

## OWNERS' GUIDE: ATYPICAL MYOPATHY

### INTRODUCTION

Atypical myopathy (AM) or sycamore myopathy, is a severe and often fatal muscle disorder of horses caused by ingesting sycamore seeds, leaves or seedlings.

These seeds and seedlings contain the toxin hypoglycin A (HGA). It is this toxin that slows or stops energy production in muscle cells. HGA is an unusual amino acid that is found in certain trees but not others. Its function is, as yet, unknown - although it might be important for growth or for protection from grazing animals.

Survival rate is around 30-40 % and is highly dependent on fast diagnosis and treatment.

The first reports of cases are from the 1940s but there has been a marked increase in recent years.

Atypical myopathy (AM) can affect individual horses or several horses within the same group. In addition, some apparently unaffected horses have high concentrations of HGA in their blood suggesting that some horses are more susceptible to the disorder than others.

Research indicated that it is mainly the sycamore tree (a member of the Acer family) that contains HGA. There are over 25 species of Acer tree but not all of these species have the toxin and it can be hard to distinguish between the different species.

### CAUSES

AM is caused by horses eating sycamore seeds and leaves that fall onto pasture in autumn and winter, and their germinating seedlings in spring.

### CLINICAL SIGNS

- General weakness : horses struggle to walk, stand and breathe
- Many horses develop heart problems
- Horses appear depressed with low hanging heads
- Muscle trembling
- Signs of colic - yet they often still have an appetite
- Brown or dark red urine
- Severely affected horses are unable to stand



To find out if your property has plants that contain the toxin known to cause AM - you now can send plant samples directly to the RVC Comparative Neuromuscular Diseases Laboratory using the sample submission form (Form also online).

### RISK REDUCTION

In addition to sample submission, there are practical steps you can undertake to minimise the risk to your horses from this disease.

- Provide supplementary forage during Autumn
- Clear fallen sycamore leaves and seeds from grazing areas
- Check neighbouring areas as some 'helicopter' seeds can travel up to 200 yards
- Test for the presence of HGA in your own horses' pastures

### BOOKING YOUR TEST

- Cost: £ #48 (incVAT)
- Timing: Results take 2-3 weeks
- Expedited 3 day turnaround service is available at a higher cost
- Payment: Via invoice
- Sample submission guidelines & form overleaf
- Samples must be seeds OR leaves OR seedlings rather than mixed materials

## **DIAGNOSIS**

If Atypical Myopathy is suspected then swift identification and early intensive, supportive treatment is vital. Your vet can use specialist AM serum tests to support diagnosis (available from the RVC Diagnostic Laboratories).

## **TREATMENT**

Confirmation can take several days so vets often start treatment immediately before diagnosis has been officially confirmed. You may be advised to take your horse to a specialist equine hospital for 24-hour advanced care. If horses survive the first few days of treatment they usually go on to recover completely, although this can take several months.