function. These generally contain chondroitin sulfate, glucosamines, hyaluronic acid, msm, yucca, or a combination of these ingredients. There is some thought that use of joint supplements starting at an early age may prevent or slow the onset of arthritis. Use of joint supplements has been reported to have beneficial effects on some horses that already have arthritis and other forms of joint disease. For horses that do not improve with the use of joint supplements, another option is the use of injectible joint products which typically contain substances thought to replace joint fluid or improve cartilage regeneration. Examples of products that may be found in injectible form are polysulfated glycosaminoglycans or sodium hyaluronate (trade names Adequan and Legend). For those horses that still are not significantly improved with the use of injectible products, a veterinarian may recommend injecting a particularly bothersome joint with steroids and/or hyaluronic acid for direct and more immediate relief. These may improve joint flexion and reduce pain within days and effects may last for months to years. Benefits of joint injections may last for months to years before having to be repeated.

Other potential lameness causing conditions for older horses are problems related directly to the feet, whether they be caused by lack of proper care or lack of good and adequate horn growth. Proper and adequate hoof care is necessary to keep older horses sound. As the horse gets used less many times their feet get neglected. This coupled with the fact that many older horse often don't grow the quality of horn we would like for them grow because of lack of use and because they don't utilize their nutrients as well can lead to imbalanced feet. Imbalanced feet then can lead to an exacerbation of arthritic conditions and long feet can lead to soft tissue injuries. So while these horses may not be working and performing like they once were proper hoof care is still essential.