

# Rattles – Rhodococcus. Equi

Rattles or the Bacteria *Rhodococcus. Equi* is well known for its ability to cause severe pneumonia in young foals. In addition, *R. equi* can cause septic arthritis (infection of joints), osteomyelitis (infection of bones), neonatal diarrhea (enterocolitis), abdominal lymphadenitis (inflammation of the lymph nodes), spinal cord abscesses, and immune-mediated disease such as polysynovitis. It can also cause sudden death in foals that appear to be healthy.

The bacteria lives in the soil and faeces of herbivores and tends to occur only sporadically except on some farms where it is considered endemic. On those farms approximately 10-20% of foals develop clinical signs of pneumonia. In moist environments, it can live in the soil for approximately one year. Foals are thought to become infected when they ingest or breathe in the bacteria in soil, dust, and fecal particles.

While most foals are exposed to *R. equi* at some point, not all foals develop disease. It is likely that a combination of the foal's immune status, environmental factors, and farm management practices all play a role. Rattles is a particular problem in the equine industry because of its high prevalence and mortality rate (approximately 28%), associated economic losses to the breeding industry, and potential negative impact on future athletic performance in foals that recover.

It is currently thought that foals become infected before two weeks of age; however, clinical signs of infection are not obvious until the foal is 30 to 90 days old. In general, it is accepted that it can cause pneumonia in foals as young as one month and as old as six months. The disease tends to develop rapidly.

Common clinical signs include:

- cough
- thick, greenish-white nasal discharge
- fever
- lethargy
- increased respiratory rate
- respiratory distress.

Pneumonia is a common medical condition in foals and is a major cause of illness and death in this age group. *R. equi* must be differentiated from other causes of pneumonia, including respiratory tract infection due to other bacteria or infection with other microorganisms such as fungi. In many cases the causative organism of respiratory tract infections is not identified.

Foals diagnosed with *R. equi* are prescribed a variety of antibiotics. Treatment should continue for at least 30 days, and prolonged treatment of six to eight weeks or more is often required. Foals are administered the antibiotics until there is no longer any evidence of pneumonia. Antibiotic-associated side effects for the foal include hyperthermia and a mild diarrhea that is usually self-limiting. In some cases the foal might require a short interruption in administration until the diarrhea subsides. Because Rattles is widespread, it is difficult to control. Good farm management and sanitation strategies can help minimize infection. For example, mares and foals can be kept on grassy pastures rather than dry, dusty paddocks. Frequent removal of faeces to minimize bacterial exposure is recommended. Any foal with clinical signs of respiratory disease should be seen by a vet. At present, no vaccine is available.

