

HORSE HEALTH

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With grassroots support from Western Canada's horse industry, the EHRF conducts vital horse health research, trains graduate students in specialized areas of horse health, provides a summer research program for veterinary students, and promotes awareness of horse health care and management among western Canadian horseowners.

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Geriatric Horse Care

Horses are living long lives on acreages, farms and ranches across North America. That reality is reflected in statistics: it's estimated that geriatric horses (animals more than 20 years old) account for somewhere between seven and 20 per cent of the entire equine population.

Owners and veterinarians are growing more aware that proper management and medical care can expand the lifespan of these horses. Many age-related issues like dental disease or parasite problems can also be prevented through regular veterinary care that's provided throughout a horse's life.

Dr. Katharina Lohmann is an internal medicine specialist and an associate professor in the Western College of Veterinary Medicine's Department of Large Animal Clinical Sciences. Since many of her regular patients at the College's Veterinary Teaching Hospital are equine senior citizens, Lohmann has gathered together a wealth of health management tips that are specific for geriatric horses.

The following story is an abridged version of a comprehensive article that Lohmann wrote for a national veterinary publication called *Large Animal Veterinary Rounds* that's written at the WCVM. Visit www.canadianveterinarians.net/larounds (click on "Archives" for the complete title list) to read the entire article that was published in June 2007. Plus, make sure to read another helpful article called "Diseases Affecting the Geriatric Horse" (published in September 2007).

FOOD AND WATER

A common challenge in caring for older horses is maintaining their weight. Several factors can cause a horse to lose pounds or adequate body condition: underfeeding, protein-calorie malnutrition, nutrient loss, the inability to eat, a lack of appetite, or a physiologic condition or illness.

In many cases, it's not enough to simply increase the amount of feed: it may take some research to understand the root of the problem. For example, if an older horse is underfed with protein-calorie malnutrition, the animal may have trouble eating the existing feed. In that case, you may need to find an alternate feed that's easier for the horse to chew or digest. Or, if younger herdmates are preventing the senior horse from getting enough access to food, you may need to rearrange the herd and provide more accessible feed sources to avoid competition.

How much fuel does a senior need?

An older horse's feeding regimen generally needs little or no adjustments as long as the animal maintains its weight and body condition. The National Research Council's (NRC) energy recommendations for adult horses equates to about 7.5 to 11 kilograms of hay per day — depending on feed quality and energy content. However, these ration estimates are only a starting point and need adjusting to account for exercising, chronic illness or conditions, or cold weather.

Use body conditioning scoring systems or weight tapes to monitor an older horse's body condition. While weight loss is a common concern, you also need to be sure that obesity doesn't become a problem.

What are the best energy sources?

While good quality forage is the ideal maintenance feed source, older animals with dental issues may need alternate feed to maintain body condition. Complete pelleted feeds meet all dietary requirements for senior horses including higher protein and fat content along with balanced mineral supplementation. If a horse doesn't have a condition like recurrent choke,

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you can also feed supplemental hay to satisfy your horses' chewing needs and to prevent boredom or bad vices.

Make the switch from hay to pellets gradually, and adjust feed amounts for the individual horse. As well, consider cost before deciding to make the switch: based on maintenance requirements, a horse will need about 15 to 20 pounds of complete feed per day.

One cheaper alternative: feed energy-packed beet pulp and grains or sweet feeds to senior horses along with their daily hay ration. But these high-carbohydrate diets aren't recommended if a horse has chronic laminitis or insulin resistance (a common condition associated with pituitary dysfunction).

While supplemental feeds with higher fat content are available in feed stores, you can also add vegetable oils to your animals' diets. You can feed up to two cups of oil to an average-sized horse in two or more daily feedings with small amounts of beet pulp and grain, but start with smaller volumes and gradually increase to oil amounts over two to three weeks.

What are changes in digestive capacity?

The energy requirements of older horses may not change, but their ability to digest certain nutrients may be reduced. Geriatric horses may prefer feeds with higher protein concentrations with less fibre content, and it may also be advisable to increase mineral supplementation so the horse gets enough phosphorus. But be careful about making these kinds of changes if horses have been diagnosed with renal or liver disease.

Since chronic parasitism can cause decreased feed digestibility in older horses, it's important to maintain a good deworming program. If a horse has trouble maintaining its body condition, use extruded feeds or add Brewer's yeast that has the added benefit of providing supplemental B-vitamins.

What are changes in water intake?

Dental pain or decreased thirst perception may cause older horses to reduce their water intake. That can cause low-grade chronic dehydration that leads to reduced exercise tolerance and a predisposition to impaction colic or renal dysfunction. As well, older horses can develop choke if they don't drink enough water along with alfalfa pellets or other pelleted diets.

How can you increase your horses' water intake? One option is to soak their hay or roughage, but that's not a long-term solution since it reduces the feed's nutrient content. Adding salt to a horse's diet may increase thirst, but animals must have free access to water and it's advisable to test for adequate renal function before using this option. Another suggestion: feed mashes or slurries to geriatric horses — a good way to ensure that they ingest some fluids.

If horses aren't drinking as much because of oral pain, it's important to correct the dental problem. Heated water sources will also help to reduce the pain of cold water on a sensitive mouth. If an older horse has a chronic condition like laminitis, it's also important to make it as easy as possible to give the animal ready access to clean water.

EXERCISE

Regular exercise can improve a horse's mobility and slow down the effects of age on cardiopulmonary and musculoskeletal function, but exercise regimens should be tailored to the horse. As well, be aware that older horses may be prone to overheating during strenuous exercise and may become dehydrated. As the horse's body changes, it may also be necessary to adjust the animal's regular saddle and tack.

Common causes of reduced athletic capacity in older horses include:

- musculoskeletal problems that are caused by the cumulative "wear and tear" of athletic activities versus acute conditions.
- decreased range of joint motion that can lead to further lameness problems if a horse tries to perform strenuous exercise.
- age-related changes in body conformation such as swayback.

Some musculoskeletal conditions in older horses can't be cured. Instead, they require long-term management and pain control through the use of non-steroidal anti-inflammatory drugs (NSAIDs) or other systemic medications, supplements (such as glucosamine or hyaluronic acid) or arthrodesis of low-motion joints. Specialized trimming and shoeing can also be helpful in managing musculoskeletal issues.

PREVENTIVE CARE AND VACCINATIONS

Geriatric horses may be more susceptible to infections based on declining immune responses with age, concurrent diseases, general debilitation and poor nutritional status. Researchers have demonstrated that declining immune responses with age primarily affect the adaptive immune responses, specifically antibody formation, while the innate immune system remains relatively stable throughout life.

Here are some recommendations about vaccination practices with older horses:

- routine vaccination against viral diseases like influenza should continue throughout life.
- continue vaccinating against life-threatening conditions like encephalomyelitis, tetanus and rabies. In contrast, some scientists recommend that owners discontinue vaccination against equine herpes virus infection since it may provide little benefit and may favour reactivation of latent infections.
- inactivated vaccines are thought to be safer for geriatric horses compared with attenuated live vaccines.
- optimizing a horse's overall health status can help to achieve the maximum benefit of vaccination.

Since chronic parasitism is a common problem in geriatric horses, review your deworming strategies — especially in animals with a perceived loss of body weight and/or condition, or with pituitary dysfunction. Monitor parasite load in an older horse through regular examinations of body weight, body condition and fecal egg counts.

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