

Foal Diarrhea: What's all the stink about?

Diarrhea is a real concern starting just after birth and lasting up to five months of age. In young foals, diarrhea can be harmless (such as foal heat diarrhea) but can become fatal without intervention. It is frequently caused by the dam's foal heat, or due to nutritional alterations. More severe cases are caused by bacteria, viruses, or parasites. In these cases, foals necessitate medical therapy and supportive care. It is imperative to recognize certain potential clinical signs to direct further therapy for your foal.

Foal heat diarrhea is transient between five and 15 days of age and seems to represent changes in intestinal function and bacterial flora. Foals are bright, alert, active, nursing, and have normal rectal temperatures (99-102°). The direct cause is unknown, but parasites and the ingestion of the mare's manure (coprophagy) have been suggested. Feces are semiformal to watery and not odorous. Therapy is usually not indicated, but application of a protectant to the skin around the perineum helps minimize scalding of the buttocks.

Strongyle worms can be shed through the mare's milk to the foal usually during the first two to four weeks. Signs are diarrhea, fever, and colic. Fecal exams are not useful because the clinical signs are associated with the larval migration stages before the adult worms pass eggs into the feces. Treatment for both parasites consists of deworming with an Ivermectin product. Additionally, deworming the mare on the day of foaling helps decrease transmission of the parasite to the foal.

Rotavirus is a virus that commonly causes diarrhea in foals from two days to two months of age. Transmission is usually from the environment. Younger foals are more commonly affected with multiple foals affected at the same time. The foals shed the virus in their feces and mares may shed the virus but show no signs. Foals become dehydrated, develop electrolyte abnormalities, requiring fluid replacement and supportive care. Control of rotavirus involves isolating affected individuals so they are less likely to spread it to other foals. Diagnosis can be made by submitting a fecal sample for a specialized test. Prevention is now possible with a vaccine given to pregnant mare, allowing the antibodies to then be transferred to the foal through the colostrum.

Clostridia are the most common causes of bacterial diarrhea in foals. There are two types of Clostridia that contribute to foal diarrhea, *Clostridium perfringens* and *Clostridium difficile*. *Clostridium perfringens* affects foals less than seven days of age, and especially day old foals. All foals get clostridial organisms colonizing the gut, but some produce toxins that can cause gut damage and others don't. Gut damage allows toxins (and even the bacteria) to enter the bloodstream leading to foal septicemia. The diarrhea is bloody can be diagnosed by detecting toxins in the feces. Foals are very ill and need to have veterinary attention immediately. *Clostridium difficile* causes bloody diarrhea and rapid death in foals of any age. It's harder to prevent this type of infection since the organism is present in the environment. Again, the organism can be detected in the feces and these foals need immediate veterinary therapy. Vaccination is available for pregnant mares, in those situations where Clostridial diarrhea has been a problem, however the foal can be started on an antibiotic that keeps the organisms from proliferating to the point of enough numbers to get the foal infected.

Prevention of diarrhea in the neonate is important. Good management practices are the key to prevention whether it is a breeding operation or a single mare. Prior to

foaling, the mare should be properly vaccinated and foaling environment should be clean and warm. When your foal is born, adequate colostrums must be received and the navel must be dipped to minimize infections. If your foal is less than three days old, stops nursing, becomes depressed, or if the diarrhea is profuse or bloody, the foal should receive immediate veterinary attention. If the foal has foal heat diarrhea, or is older and has diarrhea but is bright, alert, and nursing, supportive care can consist of owner monitoring the diarrhea, temperature, and attitude of the foal. The owner should keep the foal's rump clean to prevent fecal scalding. A water repellent ointment can be applied and Pepto Bismol or yogurt (3/4 ounces/100 lbs orally three to four times a day) can be given. The main thing a horse owner can do is keep close track of young foals and call a veterinarian immediately if the foal shows any hint of a problem.