



Caring for the Older Horse

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Improvements in health care and nutrition have increased horse's lifespans and their number of useful years. Horses can quite easily be productive into their 20s, and their age and experience make them quite valuable for many activities. In addition, owners may have a strong bond with their older horse they have owned for a prolonged period of time. In fact, in a survey of health concerns of horse owners, care of the aging horse was ranked as second in importance. It is important to understand that keeping the older horse in good condition is certainly possible, but may require additional care or considerations beyond those of a younger horse.

When asking "is my horse a senior citizen?" consider each older horse as an individual, as chronological age may differ from physiological age. Simply, some horses may exhibit visible signs of aging or loss of performance earlier than others. This can be affected by their previous use, genetics or a myriad of other environmental factors. Owners should begin to monitor their horses more closely once they reach their late teens, with the goal of minimizing any loss of function or vitality. The owner should be observing the horse for weight or body condition loss; muscle mass loss, especially over the topline; alterations in fat deposition; and changes in hair coat. Additionally, a careful recordkeeping system of observations should be employed. These should include bi-monthly observations of their body condition score (see fact sheet ANSI-3920, Body Condition of Horses), their body weight (which can be done with a weight tape or phone apps that calculate weight – see [Healthy Horse App](#)) and a photographic record of the horse. Additional measurements such as neck or belly circumference may also assist with detection of disease states such as insulin resistance. It is often easy to miss changes when observing the animal every day, therefore comparing recorded observations is critical to detect alterations. As the horse ages further, increase the frequency of these recordings to once a month and even every other week in the aged horses.

Nutrition of the Older Horse

Aging may necessitate making changes to the feeding programs of the older horse in consideration of nutrient content, degree of processing and the amount fed. The teeth of the older horse may limit its ability to chew thoroughly or greatly increase the amount of time it takes to consume feed. Due to the root structure of a horse's teeth (Figure 1) the weakening of tooth attachment with age can result in loose teeth or even loss of teeth, which may make chewing difficult or uncomfortable. This often contributes to weight loss, along with a lessening of ability to absorb nutrients. Older horses may be more prone to choke

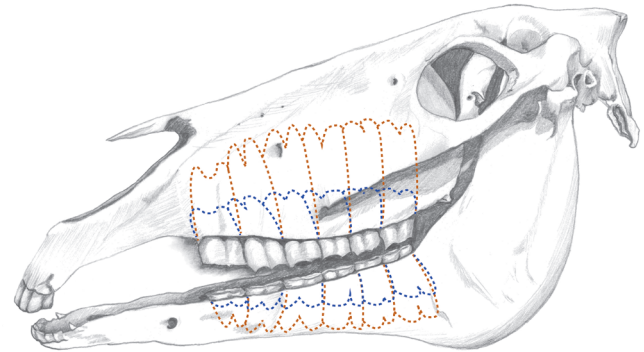


Figure 1. This illustration shows the change in root length of the tooth of the horse as it ages. When the roots become shallower with age, tooth loss is more likely.

or impaction colic due to their poor chewing ability. Regular dental inspections as frequently as every six months should be performed. While a reduction in diversity of gut microbiota in the aged horse has been reported, the effect remains to be seen. No confirmed evidence in reduction of digestibility in older horses has been reported. Therefore, feeding high quality feeds that can be more easily chewed may be the highest priority.

Due to changes in the older horse's teeth, many feeds designed for them include more processed feeds and alternative fiber sources which may be easier to digest. These feeds will typically have a higher protein percentage (around 12 to 14 percent) and should utilize high-quality protein sources to provide the appropriate amino acids. Higher calorie concentration in the form of fat is preferred, as many older horses have insulin sensitivity issues. Avoid high starch feeds. Complete feeds or senior feeds can often replace the entire diet for the horse. If choking is not a risk, long stem forage should still be offered to reduce boredom and increase the amount of time spent chewing. Soaking of feeds can also limit the risk of choking.

Older horses are often assumed to be difficult in maintaining their weight. They may begin to reduce feed intake for a variety of reasons. Older horses may have reduced mobility due to arthritis or have more competition for feed due to social interactions. Competition for resources with more robust individuals may severely impact the older horse's ability to eat. Be sure to allow the senior horse an undisturbed location in which to consume their feed and allow for extra time for them to eat. Reduced activity may also lead to a decrease in appetite as the older horse reduces its energy expenditure.

Obesity in the older horse is as problematic as being underweight. The reduction in activity may lead these horses to

gain more weight than is optimal for their health. Furthermore, adipose tissue (fat) is an endocrine tissue and obesity is a risk factor for developing insulin resistance and Pars Pituitary Intermedia Dysfunction (PPID). Diagnostic evaluations must be made to determine changes in hormones and metabolism. If horses are obese and insulin resistant, a weight loss program must be employed. Dry matter intake of a lower calorie hay can be reduced down to 1.5 to 1.25 percent of body weight. Insulin resistant horses should also receive hay that is lower in nonstructural carbohydrates – ideally less than 10 percent. Forage testing is highly recommended for these individuals. Providing slow feeding hay nets or spreading out feedings may be necessary to decrease boredom and development of stereotypies (such as cribbing or stall weaving) when reducing feed intake (see fact sheet ANSI-3973, Feeding Management of the Equine). A vitamin and mineral balancer, which is lower in calories will ensure the correct intake of nutrients with diet restriction. The rate of body weight loss must be monitored because some horses may respond more rapidly or slowly than others. Carefully monitor and respond to these changes.

Other predictable changes with the aging horse are no different than those seen in people. Older horses are more easily immunocompromised, lose elasticity of tendons and ligaments and lose a degree of their exercise capacity. All must be considered when managing the older horse.

Immune System

Immune system impairment accompanies aging across most species. Consult with your veterinarian on the proper vaccination protocol for the older horse – especially in consideration of its lifestyle (see fact sheet VTMD-9119, Equine Vaccination Programs). Consider increasing the level of biosecurity for the older horses, treating them similar to the very young and avoid contact with horses that travel frequently. The immune system can be sustained by proper feeding of anti-oxidants such as copper, selenium and Vitamin C. Many owners don't think about the immune system of the horse with the amount of internal parasites it may host. As their immune system declines, older horses are less able to withstand parasite infection. Greater fecal egg counts have been shown both in older horses and in horses with PPID, thus more frequent fecal egg count determinations in these horse are warranted to determine the level of parasite load (see fact sheet VTMD 3976, Controlling Common Internal Parasites of the Horse). Be sure to conduct fecal egg counts to coincide with the period of time of typical egg shedding for the most accurate information on parasite load.

Mobility

Maintaining comfort for the older horse is key as 50 percent of horses over the age of 15 experience osteoarthritis. Owners frequently don't recognize many of the conditions that accompany aging and may miss a chance to intervene in a timely manner. In a study of management practices of older horses, owners recognized lameness in only 23 percent of cases compared to 51 percent actually diagnosed by veterinarians and recognized hoof abnormalities only 27 percent compared to 80% diagnosed by veterinarians. Maintaining a consistent level of fitness or exercise will actually help with mobility. It is much harder to

recondition the older athlete, whether it is human or horse! Be sure to allow a longer warm up and cool down period as well. Therapies for reduced mobility may include local treatment of the joints, physiotherapy, farrier care (orthopedic shoes), joint supplements, omega three fatty acids or anti-inflammatories to keep the horse moving. While some owners may be reluctant to employ longer term usage of NSAIDS due to fear of GI upsets, it may be necessary to keep the horse comfortable. Alternatively, specific COX-2 inhibitors can be used without the deleterious effects on the GI system. Consider the older horse's housing, and provide a comfortable place to lie down and is easy to rise from. Due to the high incidence of hoof problems and laminitis in older horses, pay attention to subtle changes in movement or even behavior as indicators of pain. Horses that become reluctant or disobedient when supporting a hoof or standing for the farrier may actually be experiencing painful feet.

PPID

Many aged horses with painful feet or chronic foot abscesses may actually have PPID. Frequent or increased bouts of laminitis or soreness of the feet are seen in 30 percent of individuals with PPID. Between 20 to 30 percent of older horses will develop PPID, which is often missed in the early stages. Owner recognition of PPID was reported between 19 and 21 years of age, but field studies found a younger age of detection (as young as 15 years). Therefore it is important owners learn to recognize signs of this disease. Classic signs include failure to completely shed or the presence of patches of longer hairs on the abdomen and legs. Horses may "change shape" as well. Development of regional adiposity, in particular over the crest of the neck, the tailhead and in the mammary/inguinal region are seen with PPID. Also, a loss of muscle mass over the top line and an enhanced pot belly appearance form as the disease progresses. Horses may also show an increase in thirst and a decreased ability to thermoregulate. PPID is confirmed through monitoring alterations in hormones including ACTH. Medications such as pergolide can be used to help modulate their endocrine dysfunction under a veterinarian's supervision.

While unpleasant, the owner of older horses should also have plans in place for end-of-life decisions. These should be discussed with everyone involved with the care of the horse and include discussion about what circumstances they would be euthanized, who will perform the euthanasia and method of disposal of the body. Making these decisions at the time the horse has to be euthanized may be more stressful than planning ahead.

Overall, there is no reason to consider an older horse not useable, they just need more attention. Pay attention to changes in appearance and weight, ensure they are comfortable and establish a good working relationship with your veterinarian.

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