



Every horse owner has heard about the danger of worms but without some knowledge it is hard to understand the full impact of a worm infestation (or burden). Intestinal worms can seriously damage your horse and in some circumstances can kill it - implementing an effective worming programme is one of the greatest responsibilities of a horse owner.

### What are worms?

Worms are parasites which means that they live within, and take nourishment from the host (your horse).

The four most common types of internal parasites are Strongyles, Ascarids, tapeworms and Bots.

#### **Strongyles (blood or red worms) and Ascarids (roundworms):**

- **Stage I:** Eggs are passed in the horse's feces and contaminate the grass, hay or water. The grazing horse eats the eggs or newly hatched larvae in the contaminated feed.
- **Stage II:** Larvae burrow through the gut wall and migrate through the internal organs for several months causing irritation and damage, which can result in attacks of colic. They then return to the gut where they mature.
- **Stage III:** Adult worms live in the gut where the females can produce thousands of eggs per day.

#### **Tapeworms:**

- **Stage I:** Segments containing eggs are passed in the faeces. The eggs contaminate hay and are eaten by an intermediate host - the forage mite.
- **Stage II:** Larvae develop inside the mites which are eaten by horses feeding on contaminated hay. The larvae develop into adult worms in the horse's gut.
- **Stage III:** Adults live in the ileo-caecal junction of the gut where they attach to the gut wall by hooks. They cause inflammation which together with decreased gut motility leads to an increased risk of gut obstruction or even rupture.

#### **Bots or Warbles:**

- **Stage I:** Adult flies lay yellow-colored eggs on the chest, forelegs, throat and nose of the horse.
- **Stage II:** When the horse grooms, the larvae hatch and enter the mouth. They migrate to the stomach and attach to the lining causing irritation, digestive problems and gut obstruction. After 8-10 months, they are passed in the faeces. They burrow into the ground to pupate.
- **Stage III:** Bot or warble flies emerge from the ground.

### How do I know if my horse has worms?

Even a horse that appears to be in good health may have worms causing internal damage. Generally, in young and older horses infestation can result in:

- Loss of condition, or ill thrift, typically seen as a 'ribby horse'.
- Lethargy.
- Weight loss.
- Diarrhoea.
- Colic.
- Loss of appetite.
- Dull, rough haircoat.

If you suspect that your horse has worms, your vet needs to confirm the diagnosis and then identify the type of worms so that the most effective treatment can be used. There are two methods your vet will use: **faecal egg count and blood testing.**

### How do I know if my horse has worms?

#### **Faecal egg count:**

This method is extremely useful as it identifies the type of parasite, and gives an indication of the number of adult worms in the intestine which, in turn, gives a measure of the degree of pasture contamination. A

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fresh sample of faeces should be placed in a clean plastic bag and taken to your vet who will arrange for it to be tested. The count is given as 'eggs per gram' (EPG).

For example, if the analysis gives a count of 250 eggs per gram, and a horse produces 4.5 kg (4500 g) of faeces per day,  $250 \times 4500 = 1,125,000$  eggs per day being shed onto pasture.

### Blood testing:

It is possible for a horse to have a heavy larval infestation but have very low faecal egg counts. This is because the larval stages do not produce eggs. A blood test is the only way to detect whether a horse is infected with larvae. It measures certain chemicals in the blood produced by inflammatory responses to the migration of the larvae.

### How does my horse get worms?

Your horse will get worms if it is turned out with horses or donkeys that have worms, because the pasture will be contaminated with eggs and larvae. Your horse will eat these as it grazes. Pastures can remain contaminated for a considerable time after horses are removed so even if your horse is turned out alone, it could still get worms from the pasture or contaminated hay. Bots can affect any horse. Similarly, if your horse has worms, it can infect other horses grazing in the same field. Horses most at risk from heavy worm infestations are young or older animals or those on multi-horse premises, eg livery yards with grazing paddocks.

### What can I do about worms?

Effective parasite control is achieved by three steps: pasture management, faecal egg count monitoring and worming treatments. Your secret weapon in the attack against internal parasites is your vet. He/she can advise you on the most effective programme for your horse.

#### 1. Pasture management

The aim of this is to break the cycle of infection by removing the infective eggs and larvae from the pasture.

##### *Removal of faeces*

The most effective method is to remove and dispose of faeces from the pasture every day which is obviously time consuming. If you cannot achieve this daily, removing the faeces on a regular basis (at least twice a week) is still effective in reducing the numbers of larvae on pasture. Mowing and harrowing the pasture helps to reduce larvae numbers by breaking up faeces and exposing the larvae to the elements and to predators.

##### *Pasture rotation*

Pasture rotation can also be an effective way of reducing the number of larvae on the grass. However, larvae are very resistant and can survive for long periods (many months) on pasture. The pasture should be rested for at least 6 months to successfully reduce the numbers of larvae. Allowing other livestock, such as sheep, cattle and goats, to graze on the pasture can help to break the lifecycles of the equine worms.

It is essential to worm all horses 48 hours before they are moved on to fresh, rested paddock, preferably with the same wormer, to prevent them contaminating it immediately with worms they are already carrying.

Other important steps in pasture management include:

- Keeping the number of horses per acre to a minimum to reduce the amount of faecal contamination.
- Turning out horses of similar age together to reduce exposure to certain parasites and to increase the effectiveness of your worming programme.
- Supplying hay or grain in a rack rather than feeding from the ground where it could become contaminated.
- Regular grooming - if you spot bot eggs take care to remove them completely.

#### 2. Faecal egg count monitoring

Faecal egg counts are not only used to diagnose parasite infections, they are also an extremely useful and

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cost-effective tool in monitoring the effectiveness of your worming programme.

It is good practice to have a faecal egg count performed 5-6 weeks after worming your horse. Effective wormers remove adult worms and so should reduce the faecal egg count to zero for up to 6 weeks.

### 3. Wormers

Dosing your horse with wormers has two beneficial effects: adult worms in the intestine are removed (some wormers also attack migrating larvae) and the risk of re-infection is reduced because the number of infective larvae in the faeces is reduced.

### My horse hates being wormed - what should I do?

Wormers in the form of oral paste or gel syringes or feed additives are very popular because they are so convenient to use. However, some horses find these unpalatable and spit them out. For the wormer to be effective it is essential that the horse swallows the full dose based on its weight. If you find it difficult to worm your horse in this way, your vet will need to administer the wormer via a tube placed directly into the stomach (nasogastric tube).

### How do I know what to buy?

Worming treatments can become ineffective over a period of time because the parasites build up resistance to them. To reduce the chance of this happening, it is extremely important to rotate the worming treatments you use. It is vital that you not only change the brand of the worming treatment but that you use a product with a different 'active ingredient'. Resistance to wormers is a particular problem in some areas, particularly the south of England. It is also important to remember that no single wormer is effective against all parasites and so combinations of products should be used. Ask your vet for advice on the rotation and combination of treatments as this will also depend on your location and the time of year.

### How regularly do I need to worm my horse?

The dosing frequency of worming treatments varies according to the age of your horse, its management, climatic conditions and season: you should expect to worm your horse every 8-12 weeks. Your vet is the best person to draw up the most effective worming schedule tailored for your horse. Some useful guidelines are:

- Keep written records detailing the date of worming and the type of product used for each of your horses.
- Worm all horses that share the same grazing at the same time with the same product.
- New arrivals should be stabled and isolated for 48-72 hours and wormed according to your vet's instructions.
- Mares should be wormed immediately on return from stud and 4-6 weeks before foaling.
- Foals can be wormed from 4-6 weeks of age.
- Always give the correct dose based on the weight of your horse.

**If you want any other information on health issues concerning your pet Vetstream advise you to contact your local veterinary practice.**