

## Snake Bites In Horses and Mules

The best first aid is to keep the horse calm and arrange for immediate veterinary care. No first-aid treatments performed by owners in the field have proven particularly helpful, and many folk remedies can even be harmful. Suction devices have not been shown to be beneficial in animal models of snakebite.

Treatment varies with the severity of the bite, but can include fluids, pain medications, wound care, antibiotics, tetanus prophylaxis, and antivenin. Antivenin can decrease the amount of tissue damage and hasten recovery times, and can be especially helpful in cases of severe envenomation. Antivenin is dosed according to the estimated amount of venom injected, not the patient size, so even one vial of antivenin can have beneficial effects. Cardiac arrhythmias occur in many horses and could require treatment. Horses with severe nasal passage swelling may need treatment to maintain a patent airway; nutritional support might be required if swelling impairs the horse's ability to eat and drink.

Even after horses have recovered from the immediate effects of snakebite, subsequent complications such as heart failure or kidney damage are possible. Cardiac failure can occur weeks to months after the bite incident, necessitating continued evaluation and monitoring.

A vaccine is available for use in horses to help prevent complications of snakebite, but efficacy in horses is not yet well documented. Contact your veterinarian for more information about snakebite in your region. (*efficacy – ability to produce the necessary or desired results*)

As such a snake bite kit is not worth any money spent on it. Having the two 6 inch hoses may however help keep the animal alive.

## How to Treat Snakebite

By Karen Hayes DVM, MS

A snakebite--particularly on the nose--can be a life-threatening event for your horse. Here's what to do.



Snakebite  
Photo by Nancy S. Loving DVM

### What You See

Your horse's muzzle is severely swollen. A thin trickle of blood runs from each nostril. You can see two small holes or bloody spots on his face, about inch apart.

There's a bruise-like discoloration, plus pinpoint-size red marks on the light-colored area inside his lips. This area seems sore, because he resents having you touch it.

### What Should You Do?

1. Call your veterinarian immediately.

Why: Your horse appears to have suffered a poisonous snakebite. The swelling is part of his reaction to the venom's toxin and can impair his breathing if his nostrils swell closed. The sooner he gets appropriate treatment, the greater his chance of avoiding more severe symptoms such as fainting and suffocation, or life-threatening problems such as laminitis or heart arrhythmia (an irregular heartbeat).

2. Confine your horse and keep him quiet.

Why: The less he moves, the less toxin he'll absorb into his bloodstream.

How: Halter your horse, and stay with him until your vet arrives. Don't move him or do anything that would make him raise his head; gravity helps keep the toxin from spreading. If he's hot, sponge cool water over his body. Avoid touching his face -- the area is sore and vulnerable to infection, and he's likely to raise his head if you try.

3. Avoid "snakebite-lore" techniques. Why: The "remedies" listed below won't help your horse--and could harm him.

Avoid cutting the snakebite wounds or applying suction. If done at all, these measures should be handled only by experienced hands, within 3 minutes of the bite. Otherwise, they may increase your horse's risk of infection and probably won't help him.

Avoid applying ice or heat to the wounds. Both could further irritate the affected area, causing additional swelling and the risk of tissues rupturing or dying.

4. Look up the date of your horse's last tetanus toxoid vaccination. (This isn't the same as an antitoxin shot, which has been linked to a potentially fatal liver disease.)

Why: Just like any contaminated puncture wound, a snakebite invites tetanus.

How: Check your horse's vaccination records. Report the date of his last tetanus toxoid booster to your vet. If it's been 12 months or longer since his last booster, your horse will need another one.

5. Identify the snake, if you can do so without endangering yourself.

Why: Knowing the type of snake may help your vet formulate a treatment plan.

How: If the snake is visible, memorize its markings, if you can do so without getting within striking range. Report them to your vet.

#### Prognosis

Guarded to good. Only about one-half of horses bitten by poisonous snakes are actually envenomated (that is, injected with enough venom in the right place to cause life-threatening symptoms). Up to 25 percent of those horses envenomated die, depending on the type of snake.

Most deaths are caused by severe symptoms during the horse's initial reaction to the snakebite (heart and/or breathing problems), or chronic, secondary conditions (laminitis, diarrhea, pneumonia, paralysis of muscles that govern swallowing, and wound complications).

Your vet will treat your horse's pain, swelling, and any other symptoms. He or she will also clean the wound to reduce risk of infection, possibly prescribe antibiotics, and bring your horse's tetanus immunization up-to-date.

Your vet may also perform a blood test to determine whether your horse has been envenomated and to see if he'd have an adverse reaction to the antivenin antitoxin that neutralizes the venom's effects.

If your horse has been envenomated and won't have a reaction to the antivenin, your vet may inject it intra-venously and around the bite site. Some of your horse's severely swollen facial tissues may die and slough off, requiring 2 to 3 weeks of treatment as an open wound.