

# Deworming Your Horse

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

## Overview

Deworming is removing internal parasites (worms) from a horse, and it is an important part of horse ownership. On the other hand, wrong or too intensive use of dewormers can lead to resistance, and it is important to maintain efficacious drugs. While horses can tolerate parasite burdens, uncontrolled parasitic infections can cause problems, especially foals, yearlings, and older, pregnant, or debilitated horses. Internal parasites, for example, can cause poor hair coat, ill thrift, pneumonia (secondary to the presence of migrating larvae), colic, perforation of the intestinal tract, and diarrhea/colitis.

## Common Internal Parasites

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

## Chemical Dewormers

Deworming is most commonly achieved by administering oral anthelmintics—drugs capable of killing or evacuating parasites. This is referred to as chemical deworming. While there are many 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



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equine internal parasites. Furthermore, not all drugs are effective against all of the different types of parasites. The four major drug classes are: macrocyclic lactones (ivermectin, moxidectin); benzimidazoles (fenbendazole, oxbendazole); tetrahydropyrimidines (pyrantel pamoate and pyrantel tartrate); and prazino-isoquinolines (praziquantel).<sup>1</sup>

**Ivermectin** targets all parasites except tapeworms and is effective against some migrating strongyle larvae;

**Moxidectin** targets all parasites except tapeworms and is partially 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;

**Oxbendazole** 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 will kill tapeworms (pyrantel formulations do not

have action against encysted or migrating worms); and

**Praziquantel** targets tapeworms.<sup>1</sup>

## Alternative Deworming Products

Herbal products are available that claim to be capable of preventing and/or expelling a variety of equine internal parasites. These claims should be viewed with skepticism. Herbal dewormers are not FDA regulated, and researchers have not demonstrated safety and efficacy of any of these supplements in well-designed clinical trials.

## Parasite Control via Manure Management

In addition to chemical dewormers, certain management practices are also important for 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); and feeding horses away from potentially contaminated areas or using feeders to avoid feeding on the ground.<sup>2</sup>

Farms that manage manure by composting need to ensure that the manure “cooks” at sufficient temperatures and for adequate times to avoid spreading parasite-ridden compost on the fields.<sup>3</sup>

## Resisting Resistance

In the age of anthelmintic resistance, it is imperative to identify those deworming products that are still effective in your horses. 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 many herds, several drugs are now no longer effective against certain equine parasites. For example, there is a confirmed resistance of some roundworms to moxidectin and ivermectin, resistance of most small

strongyles to fenbendazole and oxbendazole, and some populations are resistant to pyrantel pamoate. In addition, there have been reports of an early return of small strongyle eggs following ivermectin treatment, which some researchers say suggests developing resistance, while others agree this is indicative of a genetic change in worm populations, but say it is different from resistance. In addition there is evidence some roundworms are resistant to pyrantel pamoate, and the possibility of resistance of tapeworms to pyrantel pamoate.<sup>4,5</sup> Routine testing of drug efficacy is imperative as there is no drug without resistance. You should test on your farm to make the right treatment choices.

It is not necessary to completely remove all internal parasites each time you deworm your horse. The goal of deworming is to minimize the risk of future infections by reducing the number of infective stages in the environment.

### Deworming Schedules

Deworming schedules should vary from farm to farm. The only sound approach is to use drugs that work, but reduce the

treatment intensity.

A number of free, online video seminars addressing anthelmintics, deworming, and parasite resistance are available now on TheHorse.com (TheHorse.com/HorseCourses).

### Consult your Veterinarian

The choice of deworming products and schedule are 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 fecal testing for internal parasites. Fecal egg counts can help develop a targeted deworming program based on the test results and are crucial for testing drug efficacy.

Horses are not equally susceptible to parasite infection, and certain subgroups of horses might need more attention than others. In particular, foals and young horses have a tendency toward higher egg counts. Horses with higher stress levels due to strenuous exercise or frequent travel, or horses infected with other agents (such as bacteria or viruses) are prone to

higher egg counts. A recent study suggests that horses with Cushing's disease (also called pituitary pars intermedia dysfunction or PPID) tend to have higher fecal egg counts (FECs) than healthy horses. Altogether these horses might need a tailored approach for parasite control.<sup>6,7</sup>

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