

When horses ingest the cantharidin toxin through hay or alfalfa contaminated with “blister” beetles, the outcome is often fatal. Toxicosis occurs rapidly; as little as four grams of dried beetles may contain fatal levels of cantharidin.

Cantharidin is extremely toxic and fast-acting, quickly affecting a horse’s ability to function. All blister beetles carry cantharidin and 200 species occur in the United States. The striped blister beetles present in the southwestern states are the most problematic, as they feed on alfalfa blooms.

Time is of the essence in diagnosing and treating a horse with cantharidin poisoning. A typical toxicosis case shows many of the following signs:

- Abdominal pain, resulting in anorexia
- Depression and sweating
- Frequent attempts to drink water, submerge the muzzle
- Blood-tinged urine or urine with blood clots
- Dark, congested mucous membranes
- Increased heart and respiratory rates
- Increased rectal temperature
- Hypocalcemia

The less frequent but telltale symptoms include:

- Oral erosions
- Salivation
- Synchronous diaphragmatic flutter (“thumps”)
- Stiff, short-strided gait

The Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL) at College Station was one of the first labs to diagnose cantharidin poisoning and to develop a test for the toxin.

To submit a test to TVMDL and for rapid turnaround time (<5 days) submit 5cc of serum or 5cc of urine. A 500g sample of stomach or cecal content can also be tested but may take up to 10 business days.

### **Cantharidin Test**

Specimen: 500 g stomach/cecal contents or feed, or 5 mL urine, or 5 mL serum.

Price: \$85

Turnaround: Performed in the College Station laboratory Monday - Friday, with results in 2-10 business days.

In addition, if a beetle is sent to the lab, it can be confirmed as the potentially catharidin-producing blister beetle.

### **Beetle Identification**

Specimen: Beetle should not be in formalin

Price: \$15

Turnaround: Performed in the College Station laboratory Monday - Friday, with results in 1-2 business days.

Alfalfa should be weed free and harvested prior to blossom to avoid contamination.

Visit [tvmdl.tamu.edu](http://tvmdl.tamu.edu) for more information or to download your free educational material on a wealth of diagnostic services.

