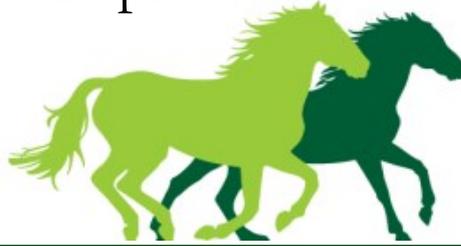


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# Damory Veterinary Clinic Equine Department



## Atypical Myopathy

### Causes

Atypical myopathy is a very serious muscle disorder of horses and ponies that occurs in the autumn and has been known about for many years in the UK and northern Europe. Until last year the cause was not identified but research from Belgium has confirmed the disease to be the result of the consumption of a toxin (Hypoglycin A) present in the European sycamore (*Acer Pseudoplatanus*). This toxin is found in sycamore seeds and a lesser extent the leaves.



### Clinical signs

There are many different signs a horse may demonstrate depending on the stage of the disease and which muscles are affected. Most clinical signs seem to develop suddenly and relate to skeletal muscle damage with the respiratory and heart muscles affected too.

- Reluctance to walk
- Stiffness
- Muscle tremours
- Weak or lethargic
- Head held down low
- Choke
- Hunched up stance
- Lying down
- Rapid breathing
- Brown/dark urine
- Sudden death

We would consider atypical myopathy a possibility in cases of colic or unusual painful conditions and recommend running screening tests.

### Treatment

Unfortunately despite intensive care many horses can die from the disease. It was commonly thought

thought that about nine out of ten horses with the condition will die but new evidence probably puts this figure at 50% so it is worth giving affected cases a chance.

Treatment focuses on intravenous fluid therapy to protect the kidneys from the by-products of muscle damage. Non-steroidal anti-inflammatories are used for pain relief. Vitamin E (2000iu per day orally) and B vitamins are used as anti-oxidants to help the muscle cells recover. Ideally feeding through the vein is also used to provide nutrition for recovery. To do all this effectively requires the patient to be hospitalised.

### What to do

**If you think your horse could have atypical myopathy call your vet immediately.**

Pasture companions should be removed from the grazing and tests performed to determine if they have muscle damage.

### Prevention

Steps should be taken when sycamore trees are in or near to paddocks to reduce seed and leaf numbers:

- Hoover/rake paddocks when picking up droppings to remove sycamore leaves and seeds
- Reduce turn out areas to facilitate more intensive management of smaller areas
- Supply supplementary forage (eg hay) during reduced grass grazing
- Reduce stocking density so horses have plenty of forage
- Inspect paddocks regularly to determine when seeds and leaves have blown down
- Fence off areas of grazing close to nearby sycamore trees
- Reduce time spent grazing to perhaps six hours or less

### Blood Test

If you are concerned about sycamore trees shedding seeds into your paddock and wish to have some reassurance that the avoidance measures above are working, a blood test may be helpful. During atypical myopathy muscle damage causes two enzymes (AST and CK) to be released into the bloodstream. Therefore a normal muscle enzyme level will show that there is no active damage. Assuming there is no other muscle disease such as tying-up, abnormal muscle enzyme levels indicate muscle damage from excess consumption of sycamore seeds. Pasture management therefore needs to be improved to reduce access to the toxin.

### Unanswered questions

There is so much we do not know about sycamore poisoning:

- What other plants contain the toxin? The common field maple found in hedgerows is also Acer but does not produce Hypoglycin A
- Why do cases occur in fields with low seed numbers and horses in fields with lots of seeds seem healthy?
- How many sycamore seeds does a horse have to eat to develop atypical myopathy?
- Could the seedlings cause the min-peak in cases seen in the spring ?