

# Internal Parasites Common in Horses

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Preventing internal equine parasites can be a serious concern for any horse owner. In all, there are close to 150 species of internal parasites, or worms that can affect your horse. Thankfully, there are steps you can take to help control these organisms. Effective internal parasite control depends, in part, on your understanding of the parasite - and its life cycle - that has infected your horse.

## The Parasite Life Cycle

In some regards, internal parasites are no different than other organisms. Most start out as an egg. The egg matures into a larvae. The larvae matures into an adult. The adult lays eggs. The life cycle starts over. However, internal parasites spend the majority of their life cycle inside your horse's stomach or intestines.

With equine parasites, usually the eggs or larvae are deposited onto the ground in the manure of an infected horse. Your horse then swallows the eggs or larvae while she grazes in the pasture. These juvenile parasites then mature into egg-laying adults in your horse's gastrointestinal system. In some worm species, the larvae migrate into other organs, such as the lungs or liver, to mature before returning to the intestines as adults to lay eggs. These eggs are then passed from your horse into the pasture where either she or another horse consumes them to start the life cycle over again.

## Common Parasites Defined

There is a range of common internal parasites that can infect your horse. Understanding how each develops and the signs your horse may exhibit when infected by a given worm allows better parasite control. There are a variety of oral medicines, which are technically known as "dewormers" and commonly called [wormers](#) available to help treat strongyles, roundworms, pinworms, lungworms, tapeworms, and more.

### Large Strongyles (bloodworms, redworms, palisade worms)

**Life Cycle:** Start out as eggs, which hatch into larvae that are consumed by horses as they graze or drink infected water. The larvae mature in the intestinal tract. One type (*Strongylus vulgaris* or bloodworm) migrates into the blood vessels of the intestines. Their entire life cycle takes about 6 to 7 months. The other two types (*Strongylus edentatus* and *Strongylus equines*) migrate into the liver. Their entire life cycle takes about 8 to 11 months.

**Effects:** Heavy bloodworm infestation can cause severe or even fatal colic or blood vessel ruptures that lead to extensive blood loss. Other large strongyles cause less severe damage. Other signs include weight loss, anemia, or colic.

**Control:** Frequent deworming is important. Use an Ivermectin-based [wormer](#) for broad-spectrum control. [Wormers](#) containing fenbendazole also offer additional control of certain mature stages of strongyles.

### Small Strongyles (cyathostomes, small redworms)

**Life Cycle:** Similar to large strongyles. Start out as eggs, develop into infective larvae which are ingested by the horse, and travel into the intestinal tract. However, instead of migrating into other body parts, small strongyle larvae burrow (or encyst in) the wall of the large colon. Here they can stay for months or years before the proper conditions trigger them to emerge. While encysted, small strongyles - which usually are the most damaging of internal parasites - are resistant to most

dewormers.

**Effects:** If large numbers of larvae emerge at once, they can cause severe health problems, including diarrhea, weakness, muscle wasting, and colic.

**Control:** Frequent deworming is important. Use an Ivermectin-based wormer for broad-spectrum control. Wormers containing fenbendazole also offer additional control of certain mature stage strongyles.

### **Roundworms** (ascarids, large roundworms)

**Life Cycle:** Horses become infected with roundworms by swallowing the eggs in contaminated hay or water. In the stomach, the eggs develop into larvae which migrate to the liver and the heart and to the lungs, where they are coughed up and swallowed. Once back in the stomach, they develop into egg-laying adults. The life cycle takes about three months.

**Effects:** Most damage occurs as roundworms migrate through the body. They cause coughing, pneumonia, liver damage, diarrhea, and colic. Large numbers of adult roundworms can cause intestinal blockage or rupture. Other signs include unthriftiness, pot belly, rough hair coat, and slow growth.

**Control:** Frequent deworming is important. Use an Ivermectin-based [wormer](#) for broad-spectrum control. It is important to note that horses acquire some immunity to roundworms as they age. Foals and horses younger than two years of age are much more susceptible to roundworm infection than older horses. When first dewormed, foals older than three months are more prone to colic. Consult your veterinarian regarding this condition.

### **Tapeworms** (cestodes)

**Life Cycle:** Similar to tapeworms in dogs, cats, and humans, equine tapeworms require an intermediate host to mature. Tapeworm eggs are ingested by a tiny mite called the oribatid mite that lives on the grass in pastures. Horses ingest the mites (and the tapeworm eggs inside the mites) while they graze. Inside the horse, the tapeworm eggs mature in 6-10 weeks into adult tapeworms that attach to the intestinal lining, where they absorb nutrients. Packets of eggs break off from the tapeworm and are passed out in the horse's feces, where they are ingested by pasture mites and the cycle starts again.

**Effects:** Tapeworm infestations can lead to colic, rough hair coat, slow growth, and other conditions due to nutrient deficiencies. In addition, heavy tapeworm infestation is considered to be a significant cause of colic.

**Control:** Typically, regular use of an Ivermectin-based wormer for broad-spectrum control is combined with a specialized wormer containing pyrantel pamoate.

### **Lungworms** (*Dictyocaulus arnfieldi*)

**Life Cycle:** Larvae are ingested while grazing. They then migrate through the body to the lungs where they mature into adults and lay eggs. The eggs hatch into larvae in the lungs, are coughed up and swallowed into the stomach, and then passed out in the manure. The entire life cycle takes about 28 days. Typically, this worm infects donkeys, but it can sometimes be found in horses pastured with them.

**Effects:** Horses with lungworms may show coughing or respiratory problems, especially when exercising.

**Control:** Frequent deworming is important. Use an Ivermectin-based [wormer](#) for broad-spectrum control.

### **Pinworms** (*Oxyuris equi*)

**Life Cycle:** Female pinworms lay their eggs in the skin around the horse's anus where they are often rubbed off onto the ground. They are then eaten by a horse and the life cycle repeats.

**Effects:** The egg masses are extremely itchy. Horses with pinworm infections will sometimes rub their tails until all the hair is pulled off. Adult pinworms (about 1-3/4 inches long) may be seen around the anal area, along with a clear discharge (the egg masses).

**Control:** It is important to use disposable wipes or paper towels for cleansing the area under the tail, rather than reusable sponges or rags, to avoid spreading the eggs and infection. [Wormers](#) containing Ivermectin, fenbendazole, pyrantel pamoate, piperazine, moxidectin, and praziquantel can help control pinworms.

### **Stomach Worms** (*Habronema muscae*, *Habronema microstoma*, *Draschia megastoma*, *Trichostrongylus axei*)

**Life Cycle:** Stomach worms are transmitted to horses by flies, which transfer the stomach worm larvae when they land on the horse's legs or muzzle or eyes, and the larvae are licked off and ingested.

**Effects:** There are several types of stomach worms and usually they don't cause much more of a problem than mild diarrhea. However, if the stomach worm larvae get into open sores on the horse's skin, or into the moist areas around the eyes, they can cause a serious skin condition called "summer sores" or "swamp cancer". The body responds to the irritating presence of the stomach worm larvae by forming a lesion called a granuloma, a raised sore that doesn't heal. A granuloma is very itchy and the horse will rub and scratch at the sore, sometimes causing severe trauma to the area.

**Control:** Frequent deworming is important. Use an Ivermectin-based wormer for broad-spectrum control.

### **Hair Worms** (*Trichostrongylus axei*, Stomach Hair Worms)

**Life Cycle:** Actually a type of stomach worm, the larvae are ingested with infected plant material while the horse is grazing. They develop in the stomach into egg-laying adults. The eggs are passed out into the environment with the manure and develop into infective larvae.

**Effects:** Hair worms in small numbers usually do not cause the horse any medical problems, but a heavy worm burden can lead to watery diarrhea and severe weight loss.

**Control:** Similar to other stomach worms, frequent deworming is important. Use an Ivermectin-based wormer for broad-spectrum control.

### **Threadworms** (*Strongyloides*, *Strongyloides westerii*)

**Life Cycle:** Mostly a concern in foals, larvae are ingested in the mare's milk or by threadworm larvae present in the bedding, which can penetrate the foal's skin. The larvae migrate through the lungs and small intestine. The life cycle takes only about 2 weeks.

**Effects:** The main concern from threadworms is diarrhea.

**Control:** An Ivermectin-based wormer suitable for foals helps control threadworms. Generally, foals become immune to threadworms by the time they are about 3 months old.

### **Bots** (botfly larvae, *Gasterophilus nasalis*, *Gasterophilus intestinalis*)

**Life Cycle:** Adult bot flies deposit their eggs on horses' forelegs and shoulders, or around the jaws and lips. When the larvae hatch, they move into the mouth where they burrow into the tissues of the gums and the tongue to develop further. Eventually, they move into the tissues of the stomach and intestines, where they live for up to 12 months before passing out of the horse in the manure and developing into adult bot flies in the soil. However, cold weather kills bot flies.

**Effects:** Although bots can cause damage to the tissue of the horse's mouth and intestinal tract, most horses do not show signs of serious diseases from bots. However, very large numbers of bots have been associated with gastric ulcers.

**Control:** Use an Ivermectin-based wormer for broad-spectrum control.

**Filarial parasites** (*Onchocerca cervicalis*, neck threadworm microfilariae)

**Life Cycle:** The adult worms of this parasite live in the *nuchal ligament*, a very thick, elastic ligament that runs along the horse's neck between the withers and the poll. Larvae from these adults migrate to the skin. The larvae are eventually ingested by insects, especially the *Culicoides* gnat.

**Effects:** Larvae burrowed into the skin can cause inflammation so intense that some horses will scratch and roll until the skin is red and the hair is rubbed off. Usually the irritation is in the skin of the forelegs, chest, eyelids, and withers, and along the middle of the belly.

**Control:** Use an Ivermectin-based wormer for broad-spectrum control.