

STUDY: Small Strongyles Developing Resistance to Ivermectin

by: Stacey Oke, DVM, MSc

April 14 2008, Article # 11668

www.thehorse.com Please include the author's name and the following tagline: Reprinted with permission of The Horse; visit TheHorse.com for more horse health information.

Researchers in Central Kentucky have suggested that small strongyles might be developing resistance to ivermectin (a commonly administered broad spectrum anti-parasitic drug). The scientists found that the number of parasite eggs in study horses' manure returned twice as quickly after treatment with ivermectin compared to when the drug was first marketed in the early 1980s.

Previous studies have shown that small strongyles—a common intestinal parasite of horses—have developed a resistance to numerous drugs since the 1950s including phenothiazine, thiabendazole, pyrantel pamoate, and piperazine. Recent studies have also suggested that resistance to ivermectin and moxidectin was also developing.

"The purpose of this study was to determine the current status of the efficacy of ivermectin against small strongyles in horses," explained Eugene Lyons, PhD, from the Gluck Equine Research Center in Kentucky.



Microscopic view of strongyle larva mouth parts for species identification.

http://www.horsemenlab.com/images/worms/blood_worms/2.jpg

This study evaluated the activity of ivermectin by counting the number of strongyle eggs per gram of feces before and after treatment with ivermectin. All horses included in this study resided on a single

farm located in Central Kentucky.

"Our results showed that the fecal egg counts of small strongyles returned faster than expected—approximately twice as quickly," said Lyons. "This data suggests that a resistance to ivermectin is developing."

This suspected ivermectin resistance has also been reported in other geographic areas, including countries outside of the United States. More detailed studies evaluating the degree of removal of small strongyles after treating horses with ivermectin and the related drug moxidectin are required to verify the data collected in this field study.

According to Lyons, no alternate drugs are available and no new drugs effective against small strongyles are forthcoming on the market.

"This is a real and serious dilemma for the equine industry," stated Lyons.

The study, "Field studies indicating reduced activity of ivermectin on small strongyles in horses on a farm in Central Kentucky" is scheduled for publication in an upcoming edition of the journal *Parasitologica Research*.

CCCHT
Catalpa Corner
3021 White Oak Ave NE • Iowa City, IA

For schooling, clinics, and show schedule:
www.catalpacorner.org • catalpacorner@gmail.com

A facility developed with the vision of offering Iowa and USEA Area IV eventers a solid training and competition arena.

August 2-3 - USEA-Recognized HT