

Respiratory Disease In Foals

by: Fairfield Bain, DVM, MS, Dipl. ACVIM, Dipl. ACVP

April 01 1996 Article # 841

What is the first thing I look for to tell if my foal has a respiratory problem, and what are the best things to do to prevent pneumonia and other problems from happening in the first place?

The most important signs of respiratory disease in neonatal foals are an increased respiratory rate (breathing hard), occasionally a cough, sometimes discharge from the nose, and fever. Some of the foals might be weak and have a difficult time getting up. These signs will all vary depending on the severity of the respiratory problem.

When a foal is born, you should run your finger along the roof of his mouth to check and see if the foal has a cleft palate. That congenital abnormality can cause the foal to get milk in its trachea and result in aspiration pneumonia. Some of these foals will have milk running out of their nose, another warning sign that pneumonia might occur.

Premature foals are at greater risk because they have poor lung development. You might notice that they have poor rib cage excursions, or their rib cage does not move in and out as well as that of a normal foal. Along with this goes poor expansion of the alveoli in the lung.

Poor colostrum absorption in any foal can lead to respiratory disease. The respiratory system can be a primary site of septicemia (caused by bacterial toxins in the blood).

With orphan foals or foals being fed on a bottle, make sure that the foal has a good suckle reflex and keep the bottle below eye level of the foal. This will help prevent milk from running down into his trachea and possibly causing aspiration pneumonia.

Older foals have the same clinical signs as neonates--difficulty breathing, coughing, nasal discharge, and fever. With any age foal, it's time to call in your veterinarian if you see the foal is having difficulty breathing and/or is coughing and has a fever.

The normal foal's respiratory rate is about 30-40 breaths per minute, although in hot weather it can go up to 60-80 breaths per minute in a normal foal. Also, if the foal has a discharge from its nostrils you should have him examined by your veterinarian. Remember to check his oral membranes--they should be bright pink. If they are discolored, it might be a sign of poor oxygenation.

In all cases, diagnosis is made by listening to the lungs with a stethoscope, and occasionally with X rays and ultrasound examination. Sometimes in young foals it is difficult to hear abnormalities because they normally have loud lung sounds. With the X rays or ultrasound, we are looking for consolidation or abscesses in the lungs. In severely affected young foals we might check their arterial blood gases. This measures the lung function--how well the oxygen and carbon dioxide are being exchanged. That's usually only done with cases severe enough to be hospitalized.

One of the main causes of respiratory disease is the bacterium *Rhodococcus equi*. There are many other bacterial agents that can cause respiratory disease, including *Streptococcus zooepidemicus* and *Streptococcus equi*, as well as *Escherichia coli* and *Salmonella*.

Preventing respiratory problems in foals starts before they are born with routine vaccination programs for pregnant mares. This is extremely important to protect young foals from equine viral rhinopneumonitis. It is also important to make sure the foal nurses well so that you know he got the antibodies from the mare in the colostrum. With older foals, make sure they are on a good vaccination

program to help prevent viral infections.

In areas where *Rhodococcus* is a problem--and it can be endemic on some farms--avoid over use of congregating areas where dust builds up. That is a prime area for the transmission of *Rhodococcus*.

It should go without saying that a clean environment for the foals is extremely important. Make sure that stalls are kept as clean as possible because dust and ammonia can injure the cells lining the respiratory tract of a foal and cause decreased clearance for debris.

**Readers are cautioned to seek the advice of a qualified veterinarian
before proceeding with any diagnosis, treatment, or therapy.**



Copyright © 2009 BLOOD-HORSE PUBLICATIONS. All rights reserved. Reproduction in whole or in part in any form or medium without written permission of BLOOD-HORSE PUBLICATIONS is prohibited. THE HORSE, THE HORSE logo, THEHORSE.COM and THEHORSE.COM logo are trademarks of BLOOD-HORSE PUBLICATIONS.