



# SETFAST (AZOTURIA, TYING UP, EXERTIONAL MYOPATHY/RHABDOMYOLYSIS)

This is a common condition, invariably associated with exercise, that most frequently causes hindlimb stiffness, but can affect any of the muscles of the skeleton. Its older name of 'Monday morning disease' gives a clue as to the most commonly affected animals: horses that are exercised after a period of rest. However, even horses that are in regular work can suffer, particularly if they are on a high energy diet or have other dietary deficiencies or predisposing factors against them. Some horses can be incredibly sensitive so that even a slight reduction in exercise level for just one day will precipitate an attack. These 'susceptible' horses are often fillies and an association with their hormonal cycles has been suspected but not conclusively proved. A genetic predisposition may be involved in some cases.

### What are the signs of Setfast?

The vaccines are usually given at 9 and In the most common presentation, the horse will 'stiffen up' and eventually, sometimes quite quickly, become completely immobile. The problem usually affects the muscles of the hindlimbs, pelvis and back, so the first signs are a symmetrical shortening of the stride lengths of the hindlimbs. The signs are always brought on by exercise, but this does not need to be strenuous and, in fact, most cases occur when the horse is just walking or trotting prior to beginning work. Less commonly, the disease affects horses at the end of a period of hard work, or may even be so subtle as to cause only a drop in performance.

As well as the obvious gait abnormality, the muscles themselves may become hard and painful, although this only becomes obvious in quite severe



cases. The condition is very painful, so the horse will often sweat, have an elevated heart rate and paw the ground. They may look as if they are trying to lie down, but can't. Of course, these signs can easily be confused with colic, and it is only when the horse is walked that the difference becomes obvious.

Some cases develop dark red/brown urine: this discolouration is caused by the oxygen carrying pigment in the muscles (myoglobin) leaking out of the muscle cells and through the kidneys.

If there is any doubt, or if the signs are too subtle to allow a definitive diagnosis to be made on clinical grounds alone, a blood sample may be useful. Setfast causes the release of enzymes into the blood that would normally be retained

within the muscle cells (creatine kinase (CK) and aspartate aminotransferase (AST))- significant elevations of these enzymes are characteristically seen in setfast. Follow-up blood samples are then useful to allow the horse's response to treatment to be monitored.



## What should I do when my horse develops Setfast?

Stop exercise! The problem will only worsen with further exercise, even just walking. If the signs are not too bad, the horse should be walked back to the stable, dried off, kept warm and monitored. If the signs are more serious, or you are a long way from the yard, consider using transport. Most cases suffer for an hour or two before the signs resolve with no lasting effects, but if the horse is particularly stiff or at all distressed, you should telephone your veterinary surgeon for advice. Most cases respond well to the administration of painkillers (usually phenylbutazone) and light sedation can be very useful to relieve anxiety and calm the horse. Occasionally intravenous fluids and muscle relaxants are used, but usually only in severe cases.



## What causes Setfast and how can I prevent it?

Diet is an important factor, especially concerning energy levels and electrolytes. Make sure you feed quantity and quality appropriate for your horse's level of activity. High carbohydrate (energy) diets make a horse more prone to setfast. If your horse must be on a high energy feed, consider supplying a greater proportion of the energy as fat, which is metabolised differently and causes less problems. Electrolytes (especially calcium, sodium, potassium and magnesium) are vital for proper muscle function, and it is very easy for horses to deplete their own resources. If fed correctly, horses have an enormous reserve of electrolytes and need never become deficient. The best way is to feed an electrolyte supplement daily, increasing the dose at times when sweat loss is greatest. Remember that a horse can lose 10 litres of sweat in an hour, and each litre will contain 4g of sodium! Feeding electrolytes daily is a far more effective and cheaper way of replacing them than using commercially available pastes after hard work. Laboratory testing of your horse's urine may be of benefit to analyse electrolyte status, in some cases. Speak to your veterinary surgeon about daily electrolyte supplementation and about status testing.

Regular exercise is important if your horse is prone to setfast. Some horses can be working everyday, but if they just do a little less on one day, that's enough to trigger an episode the next day. Turning horses out for as long as possible helps, as does a period of walking exercise before being ridden.

Drugs may help to reduce the occurrence in susceptible individuals, but are not usually necessary in the vast majority of cases. Dantrolene is a

muscle relaxant that works very well, if given before exercise. Some horses, particularly excitable fillies, benefit from just simple acepromazine (ACP) to help calm them down. Occasionally the disease appears to be associated with some filly's reproductive cycles and drugs can help to suppress oestrus in affected mares or fillies.

There are a number of other treatments on the market, most of which have no scientific rationale or evidence to support them. If in doubt, speak to your veterinary surgeon before spending money on spurious treatments. Remember that most setfast cases are one-offs, often associated with a simple change in management that, with hindsight, can be avoided next time: long-term damage does not occur unless horses suffer very severe, repeated episodes.

This client information sheet is based on material written by:

Marcus J. Head  
BVetMed, MRCVS.

Deidre M. Carson  
BVSc, MRCVS.

Sidne W. Ricketts  
LVO, BSc, BVSc, DESM, Di ECEJM, FRCPath, FRCVS.

Every effort has been taken to ensure the accuracy of the information in this publication. Information in relation to pet care in this publication is of a general nature and does not constitute veterinary advice. Any liability arising from your use or reliance on the information contained in this publication is excluded.

©2014 Station House Vets



STATION HOUSE VETS

[www.stationhousevets.com](http://www.stationhousevets.com)

Station House Vets  
Teal House, Welburn, YORK YO60 7EP • Tel: 01653 618303