

## Bacterial Diseases of the Horse

---

 [articles.extension.org/pages/11396/bacterial-diseases-of-the-horse](https://articles.extension.org/pages/11396/bacterial-diseases-of-the-horse)

*Craig Wood, University of Kentucky*

### Strangles

*Craig Wood, University of Kentucky*

Strangles is a highly contagious upper respiratory infection in horses. The cause has been identified as a bacteria. The disease has a low mortality rate, yet the economic ramifications due to long recovery periods can be great. The disease is contracted through environmental contamination, nasal discharge, or direct contact with infected animals.

1. high fever of 103 to 106 F
2. loss of appetite
3. a moist cough
4. clear nasal discharge that becomes yellow
5. difficulty in breathing and swallowing (as if strangling, hence the name)
6. swelling of submandibular lymph nodes that rupture.



This upper respiratory inflammation then spreads to the submandibular lymph nodes (below the jaw), which eventually abscess. Symptoms can range from minor to major. The most severe form of strangles involves inflammation of all lymph nodes

Treatment consists of supportive care, which involves keeping the animal warm and dry, isolating it from other animals, and offering it soft foods. Hot packing of the abscesses speeds up formation of pus. The antibiotic of choice is penicillin if used before abscess development. Penicillin used after abscess formation slows recovery. Strangles is usually not fatal.



There is a vaccination available for strangles, yet efficacy is low and the duration is short. The best prevention is to isolate new animals, optimally for a month. Any horses with upper respiratory signs should be avoided and/or watched closely for further problems.



### Botulism

*Craig Wood, University of Kentucky*

Botulism in horses is rare, but is usually fatal. It is caused by toxins produced by the bacteria known scientifically as *Clostridium botulinum*. The botulism toxins act on the peripheral nervous system by preventing transmission of the nervous impulses. These toxins are found in the soil and in decaying plant or animal matter. Adult horses and foals usually less than 8 months old can be affected.

1. impaired suckling
2. inability to swallow
3. decreased eyelid and tail tone and dilated pupils
4. respiratory paralysis, which causes death.

## Adults

1. many of the same signs seen in foals
2. eventual muscle weakness, tremors, and collapse
3. respiratory paralysis, which causes death.

If botulism is caught early, there is a polyvalent equine antitoxin (an antibody produced in response to a toxin from the bacteria) that is active against several types of the organism. This antitoxin has improved the chances of survival in horses.

 **Treatment**

A vaccine is available for use and is recommended only for endemic areas.

 **Prevention**

## Tetanus

*Craig Wood, University of Kentucky*

Tetanus, also known as lockjaw, is an extremely serious disease of the central nervous system that has a high mortality rate in horses. The bacteria causing tetanus is found worldwide, and therefore, every unvaccinated horse is a potential victim.

The disease is caused by a toxin released by the bacteria *Clostridium tetani*. This bacteria is normally found in the intestinal tract of horses and is passed in the feces. The spores are always present in the soil in any horse facility. The bacteria is anaerobic, meaning that it multiplies in areas where oxygen is not present. Deep puncture wounds contaminated with dirt are ideal locations for tetanus to flourish.

Tetanus may lie dormant in the animal for as long as six months. Therefore, the onset of signs may be months after the original injury.

1. inability to open mouth to eat and drink
2. eyes wide open and ears rigid
3. stiffness and rigidity of the entire body
4. extreme sensitivity to sounds, sights, and touch
5. third eyelid closes uncontrollably  
(One way to distinguish tetanus from other neurological diseases is to clap your hands and watch the third eyelid. It will close uncontrollably.)
6. convulsions and death in 75 to 80 percent of cases.

 **Clinical Signs**

If the horse makes it through the first week, chances of recovery are good, but full recovery may take many months.

Treatment is mainly supportive. The horse should be kept in a dark, quiet place with plenty of padding to prevent injury. Adequate nourishment and fluid intake must be monitored. Sedatives and muscle relaxers should be administered along with the tetanus antitoxin.



## **Treatment**

Vaccination with tetanus toxoid is a highly effective preventive. It is given in two doses four to eight weeks apart, followed by a booster every year thereafter.

Broodmares should be vaccinated four to eight weeks prior to foaling to ensure passive immunity for the foal. The foal may then receive its first injection at 3 months of age because maternal immunity will not interfere with the vaccine.



## **Prevention**

If an unvaccinated horse is wounded, it should be given the tetanus antitoxin for immediate protection. However, this protection is short-lived, so the horse should be given the toxoid vaccine at the same time and a booster four weeks later.