

Senior Horse Nutrition

by: Marcia King

September 01 2008 Article # 12797

Choose the right diet for your aging horse to maximize his health and well-being.

Your horse is of that certain age--a senior, a veteran, a golden gal or golden guy, a moldy oldie. The last rail's been cleared (or knocked down), the backstretch run, the pattern completed. Life's about cruisin' in the slow lane.

Now that your horse is officially a senior citizen, you wonder, *shouldn't he starting eating like one?*

But what does feeding a senior horse entail? Is a special senior formula the best option? Can or should forage remain the foundation of your aging horse's diet? Is supplementation needed for his aging digestive system?

When should a horse be switched to a senior diet and, more importantly, why?

Aging Bodies

There are plenty of reasons why aging can take a toll on senior digestion.

Poor dentition is high on that list. An older horse can run out of teeth, since a horse's teeth essentially grow until they're gone. In addition to tooth loss, tooth fractures, diastemas (gaps between the teeth), abnormal wear patterns, and sharp points decrease the horse's ability to grasp and grind food. That, in turn, leads to decreased food ingestion and, ultimately, weight loss. Horses with these disorders benefit from diets that are easier to ingest.

Many "old horse disorders" can adversely affect the horse's ability to digest and absorb nutrients, or the condition can be exacerbated by an inappropriate feed protocol. These senior maladies can include equine Cushing's disease; liver, kidney, and intestinal dysfunction; decreased saliva production; tumors; and chronic

obstructive pulmonary disease (COPD) or summer pasture-associated obstructive pulmonary disorder (SPAOD). Conversely, treatment of these conditions can be enhanced or better managed with appropriate nutrition.

And, for unidentified reasons, some old horses just do not absorb or digest nutrients as well as they did before. "In such horses, a 'senior' type ration may help," states Sarah Ralston, VMD, PhD, Dipl. ACVN (veterinary nutrition), an associate professor in the Department of Animal Science at Rutgers University.

The big question of when to make the switch should rest with how well your horse is doing, not whether he's reached some arbitrary age. Does he have a disorder that necessitates certain nutrients? Is he losing weight?

"Each horse is different and will reach the point where they need changes in the diet at different times," notes Britta Leise, DVM, MS, Dipl. ACVS, a clinical instructor in Emergency and Critical Care at The Ohio State University College of Veterinary Medicine. "If your horse is 20 years old, has a body conditioning score of 5 or 6 out of 9, and is eating the same diet he or she always has, then changing their diet would not necessarily be indicated. However, a horse that cannot maintain his weight, that has a body condition of 4 or less, may need to be changed over to a senior diet."

Before changing feeds in a failing older horse, first get a thorough health checkup, cautions Ralston. "If pituitary, liver, or kidney function is compromised, many of the 'senior' formulas could actually make matters worse," she says.

Leise warns that determining the body condition of an aging horse is sometimes tricky. "For example, a cushingoid horse with a thick hair coat and pendulous abdomen might be perceived as fat by some owners," she says. "Consulting with your veterinarian twice a year about your horse's body condition score and overall health, ideally during the late fall (before going into the winter) and spring (as the grass is getting more rich), is recommended."

Diets for Success

Unless you're addressing specific veterinary conditions in your horse, the general protocol for senior horses that need diet changes, says Ralston, are forages or feeds that contain 12-14% crude protein, preferably from a high-quality source such as soybean meal, restricted calcium (0.6-1.0% as fed), and higher phosphorus (0.4-0.6%).

"Based on our most recent information, starch and sugars should be restricted, though the exact cutoff point is not well-established," she says. "If liver function is good, added fats (5-10% in total) can be used as extra calorie sources. Ideally, the feed should be processed in some way to increase digestibility and be easily chewed. Antioxidant vitamins such as A and E should be added, especially if the horse is not on good-quality pasture or hay.

"A typical ration for a 1,000-pound horse might consist of free access to top-quality hay (preferably a straight grass or grass/alfalfa mix) or pasture, plus two to eight pounds of a feed designed for old horses, plus free-choice water and salt."

It could take a while for your horse to adjust to a new feed. "My mare still would prefer sweet feed, but will eat the senior, and she needs it!" proclaims Leise. "Feeding changes should always be made gradually over a few weeks."

Additionally, it's best to feed your senior horse separately, not in a group. "Older horses may be slower to eat, can be run off, or might not get there as fast," Leise warns. "Therefore, he or she may not be getting all the food you intended for them to receive."

Forage choices "Choose softer grasses such as orchard grass, brome, or timothy," Ralston advises. "Avoid alfalfa, clover, or other legume hays because they are very high in calcium, which is really hard on the old kidneys."

Especially avoid using coarse, long-stemmed, poor-quality hay for horses with dental issues, warns Leise. "They might not be able to completely digest the large fibers, predisposing them to impactions of the large colon."

Leise also discourages round bale hay feeding for aging horses. "If a senior horse needs a senior diet, then the round bale that sits out exposed to the weather will not have the nutrients needed," she says. "Round bales also tend to have longer stems and can be harder for the horse with dental issues to chew and digest." Risk of botulism is higher in round bales, adds Ralston.

Normal forage rations are about 1-2% of the horse's body weight per day; unlimited pasture or hay access is usually okay unless the horse is prone to laminitis, obesity, or choke. Note: If you soak the hay in water to help

with chewing, soaking for 30 minutes or less is all that is need to help with water intake and chewing.

Concentrates "If you're feeding a concentrate in addition to forage, feed only as much concentrate as necessary to maintain good body condition," Ralston advises.

Senior formulas are designed to be complete, balanced, highly digestible, palatable, and nutrient-dense, packing more calories and substance in smaller portions. "Some commercial senior diets use an extruded feed, which makes them more digestible," Leise says. "These diets commonly contain high-quality protein sources, such as alfalfa or soybean meal; they usually contain about 14% protein, 4 to 5% fat, and around 14 to 15% fiber. Other important vitamins (particularly B) and minerals (phosphorus, calcium, selenium, copper, and zinc) are also added to the diets."

Some researchers, including Ralston, have found that older horses do better on complete pelleted feed versus textured feed (sweet feed, oats, corn). "I do not recommend sweet feeds for otherwise healthy old horses, period," Ralston says. "Incidence of insulin resistance is too prevalent in the 20-year-old and older cohort."

When feeding a senior formula, observe a couple of caveats:

- When feeding a senior formula still provide some forage, if possible. "Most complete feeds fed without access to forage are invitations for ulcers, wood chewing, or worse," warns Ralston. "Plus many 'complete' formulas do not contain high amounts of fiber (greater than 15%). If the fiber content is low, even if it says it is a 'complete' formula, additional fiber sources should be offered. One to two pounds of soaked hay cubes or beet pulp per feeding can really make a difference.
- "Even if the horse does not greedily overeat the sweet feed due to its high palatability," Ralston says, "the sweetness will attract flies and make the feed more prone to mold. Offer at most the recommended daily amounts divided into several smaller feedings (less than 0.5% of the horse's body weight per meal)."

Special Needs

Horses affected with particular medical or physical disorders often require a different nutritional protocol than the general feeding guidelines recommended for normal seniors. Here are some tips.

- Avoid sweet feeds, high-grain diets, and lush sugar-rich pastures for horses prone to or having laminitis, Cushing's disease, equine metabolic syndrome (also known as peripheral Cushing's syndrome, hypothyroidism, or insulin resistance), or pituitary/thyroid dysfunction. Pasture sugars are highest during periods of lush growth, during the afternoon in spring and fall, and during the morning after an overnight frost.

"Pelleted or extruded feeds containing high fat (5% or more) and fiber (15% or more), but with limited molasses content, may help control these problems," Ralston says.

- Changing when/where horses are allowed forage can greatly benefit recurrent airway obstruction and summer pasture-associated obstructive pulmonary disease (SPAOD) horses. Says Leise, "COPD horses (those affected with chronic obstructive pulmonary disease, now termed recurrent airway obstruction) do better out of the stall on grass, with little or no hay, although wetting the hay or feeding chopped hay can decrease dust. Usually they need to be out year-round, but particularly in winter when the barn is closed in. SPAOD horses cannot be on grass in the summer months, and even hay can cause them problems at times. Both COPD and SPAOD horses are ideal candidates for being fed complete pelleted senior diets in order to avoid exposure to irritating hay dust or outdoor pollens and molds."
- Soaked hay cubes or beet pulp plus pelleted or extruded senior feeds are good for horses with chewing difficulties or decreased saliva production, Ralston reports. "Add at least one quart of water per pound of feed to prevent choke," she says.
- Try complete feeds or loose hay and/or hay cubes for horses that cannot graze effectively due to missing or misaligned front teeth (incisors), suggests Ralston. "Soak the feeds if the horse tends to choke on his feed or is prone to intestinal impactions," she adds.
- Avoid senior feeds for horses with liver or kidney failure. "Most senior feeds have increased protein and fat, which are contraindicated for liver failure," warns Ralston. "Some senior feeds contain higher phosphorous and calcium, and those are contraindicated for kidney failure."

Instead, feed horses with liver disease diets high in starch, but low in protein (less than 12%) and fat (less than 5%), using grains such as corn, sweet feeds, or concentrates and free access to grass hay. Fairly large amounts (1.0% of the horse's body weight per day divided into two or three meals) of the concentrates might be needed to maintain weight.

"Horses with kidney failure should be fed good-quality grass hay and corn or a complete pelleted ration for mature (not aged) horses," says Ralston. "Avoid legumes (alfalfa and clover), wheat bran, and beet pulp, due to high calcium (in legumes and beet pulp) or phosphorus (in wheat bran) content."

Supplements

Unless they have veterinary abnormalities or nutrient deficiencies, most senior horses receiving an appropriate complete and balanced diet do not require additional vitamins and minerals, except maybe vitamins A and E, if the quality of their pasture or hay is not good, Ralston states.

"Extra minerals and vitamins in high concentrations can be harmful," warns Leise. "Commercial feeds are complete and balanced, providing what the normal horse needs," she notes. "Good pasture also usually provides an adequate source of vitamins and minerals."

Ailing horses or those with medical conditions, however, might benefit from specific supplementation.

Vegetable oil To help maintain weight and condition, add up to one cup of vegetable oil per day if liver function is good, suggests Ralston. "Fat is a good source of energy at less than 10% of the total ration a day, especially if liver function is reduced," she says.

Joint supplements Glucosamine, chondroitin sulfate, MSM (methylsulfonylmethane), and hyaluronic acid (HA) could aid arthritis sufferers, says Leise.

Electrolytes "Because some cushingoid horses sweat more due to their heavier hair coats, they could require additional electrolytes (sodium, potassium, and chloride)," says Leise. Adding electrolytes to feeds also can help stimulate water intake. Free access to salt is essential.

B vitamins "Daily oral supplementation with B-complex vitamins (brewer's yeast is a good source) and ascorbic acid (0.01 g/pound body weight) may be beneficial for horses with liver disease or that are chronically stressed due to other medical or physical conditions," says Ralston.

Take-Home Message

Keep it simple. Managing the nutritional needs of your senior horse doesn't have to be a complicated affair. Follow the adage: *If it ain't broke, don't fix it*, making the switch to a senior diet only when your horse's condition suggests he needs the extra support. When that time comes, use the right nutritional protocol for your horse's particular situation, based on a full health assessment, to help maximize your horse's health and well-being.

**Readers are cautioned to seek the advice of a qualified veterinarian
before proceeding with any diagnosis, treatment, or therapy.**



Copyright © 2009 BLOOD-HORSE PUBLICATIONS. All rights reserved. Reproduction in whole or in part in any form

or medium without written permission of BLOOD-HORSE PUBLICATIONS is prohibited. THE HORSE, THE HORSE logo,

THEHORSE.COM and THEHORSE.COM logo are trademarks of BLOOD-HORSE PUBLICATIONS.