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# A case of Thumps

## equine hiccups

By Dr Katelyn McNicol  
BVSc, WestVETS

We've all had a case of the hiccups, but did you know that your horse can actually get the hiccups as well? Equine hiccups are more commonly referred to as 'Thumps', but are scientifically known as Synchronous Diaphragmatic Flutter (SDF).

A horse with thumps will typically present with muscle twitching in their flanks, which are caused by abnormal contractions of the diaphragm. These twitches are normally at regular intervals and can even produce a 'thump' noise upon contraction, hence the common name.

The diaphragm is normally controlled by the phrenic nerve, which runs over the base of the heart. In thumps, the nerve is hypersensitive and, instead of responding to its normal stimulus from the brain, it begins to react to the electrical impulses traveling across the heart. This is why the abdominal twitches are normally at regular intervals because they are synchronous with the heartbeat.

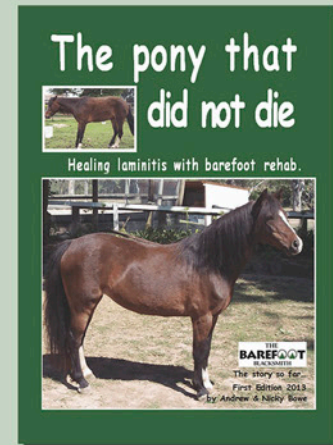
Thumps itself isn't a problem, but the concern lies in the reasons behind the phrenic nerve becoming hypersensitive, which is most commonly from dehydration, and electrolyte and mineral disturbances. The main culprit is normally low calcium, but can also occur with low magnesium, potassium, chloride and sodium.

The severity of the deficiency will dictate the clinical signs, meaning you can see anything from mild abdominal twitches up to whole body tremors, weakness, fever, cardiac arrhythmias and, eventually, seizures.

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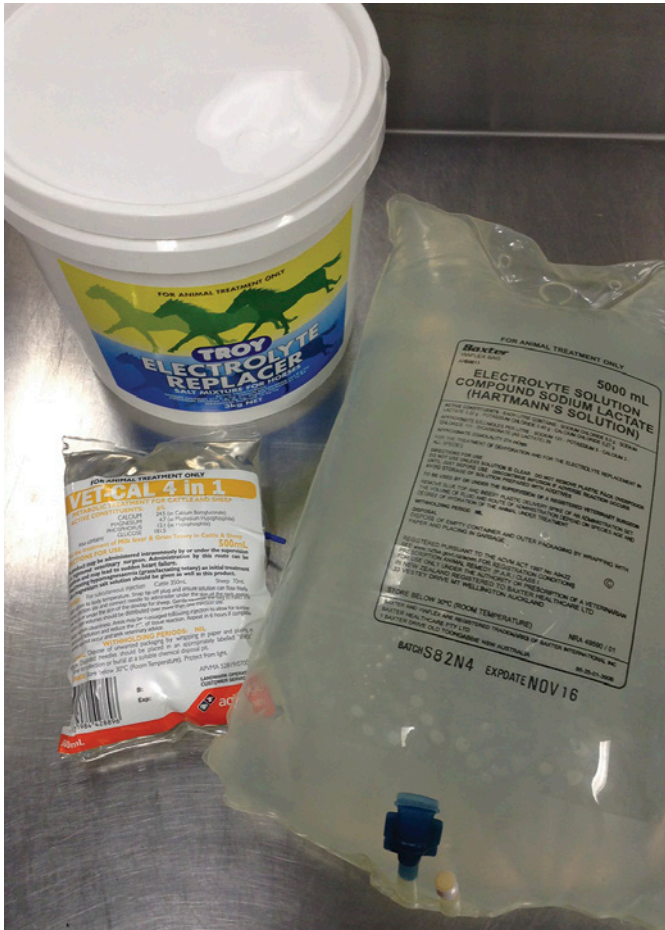


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Logically, it is horses that sweat profusely and are required to perform at an elite level that are most at risk of developing thumps. This is why it is usually only seen in endurance and race horses. In fact, it is so uncommon in other disciplines that many vets can go their whole career without seeing a single case.

There are, however, a few other circumstances that can lead to thumps. Of note is the heavily pregnant mare who can develop thumps due to the calcium depletion in producing milk. This requires prompt veterinary attention to correct and should not be ignored. Mineral and electrolytes can also be depleted by extensive transport, sepsis, gastrointestinal disease and hypoparathyroidism.

### Treatment

Many horses will spontaneously resolve when provided with feed and water. However, it is advisable that a vet be contacted to determine if there is a more serious underlying cause that may need further intervention.

Treatment is aimed at correcting any dehydration, and mineral and electrolyte disturbances. This can involve, for example, an electrolyte drench, intravenous calcium or intravenous fluids, with the success of the treatment being monitored by clinical signs and blood testing.

### At Risk

Any horse that sweats profusely and becomes dehydrated.

### Why

- Dehydration, mineral and electrolyte imbalances.
- Occasionally, calcium depletion in heavily pregnant mares.

### Signs

From mild to severe:

- Abdominal twitches (hiccups)
- Whole body tremors,
- Weakness,
- Fever,
- Cardiac arrhythmias and,
- Eventually, seizures.

### Prevention

- A balanced diet (balanced calcium-phosphorus ratio)
- Access to a salt block or adding salt to feed
- Electrolytes before, during and after strenuous work.

## Prevention

A horse on good quality feed with access to water should have no trouble coping with light to moderate exercise. If, however, you know your horse may be asked to perform at a higher level where excessive sweating and dehydration may be a risk then treating with an electrolyte replacer before, during and after an event may be a good idea.

With calcium being one of the leading causes of thumps, it may seem like a good idea to start adding calcium to your horse's diet. This is, in fact, a bad idea!

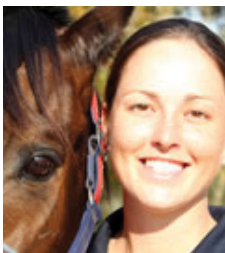
Adding excessive calcium to the diet shuts off the horse's normal mechanism to mobilise calcium from their own stores (e.g. bone) meaning that in times of need they won't be able to cope, thereby worsening the condition. Extra calcium should only be added if your horse's diet is known to be low in calcium or high in phosphorous, or if their pastures are high in oxalates.

It is important to remember that thumps is exceptionally rare, but if you do happen to see the curious sight of your horse hiccuping, it would be well worth a phone call to your veterinarian to determine if a visit is in order.



## Did you know?

Together with calcium, phosphorus is a major constituent for bone development and growth. The intake of these two minerals must be adequate and in the correct ratio, which is two parts calcium to one part phosphorus. High concentrations of calcium in the diet can depress phosphorus absorption, conversely when Calcium intake is less than Phosphorus intake (ratio less than 1:1) calcium absorption may be impaired.



**ABOUT THE AUTHOR:** *After graduating with honours in 2009 from the University of Queensland, Katelyn McNicol joined the WestVETS team as a mixed animal veterinarian. Although Katelyn loves all animals, her true passion is horses, being particularly interested in medicine and*

*anaesthesia. Katelyn has also undertaken further study in equine dentistry and she is dedicated to the science of balancing a horse's teeth to enhance health, nutrition and performance.*



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