

ADVICE ON

# Atypical Myopathy

The  
British  
Horse  
Society



In recent years, the frequently fatal muscle disease Atypical Myopathy (AM) has become more prevalent in Great Britain. Statistics collated in 2010 by the Atypical Myopathy Alert Group (AMAG) revealed three reported cases of AM in Britain in the year up to November. By 2013 the figure had increased to 51 reported cases in the equivalent time period. The increase is not confined to Britain as confirmed cases of AM are also growing throughout Europe at a rapid rate.

## The Disease

Associated with horses kept predominately at grass, AM occurs predominantly during the autumn although cases are also more rarely seen in the spring. AM can affect individual horses or several horses within the same group. All horses are potentially susceptible to AM, although youngsters and horses above the age of 20 have been found to be at greater risk.

The disease was first recognised in 1984 and is very similar to a disease in America called Seasonal Pasture Myopathy (SPM). Myopathy diseases in horses result in damage to the muscle tissue and cause significant muscular pain in affected animals. Unlike myopathies caused by strenuous exercise (such as tying-up), AM does not require any physical exertion for the clinical signs to manifest themselves. This factor apart, the presentation of AM is very similar to those of other equine myopathies.

## The Cause

Extensive research has been conducted to find the cause of AM. Observations following outbreaks of AM have shown that horses kept on overgrazed pasture with a large quantity of dead leaves and dead wood are at particular risk. This is exacerbated when the horses are not provided with adequate hay or other supplementary feedstuffs.



Research into SPM has linked its cause to the ingestion of seeds from the box elder tree (*Acer negundo*). These seeds contain a toxic substance called hypoglycin-A. Because of the similarities between SPM and AM, European research into AM has concentrated on similar potential causes. In 2013, the seeds (also known as helicopter seeds) of the sycamore tree (*Acer pseudoplatanus*) were linked to outbreaks of AM in 17 cases in the Netherlands, Germany and Belgium.

As the research is still in its early stages there remain many questions left unanswered, such as why AM is becoming more prevalent, which factors affect toxicity, are there any other plants potentially also causing the disease, and are horses able to build up resistance if they consume non-lethal amounts of seeds? There is much more research to be done, but the identification of a potential cause has proven to be an enormous leap forward.

## Clinical Signs

The onset of AM is rapid and the disease may appear without warning. Affected horses will often be found out at pasture unwilling to move. Clinical signs include:

- Muscular stiffness
- Reluctance to walk
- Muscle tremors
- Sweating
- Depression and/or the horse looks as if it is sedated
- High heart rate
- Dark urine
- The horse appears weak and may have difficulty standing
- Breathing difficulties
- The horse may still want to eat

Affected horses often progress to lying down fairly quickly and sadly, many horses have been found dead out at pasture, such is the speed with which the disease can sometimes take effect. Once the clinical signs of the disease are present, the prognosis for the horse is very poor as mortality rates are between 75 and 90 percent.

## Treatment

Urgent veterinary assistance should be sought if a case of AM is suspected as swift identification of the clinical signs and early intensive, supportive treatment is essential. However, there is no specific treatment to cure the disease and treatment will be aimed at minimising the effects of the clinical signs. Due to the poor prognosis, euthanasia may have to be considered for horses that are suffering and those that have reached the stage where they are unlikely to respond to supportive treatment.

## Prevention

For many horse owners in the UK, the sycamore tree is a common feature in paddocks used to graze horses. Historically, these trees have been thought to pose no threat to horses but now, with the new research findings, this viewpoint has been re-evaluated. Minimising the exposure of horses to the seeds of the sycamore is thought to be key in preventing AM.

During the autumn, owners where possible, should decrease horses' opportunities to consume sycamore seeds. This is easier said than done, as even those paddocks that are



free of sycamore trees may still be at risk from seeds being blown on to the land. Therefore, the main preventative measure is to ensure that horses turned out for the majority of the time on poor quality grazing, have sufficient supplementary feed to minimise the risk of foraging for alternative food such as the seeds. Additional actions include:

- Ensure the pasture is not over-stocked
- Maintain good pasture management to prevent weeds taking over grass growth
- If moving horses is not an option, fence off areas around the sycamore trees
- Removal of sycamore seeds and dead leaves from the paddock
- Removal of sycamore saplings
- Where possible, consider stabling the horses overnight



09/14

The British Horse Society  
Abbey Park, Stareton, Kenilworth, Warwickshire CV8 2XZ  
Tel: 02476 840517 Fax: 02476 840501  
www.bhs.org.uk Email: welfare@bhs.org.uk

The British Horse Society is a Registered Charity Nos. 210504 and SC038516

The  
British  
Horse  
Society