

# Wage war on worms

Even an apparently healthy horse can harbour a potentially dangerous worm burden, so here's some expert advice from vet Richard Sutcliffe to help you fight back

Words Andrea Oakes



## OUR EXPERT

**RICHARD SUTCLIFFE**  
MRCVS is an equine vet at Bishopston Veterinary Group in North Yorkshire, a member of the XLVets group.

**T**he importance of a good worming regime is nothing new to conscientious horse owners, many of whom stick to strict schedules to keep the pesky creatures at bay. But while we may have declared 'war on worms', the bad news is that the worms are fighting back by developing resistance to many of the worming products now available.

These unwelcome visitors can cause problems inside our horses without our knowledge - even a well-cared-for and apparently healthy horse can harbour a potentially dangerous worm burden. While we may think he's

been treated, he could in fact be what vet Richard Sutcliffe refers to as "a ticking time bomb".

So how best to protect our horses from the menace of worms? The worming world can be confusing, with egg counts, tapeworm tests and a proliferation of products to contend with, but knowing your enemy and the damage it can cause will give you a vital head start. Join us as we unravel the mysteries of worming - and find out how you can implement some of the most effective anti-worm measures to keep your horse safe.

## WORM FACTS

Worms are an unpleasant fact of life as far as horses are concerned, but why exactly must the two go together? A worm is basically an internal parasite that uses the horse as a host during part of its lifecycle, living within and feeding from the horse's organs and tissues.

However, gruesome as this may seem, Richard explains that the aim is not to have a worm-free horse. "If you try to eradicate all worms your horse's immune system will become susceptible, whereas a low burden will have a beneficial effect by continually stimulating the immune system," he says. "Nowadays, we try to find a better balance between immunity and worm population."

In the wild, this worm-horse ratio would have been more naturally balanced as horses roamed over thousands of acres, but the modern practice of grazing domesticated horses on limited pasture exposes them to higher levels of infestation. While many of the parasites that favour the horse as a host are merely hitching a ride and rarely cause disease, some can do irreversible damage to the gut and other internal organs.



## LUNGWORMS

Horses grazing with donkeys can eat larvae, which then travel to the lungs and mature into thread-like worms that measure up to 8cm in length.



## BOTS

The larvae of the botfly develop in the stomach and are passed in droppings during summer months. The orange-coloured bots are around 2cm long.



## SMALL REDWORMS OR CYATHOSTOMES

Infective larvae, eaten by the grazing horse, migrate to the large intestine where they burrow into the gut wall. The adult worms (above) are 1-2cm long and live in the large intestine.



## TAPEWORMS

The most common tapeworms (above) are creamy-white and can measure 5-20cm long. They attach themselves to the junction between the small and large intestine.

## LARGE REDWORMS OR STRONGYLES

Adult worms live in the large intestine. The larvae burrow around the blood vessels and migrate through other internal organs.

## LARGE ROUNDWORMS OR ASCARIDS

White-coloured adults form a spaghetti-like mass in the small intestine of foals and yearlings. Larvae migrate from the intestines to the liver and lungs.

## INTESTINAL THREADWORMS

At six months old, young horses develop immunity to these tiny, hair-like worms that live in the intestines. Larvae migrate to the lungs.

## PINWORMS

These long, slender worms live in the horse's colon and migrate to the anus to lay their eggs.



Tapeworms can be a hidden danger in the bowel - in some cases causing it to telescope in, as in the example above



Weight loss, diarrhoea and colic can be a sign of small redworm infestation - something that can be diagnosed through veterinary investigation





# WHEN WORMS WREAK HAVOC

The degree of internal damage caused will depend on the type and number of worms present and the horse's general health and immune status. Richard explains that the threat to our horses' health has changed over the past few decades.

"The wormers of the last 10-30 years contained Ivermectin which targeted strongyles [blood-sucking large redworms found in the intestines]," he says. "The chief damage from strongyles is to the blood vessels supplying the horse's gut. The worms burrow around and live within the main artery that supplies blood to the intestinal tract, causing an aneurism or blood clots that cling to the artery walls. If these clots break free, they can block the narrower blood vessels and cause colic."

"Ivermectin wormers have decimated the strongyle populations, but the big danger now is from cyathostomes," continues Richard. "These small redworms burrow into the gut wall and undergo inhibited life stages there, lying dormant sometimes for years. They can then emerge en masse - we're not quite sure why - in their thousands, causing gut wall damage, weight loss, diarrhoea and colic. The resulting disease, larval cyathostomiasis, is difficult to treat and can prove fatal."

The difficulty in detecting cyathostomes in the equine, coupled with the fact that these parasites are developing an increased resistance to wormers, makes for alarming news.

"That's why all our energy must



Collecting a sample of poo for your WEC

go into preventing the situation," says Richard, adding that there are other potential killers. "Tapeworms inhabit a specific area of the gut and irritate the mucosal lining, which can cause recurrent, spasmodic colic. They're another hidden danger."

## SIGNS AND SYMPTOMS

A modern system of worm control relies on the worm egg count (WEC), in which a sample of the horse's droppings is analysed in a laboratory for the presence of parasite eggs. It's an important weapon in the fight against worms, because it helps us to keep pasture infection rates down, but it's not able to detect tapeworms or the 'encysted' larvae in the gut wall that cause cyathostome infections.

So how do you know if your horse is carrying a dangerously high burden of the most problematic parasites? "There are often no signs, which is part of the problem," says Richard. "In severe cases you might get ill-thrift. The

first real clues are that the horse becomes pre-disposed to colic or shows weight loss or diarrhoea.

"Some owners find worms in droppings, but this is usually after the horse has been de-wormed. Unless owners perform regular WECs, it's often not until a catastrophe such as a case of severe colic that a worm infestation is detected."

While most healthy horses can cope with a moderate worm burden, Richard explains that certain groups are more vulnerable.

"Older horses whose immune systems are on the wane are at risk, as are those with compromised immune systems such as those on immuno-suppressive drugs."

"Foals and yearlings have naïve immune systems and are susceptible to another class of roundworm called ascarids. It doesn't take huge numbers of them to block the gut, and youngsters can also develop a pot-bellied appearance or colic due to the physical presence of ascarids in the intestines. Because they're not necessarily at the adult, egg-laying stage, these can't be quickly and



**VET ADVICE**  
Have a chat with your vet about worming when your horse has his regular vaccinations, as it's vital a worming regime is tailored to the individual. There are so many factors to take into account, including your horse's age, the type of pasture he's on and how many others he grazes with.



Horses who graze together may have different worming needs

reliably detected with a WEC."

The tell-tale signs of tiny yellow eggs stuck to your horse's coat indicate that the botfly has paid a visit, but it's now thought that the 'overwintering' of larvae inside the horse's stomach doesn't cause disease - and is rarely seen nowadays thanks to Ivermectin. Similarly, pinworms are thought to be irritating rather than harmful. The adult female lays her eggs under the horse's tail around the anus, which can cause itchiness.

Whereas lungworm was once problematic, causing coughing, weight loss and debilitation, the condition is now less common - again because of Ivermectin. "The donkey is the true host and the horse grazing on the same or adjacent pasture can be accidentally affected," says Richard.

## LONG-TERM EFFECTS

The parasites that migrate around the body and burrow through blood vessel walls and into organs can cause permanent problems. Even if the horse survives the short-term danger from colic and is rid of his worm burden, he may

still suffer ill-effects for a lifetime.

"A horse with a large amount of worm damage is potentially prone to being a poor doer and may struggle to retain weight," explains Richard. This is a result of the damage to the gut lining which causes loss of glandular tissue and the absorptive lining and its replacement with scar tissue.

"The owner of a horse who's had cyathostome damage will have to pay particular attention in the future to treating him with something that's active against inhibited stages, as there is so much resistance to the worming products available nowadays. Once a horse has been diagnosed with a high infection intensity of tapeworm, he'll need treating twice yearly for life."

## LESS IS MORE

Tempting as it may be to reach for the worming syringe to protect your horse from such an array of parasitical nasties, this is one area of healthcare where less may well be more. "The most common mistake made is over-use of and over-reliance on worming products



Test and dose is now the effective way to worm

rather than testing and dosing," says Richard, who explains that the increasing problem of drug resistance requires a more strategic approach to worming than the old blanket coverage.

Resistance occurs, he adds, when a parasite that was once killed by an active ingredient can no longer be controlled by the recommended dosage of that particular ingredient.

"With no new developments on the horizon, we can only work with the worming products currently available," he warns. ☑



**MOVING YARDS?**  
If a new horse is introduced to the yard, he should ideally be isolated and multi-treated with two different classes of wormer to counteract the threat of introducing resistant worms. Follow this up with a WEC.

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