



The Aging Horse

Old age is not a disease—it is strength and survivorship, triumph over all kinds of vicissitudes and disappointments, trials and illnesses.

—Maggie Kuhn (1905-1995)

Owners of older horses have generally owned them for a long time. They have developed a bond that is similar to that seen with companion animals such as dogs and cats. Their desire to have their animals age gracefully with comfort and mobility has stimulated research in the field of equine geriatric medicine — a field specializing in diseases as well as normal changes associated with aging. This issue of *The Horse Report* will highlight some of these areas to provide readers with a better understanding of the equine aging process and its associated changes.

Aging in itself is not a disease, but it can result in changes that predispose the body to disease. Horses age in different ways and at different speeds, depending on their genetics and environment. It is no different in humans. While there are numerous theories on aging, a widely accepted belief is that an organism's



Taddy, a 30-year-old Quarter Horse, lives at the Center for Equine Health. See inside for more information on her.

biologic process is genetically determined at conception and lasts for the duration of its life. Environmental influences as well as stressors within the body (e.g., disease) can affect this process by either accelerating it or slowing it down (M. R. Paradis, *Vet. Clin. Equine* 18/3, 2002). This explains why some animals may appear old at the age of 15 years, while others may still be competing at the age of 25 years. Some humans seem old at age 60, while others continue working in their professions well into their 70s or 80s.

What constitutes mature, old and very old in horses?
By American Quarter Horse

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DIRECTOR'S MESSAGE

The Rule of More and Less



Dr. Gregory L. Ferraro

Old minds are like old horses; you must exercise them if you wish to keep them in working order.

—John Quincy Adams

In this issue of our *Horse Report* we present some useful information on caring for older horses: What to expect as your horse ages, a description of several medical conditions commonly found in older animals, and general health care recommendations. There are many geriatric diseases and health care management issues affecting horses—too numerous to discuss all of them here. If you are concerned about a problem that is not addressed in this *Horse Report*, contact your veterinarian for advice. I also recommend a guiding principle for geriatric health care that can be applied to all species, including humans: the *Rule of More and Less*.

Older horses are quite similar to humans as they age. What had little or no effect on youthful well-being can suddenly take on significance in our golden years and sometimes present serious

risk. Additionally, that youthful flexibility of schedule, the spur-of-the-moment change of plans in the pursuit of fun and pleasure, may be difficult for an older horse (or human) to manage.

The *Rule of More and Less* is as follows. Older horses need *more* of our attention focused on their daily activities and appearance. Small changes in their responsiveness to food, grooming and exercise can be indicators of oncoming problems. Their daily attitude, the general appearance of their hair coat and changes in posture can also signal a potential health problem. Any weight loss or changes in fat distribution should be considered significant until proven otherwise.

The geriatric horse needs *more* attention to his health care. Regular veterinary exams, vaccinations and parasite control become increasingly important as a horse ages. If he received

Most of all they need someone close by who cares for them, looks out for them and loves them.

an annual or twice yearly visit by the veterinarian when he was younger, he may now need quarterly or monthly health exams.

More regular and intensive foot care becomes extremely important in many older patients, especially those with Cushing's disease-like syndromes. *More frequent* dental inspections and procedures will inevitably become important for health maintenance. *More* attention to dietary needs will also become a necessary component to your older horse's care, especially in

relation to the condition of his teeth. In very old horses, milled and balanced feedstuffs of high nutritional quality inevitably will need to replace hay as the primary source of dietary intake.

On the other hand, your aging horse will become *less able* to tolerate sudden changes in schedule and activity. A stable and constant routine is best for continued geriatric health, with as few changes as possible in exercise, feeding and travel. The luxury of saddling up 'ole Dan once in a blue moon and having him carry you from dawn to dusk with no complaint is now in the past. As with humans, things that were easy for him to do in his youth become increasingly more difficult with age.

A daily exercise regimen with as little variability as possible, combined with a regular grooming and feeding schedule is the old horse's best friend. The *less* change you throw at them,

the fewer health problems you will likely have.

To summarize, old horses like old people need *more* attention and *less* excitement and disruption in their daily routine. They need regular exercise, but no more dance marathons. They need good food, but not too spicy. They need to see their doctors regularly, follow their instructions and take their medicine. Most of all they need someone close by who cares for them, looks out for them and loves them.

The Aging Horse — Continued from page 1

Association standards, a horse over 16 years old is considered aged. The oldest horses that have been studied have been mostly in their mid-40s, according to research cited in *The Veterinary Clinics of North America* (December 2002). Some people have tried to define the age of horses equivalent to the age of human beings. Using a mean lifespan for the horse of 25 years, researchers have suggested that this was equivalent to 71 years of age in people. Thus, a 20-year-old horse would be equivalent to a 57-year-old person and a 30-year-old horse would be equivalent to an 85-year-old person.

One of the most important ways to help our horses live as long and healthy a life as they are capable of is through **regular, preventive medical care**. Even if an animal is retired from regular work and is “out to pasture”, it should be examined by a veterinarian at least bi-annually and preferably more frequently (quarterly). A complete physical exam, including teeth, can reveal subtle changes in an animal’s health and allow for early intervention and possibly an improved outcome. It is well known that early intervention can be the single most important step in managing disease.

Between visits with a veterinarian, **all older horses should be visually examined by their caretakers at least once a day, every day**. Watch for changes in body condition, behavior and attitude. Regular assessments of an animal’s body condition, hair coat and general attitude can help

determine whether there are any nutritional, endocrine or dental problems. Slight changes that are noted should be investigated immediately to determine whether there is a budding problem. Even seemingly minor problems that are addressed right away can make a big difference to the horse’s well-being.

Maintaining Proper Body Weight and Nutrition

The most common causes of weight loss in aged horses are failure to keep up with deworming schedules, poor dentition, and/or debilitating diseases, according to Dr. Sarah Ralston of Rutgers Cooperative Research and Extension. She reports that horses over 20 years old had reduced digestion of fiber, protein and phosphorous compared with young horses fed the same diet, though many of the aged horses were still able to maintain good body condition on good-quality hay rations. Thus, the diet of older horses should be examined carefully and adjusted to an individual horse’s needs.

Older horses in particular need a high-quality diet — no dusty or moldy feeds. Also, older horses should be fed away from younger, more aggressive ones so they won’t have to compete for feed. More frequent feeding (two to three times a day) is better for the digestive system of older horses. Rations can be adjusted to maintain proper body condition, which generally consists of being able to feel the ribs but not see them.

Ample fresh, clean, lukewarm (not cold) water should be available at all times. Water that is too cold will result in reduced consumption, which can then lead to colic and other problems.

Free access to fresh water will help reduce constipation or impaction problems, which tend to be most common in winter. If the horse does not drink well, feeding water-soaked feeds (1 to 2 gallons of water per feeding) will help increase fluid intake. Careful observance of water intake can help to avoid disastrous consequences.

Caring for Teeth

While all horses require regular tooth care, older horses and especially those known to have missing molars, should have their teeth checked at least twice a year. If chewing is difficult, “soups” of pelleted feeds may need to be fed. However, the feed should be chosen carefully, preferably under a veterinarian’s guidance, so that it contains adequate and complete nutrition. If the front incisors are missing or badly aligned, do not rely on pasture for nutrition. These horses must be fed complete feeds or loose hay and/or hay cubes since they cannot graze effectively.

Vaccinations and Deworming

Annual and bi-annual vaccinations for tetanus, sleeping sickness, and West Nile Virus is highly recommended for older horses, with additional vaccinations as indicated by the animal’s environment and herdmates.

A regular deworming schedule three to four times per year also is highly recommended. Intestinal worms can scar and cause chronic mucosal damage of the intestines or damage blood vessels, which affects nutrient absorption.

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Routine deworming should be an integral part of an older horse's care.

Shelter and the Environment

Older horses are more sensitive to severe weather, both heat and cold, and often suffer weight loss when temperature fluctuations are extreme. It is essential that adequate shade is available in summer, and that shelter from wind and precipitation is provided in winter. Three-sided "run-in" sheds are adequate in most cases. Higher energy needs in winter can be met by providing increased feed in a more highly digestible form such as high-fat pelleted or extruded feeds.

Managing Age-Related Body Changes

In advanced age, it is not uncommon for horses to become reluctant to lie down due to difficulty in getting back up. This is especially true if they are confined to a stall where exercise and space are limited. While no studies have been conducted to determine how much "down time" a horse needs, most horses will lie down at least once every two or three days. If you suspect a problem, consult your veterinarian about ways to manage it.

Pain can make a horse so miserable it may lose the desire to eat. The principal cause of pain in older horses is arthritis. The best thing to do for an arthritic horse is to allow it to exercise at will. Joints become stiff when a horse is kept in a stall for any length of time, and it is twice as painful to start moving again when turned out. Do not confine the horse to a stall unless absolutely necessary for medical reasons. The more the older horse can move about freely, the less stiff it will be. Ideally, there should be free access to a turnout, preferably with another compatible horse or pony for company.

Arthritic horses can be helped by anti-inflammatory drugs, chondroprotective feed additives, and other remedies. Attention to proper trimming and shoeing may help avoid unnecessary stresses on joints and can help keep the horse mobile. Also, maintaining an ideal body weight and avoiding obesity will prevent extra weight and stress on the joints.

Reducing Stress in the Older Horse

Finally, older horses do not handle changes in environment or routine well (see the *Rule of More and Less* in Director's Message). A stable and consistent



Taddy is a Quarter Horse mare born in Nebraska on April 21, 1976. That makes her 30 years old! She has had 18 foals over her lifetime. Since coming to live at the Center for Equine Health at age 23, she has had no major health problems other than a colic watch and corneal ulcer. Taddy is a remarkable example of healthy old age.

routine is needed for continued geriatric health, with as few changes as possible in exercise, feeding and travel. Relocating an older horse from one farm to another or even from one pasture to the next can be very stressful, especially if it means a change of pasture mates. Many do not adjust to a new group of pasture mates quickly and may experience detrimental weight loss during the adjustment period. Older horses tend to fall to the bottom of the pecking order and may not feel like fighting for food when an aggressive horse pushes them away. If hay or grain is group fed, careful observation of how well an older horse is getting to the feed may prevent a problem of detrimental weight loss before it happens. *

Diseases Associated with Aging

by Johanna Watson, DVM

As stated earlier, aging in itself is not a disease. However, aging predisposes the body to disease as parts become worn and the immune system is not as strong as it once was. The diseases described here can occur in younger horses but their incidence increases with age. A horse may have more than one of these diseases concurrently, in which case it is important for a veterinarian to consider the potential disease interactions when deciding on a management or therapeutic plan.

Equine Cushing's Disease

Equine Cushing's Disease, a disease of the endocrine system, is one of the most common age-associated diseases in the horse. It is classically characterized by a long and/or wavy hair coat that does not shed appropriately in the spring. Horses can also be affected with this disorder prior to showing the hair coat change. Other clinical signs of this condition include laminitis, loss of muscular body mass, lethargy, increased water consumption and thereby increased urination.

Cushing's Disease is caused by a loss of control by the pituitary gland which in turn causes overproduction of pituitary peptides. Tests are available to confirm a diagnosis. Once confirmed, daily treatment with pergolide replaces the normal control function of the pituitary tissue. Many of the clinical signs often subside with treatment.

Arthritis

Horses that have been athletic performers in their lifetime develop some form of arthritis. If a joint problem is bilateral and affects both the front or hind limbs equally, it may be difficult to detect and may be manifested only by stiffness or a reluctance to lie down.

There are many ways to treat lameness in an older horse, and which treatment to use will depend on the joints that are affected. For example, if a horse has bilateral arthritis of the hock joints and is stiff in both hind limbs, one option would be to inject both hocks with anti-inflammatory agents. This procedure often provides an animal with up to 6 months of pain relief and improved mobility. For a horse with chronic laminitis that has pain in both front feet and is tender-footed, shoeing the animal with front shoes only, with or without pads, may provide significant pain relief.

Other options for arthritis pain include oral anti-inflammatory drugs such as phenylbutazone, which can be given daily or as needed for discomfort. Note that since these drugs also affect the intestine and kidney, they should always be used cautiously and under the direction of a veterinarian. Some studies have shown beneficial effects from feeding chondroprotective agents such as glucosamine and chondroitin sulfate. However, these substances are more likely

to be of benefit in the early stages of disease. Once significant bony changes occur in a joint, the benefit of such substances is likely to be minimal.

Changes in Digestion/Nutrition/Teeth Problems

Older horses, like older people, develop changes in their gastrointestinal system. Generally, these changes consist of a decrease in the digestibility of some feed components and a decrease in the absorption of some nutrients. As a result, the older horse requires a highly digestible, good-quality feed.

Along with these changes in the GI system, the equine teeth are going to wear out in the late 20s or early 30s, depending on how well the teeth have been cared for throughout an animal's life. At this time, the reserve crown will be negligible, and the premolars and molars will begin to fall out. It is extremely important for older horses to have a complete oral exam at least twice a year. Loose teeth often remain in the socket because an older horse does not open its mouth wide enough for the tooth to fall out. Loose teeth and sharp enamel points can be removed during the dental exams.

As horses lose their dentition, they need to transition off of hay entirely as their primary forage source. There are many choices of complete feeds formulated for geriatric horses. With knowledge

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Diseases in Aging

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of your horse's specific needs, your veterinarian would best be able to select the best one.

Colic

Colic is a disease affecting horses of all ages. However, there is a disease associated with age that can cause colic. Older horses are more likely to develop a benign fatty growth called a lipoma in their abdomen. This lipoma can grow on a stalk that elongates, dropping the ball-shaped lipoma into the abdominal cavity. As the lipoma grows, it gets heavier and the weight of the mass tends to lengthen the stalk from which it hangs. The problem occurs when the stalk wraps around a portion of the intestine and tightens. This is known as a strangulating lipoma and requires surgical correction.

Unfortunately, there is no way to detect these growths prior to their causing colic. Very often the colic associated with a lipoma is extremely painful. Surgical correction for this usually involves removal of a section of the intestines that was trapped in the stalk of the lipoma and then reconnection of the remaining intestines.

Cancers

Older horses are more likely to develop cancers of various types. Horses with less pigment on the head or other regions may develop squamous cell carcinoma, a type of skin cancer. This is very common around the eyes of bald-faced or light-skinned horses. The grey horse may develop multiple melanomas over time. Any horse

may develop lymphosarcoma, a cancer of the white blood cells that can affect almost any tissue in the body but commonly affects the intestines, chest or central nervous system. Early detection of all of these tumors provides the best options for treatment and outcome.

Heart Disease

Here, the horse has a huge advantage over their human partner. The multitude of diseases that plague humans such as hardening of the arteries, high blood pressure and heart attack are virtually unheard of in the horse. However, over time the valve leaflets in the equine heart change and become stiffer. This change can lead to leaks in the valve and development of a heart murmur. The most common age-related murmurs are those of leaky mitral or aortic valves. The presence of a murmur in and of itself may not necessarily be cause for alarm but it must be monitored for change over time. A heart murmur is something that a veterinarian should check for during an exam. If there is any uncertainty as to the severity of a murmur, the size and velocity of the leak can be measured by a cardiology ultrasound. If the murmur changes dramatically, becomes very loud, or the horse develops signs of heart failure, then the animal should be re-evaluated by ultrasound as soon as possible.

Cataracts

Horses can develop changes in their lenses that cause them to opacify and become a cataract. As the cataract matures, the horse may lose its vision in the affected eye. While cataract removal is performed with

limited success in foals, it is not often attempted in the adult horse because the procedure has been less successful with more serious side effects noted. Most often the changes that occur with age in the equine eye are associated with long-standing recurrent uveitis or "moon blindness" and so it is very important to recognize, treat and monitor these horses for recurrence of signs.

Urinary Bladder/Kidney Infections

Urinary bladder or kidney infections can occur at any age but older horses may be more susceptible to them due to age-related body changes or other disease conditions. In females, there are age-related conformational changes that occur as a result of loss of fat and muscle tissue. These changes make it easier for bacteria from the feces to gain entry into the urinary tract. Clinical signs of a urinary tract infection may include frequent urination, urine scalding of the hind legs, and blood in the urine. An older horse with Cushing's Disease has decreased ability to defend itself from infection and thus may be more prone.

Older horses have older kidneys that may have lost some capacity over the years. Many of the drugs that we administer to alleviate pain and stiffness in the joints—nonsteroidal anti-inflammatory drugs—can damage the kidneys. It is advisable to do routine laboratory tests of kidney function in older horses before starting them on these types of drugs and to monitor them at intervals if they are on these drugs for long periods of time. *

Food for Thought: Feeding the Senior Horse

by Carolyn L. Stull, PhD
Veterinary Medicine Extension

Horses in their senior years require a sound nutritional program that is customized for each individual horse. As with any aging process, each individual horse must contend with a less-than-perfect working body. Common aging conditions include weight loss, loss of dental function, hormonal changes affecting metabolism, skeletal problems such as arthritis or laminitis, and kidney or liver degeneration. Coupled with good management, housing, and veterinary care, proper nutrition can be supportive in providing the senior horse with a quality, healthy life.

Here are a few nutritional guidelines for the senior horse:

- Diets should consist of a palatable ration based on a high-quality fiber in a forage, such as alfalfa. Water and free choice salt should be easily accessible. No moldy or dusty feed should ever be fed.
- Healthy horses over the age of 20 may have reduced digestion of protein, fiber, vitamins, and minerals. Diets should contain between 12-16% of easily digestible protein, which is greater than the protein recommended for the idle mature horse. Supplementing with soybean meal will improve the digestibility of protein.
- Loss of teeth and a suitable grinding surface can be a challenge for the older horse in properly digesting their feed. Commercially available extruded feeds, processed feeds or pellets can be fed to increase digestibility. Soaking pellets in a bucket of water to make a slurry which a horse can drink will benefit a horse with compromised dental function.
- "Feel the ribs but not see the ribs" is a general recommendation for the proper body

weight of an older horse. Weight loss is often a problem due to a combination of problems including poor absorption of nutrients, dental problems, parasites, and metabolic changes. Adding corn oil (up to 2 cups per day) to the feed increases the caloric intake with the added benefit of a shiny hair coat!!

- Provide an environment for eating with minimal stress and competition from herdmates, suitable footing to minimize discomfort due to lameness, and shelter from extreme weather elements. Older horses often require a longer period of time to ingest their ration of feed, so keep the younger horses from competing for the available feed needed by the older horses.



Gift to a Friend

by Gregory L. Ferraro

One of the unfortunate aspects of our lives is that we often outlive the animals with whom we share intimate friendships. Frequently, their death comes dramatically and with certainty. Severe illness or tragic accident provides no alternative to the end of life.

More commonly, however, these matters are not so clear cut. Illness and debilitation, particularly in the older animal, may come gradually over an extended period, accompanied by a subtle rise in suffering. During this period of time, we may be so caught up in saving the life of our beloved friend that we find it difficult to recognize the intersection of progressive medical treatment and the humane relief of suffering.



Euthanasia is a gift that we give to our suffering animals. When properly chosen and applied, it is one of the most humane acts a person can accomplish. Unfortunately, there is no one—no veterinarian, animal expert or friend—who can give you a precise answer as to when such a gift should be given. It is a personal decision that each of us has to make based upon our own values under difficult circumstances.

The decision is rarely made easily but often comes less painfully to those who have thought about it ahead of time. Veterinarians with experience in this area will tell you that animal owners who have contemplated the question of euthanasia and settled upon solution well in advance of the need to act have a much easier time. It is recommended that animal owners, particularly those with aged animals, establish a close relationship with their attending veterinarians. They should discuss the subject of euthanasia with those caregivers and come to an understanding of how the events surrounding the loss of their animals should be handled—not just if, when and how euthanasia should be performed, but who should be present, where should it occur and what is to be done with the animal afterward. Preplanning for these circumstances will certainly minimize the unpleasantness that accompanies them.

While it is easier to avoid thinking about the subject, we know that life for all living creatures comes to an end. We, as humans, have the ability to make that end lovingly easy for many of our animal friends. It would be a shame not to be ready to show them that one last gesture of loving devotion.

A Tribute to Peggy and Dino

There are heroes among us in everyday life, including those who don't live in the public eye but have accomplished extraordinary events, overcome obstacles, and more. Some of these heroes are animals. Two such heroes are Peggy Narducci and her beloved horse Dino.

Peggy has been riding horses for the last 25 years, having learned to ride when she was 64. Undoubtedly through fate, Peggy and Dino were brought together early in her riding career. It was love at first ride for Peggy. Dino was so careful with her, so obviously intelligent and gentlemanly she could not resist him. Acquiring him meant moving from a townhouse in San Bruno to a place in the country with a barn. The Narducci's found such a place in Davis. Peggy took one look at the barn (not the house) and said, "This will do!"

The next 22 years were filled with fun and merriment for Peggy and Dino as they participated in all sorts of parade competitions. According to Peggy, Dino loved kids and was as careful around them as he had been with her. "He loved to walk and prance to the music in parades, and the louder the crowd, the more he enjoyed it." And Peggy loved to perform in the parades too. "My biggest joy is the look on the people's faces when we go down the parade route . . . all the happiness out there." In their long history together, they participated in 550 parades and 13 Tournaments of Roses. People came to expect to see them year after year.

But on April 24, 2006, at the venerable age of 30 years, Dino was found lying down in his stall and was taken to the UC Davis Veterinary Medical Teaching Hospital. He was suffering from colic induced by a benign tumor that had caused his intestines to become entangled. This required surgery to remove the dead area of intestine and to reattach the remaining ends. The surgery went well and Dino's initial prognosis was very good, particularly for a horse of his age. But sadly, he contracted pneumonia and the difficult decision was made to put him down.

Dino was no ordinary horse, and Peggy is no ordinary woman. Peggy, now 90 years old, probably won't return to the parade circuit, but she and Dino will be remembered as heroes by many.



Peggy and Dino, June 2006

*His journey's just begun
Don't think of him as gone away
His journey's just begun
Life holds so many facets
This earth is only one.
Just think of him as resting
From the sorrows and the tears
In a place of warmth and comfort
Where there are no days and years
Think how he must be wishing
That we could know today
How nothing but our sadness
Can really pass away
And think of him as living
In the hearts of those he touched
For nothing loved is ever lost
And he was loved so much!*

—Ellen Brenneman

COMING EVENTS

CALLING ALL VETERINARY HEALTH CARE PROFESSIONALS !

UC Davis School of Veterinary Medicine presents

THE 19th ANNUAL FALL SYMPOSIUM ON RECENT ADVANCES IN CLINICAL VETERINARY MEDICINE and OSCAR W. SCHALM MEMORIAL LUNCHEON AND LECTURE

**Sunday, September 17, 2006
Gladys Valley Hall, UC Davis**

Topics will cover a broad range related to small animal medicine, a mini course on ophthalmology, equine reproductive techniques course, RVT/Vet Technician program in radiology, RVT/Vet Technician general, and a one-day ultrasonography in feline course.

Additional, special-fee courses will also be available on Saturday, September 16 and Monday, September 18. Saturday's program will feature a one-day cardiology course in practical ultrasonography. Monday's program will feature an equine reproductive techniques course.

In addition, on September 17-18, a **short course will be offered for veterinarians** on equine reproductive techniques. This course will be held at the Health Sciences Complex. Guest and UC Davis speakers include W.R. Twink Allen, Barry Ball, Irwin Liu, Stuart Meyers, James Brown, and Aaron Hodder.

For more information, contact Sandra Wais, Center for Continuing Professional Education, (530)752-3905, or to download brochures and registration forms visit their Web site at www.vetmed.ucdavis.edu/ce

Congratulations to *The Horse*



Report for being recognized for excellence by American Horse Publications!

The Horse Report was presented with a First Place award for **Best Equine-Related Newsletter**—for the second consecutive year. The 2006 AHP Awards Ceremony was held in Orlando, FL, on June 22-24. We are proud to be making a contribution to the welfare of our equine friends.



A young'un.

Tips for Caring for the Older Horse

Because of advances in nutrition, management and health care, horses are living longer, more useful lives. It is not uncommon to find horses and ponies living well into their 20s and 30s. While genetics play a role in determining lifespan, caregivers can have a significant impact.

You may think that turning your old-timer out to pasture is the kindest form of retirement. But horses are individuals. Some enjoy being idle; others prefer to be a part of the action. **Whatever you do, don't ignore the horse.** Proper nutrition, care and exercise will help the animal thrive.

The American Association of Equine Practitioners has provided the following recommendations for caring for your older horse.

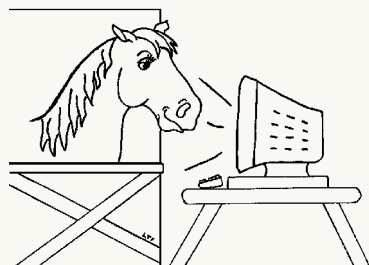
- 1. Observe your horse on a regular basis—every day if possible. Watch for changes in body condition, behavior and attitude. Address problems, even seemingly minor ones, right away.**
- 2. Feed a high-quality diet. Do not give dusty and moldy feeds.**
- 3. Feed your older horse away from younger, more aggressive ones so it won't have to compete for feed.**
- 4. Feed at more frequent intervals so as to not upset the digestive system. Two to three times daily is best.**
- 5. Provide plenty of fresh, clean, lukewarm water. Excessively cold water reduces consumption, which can lead to colic and other problems.**
- 6. Adjust and balance rations to maintain proper body condition. A good rule of thumb is to be able to feel the ribs but not see them.**
- 7. Provide adequate, appropriate exercise to maintain muscle tone, flexibility and mobility.**
- 8. Groom your horse frequently to promote circulation and skin health.**
- 9. Annual and bi-annual vaccinations for tetanus, sleeping sickness and West Nile Virus is recommended, with additional vaccinations as indicated by the animal's environment.**
- 10. Routine deworming should be an integral part of care.**
- 11. Be aware that older horses are prone to tumors. Look for any unusual lumps or growths from head to tail as well as beneath the tail (especially on gray horses).**
- 12. Schedule routine check-ups with your veterinarian. Call immediately if you suspect a problem.**

A quick response to ailments, injuries or a decline in fitness can keep your older horse from having a serious setback. That means less worry for you and a better quality of life for your old friend.

COMING EVENTS

Dollars for Davis Poker Ride!**Date:** Sunday, September 17, 2006**Where:** Upper San Leandro Reservoir, Moraga**Time:** Staggered starts between 9:00 and 10:30

Come ride the beautiful Moraga hills on this annual fundraiser to benefit our equine friends through the UC Davis Center for Equine Health. The trail is approximately 6 miles of moderate to steep terrain on mostly fire trails and will be available to both poker ride competitors and those riding just for pleasure. Minimum donation for participating in the ride is \$25.00, with an optional poker hand entry fee of \$10.00. Lunch may be pre-ordered for a cost of \$5.00 and will be served after the ride. Prizes will be awarded after lunch. For more information, call Karen Bottiani, Moraga Horsemen's Association, (925)943-7351, or e-mail her at kbottiani@comcast.net. To download a flyer and for directions to the trail, visit our Web site at www.vetmed.ucdavis.edu/ceh (see Upcoming Events).

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