

Questions & Answers

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SUBJECT: TYING UP

How can we prevent tying up from happening in the equine athlete?

'Tying up' (myositis) is a term used to describe the result of severe muscle pain in the horse. There could be any of a number of causes for the onset of muscle pain, ranging from over-exertion to a physiological problem with the muscle cell itself. It can be a one time occurrence or a recurrent problem. Unfortunately, the only way to prevent it is to turn the horse out to pasture and not ask it to perform. Since that is not usually an option for most horse owners, there are some feeding changes that can be made to help the horse avoid episodes of tying up.

1) Replace a portion of the starch (grain) in the diet with fat and fiber. This can be done by replacing some of the grain in the diet with highly digestible fiber like beet pulp. To increase the fat in the diet add 1 to 2 cups of corn oil (or any palatable vegetable oil) per day. There is a product that is high in fiber and fat on the market called rice bran. EquiJewel Rice Bran is perhaps the safest to use because it has a balanced calcium:phosphorus ratio. Some manufacturers make special high fat/high fiber feeds. An appropriate feed would have on the guaranteed analysis a fiber value of 15 to 20 % and a fat value of 6 to 12 % fat.

2) Supplementation with vitamin E/selenium has helped some horses with myositis. Be sure you check whether you are in an area of the country where the soils are high in selenium before you try this option.

3) Daily supplementation with electrolytes may be helpful for the horses whose problem is due to electrolyte imbalances. This would be particularly important during work or if the horse is sweating.

4) The use of supplemental chromium has been found to help some horses with myositis. The exact mechanism is not fully understood, but it has to do with insulin and cortisol regulation. KER has a chromium product called "Metaboleeze" which is only available through a veterinarian.

5) As much turn-out as possible, 24 hours out on pasture is the best. If the horse does not have 24 hours turnout then a daily exercise routine is very important.

SUBJECT: FAT

I have been acutely aware of major shifts in recent years from low fat to high fat diets in our performance horses. From my perspective, it seems to be creating excellent results in several classes of horses. I guess I'm a little concerned about where all this is going and what kind of research is being done to assure the long term health of our horses is being given adequate consideration. Do we have adequate research and understanding of what the impact of high fat diets might be to their metabolism or to their overall physical development? Is there adequate follow up research being conducted to assure we are not creating something we have to deal with later in the life of these performers? I'm not an "old fashioned" oats and hay person, but also understand that sales and marketing sometimes exerts overwhelming pressure on what is good sound nutrition and common sense.

The addition of fat to the equine diet is just about the most researched topic in equine nutrition. Work has been done involving almost every age group and under almost every circumstance you can imagine. Universities like Virginia Tech, University of Kentucky and Texas A&M have done much of the research, but numerous others have done their share at exploring different aspects. Here at Kentucky Equine Research (KER) we have done several studies involving the use of fat in the diet of the performance horse. The Equine Nutrition and Physiology Society Proceedings are full of fat research done over the last 20 years.

Unfortunately, most of the studies have been fairly short term, lasting 16 weeks or less. This does not answer the question of the long term effects of high fat diets. KER just finished a study which involved feeding high fat diets for 15 months. Several parameters were monitored which would indicate whether it was harmful to keep them on the fat that long (we were particularly interested in liver damage). The only difference we saw was higher blood cholesterol but that in itself did not appear to affect performance in any way.

The equine digestive tract is designed to handle reasonable amounts of fat. Unlike ruminants, the

small intestine of the horse comes before the fermentation vat. This gives the horse the excellent opportunity to get the full benefit of the fat in the diet before it hits the microbes (where high fat can be a problem). Not that it is not impossible to overwhelm the equine digestive tract with fat – I have seen problems when horses are fed excessive amounts of fat (particularly animal fat). But as long as a horse is eating well, performing well, looking healthy and acting sane, I do not have anything against adding fat in the diet.

Research is limited by the amount of money that can be put into it. I am afraid that only time will tell whether there really are long term problems with added fat in the equine diet, but so far things look pretty promising.

SUBJECT: HEAVES

We have a remarkable older Warmblood mare who suffers from heaves. We just pulled her away from all hay and have gone back to alfalfa cubes. They worry me as it seems she will not have enough roughage in her diet. What are you doing in this situation? Can one successfully breed a horse with this condition?

A Heaves is the common name for the ailment “chronic obstructive pulmonary disease” (COPD). It is caused by a hypersensitivity to fungal spores which are found in bedding, stable and hay. For some horses it may be a sensitivity to summer pasture grass pollen. Many times the very first signs of the disease (decreased performance) go unidentified as COPD.

Controlling the dust in the horse’s hay can help COPD horses. The best way is to soak the hay in water for 5 minutes before feeding to reduce the fungal spores. Hosing the hay well will have the same effect. This has been found to be more effective at reducing the spores than feeding pelleted or cubed feed. However, the spores in hay cubes can also be reduced by filling the bucket of cubes with water (just enough to cover the cubes) and feeding them to the horse wet.

Yes, your horse can get enough roughage from hay cubes, provided you feed enough of them. The horse should be getting at least 1% of his body weight in cubes - which for a 1400 lb Warmblood mare is at least 14 lbs of cubes. There are many horses who survive on hay cubes because baled hay is not available. However, you may consider the alfalfa/timothy cubes rather than straight alfalfa if your horse is used to grass hay or you are concerned about the high protein or calcium in alfalfa.

Another fiber source used commonly in COPD horses is soaked beet pulp. Any concentrate (sweet feed or pellets) can be mixed into the beet pulp just prior to presenting

it to the horse in order to cut down on the dust in those feeds.

For an answer to your question about breeding your mare, I consulted Drs. Kevin Dippert and Vito DelVento of Equine Reproduction Concepts (Virginia). They explained that the problem with breeding may be totally dependent on the severity of COPD that your horse has. If the disease is well managed with the changes in diet, then there will probably not be any problem. The biggest time of concern for a COPD mare is as she becomes heavy with foal in the last trimester of pregnancy. If she has trouble breathing, the fetus may not receive enough oxygen. Their recommendation is to be sure that the mare is monitored by a veterinarian during this time. The veterinarian can recommend other treatments for the horse if she runs into problems. ☺

Have a Question You Would Like To Ask?

The staff of Kentucky Equine Research welcomes questions and will be happy to answer any you may wish to ask. Simply:

Mail your inquiry to
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Phone our toll free number
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Fax your question to
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E-mail us at ***info@ker.com***

Or you can post your question on our
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