

# Ask A Vet: Tetanus-An Ounce of Prevention

*Sunday, December 6, 2015*

Dear Dr. Weldy's,

Do I really need to vaccinate my horses for tetanus? What's the big deal about it, anyway?

-Doubting Thomas

Dear Thomas,

Thanks so much for your question! First, let's talk about what tetanus is. Tetanus is a disease (often fatal) caused by the neurotoxins that are produced by the bacteria, *Clostridium tetani*. This is a bacteria that is present in the gastrointestinal tract and manure of horses, other animals and even humans. It is also present in the soil. The bacteria produces spores, and these can survive in the environment for years, presenting a long term risk of exposure to horses and those who work in areas where horses are kept. Tetanus is not contagious. It occurs by the contamination of puncture wounds, lacerations, surgical incisions and the umbilical cord of foals and the reproductive tract of mares after a traumatic foaling with the bacteria. Signs of tetanus in your horse include: muscular stiffness and spasms, difficulty eating, protrusion of the third eyelid, a horse that easily startled, the tail is held out straight, nostrils will flare and the horse may sweat. Any loud sound, bright light or touch can aggravate the signs. As the disease progresses, the horse will collapse, spasm and convulse and will die from respiratory failure.

50-75% of horses infected with tetanus will die from the disease, even with treatment. Treatment goals include: killing the bacteria so that no more toxin is produced and decreasing the effects of the toxins that are already circulating in the horse. Antibiotics (usually penicillin) and tetanus antitoxin (both intravenously and intramuscularly) are used. In severe cases, the horse may be managed in a sling and intravenous fluids and bladder catheterization may be necessary. If these measures are necessary, chances for recovery are dismal and euthanasia is often the most humane option.

Sounds pretty bad, right? So what can we do to prevent this serious disease? Luckily for horse owners, tetanus is easily preventable via vaccination! An unvaccinated, adult horse should be given two doses of tetanus toxoid at a 4-6 week interval and then yearly boosters. If a horse sustains a wound or undergoes surgery 6 or more months after their prior tetanus booster, they should be given a tetanus toxoid vaccine immediately when the wound is noticed. Foals born to unvaccinated mothers should have 3 tetanus toxoid injections beginning at 1-4 months of age with 4 weeks between doses and yearly vaccination after that. Foals born to mares vaccinated pre-partum can be vaccinated with 3 tetanus toxoid injections starting at 4-6 months of age with 4-6 weeks between the first 2 doses and the third dose being given at 10-12 months of age with yearly vaccinations to follow. Tetanus antitoxin is indicated in situations when a horse is at risk of contracting tetanus (ie. the horse sustains a wound) and has not been vaccinated appropriately for tetanus.

I hope this has helped to clarify why tetanus vaccines are essential for horses and erase any of your doubts about keeping them up to date for your own horses. If you have any questions regarding tetanus vaccination, contact your local veterinarian.

-Dr. Ashley Vander Wey