



DEWORMING

Our goal at Miller & Associates is to provide the framework for a safe and effective deworming program that takes into account current parasite threats and trends. The largest change from old deworming protocols is our concern with developing parasitic resistance. Therefore, our recommendations are centered on targeted deworming based on fecal egg counts, and less frequent rotation between dewormers.

An Overview of Equine Parasites

In the past, the most feared equine parasites were the large strongyles (*Strongylus vulgaris*), which caused damage to the blood supply to the intestines and could result in severe colic. However, large strongyles now rarely affect horses, and the most common parasites that we target with our deworming are the small strongyles (cyathostomins). Small strongyles only cause disease in the horse when they infect horses in very large numbers; therefore, our goal with deworming is to keep these parasites to a low level, not to eliminate them entirely.

Other parasites that less commonly affect the horse include: tapeworms (*Anoplocephala perfoliata*), which are sometimes associated with colic; roundworms or ascarids (*Parascaris equorum*), which primarily affect foals; pinworms (*Oxyuris equi*), which lay eggs on the skin around the anus, causing itching and tail rubbing; and *Habronema muscae*, a stomach parasite seen most commonly in the South that is responsible for "summer sores".

Combating Parasite Resistance

There is an alarming trend of developing parasite resistance to common dewormers. Because no new equine deworming medications are in development, we want to preserve the effectiveness of our current dewormers as long as possible. Thus, we want to try to reduce unnecessary deworming. Study of equine parasite interaction has revealed that each horse has its own level of innate immunity against small strongyles. Most horses actually protect themselves for the most part and shed only a few parasites. In fact, the majority of parasites (80%) shed into the environment come from a select few horses (20-30%), the "high shedders", which do not have as much innate resistance. The best current method for determining a horse's innate resistance is a fecal egg count (FEC). Based on the results of this test a horse is determined to be either a "low shedder", needing only infrequent deworming, or a "high shedder", requiring more intensive management. A horse's innate resistance is stable over time provided the horse is in good health and under consistent good management.



Equine Dewormers

Drug	Brand Name	Targeted Parasites	Notes
Fenbendazole	Panacur Safeguard	Small Strongyles Large Strongyles Pinworms	High resistance seen at normal doses
*Double dose fenbendazole	*Panacur powerpac	*Ascarids *Encysted small strongyles	
Ivermectin	Zimectrin Eqvalan	Small Strongyles Large Strongyles Habronema Pinworms	
Oxybendazole	Anthelcide	Small Strongyles Large Strongyles Pinworms	Resistance seen in some populations
Moxidectin	Quest	Small Strongyles (including encysted small strongyles) Large Strongyles Pinworms	Not safe in foals
Praziquantel	Equimax & Zimectrin Gold (with Ivermectin) Quest Plus (with moxidectin)	Tapeworms	
Pyrantel Pamoate	Strongid	Small Strongyles Large Strongyles Pinworms	

If you wish to obtain additional information about equine parasites and deworming, we encourage you to visit the information page provided by the [American Association of Equine Practitioners](#).