



# U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Volume 1, Issue 8

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## Is My Horse Too Fat?

By: Marcia Hathaway, PhD, U of M

While “beauty lies in the eyes of the beholder”, determining whether a horse is fat does not have to be so vague. The answer lies in the body condition score. A body condition scoring system was developed by researchers at Texas A & M based on the location and amount of fat stores underneath the horse’s skin (Figure 1). The scoring system uses a number scale from 1 – 9. A body condition score of 1 is ‘poor’ and the horse is emaciated, whereas a body condition score of 9 is given to a horse that is extremely fat. A body score of 5 is ‘moderate’. One characteristic of a score of 5 are ribs that cannot be seen, but can be easily felt. Visually examining your horse and then running your hands over the horse’s side to feel its ribs can give you a good indication of your horse’s body condition score. A score of 4, (moderately

thin), allows a faint outline of the ribs to be seen, whereas a score of 6, (moderate to fleshy) is characterized by ribs that cannot be seen and fat over the ribs that feels spongy. Although a score from 4 – 6 is appropriate for most horses, the ideal score for each horse will vary, depending on differences in energy expenditure, frame size, physiological condition, diet history and the owner’s personal preference. Visually and physically examining your horse is the best way to establish its body condition score. Assessing your horse’s body condition score on a routine basis allows for dietary adjustments to be made. How much you need to feed your horse will vary over time and is strongly influenced by changes in exercise, environmental

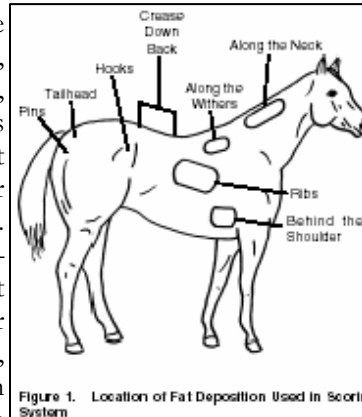


Figure 1. Location of Fat Deposition Used in Scoring System

conditions and quality of feedstuffs. Trying to maintain your horse’s ideal body weight is a constant challenge. Without frequent assessment a horse can lose or gain a significant amount of weight before it may be obvious to someone who sees the horse frequently. Altering your horse’s body condition score takes considerable time and effort. Any increase or decrease must be accomplished gradually over time in order to be done safely.

## Ask The Expert

By: Florian Jenner DVM, U of M

**Q:** What is the difference between a Food and Drug Administration (FDA) approved joint supplement and a nutraceutical type joint supplement?

**A:** Intraarticular, intravenous and intramuscular administered joint medications are considered to be drugs and are subject to FDA (approval. All of these drugs have been tested by independent research and have been shown to be effective. Oral joint supplements (also known as nutraceuticals), however, are not considered to be drugs and are not regulated by the FDA. Because these products are not regulated by the FDA the amount of active ingredient claimed on the label is not necessarily what is contained in the bottle, and great variation can also exist in the purity and the absorbability (ability of the product to be absorbed in its active form after being given orally) of the product. Only few nutraceuticals have been tested scientifically, which makes it difficult for veterinarians to make recommendations for all but a few oral supplements.

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## Up Coming Events

November 1st, 2005  
Horse Pasture Management  
Watertown/Mayer HS  
5:30 pm to 8:30 pm.  
Contact Aaron at  
952-955-0214

February 18th, 2006  
Horse Owner Education Day  
Winona, MN  
9:30 am -3:00 pm  
Contact Kristi at  
763-767-3837

February 25th, 2006  
Horse Owner Education Day  
Cambridge, MN  
9:30 am -3:00 pm  
Contact Kristi at  
763-767-3837

**NOTE DATE CHANGE**  
Tentative Date: March 4, 2006  
Hands-on Horse Day  
U of M in St. Paul  
Vet School  
Online registration available at  
[www.cvm.umn.edu/outreach](http://www.cvm.umn.edu/outreach)

March 11th, 2006  
Horse Owner Education Day  
Norwood, MN  
9:30 am - 3:00 pm  
Contact Laura at  
952-442-4496

March 18th, 2006  
Horse Owner Education Day  
Fergus Falls, MN  
9:30 am - 3:00 pm  
Contact Kristi at  
763-767-3837



Due to the great variety of joint supplements on the market, this discussion will be limited to the various ingredients commonly used in joint supplement, not brand names. The purpose of joint supplements are to provide building blocks for cartilage and synovial fluid, and to reduce inflammation and cartilage degradation. Most oral joint supplements contain varying amounts of glucosamine, chondroitin sulfate (CS), Methylsulfonylmethane (MSM), and minerals, or a combination of these. Glucosamine is a building block for cartilage and joint

## Joint Supplements

By: Florian Jenner DVM, U of M

fluid and has been shown to stimulate the building of cartilage and inhibit inflammation. Glucosamine is well absorbed in the horse gut and is accepted as a valid therapeutic approach for the management of degenerative joint disease in horses and as an alternative to injectable therapies where cost is an issue. CS inhibits inflammation and tissue destruction. However, absorption of CS has been reported for man, dogs, and rats at less than 15%. Absorption in horses

has not been studied. MSM is a source of bioavailable sulfur and is believed to have anti-inflammatory effects, but these effects have not yet been proven. Minerals are important constituents of enzymes that control cartilage synthesis. They are included in many joint nutraceuticals (non-regulated products) to insure against dietary deficiencies. Sulphur plays a part in the biosynthesis of glucosamine and collagen, manganese is an essential part of the enzyme

involved in the synthesis of CS, zinc is a component of the enzyme that controls the production of collagen in cartilage, and copper is also involved in collagen production. Because of the wide variability and amount of active ingredient of minerals, their purity and availability after oral administration is sometimes unknown. When using joint supplements, it is important to consult with your veterinarian and to rely on trusted, proven brands.

With good health care, many horses are living into their 20's and even occasionally, their 30's. These senior citizens play a unique and special role in their owners' lives, often as cherished friends that now are patiently teaching young people to ride, or retired from active duty but not forgotten. These horses have additional health care needs to help them stay healthy. Many of these needs parallel those of elderly people, and are best managed if recognized early. First and foremost, digestive efficiency declines with old age, sometimes making it challenging to keep weight on the horse. Teeth are important for efficient chewing and may be either worn down or have abnormalities that

## Geriatric Care for Horses

By: Julie Wilson, DVM, U of M

cause pain. A veterinarian can readily assess the mouth, and recommend either a switch to an easily chewed, senior diet or address any sources of pain in the mouth, such as sharp enamel points or loose teeth. The elderly horse's nutrient absorption by the intestines may wane, creating a need for higher energy, readily digested feed, as well as good quality forage, especially in the winter. Arthritis affects many older horses and should be addressed. When exercising, the horse should be warmed up slowly, and may need to have its work expectations reduced. Nutraceuticals, such as chondroitin sulfate and

glycosaminoglycans can ease the discomfort of arthritis, as can anti-inflammatory products such as MSM, and devil's claw. Some horses may need further help such as joint injections, or nonsteroidal anti-inflammatory drugs like phenylbutazone, given judiciously as recommended by the horse's veterinarian. Shoeing or trimming to ease breakover may be helpful too. Old age also brings a higher risk of cancer or neoplasia. This risk should be kept in mind any time an older horse experiences unexplained weight loss. One of the most common tumors involves the pituitary gland at the base of the brain. Cells in part of the pituitary begin to proliferate and no longer

correctly regulate their production of hormones. This results in Equine Cushing's Syndrome, which in the later stages is easily recognized by a long hair coat. This characteristic is due to overproduction of the hormone cortisol. The immune system is suppressed, so these oldtimers may be more susceptible to bacterial and viral infections. This is an important reason to maintain a good vaccination schedule for elderly horses. Most horses with Cushing's syndrome respond well to treatment with pergolide and can live many years.