



Livestock Management

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Internal Parasites Common in Horses

All horses have parasites. The only exception is the newborn foal. In most circumstances, the foal becomes infected with parasites through the mare's colostrums during nursing.

Parasites are the most common cause of colic in horses, which can be very serious and even life-threatening. If parasite numbers are sufficient, parasites may contribute to weight loss, disease, and performance problems. The following information addresses the most common internal parasites found in horses but does not include all of them.

The parasite that infects the foal shortly after birth is *Strongyloides westeri*, the intestinal threadworm. The larvae of this parasite lie dormant in the muscle of the mare's ventral abdominal wall. They become active near the end of pregnancy and are secreted in the mare's milk to the nursing foal.

Large numbers of these parasites may cause diarrhea in the foal. Since this occurs around the time of the mare's first heat after foaling, the diarrhea is sometimes described as the "foal heat diarrhea." Fortunately, foals usually develop resistance to this parasite quite rapidly. Threadworms are found in foals up to about 3 months of age, but they are not found in adult horses in any significant quantity. Although these parasites usually do not cause serious problems, some owners deworm foals when they are 1 to 2 weeks old.

Another parasite commonly found in young horses is the roundworm, *Parascaris equorum*. This parasite, common throughout the world, may be a cause of poor condition in young horses. The very large, white roundworm may be up to 15 inches long. Infections are usually greatest in foals and yearlings since horses develop some immunity to these parasites as they age.

The major damage caused from these parasites results from the migration of larvae from the intestines through the liver and lungs while completing their life cycles. Occasionally, adult worms in the intestines of foals can cause impaction, colic, and death. Since eggs passed by the adult roundworms are quite resistant, it is best to avoid using the

same paddocks for mares and foals in successive years. Deworming the foals at an early age may also help avoid impaction problems, by not allowing large numbers of adult roundworms to build up in the intestines.

The most pathogenic parasites in horses, according to parasitologists, are the large strongyles. The "big three" species of large strongyles are *Strongylus vulgaris*, *Strongylus edentatus*, and *Strongylus equines*. Although all three species can be quite harmful to horses, the *Strongylus vulgaris*, is commonly referred to as the bloodworm, is the one of most concern to horse owners.

The adult parasites reside in the large intestines and pass their eggs in the horse's feces. These eggs develop and hatch as larvae in the environment. Horses then ingest the larvae while grazing. The larvae migrate through the intestinal wall and into the blood vessels that furnish the blood supply to the intestinal organs. This migration may last for up to seven months. This is the most damaging stage of the parasite since the blood supply to the intestines is being compromised. If the blood supply is damaged sufficiently, the result is colic and perhaps death. Fortunately, infection by this parasite can be controlled by the use of proper deworming medications.

Another common parasite of horses is the horse pinworm, *Oxyuris equi*. Adult worms are found in the terminal portions of the digestive tract. The adult females migrate out the rectum and lay their eggs on the skin around the anal area of the horse. This usually causes a severe pruritis, which results in the horse rubbing its rump and tail against some stationary surface. When the horse rubs against the feeder, manger, or wall of the stall, the very sticky eggs are transferred to these surfaces. The horse is infected by the larvated eggs ingested when licking these contaminated surfaces. The most harmful effect of this parasite is the self-mutilation caused by the horse rubbing its rump area against a post or stall surface.

Bots are also a concern of horse owners. In late summer or fall, bot flies lay eggs on the hairs of the horse. The location of the eggs on the horse is related to the species of bot fly. The eggs may hatch around the mouth and crawl

into the mouth area, or the horse may ingest the eggs when grooming itself or another horse. The larvae pass into the stomach where they become attached. The larvae remain in the stomach and develop for 10 to 12 months before they are passed out in the horse feces. These larvae then pupate on the ground, and the adult fly emerges after one to two months. Most owners deworm their horse after the first hard frost has killed the adult bot flies. If the larval stage is killed in the stomach at this point and all the remaining eggs are removed from the hairs on the horse, there should be no chance of reinfection for the remainder of the year, since the cold weather killed the adult flies.

All of these parasites, except for the bot larvae, are susceptible to most of the over-the-counter anthelmintics (dewormers) for horses. Only certain products are effective against the bot larvae. It is best to consult your veterinarian about the proper use of these products as part of a regular health program.

Management practices may be employed to reduce the risk of parasite infection and reduce the reliance of treatment. If stalls are cleaned daily and paddocks cleaned weekly, many of the parasite eggs will not have time to develop into the infective larval stage and will be removed as a source of reinfection. A harrow or drag may be used in pastures to break up manure piles and expose parasite larvae and eggs to the sun. Hot summer temperatures kill many parasite larvae.

To reduce the risk of reinfection, pastures may be rotated so that horses are not on a pasture for at least eight weeks. Other species of animals, such as cattle, may be kept on the pasture since most horse parasites are specific, infecting only horses. Drain wet areas because most parasites and their eggs or larvae prefer and survive longer outside the animal in wet environments. Practice fly control measures to reduce the population of bot flies.