KEEPING™ BRITAIN'S HORSES HEALTHY

RESPONSIBLE HORSE OWNER BOOKLET

PARASITE CONTROL

MSD Animal Health

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Advancing Excellence in Equine Care

INTRODUCTION

Whilst most of us understand the need to worm our horses, there is evidence to suggest that many of us are not treating our horses in the most effective way.

With an increasing risk of resistance to anthelmintics (wormers), it is vital that we adopt an effective worming strategy to protect our horses and ponies from the threat of irreversible damage. Equally there are many external parasites which affect horses. Early recognition and prompt treatment of these will allow more effective control.

This guide is part of a series covering a range of different topics to help you keep your horses healthy.

For more information and to gain access to the rest of the series, please visit our website: **www.healthyhorses.co.uk** or find Keeping Britain's Horses Healthy on Facebook and Instagram.

INTERNAL PARASITES

How do they cause damage?

Worms are a normal occurrence in horses and are present in the vast majority of horses at varying levels of infestation. Eggs can be ingested from infected pasture, and develop inside the horse's gut or lungs where they have the potential to cause disease. Eggs produced by the adult worm will then be shed in the faeces increasing the existing worm burden on the pasture and the potential of infecting new horses.

When present in low numbers, worms cause minimal problems. However, when present in moderate or larger numbers, they can severely affect our horses' health and can result in poor body condition, colic and general ill health. More seriously, they can also damage a horse's intestines and other internal organs, often causing irreversible harm with potentially fatal consequences.

It is very important that horses undergo the correct tests and, where indicated, treated with the right wormer at the right time of year: this can be achieved through an individual worming programme, which your veterinary practice can help you design.

Types of internal parasites/worms.

The most common species of worms that affect horses include:

Large Redworms (*Strongyles*)

Large redworms are one of the most dangerous internal parasites. They eat through the lining of the gut wall and travel through the blood vessels of the gut causing significant bleeding and damage. They can cause rapid weight loss, diarrhoea and surgical colic. Severe cases of infection can lead to death.

Small Redworms (*Cyathostomes*)

Small redworms are the most common internal parasite in horses. The larvae hibernate in cysts within the gut wall during the winter and emerge in large numbers in the spring causing severe damage to the intestines during the process. They can cause weight loss, diarrhoea and colic with potentially fatal consequences particularly at the time of mass emergence.

Tapeworms (*Cestodes*)

Tapeworms can grow to 8cm in length and a width of 1.5cm. They form into clusters at the junction between the small and large intestines where they can cause digestive disturbances, loss of condition, colic and fatal blockages. Horses become infected when they eat forage or grass contaminated with the infected forage mite.

Roundworms (*Ascarids*)

Adult roundworms can grow to 50cm in length and are particularly dangerous to foals and young horses (older horses develop immunity). The larvae migrate through the gut wall, through the liver and then the lungs. The larvae are coughed up and swallowed, maturing to egg laying adults within the gut. Roundworms can cause respiratory signs (seen as a cough and nasal discharge) or they can cause gut signs such as weight loss, a poor-doer or pot-bellied appearance and diarrhoea.

Threadworms (*Strongyloides*)

Threadworms often remain dormant in adult horses but transfer to newborn foals via the mare's milk. This leaves the foal weak and susceptible to diarrhoea and anaemia. The foal's growth rate may also be affected. Foals should be wormed against threadworms as early as 4 weeks old and worming the mare during pregnancy will help reduce numbers transferring to the udder. Natural immunity usually develops by 6 months of age.

Pinworms (*Oxyuris*)

Pinworms can damage the bowel before laying their eggs around the outside of the anus causing intense itching and irritation. Persistent scratching will result in hair loss and open sores, around the tail head which can become infected.

Lungworms (*Dictyocaulus arnfieldi*)

Lungworms prevail in pastures shared with donkeys – the lungworm's natural host. These worms cause persistent coughing in horses as respiratory problems develop.

Bots (*Gastrophilus*)

Bot flies are one of the most common irritants to horses during the summer grazing season. They lay sticky yellow eggs on the horse's coat – these are then ingested as the horse grooms itself by licking. On entering the mouth the eggs hatch out into larvae, which migrate to the stomach.

TESTING YOUR HORSE FOR WORMS

There are several tests which can be used throughout the year to assess whether your horse has a worm burden that requires a worming treatment. Tests such as faecal worm egg counts (FWEC) and tapeworm should form an integral part of your horse's routine worming programme.

Faecal worm egg count (FWEC)

- **What is a FWEC?**

  A sample of your horse or pony's dung is viewed under a microscope to see whether any worm eggs are present and, if so, how many per gram of dung. Knowing this is important as horses only need treating for worms if they have over certain amount of eggs per gram.

- **When is best to perform a FWEC?**

  FWECs are most useful when performed through the grazing season (April to September) approximately every 8-12 weeks.

- **What worms does a FWEC identify?**

  FWEC identify small and large strongyle eggs from mature stages which are actively laying eggs. FWEC do not identify whether your horse has pinworms, bots, tapeworm, immature strongyle worms or encysted small redworms.

  FWEC can tell you how many eggs per gram of faeces your horse had in the sample you sent in and therefore what burden your horse has, which will help to indicate if your horse needs a treatment.

- **My horse's FWEC said he does not need treating – what now?**

  This means your horse does not currently have any identifiable worm eggs or their count per gram is below the treatment threshold.

  Don't forget, FWEC does have limitations in what can be identified so it does not mean your horse does not have any worms. A repeat FWEC in 8-12 weeks during the grazing season is advisable and further tests discussed below at the appropriate time of year.

Tapeworm testing

- **How do you test for tapeworm?**

  A sample of your horse's blood or saliva can be used to test for antibodies to tapeworm. This will help identify if your horse has a tapeworm burden and whether your horse needs treating or not.

- **How often do I need to test for tapeworm?**

  Approximately every 6 months, once in the spring and once in the autumn.

Encysted small redworm testing

- **How do you test for encysted small redworms?**

  A sample of your horse's blood can be used to test for small redworm life stages, including the encysted larval stage.

- **When do I need to test?**

  As we enter winter is the best time to test for encysted stages to help inform you if your horse needs a treatment.

Why does my horse need these tests?

Regular and intensive worming treatments have led to resistance developing to the currently available wormers, and the rate of resistance development directly correlates with frequency of use. It is also well accepted that some horses harbour high worm burdens whilst others remain consistently low, known as the 80:20 rule.

By testing to see which type of worms, and how many, a horse has, the high shedding horses can be identified and wormed appropriately, while those with a low burden can be saved a treatment, helping to preserve the wormers we have available. To achieve this, all horses should have a worming programme which incorporates adequate testing.

Where can I go to get these tests?

All the tests we have discussed can be performed by most veterinary practices. FWEC only require a 2-3g sample of dung, taken from different piles and mixed, which should be stored in a sealed container and be as fresh as possible, ideally less than 24 hours old. It is important that you get advice on interpreting the results, so you can identify which horses need worming and which product to use.

TYPES OF WORMER/ ACTIVE INGREDIENTS

There are three main classes of broad spectrum anthelmintics (wormers). These are:

- **Benzimidazoles: eg. fen/me- bendazole**
- **Tetrahydropyrimidines: eg. pyrantel embonate**
- **Macrocyclic lactones: eg. Iver/aver-mectins**

Praziquantel is a fourth class but is for tapeworm treatment ONLY.

Using the same class of wormer every grazing season will increase the chance of resistance developing.

It is therefore important to target wormers for those horses that have high worm burdens.

INDIVIDUAL WORMING PROGRAMMES

Tailored programmes ensure you target specific worms with an effective product at the correct time of year through the use of testing to help indicate which horses need a treatment at the appropriate times.

If you have a new horse, they could potentially introduce a resistant population to your fields or yard. It is sensible to worm them with a product or combination of products that will kill all types and stages of roundworm (including encysted and inhibited small redworm) and tapeworm. Stable him for at least 48 hours after worming before turnout to allow the wormer to take effect and prevent viable eggs from being deposited on the pasture. FWEC testing is useful but will not identify all stages or worms.

If possible, perform a FWEC 10-14 days after your horse has been treated to identify if there are any resistant worms. If practical, they should not be turned out with other horses until this has been done.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
			THE GRAZING SEASON								
	Consider whether treatment for Small Redworm Larvae is required - 5 day course fenbendazole or single treatment of moxidectin.	**Test for tapeworm. If treatment is required -** double dose pyrantel embonate or single treatment of praziquantel.		FAECAL WORM EGG COUNT **To reduce the risk of worm resistance build testing into your worming programme.** TREAT IF INDICATED				**Test for tapeworm. If treatment is required -** double dose pyrantel embonate or single treatment of praziquantel.		**Test for encysted Small Redworm Larvae. If treatment is required -** 5 day course fenbendazole or single treatment of moxidectin.	**Consider whether treatment for Bots is required -** ivermectin or moxidectin.

You should discuss this targeted worming programme with your veterinary surgeon to tailor it to your individual horses risks.

RESISTANCE TO WORMERS

Resistance occurs when a selected wormer no longer effectively controls the worm population, an increasingly common problem to all wormers.

Once resistance has been established in a worm population, the health, welfare and performance of worm infested horses will be compromised because no effective treatment is available.

Resistance may be increased when too low a dosage of a wormer is used for the weight of the horse, or if the same wormer is used too frequently. To help reduce the incidence of resistance we should:

- Use FWEC testing to assess which horses require worming treatment
- Avoid over using one particular active ingredient
- Have a worming plan which incorporates testing
- Target specific worms with an effective product at the correct time of year
- Weigh (or weigh tape) your horse(s) before dosing so you can provide the right amount of wormer and avoid under dosing
- Use pasture management techniques to reduce the worm burden on the pasture and help limit the reliance on wormers

TOP TIPS FOR WORM CONTROL

A well-managed pasture will help to reduce the worm burden.

- Remove droppings on a regular basis (preferably daily, but at least twice a week) and don't spread horse manure on pasture
- Don't overstock pastures: a maximum of two horses per hectare or 1-1.5 acres per horse is recommended
- Graze horses of a similar age together – young horses are more susceptible to a higher worm burden and will therefore contribute to a higher worm burden on the pasture
- Sub-divide grazing areas into smaller paddocks and graze on a rotational basis
- Graze paddocks with other livestock too. This will dilute the horse worm burden on your pasture
- Worm all horses that graze together at the same time, with the same product, if the results of the individual horse's FWEC suggest they need worming. Those horses within the group with a FWEC of less than 200 eggs/g do not require a treatment

EXTERNAL PARASITES: FLIES AND MIDGES

Flies

There are several species of fly, which can prove a torment to horses during spring and summer months. Biting flies can pierce the horse's skin and feed on its blood while nuisance flies lay secretions in and around the horse's eyes, mouth, nose and other sensitive areas. Aside from the threat of an allergic reaction and the annoyance, flies can carry diseases, which they can spread from horse to horse.

Sweet-itch

Sweet-itch is a common allergic skin disease that affects many horses and ponies in the UK and at present there is no cure. Once a horse develops the allergy it will generally be for life and so it is important to take measures to prevent unnecessary suffering.

It is a condition caused by a reaction to the saliva of biting midges during the months from April to early October. It causes horses to rub their manes and tails and surrounding areas, and sometimes their undersides too. The severity of the condition varies from horse to horse; some will only rub occasionally, while others will rub themselves bald, causing open sores.

Treatment revolves around anti-inflammatory therapy which is often unsatisfactory and can have serious side effects if used long term. Preventative measures are therefore crucial to avoid the condition and limit the suffering which can arise from the intense and unrelenting itching.

Midge control

- **Start control before the midge season - do not wait for your horse to start itching**
- **Stable your horse during dawn and dusk when midge activity is greatest**
- **Turn horses out in fields which have lower midge burdens such as breezy pastures, higher ground and away from woodland**
- **Prevent horses from grazing areas that have ponds, lakes or rivers nearby as these naturally attract the troublesome midges**
- **Use an effective fly rug to prevent midge contact with your horse's skin**

EXTERNAL PARASITES: LICE AND MITES

Lice

Lice are common in horses and are readily passed from one horse to another by physical contact, and can also be spread by the sharing of brushes and equipment from one horse to the next. Sharing equipment is not recommended as nits (louse eggs) can live for a few days on equipment away from the horse, transferring to the next horse when the equipment comes into contact with it.

Lice thrive where they can keep warm and are often found at the roots of the forelock and mane but they can be found anywhere on the body particularly if the coat is thick.

The symptoms of a lice infestation include:

- **A dull, listless coat**
- **Patchy hair loss**
- **Matting of body hairs, mane and tail**
- **Itching and rubbing against posts and stable walls**
- **Chewing and biting their skin**
- **Loss of body condition in more severe cases**
- **Visibility of lice and eggs on the surface of the skin and in the coat**
- **In more severe case, anaemia due to ongoing blood loss**

Lice are relatively simple to control. Rugs, saddle pads, brushes, and other equipment should be treated with very hot water or washed with an insecticide solution. All bedding should be removed from the stable, which should be disinfected and ideally kept horse-free for a number of days. Where one horse in a group has lice, all horses must be treated with a Permethrin based product, whether they show signs of infestation or not, to break the possibility of lice transmitting from one horse to the next and back again.

Feather Mites

These are caused by the mange mite, *Chorioptes equi*. This condition is particularly common in heavy draught breeds and is more prevalent in winter. The mites burrow into the skin of the pastern, fetlock and cannon and cause severe itching, leg-stamping, self-mutilation and heavy scale and scab formation in these areas. The mites can spread from one horse to another so other feathered horses in the same yard may also be infected.

Clipping the feathers can help prevent the condition in some instances and can be helpful if topical treatments are used to alleviate the sypmtoms. There are no licensed products to treat the condition but your vet will be able to advise you on the best course of action should your horse be demonstrating signs of infestation.

WHAT SHOULD I DO NOW?

Check your horse's worm status and treatment history.

- Accurately record all of your horse's worming activity including when faecal worm egg counts are performed, the results and any products you used including the dose given and the weight of your horse at that time. To download a worming record card **www.healthyhorses.co.uk (search: worming programmes)**
- Discuss a worming protocol with your yard and your vet
- Ensure you have an effective fly repellent to hand and take measures to minimise the exposure your horse has to nuisance flies and midges during the summer months
- Check your horse's skin and coat regularly for signs of disease

Where can I go for further information?

- Your vet
- To find a vet in your area **findavet.rcvs.org.uk/find-a-vet**
- BEVA horse owner information **www.beva.org.uk (search: horse owner information)**
- BHS worm summer care **www.bhs.org.uk/advice-and-information/horse-care/summer-care**

MSD
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Further information is available from:

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