

# Watch for Subtle Signs of Exertional Myopathy

by Melissa Ribley, DVM

**M**yositis, also known as “tying up” or exertional rhabdomyolysis, is a condition that occurs with some frequency in endurance horses and can have early subtle signs. Not recognizing or, even worse, ignoring these early subtle signs can lead to serious health consequences and even death in the endurance horse.

This article is intended to outline the signs of myositis in order to aid the rider in recognizing this condition early on. Early recognition of this condition can help prevent further progression of the disease by stopping further exercise and initiating appropriate therapy.

Myositis is a degenerative condition of the muscles and though any muscle can be affected, the most commonly affected muscles in the endurance horse are the gluteal muscles. There are genetically-related causes of myositis and also diet- and exercise-related causes of myositis. These can be differentiated by means of muscle biopsy. Preventing myositis is done through appropriate diet management such as low-carbohydrate, high-fat diets and warming horses up slowly before strenuous exercise. If the myositis recurs despite appropriate management of diet and exercise, see your veterinarian for a complete work-up as there are other preventative measures.

Degeneration of the muscle cells causes release of myoglobin into the blood which is then filtered by the kidneys. Myoglobin causes damage to the kidney's filtering system and the resulting kidney (renal) damage, with or without secondary laminitis, is the possibly life-threatening consequence of myositis. Relieving the pain of muscle inflammation and protecting kidney function is the goal of treatment in the horse with myositis. This is best done by stopping exercise and initiating fluid therapy along with the judicious use of NSAIDs such as phenylbutazone or Banamine.

## Recognizing equine pain

Degeneration of the muscles causes pain for the horse and most recognizable signs of myositis are related to pain. These signs can be very subtle, therefore it is important for the rider to know what is not normal for their horse. The first signs of an impending myositis often occur very early in the ride, and may include a slight hesitancy in the horse to continue moving at speed. The horse may drop to a walk where he would normally trot and this is often more apparent on the uphill sections of the trail. The horse may break into a sweat before he normally would or the sweat may be more profuse than normal.

## Other signs

If you notice any of these signs in your horse do not continue exercise. Rather, stop and evaluate your horse:

- Check the pulse—is he not recovering down to a normal heart rate with rest?
- Feel the gluteal muscles over the rump—do they feel more hard than normal either on one side or both sides?
- Give the horse a chance to urinate. If the urine is brown/ coffee colored, then you have a horse with myoglobin in the urine which means you have a horse with myositis.

If any of the previous signs are noted and the horse will willingly walk, walk the horse slowly to the closest veterinary checkpoint. Send on word to the check point that you need veterinary assistance.

Continued strenuous exercise will cause further progression of the condition and may cause irreversible kidney damage with the possibility of secondary laminitis.

## Heart/pulse issues

One of the first signs of myositis at a vet check early on in the ride is a poor heart rate recovery or failed cardiac recovery index (CRI). This is due to the pain associated with the myositis. There may be no other apparent signs in the horse. The horse may not be reluctant to exercise and he may not show hind limb stiffness or lameness. If the only sign in your horse is poor heart rate recovery or a failed CRI, closely observe the horse for urination. With myositis, the urine will always be brown/coffee colored. If urination is not observed, ask to have a blood sample drawn and have your veterinarian at home later check the level of muscle enzymes. Elevated muscle enzymes are diagnostic for myositis.

## Further symptoms

With progression of the condition, there may be great hesitancy from the horse to move, visible swelling of the gluteal muscles either on both or just one side and there may be a stiffening of the hind limb gait and shortening of the stride either of one or both hind limbs. If these signs are noticed on the trail and the horse will not willingly walk, exercise should be stopped immediately and word sent that treatment is needed. If the horse will willingly walk, slowly progress onto the next veterinary checkpoint.

Myositis in endurance horses is a condition that presents with a variety of signs, some being subtle. It is also a condition that can progress into a life-threatening condition without appropriate intervention. It is important for the rider to recognize these subtle signs in order to improve the outcome for the horse.