



Veterinary Bulletin



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Customized Equine Parasite Control Programs

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[Equine Parasite Control Practices](#)

J. L. Nicol
Merial Veterinary Bulletin
TSB-9-99054-FTB

A Scientific Review

There is a definite relationship between the presence of endoparasites and the incidence of colic in the mature horse. That same relationship may also prevent the growing foal from realizing its full growth potential. Our approach to parasite control in the horse should focus on the age of the patient as well as the choice of appropriate anthelmintics, schedule of treatments, and periodic monitoring of program effectiveness.

[Equine Colic](#)

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The Foal

The first parasite to which the nursing foal is exposed, by percutaneous and transmammary (via milk, not colostrum) infection, is *Strongyloides westeri*. Although not of clinical concern on all farms, this parasite may cause nursing foals to appear unthrifty or have diarrhea by two or three weeks of age. If a farm has a history of *Strongyloides* infection in foals, the owner should look at environmental cleanup as well as choosing an appropriate anthelmintic regimen for mare and foal.

[Impact of Management Factors on Development of Colic in Horses](#)

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Environmental control of percutaneous transmission of *Strongyloides* in the foal includes keeping the housing area and feeding equipment of mare and foal both clean and dry. Continuously used dirt stalls might be scraped out and left empty to dry out or house only mature horses. Current anthelmintics approved for control of the intestinal stages of *Strongyloides* include ivermectin, thiabendazole, and oxbendazole. Transmission of *Strongyloides* larvae in the mare's milk begins about day 3 of lactation, peaks about days 10 to 12, and drops off after day 20. For best control, the mare may be treated with EQVALAN® (ivermectin) brand products prior to foaling to prevent contamination of the environment. In some cases, direct treatment of the foal may be necessary.

[Risk Factors Associated With Recurrent Colic and Chronic, Intermittent Colic in Horses](#)

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The next parasite of concern in the young foal, and perhaps the most pathogenic, is the roundworm, *Parascaris equorum*. The infective egg of this nematode is acquired by the foal through oral contact with the contaminated environment and through coprophagy. Even with frequent

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manure removal, the environment is contaminated from previous foals. The ascarid egg is incredibly resistant to drying, temperature variations, and disinfectants. Once ingested, larvae break out of the eggs and migrate through the foal's liver and lungs to finally reach the intestinal tract.

Clinical signs of disease due to this migration may manifest as "summer colds," lethargy and/or inappetence. Worse yet, a heavy burden of mature ascarids in the intestinal tract may lead to colic, impaction or even intestinal rupture. Sexually immature (but mature-sized) ascarids may be found in the foal's intestinal tract only 40 days after egg ingestion.

Many anthelmintics control adult roundworms. Heavily parasitized foals should be treated with drugs such as EQVALAN, the benzimidazoles, or tetrahydropyrimidines which slowly kill the adult worms. Foals experiencing clinical signs of migrating larvae through the lungs are best treated symptomatically, including treatment with ivermectin which is effective against L3 and L4 larval forms. Foals should be dewormed at eight-week intervals and maintained on this schedule throughout the first 18 months of life. This schedule will help eliminate the deleterious effects on growth caused by internal parasites. On farms with a history of ascarid problems, foals should be treated at six-week intervals until 6-8 months of age. Significant reinfection by mature-sized, yet immature, larvae is possible by six weeks following larval ingestion.

Weaning/Yearling

As the threat of *Parascaris* diminishes, the weanling and yearling must contend with infections of small and large strongyles, much the same as mature horses. Fecal exams will reveal primarily strongyle type eggs. The microscopic eggs of small and large strongyles are indistinguishable. Horse owners are aware of damage which may be caused by the arterial migration of the "bloodworm," *Strongylus vulgaris*. Suspected large strongyle induced colics are treated symptomatically. This should include deworming with one dose of EQVALAN at the 200 mcg/kg or five consecutive daily doses of fenbendazole at 10 mg/kg. Vessels damaged by *S. vulgaris* will heal with time and appropriate parasite control. However, some vessel elasticity may be permanently compromised.

Often times, owners are NOT aware of the damage which may be done by heavy burdens of adult small strongyles. Small strongyle resistance to the benzimidazole anthelmintics has been well documented, and the practice of slow rotational programs, using benzimidazole compounds alone, should be discouraged for this reason. EQVALAN is highly effective against adult small strongyles.

Quantitative Fecal Exams

Performing quantitative egg counts on fecals taken the day of deworming and 10 to 14 days later will give an indication of environmental contamination with parasite eggs and efficacy of anthelmintic used. Whether using a seasonal or interval approach to deworming, a veterinarian may obtain an estimate of these two parameters.

A practitioner should use this quantitative approach when calling on a farm that demonstrates poor parasite control practices. Pre-treatment egg counts may reflect possible inadequacies in the horses' deworming schedule, particularly in regard to environmental contamination. Post-treatment egg counts will demonstrate the effectiveness of the selection and delivery of the anthelmintic. Additionally, bi-weekly egg counts following veterinary deworming may be used to track the rise in egg counts with time. With these tools, an appropriate interval of anthelmintic use may be established, and customized control programs developed by the veterinarian for individual farms.

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