

# Deworming

*Your vet can help you schedule deworming to keep your horses healthy and avoid resistant parasites on your farm*

## Overview

Deworming refers to removal of internal parasites (worms) from a horse. It is an important part of horse ownership because uncontrolled parasitic infections, particularly in foals, yearlings, and older, pregnant, or debilitated horses, can cause problems. For example, internal parasites can cause the hair coat to appear poor, ill thrift, pneumonia (secondary to the presence of migrating larvae), colic, perforation of the intestinal tract, diarrhea/colitis, or, in rare cases, fatal aneurysm (an abnormal blood-filled dilation of a blood vessel—especially an artery).

## Common Internal Parasites

While more than 150 different parasites can potentially infect equids, there are actually only a handful that pose any real concern to North American horses. The “big five” internal parasites of horses are roundworms (also called ascarids, *Parascaris equorum*), pinworms (*Oxyuris equi*), large (*Strongylus spp*) and small (*cyathostomes*) strongyles, tapeworms (*Anoplocephala spp*), and bots (the immature form of adult botflies, including *Gasterophilus intestinalis*). Threadworms (*Strongyloides westeri*) are not typically included in the big five because infections are temporary and occur only in foals.

## Deworming Products/Techniques

In general, deworming typically implies that one or more anthelmintics (drugs capable of killing or evacuating parasites) are administered orally to a horse. This is referred to as chemical deworming. While there are a multitude of anthelmintic products currently available through veterinarians, tack shops, or via the Internet, these products all contain many of the same ingredients. In fact, there are very few drugs (from an even smaller selection of drug classes) that are effective against equine internal parasites. Furthermore, not all



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drugs are effective against all of the different types of parasites.

The primary anthelmintics used in equine practice are:

- **Ivermectin** targets all parasites except tapeworms and is effective against some migrating strongyle larvae;
- **Moxidectin** targets all parasites except tapeworms and is effective against encysted small strongyles;
- **Fenbendazole** targets large and small strongyles, pinworms, and roundworms and it is effective against migrating strongyle larvae and encysted small strongyles when used at double the normal dose for five consecutive days;
- **Oxibendazole** targets large and small strongyles, pinworms, roundworms, and threadworms;
- **Pyrantel pamoate** targets large and small strongyles, pinworms, roundworms, and when used at a double dose it will also kill tapeworms; and
- **Praziquantel** targets tapeworms.

Some owners try herbal products that proponents claim to be capable of preventing and/or expelling a variety of equine internal parasites. Like other veterinary

supplements, herbal dewormers are not regulated by the Food and Drug Administration (FDA), and veterinarians caution that researchers have not demonstrated the safety and efficacy of many of these supplements in well-designed clinical trials.

In addition to administering an anthelmintic, experts recommend certain management practices to assist in controlling parasite populations. These include: picking up feces (that can contain parasite eggs) from paddocks on a regular basis; rotating pastures (potentially necessitating the purchase, assembly, and use of temporary fencing); composting manure (properly); and feeding horses away from potentially contaminated areas or using feeders to avoid feeding on the ground.

## Goals of Deworming

Regardless of your choice in deworming product(s), the goal of deworming is to minimize the risk of future infections by reducing the number of infective stages in the environment. The most important consequence of killing parasites with dewormers is not removal of the worms, it is disruption of their reproduction. It is not necessary to completely remove all internal parasites each time you deworm your horse.

Another important goal of deworming is to appropriately select a deworming protocol to prevent or minimize the development of anthelmintic resistance. Anthelmintic resistance is defined as the development of populations of internal parasites that are not killed following the administration of recommended doses of anthelmintic drugs—in essence, the parasite population becomes resistant to the drugs. Resistance is a growing problem in the equine industry as several drugs are now no longer effective against certain parasites. For example, there is a confirmed resistance of some roundworms to moxidectin and ivermectin, resistance of most small strongyles to

fenbendazole and oxybendazole, and some populations are resistant to pyrantel pamoate. In addition, there have been reports of an early return of small strongyle eggs post-treatment (which some researchers say suggests developing resistance, while other researchers agree this is indicative of a genetic change in worm populations, but different from resistance), evidence that some roundworms are beginning to show resistance to pyrantel pamoate, and the rumors of resistance of tapeworms to pyrantel pamoate.

### Deworming Schedules

Deworming schedules vary drastically from farm to farm, ranging from “When I remember” to tightly scheduled programs (e.g., every four to six weeks) or even daily administration. At present there is no evidence available to suggest that one program is better than another when it comes to deworming efficacy; however, it is widely accepted that some form of rotational schedule is better than using the same product year after year.

Rotational deworming refers to the practice of using an anthelmintic from a

different *drug class* each time you deworm your horses. For example, consider using ivermectin (from the macrocyclic lactone class) once, then fenbendazole (of the benzimidazole class) at the next scheduled deworming. Selecting different drugs from within the same class (e.g., fenbendazole and oxibendazole) is not sufficient rotation to ensure that resistance will not develop or that all potential internal parasites are being targeted (i.e., roundworms and strongyles).

One of the major failures of rotational deworming is that owners do not monitor the success or failure of their programs. As an alternative, you can have a fecal egg count performed on your horse and develop a targeted deworming program based on the test results.

### Consult your Veterinarian

The choice of deworming product(s) and schedule are ultimately the owner's or farm manager's decision, but consulting with a veterinarian can be beneficial and is strongly advised. Your veterinarian will evaluate the current program, recommend modifications, and offer advice regarding

## FAST FACTS

- Deworming refers to the removal of internal parasites (worms) from a horse.
- Internal parasites can cause the horse to have a poor hair coat, ill thrift, pneumonia (secondary to the presence of migrating larvae), colic, perforation of the intestinal tract, diarrhea/colitis, or, in very rare cases, fatal aneurysm (an abnormal blood-filled dilation of a blood vessel—especially an artery).
- The most common internal parasites of horses are roundworms, pinworms, large and small strongyles, tapeworms, bots, and threadworms.
- The goals of deworming are to reduce parasites in the environment by markedly reducing (but not necessarily eliminating) the number of internal parasites infecting a horse and to minimize the development of anthelmintic resistance.
- To determine the best deworming schedule for your farm, talk with your veterinarian.

fecal testing for internal parasites to help ensure that your horses are benefiting from the best possible program to control parasites and anthelmintic resistance. 🐾



**We're for a deworming program that combats resistance as well as parasites.**

**The right dewormer at the right time for the right horse.**

We're for managing parasite resistance and maximizing effectiveness. We're for customized programs based on science. Most of all, we're for veterinary involvement.

Ask your veterinarian about strategic deworming and find out the benefits of using the right dewormer at the right time for the right horse. It's a more efficient program for you, and a more effective way to ensure the health and welfare of your horse.

**We're for the horse.**

**PANACUR® POWERPAC**  
(fenbendazole)

