

Practical Guide to Parasites

Knowing the facts about parasites and dewormers is a big step toward making important decisions about your horse's health. By Christa Moody and Teresa Jascob

You can't escape them—and neither can your horse. With more than 150 known species, internal parasites can be anywhere, from your horse's pasture, to its food and water, even on its own coat. And with literally thousands of articles written on the subject, making sense of what you really need to know about these tiny threats can be a daunting task, to say the least.

Knowing a few simple facts about parasites and dewormers will help you take the first step toward making important decisions about your horse's health care. After all, this battle with parasites is one you need to win. Parasites can seriously damage your horse's health, strength and vitality, causing lethargy, weight loss, colic, and even death. Neglecting your horse's deworming program can result in illness or death. This photo reveals large strongyle damage in a horse's digestive system.

Let's begin by taking a closer look at the parasites your horse might be exposed to every day.

Roundworms

Also known as "ascarids," these prolific worms can produce 100,000 to 200,000 eggs daily. Protected by a thick coating, the eggs can survive up to 10 years on your pastures, and are unaffected by adverse weather conditions. The life cycle of the roundworm begins when an egg is ingested by the horse. Inside the small intestine, the eggs hatch and penetrate the intestinal lining. They migrate through the liver and into the lungs, where they remain for two to three weeks. They then burrow from the blood side of the lung into the air side, where they cause permanent damage to sensitive lung tissue. The larvae then crawl up the trachea, causing enough irritation that the horse coughs. The ascarids are then coughed up, re-swallowed and develop into egg-laying adults. Eggs are passed out of the horse in the manure.

Small Strongyles

Unlike roundworms, small strongyle eggs actually hatch while outside the horse. They go through several larval stages on the pasture, eventually maturing into a third stage that is infective to the horse. Once this larva is ingested, it penetrates the lining of the intestines.

If adult small strongyles already exist in the horse's bowels, the immature parasites will halt their migration and stay inside the intestinal lining. The

horse's immune system tries to attack the invaders and surround them with scar tissue. We call these waiting parasites 'encysted' small strongyles. If the adult population of small strongyles decreases, the immature parasites will break out of their cysts and enter the intestines as mature, feeding parasites. Their eggs will pass out of the horse with the manure, starting the process all over again.

Large Strongyles

These dangerous parasites are quite different from the small strongyle, although they also begin their lives outside the horse and are infective as a third stage larva. When they are ingested, they migrate to the cranial mesenteric artery—the artery that supplies blood throughout the intestinal tract. Their presence here can cause enormous damage, resulting in potentially fatal colic conditions.

Tapeworms

When tapeworm eggs are passed out of the horse, they are ingested by tiny, pasture-dwelling insects called oribatid mites. These mites are then ingested by the horse with grass, or hay. The mites are digested, and the immature tapeworms travel to the junction of the small and large intestine—an area known as the ileocecal junction.

The presence of many worms in one specific area can cause significant damage to the horse. These parasites are strongly associated with several serious types of colic, including gas colic, impaction colic and a potentially fatal colic known as ileocecal intussusception.

Bots

The bot fly can be heard buzzing around pastures throughout the country. It lays its eggs on the legs and shoulders or chin and nose of the horse—depending on the specific bot species. These eggs are either licked into the mouth, or they may burrow through the skin to be ingested and scoot their way down the esophagus to the stomach. There, they attach and winter over until spring, when they are passed out in the manure and hatch into flies. These parasites can cause ulcers, irritation and some types of colic.

Pinworms

Pinworms live most of their lives in the large intestine, but they crawl out onto the skin of the rectal area to lay their eggs. While this parasite usually causes little internal damage to the horse, they can create irritation around the anal area, resulting in horses that persistently itch and rub their tails.

Threadworms

Threadworms enter the horse's system by penetrating the skin or through

ingestion. Their migratory pattern is like the roundworm, but some infective larvae can remain dormant inside a mare until she foals. They then travel through the mammary glands and are passed in the milk to the foals. They are believed to be factors in foal heat diarrhea.

Stomach Worms

House and stable flies deposit stomach worm larvae around the horse's mouth, where they are ingested. They may also be left on open wounds or around the eyes where they enter, causing summer sores.

Neck Threadworms

Small insects, called midges, are the intermediate host for this parasite, which are injected into the horse when the midge bites. Adults live in the tendons and ligaments and can cause dermatitis, lameness and eye problems.

Stomach Hair Worms

Found in the stomach and small intestines, these worms can cause diarrhea and intestinal bleeding if large infestations are allowed to occur.

Deworming Decisions

With an understanding of the potential damage caused by internal parasites, the reasons they must be contained become abundantly clear. But, making decisions about which dewormers to use, and when, can be a difficult task.

Most horse owners have read about the need to 'rotate' dewormers. This simple method of changing from one dewormer to another throughout the course of the year helps reduce the chances of developed resistance in parasites, while maximizing the best attributes of each chemical compound.

There's a trick, of course. In order to rotate dewormers effectively, you must change chemical classes not just brand names—and there are many different brand names available for each chemical class.

The Bottom Line

What does this mean? Basically, you must look at the chemical name of the dewormer that you are purchasing, not just the brand name. All of the brands within each chemical class affect parasites in a similar way. The chemical name is usually listed right under the brand name of the product, on the outside of the packaging.

Fortunately, there are just a few broad chemical classes to be concerned about. The first class is "benzimidazoles". Dewormers in this chemical

class usually have names that end in “ole,” so you can easily locate them this way.

The second major chemical class is the “pyrantel” class—whose members are easy to find because their chemical names usually begin with “pyrantel.”

Finally, there are the “macrocyclic lactones,” perhaps the most populous class of dewormers. These chemicals have names that often end in “ectin.” This class has also gone through a change lately as some of the products in it now add a compound called ‘praziquantel’ right along with the macrocyclic lactone that is the main ingredient. Praziquantel is a powerful force against tapeworms, so its presence is an added strength for some of these dewormers.

Daily dewormers most often fall into the “pyrantel” chemical class. By using a daily dewormer and dosing twice-yearly with a macrocyclic lactone (one of the “ectin” dewormers) owners can simulate a rotational program while their horses enjoy the benefits of daily protection from parasite damage.

Read the Label

The following classes of de-wormers are grouped to help you decide which de-wormer is best for your horse. As you can see, no individual chemical will obliterate every parasite that could affect your horse. Study labels, don't forget to ROTATE, and always consult your veterinarian for more information on proper de-worming.

Making It Make Sense

Now that you know how to look for those all-important chemical names, let's get really practical. How do you design a deworming program that will be most effective for your horses?

The very best answer is to work with your veterinarian to create a program that really makes sense for your horse's needs and your geographic area. Veterinarians at Pfizer Animal Health also have some suggestions about simple ways to rotate dewormers.

Listed below are three potential rotational programs, with each product's chemical name in parentheses.

Final Components

Good deworming decisions and a strong relationship with a veterinarian are both critical to the continued health of your horses, but don't forget the importance of pasture management and manure disposal as well. Mowing

and dragging your fields breaks up and spreads out manure piles, allowing the sunlight and heat to help destroy parasite larva by drying them. Removing manure from stalls and paddocks reduces the chance of reinfestation.

A few facts and some practical decisions can help you win the battle against internal parasites and the serious damage they can do to your horses. Take the time to read package labels, learn about parasites and consult with your veterinarian to create a program that makes sense for you and your horse.

Christa Moody

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Controlling Parasites

It's more than a tube of dewormer.

Now that you have met some of the common parasites, you can understand why an aggressive and consistent parasite control program is imperative to your horse's overall health! Parasites can cause an array of ailments, ranging from colic to pneumonia – and even death. A rotational deworming schedule, pasture management, and proper manure disposal are a must in controlling parasite infestation. Because temperatures between 45 F and 85 F are favorable for parasite larva to hatch, every demographic area will have a different parasite cycle. The southeastern U. S. has weather conditions that encourage growth of parasites starting each fall and continuing through spring when daily temperatures begin to reach above 85 F.