

all tied up



The Problem

Muscle-related problems can manifest in a number of ways, from a horse that appears slightly stiff but is still able to work to some degree, to a complete seizing of the muscles so that the horse can't move. If the symptoms are only very slight then it is very difficult to diagnose the problem as there could be several other causes. If you suspect your horse is "tying-up", consult your vet to confirm the diagnosis.

There are a number of different conditions which may be causing similar symptoms, yet all require very much the same approach to diet and management.

■ Polysaccharide Storage Myopathy (PSSM)

A condition which prevents normal metabolism of glycogen (the storage form of glucose in the muscles). Abnormal accumulation of glycogen occurs within the muscles and can cause muscle stiffness, sweating and a reluctance to move. This is typically thought to affect Quarter horses, some warmbloods and draught horses.

■ Recurrent Exertional Rhabdomyolysis or Exertional Rhabdomyolysis Syndrome (RER/ERS)

A stress-related disorder involving a disruption of normal muscle calcium function, meaning that it becomes difficult for the horse to control muscle contraction and relaxation. This is more prevalent in Thoroughbreds, especially highly strung types and stressy fillies.

■ Shivers

A progressive nervous/neuromuscular disorder which can cause muscle spasms, reduced muscle strength and increased limb rigidity. Research is limited regarding its treatment, however dietary adjustments are recommended to be similar to those of PSSM and RER.

■ Stringhalt

This is often confused with shivers and is also primarily a neurologic condition, which can cause abnormal 'jerking' of the hind legs with over-contraction of the digital extensor muscles.



Diet Management

All the muscle conditions described above require similar feeding regimes.

Forage

- Unless the horse is a good-doer, feed the best quality forage, preferably ad lib, which will contribute more, nutritionally, and reduce the reliance on concentrate feed. Soft, leafier, earlier-cut hay or haylage is generally more nutritious and more digestible than later-cut, stalkier forages.
- Ensuring constant access to pasture/forage will promote gut health and help reduce horses' stress levels.

Concentrates

- It is very important that the horse's overall diet is fully balanced so any balancer or other concentrate feed must be fed at recommended levels to ensure the horse is not missing out and that vitamin, mineral and protein levels are appropriate.
- Diets should be low in starch and sugar, as large intakes of these soluble carbohydrates can increase glycogen accumulation in the muscle, which is disadvantageous for all muscle disorders, especially PSSM, so the avoidance of certain mixes and cereals is often recommended.

Low Calorie Requirements

- For those whose calorie requirements are met by forage alone, a balancer like Lo-Cal or Performance Balancer can be fed as the sole concentrate and will provide optimum levels of vitamins, minerals and quality protein, without unwanted starch, sugar or calories.

Moderate Calorie Requirements

- Keep Calm is a high fibre, low starch beet-based feed which is formulated for horses in up to moderate work. It is soaked feed so care must be taken to ensure it

sufficient is fed by feeding according to its dry weight. For horses in harder work, it should be topped up with a balancer to ensure vitamin, mineral and protein requirements are met even if additional calories are not required.

High Calorie Requirements

- Where starch levels must be kept to an absolute minimum yet calorie requirements are high, Ease & Excel (8% starch) is ideal and provides less than a third of the starch of our reduced starch options and a quarter of that provided by a traditional competition mix.
- Reduced starch mixes, like All-Round Endurance Mix or Slow Release Condition & Competition Mix (both 22% starch) are ideal for horses working up to the hardest level, providing energy from fibre and oil alongside carefully micronised cereals.
- Outshine high oil supplement can be added to the recommended amounts of a balancer or compound feed, as a concentrated source of slow release calories with the necessary "built in" antioxidants.
- A combination of Performance Balancer, Keep Calm/Fibre-Beet/Alfalfa Plus Oil and Outshine can also be devised to meet high calorie, low starch requirements.

Additional Fibre/Calorie Options

Additional highly digestible fibre sources are useful, especially when forage quality is not as good as it could be, and can be fed separate from the concentrate feed, if desired. The following can also be fed as a calorie base to which a balancer can be added to supply essential nutrients for a fully balanced diet.

MANAGEMENT TIPS

Make any changes to the diet very gradually over a period of 10-14 days.

Feed should be given for the work the horse is currently doing rather than in anticipation to any changes to workload.

Warm up and cool down thoroughly before and after exercise.

Avoid confining the horse to the stable for long periods.

- **Alfalfa Plus Oil** combines alfalfa with soya oil to provide fibre and quality protein (beneficial for muscle support), as well as a calorie content similar to some conditioning feeds (12.5 MJ/kg).
- **Speedi-Beet** is unmolassed beet pulp which is high in fibre, low in sugar and contains only trace levels of starch.
- **Fibre-Beet** combines Speedi-Beet with alfalfa and oat feed to provide a high fibre option with quality protein and low sugar and starch levels.
- **Outshine** high oil supplement supplies a concentrated source of calories (24MJ/kg) with supporting antioxidants which are necessary when increased levels of oil are fed.

Electrolytes

- As dehydration and a loss of body salts are often a causative factor in tying-up episodes, it is important to replenish these salts and encourage rehydration as rapidly as possible, every time a horse sweats.
- For horses in light work, the addition of ½ -2 tablespoons of salt to the daily feed can be beneficial. This will supply sodium and chloride, while providing plenty of forage will ensure that sufficient potassium is consumed.
- For horses in harder levels of work, a good quality electrolyte supplement, like Baileys Aqua-Aide, is preferable. Aqua-Aide contains key salts, including sodium chloride, potassium chloride and magnesium, and is administered in water or wet/sloppy feed. Fresh, clean drinking water should also be provided at all times, alongside any electrolyte solution.