

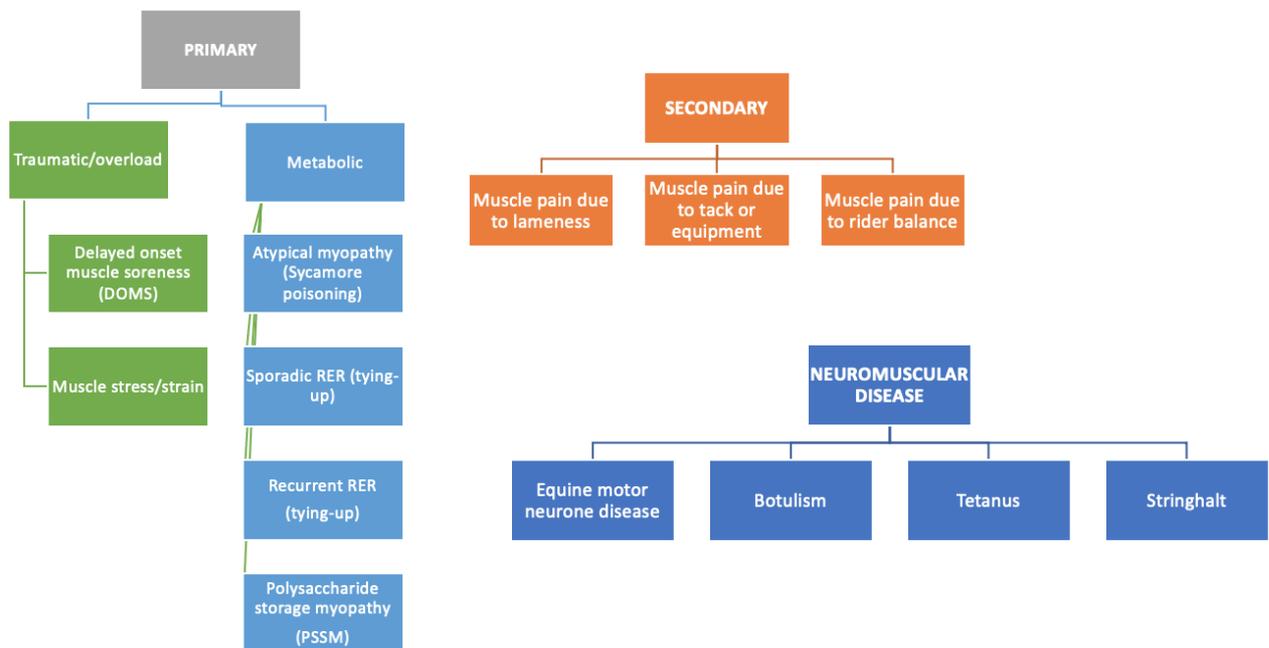
# Muscle conditions

## How do muscle conditions present?

Myopathy is a general term that refers to diseases that affect muscle fibers. They can present in a variety of ways including pain, stiffness, weakness and poor performance. Some of the muscle disorders can result in horses lying down, or being reluctant to move.

## What are the likely causes?

To try and simplify the variety of myopathies, they can be grouped into categories. Primary muscle disorders have any underlying traumatic or metabolic cause. Secondary disorders have a separate underlying cause such as hindlimb lameness, poor tack fit or poor rider balancer. Neuromuscular diseases involve the nervous system, these conditions are not covered in this information sheet.



## Primary Muscle Conditions

### Delayed onset muscle soreness (DOMS)

Similarly to humans, following a period of unusual or unaccustomed exercise, delayed onset muscle soreness can occur. This tends to occur when the muscle has been eccentrically contracted – lengthened. Prevention of DOMS includes, slowly building up fitness level and making sure a good warm up and cool down is performed.

### Muscle stress/strain

Although uncommonly documented, muscle strains can be a cause of localised muscle soreness, particularly in athletic horses. Overstretching of muscle can lead to disruption of muscle fibres. Rest and cold hosing are required. Anti-inflammatories may be prescribed if deemed necessary by a veterinary surgeon.

### **Exertional rhabdomyolysis – sporadic and recurrent**

Exertional rhabdomyolysis is a muscle disorder more commonly known as ‘tying up’ or ‘Monday morning disease’. We divide it into two categories – sporadic and recurrent.

The sporadic form of tying up is generally seen in unfit horses after they have been exercised harder or for longer than usual. It results in muscle pain, stiffness and a reluctance to move. Its diagnosis is based on examination of the horse and blood sampling which will show increased muscle enzymes. We treat tying up with anti-inflammatories and rest. Fluids may be required in more severe cases. It can be prevented in the future by careful consideration of diet and exercise regime.

Recurrent exertional rhabdomyolysis (RER) results in repeated episodes of tying up. It can be seen in fit horses and is often recognised in racing thoroughbreds, resulting in muscle pain, stiffness and poor performance. An abnormality in calcium regulation is thought to be an underlying cause. If we are suspicious of recurrent rhabdomyolysis, further investigations such as a lameness examination, exercise tests and a muscle biopsy may be performed.

### **Polysaccharide storage myopathy**

Polysaccharide storage myopathy, commonly abbreviated to PSSM, is an inherited condition. It causes a defect in an enzyme involved in muscle energy metabolism. It is seen most commonly in quarter horses, draught horses and warmbloods. It can present in variable ways, but typically horses look as though they are tying-up. Blood tests, DNA tests and muscle biopsies are sometimes used to diagnose this condition. Cases can be managed with rest, a consistent exercise regime alongside a low carbohydrate and high fibre diet.

### **Atypical myopathy**

Atypical myopathy is a muscle disorder caused by ingestion of sycamore leaves, seeds or seedlings from European sycamores. It is potentially fatal. There does seem to be an underlying genetic component meaning some horses are more susceptible than others. Prompt treatment involving hospitalisation, fluid therapy and pain relief is required.

To reduce the risk of atypical myopathy is advised to fence off areas where sycamore seeds fall. Provide extra forage (hay/haylage) if grazing is poor and reduce the number of horses grazing an area so there is plenty of grazing for each horse.

### **Secondary Muscle Conditions**

A horse with back pain may display behavioural problems when being ridden, or you might notice your horse seems ‘cold-backed’ or is not performing as well as expected. Back pain can occur through poor saddle fit, an unbalanced rider, gastric ulceration or primary back problems. However, most commonly we see back pain because of the horse compensating for a hindlimb lameness. The underlying problem should be addressed through a veterinary work up.

### **Other rare myopathies**

There can be other nutritional, physical, or infectious causes of myopathies but these tend to be rare.

**If you have any concerns about your horse's muscular system, please give us a call to arrange an appointment with one of our veterinary surgeons.**