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PARASITE CONTROL

FOALS UP TO 1 YEAR OF AGE
AND ADULT HORSES



PANACUR[®]

 **MSD**
Animal Health

PARASITE CONTROL

FOALS UP TO 1 YEAR OF AGE

TIME / EVENT	KEY PARASITES
FOALING (MARE)	THREADWORMS (<i>Strongyloides westeri</i>) – usually not a problem. Treat mares known to have infected foals in the past with a macrocyclic lactone (ivermectin or moxidectin) within one day after foaling. Alternatively, treat the foal at 4–10 days of age with a benzimidazole (eg, fenbendazole) or a macrocyclic lactone (ivermectin or moxidectin).
8–10 WEEKS OF AGE	ROUNDWORMS (<i>Parascaris equorum</i>) – treat with a benzimidazole (eg, fenbendazole) or pyrantel.
16–18 WEEKS OF AGE	ROUNDWORMS (<i>Parascaris equorum</i>) – treat with a benzimidazole (eg, fenbendazole) or pyrantel. REDWORMS (large and small strongyles) – late born foals should be treated with ivermectin or moxidectin or pyrantel for large and small strongyles like other foals at introduction to the grazing herd. A benzimidazole (eg, fenbendazole) may offer an alternative on premises where ongoing efficacy has been demonstrated.
6 MONTHS INTRODUCTION (SEPTEMBER–OCTOBER) This treatment should not be administered too late, since a large proportion of small bloodworm larvae are dormant during the winter and thus very difficult to treat.	ROUNDWORMS – treat if necessary with a benzimidazole (eg, fenbendazole) or pyrantel. A macrocyclic lactone (ivermectin or moxidectin) may offer an alternative on premises where ongoing efficacy has been demonstrated. REDWORMS – if required, administer ivermectin or moxidectin about one week after treatment with a benzimidazole (eg, fenbendazole) for roundworms. Alternatively, administer pyrantel. A benzimidazole (eg, fenbendazole) may offer an alternative on premises where ongoing efficacy has been demonstrated. TAPEWORMS (<i>Anoplocephala perfoliata</i>) AND BOTS (<i>Gasterophilus</i> species larvae) – treat if necessary. Tapeworms are uncommon in foals <7 months old. See “Parasite control – adult horses” for the selection of a suitable agent.
9–10 MONTHS (JANUARY–FEBRUARY) Faecal worm egg count (FWEC) is recommended – treatment, if necessary, depending on FWEC results.	ROUNDWORMS – if needed, administer a benzimidazole (eg, fenbendazole) or pyrantel. Macrocyclic lactones (ivermectin or moxidectin) may offer an alternative on premises where efficacy has been demonstrated.



PARASITE CONTROL

ADULT HORSES

TIME / EVENT	KEY PARASITES
<p>PRIOR TO GRAZING TURNOUT (AT LEAST 3–5 DAYS BEFORE)</p> <p>The most important time for anthelmintic treatment is in the spring, before turnout to summer grazing. Treatment is aimed at reducing the contamination of pasture with strongyle, roundworm and/or tapeworm eggs.</p> <p>FWEC is recommended – anthelmintic treatment if necessary based on FWEC results.</p>	<p>LARGE AND SMALL STRONGYLES – treat with a macrocyclic lactone (ivermectin or moxidectin) or pyrantel.</p>
<p>DURING THE GRAZING SEASON</p> <p>Additional anthelmintic treatment may be needed during the grazing season. Treatment should be based on FWEC, the age of the horse and duration of grazing.</p> <p>ERP (egg reappearance period) for the selected agent determines the treatment interval. Young horses generally have a shorter ERP.</p>	<p>TAPEWORMS – treat with praziquantel or a double dose of pyrantel.</p>
<p>INTRODUCTION WHEN CHANGING TO WINTER PASTURE (LATE SEPTEMBER–OCTOBER)</p> <p>Anthelmintic treatment should not be administered too late in the season, since a large proportion of small strongyle larvae are dormant during the winter, and this stage of the parasite is very difficult to treat.</p> <p>FWEC is recommended – if necessary, administer an anthelmintic, depending on FWEC results.</p>	<p>BOTS – treat with ivermectin or moxidectin if eggs were found the previous autumn and pyrantel has been used.</p> <p>Treat with ivermectin or moxidectin if large number of bot fly eggs are seen on the horse's coat and these have not been removed (eg, scraped off).</p>



ACTIVE SUBSTANCES

FENBENDAZOLE

- Efficacy against adult and immature roundworms
- Ovicidal efficacy in roundworms
- Efficacy against threadworms variable
- Efficacy against adult and larval stages of large strongyles
- Not suitable for the treatment of bot larvae or tapeworms
- Widespread resistance in small strongyles^{6,8-10}
- The most effective agents against roundworms^{9,10}
- Evaluated for safety in pregnant mares
- Treatment should be carried out every 4-5 weeks based on egg reappearance period (ERP) only on premises where ongoing (strongyle) efficacy has been demonstrated⁶

PRAZIQUANTEL

- Efficacy against adult and larval stages of tapeworms
- Not suitable for the treatment of roundworms, large and small strongyles and bots
- Safety during pregnancy has not been assessed



ACTIVE SUBSTANCES

IVERMECTIN

- Efficacy against adult and immature roundworms
- Efficacy against adult and larval stages of large and small redworms
- Efficacy against oral and gastric stages of bot fly larvae
- Not suitable for the treatment of tapeworms
- Resistance in roundworms has been reported in a number of countries, including Europe^{1,2,7-11,14,15}
- Small redworm resistance has been reported^{8,9}
- Evaluated for safety in pregnant mares
- Treatment should be carried out every 8 weeks based on ERP⁶

MOXIDECTIN

- Efficacy against adult and immature roundworms
- Efficacy against adult and larval stages of large and small redworms
- Efficacy against oral and gastric stages of bot fly larvae
- Not suitable for the treatment of tapeworms
- Resistance in roundworms has been reported in a number of countries, including Europe⁸⁻¹⁰
- Do not use in foals younger than 4 months
- Treatment should be carried out every 12 weeks based on ERP

PYRANTEL

- Effective against adult roundworms only
- Effective against adult large and small strongyles only
- Effective against adult tapeworms only: A double dose is required for the treatment of tapeworms
- Not suitable for the treatment of bots
- Resistance in small strongyles has been reported in a number of countries, including Europe^{6,8,9,12,13}
- Evaluated for safety in pregnant mares
- Treatment should be carried out every 4–6 weeks based on ERP only on premises where ongoing (strongyle) efficacy has been demonstrated⁶



TARGETED SELECTIVE TREATMENT SHOULD BE COMBINED WITH PASTURE MANAGEMENT AND HYGIENE.³

PASTURE MANAGEMENT AND HYGIENE

- Separate summer and winter paddocks. It is important for winter paddocks to dry up in the summer
- Clean out pastures and paddocks, at least twice per week
- Avoid feeding directly from the ground
- Do not move horses immediately after treatment
- Avoid overstocking – paddocks should be large enough so that the horses can graze without being forced to eat around dung
- Switching and co-grazing with other species
- Let the area rest from grazing animals, preferably for a year
- Plow, harrow or trim the pasture

FAECAL WORM EGG COUNT (FWEC) TO HELP ASSESS NEED FOR ANTHELMINTIC TREATMENT

- Treat only individuals that shed high numbers of eggs, and are thus responsible for pasture contamination
- Remember that it is important to check carefully for large strongyles, especially if the FWEC is low

CAREFUL TREATMENT WITH THE CORRECT DOSE

- Establish which parasite is to be treated
- Weigh the horse or use a weigh tape – too low a dose of anthelmintic increases the risk of resistance
- Use the same agent for the whole herd or stable



EFFECTIVE TREATMENT OF NEWCOMERS TO THE HERD BEFORE INTRODUCTION TO PASTURE

- Performing a FWEC provides information on the current parasite status. If treatment is indicated, administer ivermectin or moxidectin, in combination with praziquantel, depending on the time of year.

REGULAR MONITORING OF THE PARASITE STATUS OF THE HERD

- Faecal samples taken 14–17 days after anthelmintic treatment allow the efficacy of the agent used to be assessed.⁴



Panacur Equine Oral Paste 18.75 % w/w with Apple and Cinnamon Flavour

Species:	Horses and other equidae
Therapeutic indication:	Pharmaceuticals: Endoparasiticides: Anthelmintics for horses
Active ingredient:	Fenbendazole
Product:	Panacur Equine Oral Paste 18.75 % w/w
Product index:	Panacur Equine Oral Paste
Withdrawal notes:	Meat and offal: 5 days The product is not authorized for use in mares producing milk for human consumption.

Qualitative and quantitative composition

Each syringe containing 24 g paste for oral administration

1 g contains a ctive substance(s) :

Fenbendazole: 187,5 mg

Excipient(s) :

Methyl Parahydroxybenzoate: 0.17 % w/w

Propyl Parahydroxybenzoate: 0.016% w/w

For full list of excipients, see section "Pharmaceutical Particulars".

Pharmaceutical form

Oral paste.

A white to light grey homogenous paste.

Clinical particulars

Target species

Horses and other equines.

Indications for use

A broad spectrum anthelmintic for the treatment and control of adult and immature roundworms of the gastro-intestinal tract in horses and other equines. Panacur also has an ovicidal effect on nematode eggs.

Panacur effectively treats and controls the following roundworm infections:

Large strongyles (adults and migrating larval stages of *S.vulgaris*; adults and tissue larval stages of *S.edentatus*).

Benzimidazole susceptible adult and immature small strongyles (Cyathostomes), including encysted mucosal 3rd and 4th stage larvae; it is also effective against encysted inhibited 3rd stage larvae in the mucosa.

Adult and immature *Oxyuris* spp., *Strongyloides* spp. and *Parascaris equorum*

Contra-indications

None.

Special warnings for each target species

Care should be taken to avoid the following practices because they increase the risk of development of resistance and could ultimately result in ineffective therapy:

- Too frequent and repeated use of anthelmintics from the same class, over an extended period of time.
- Under dosing, which may be due to underestimation of body weight, misadministration of the product, or lack of calibration of the dosing device (if any).

Suspected clinical cases of resistance to anthelmintics should be further investigated using appropriate tests (e.g. Faecal Egg Count Reduction Test). Where the results of the test(s) strongly suggest resistance to a particular anthelmintic, an anthelmintic belonging to another pharmacological class and having a different mode of action should be used.

Resistance to fenbendazole has been reported in cyathostomes in horses. Therefore the use of this product should be based on local (regional, farm) epidemiological information about susceptibility of nematodes and recommendations on how to limit further selection for resistance to anthelmintics.

Special precautions for use

Assess bodyweight as accurately as possible before calculating the dosage.

Operator warnings

Direct contact with the skin should be kept to a minimum. Wear impermeable rubber gloves while administering the product. Wash hands after use.

Adverse reactions

None known.

Use during pregnancy, lactation or lay

Pregnant mares and foals may be safely treated with fenbendazole at therapeutic dosage levels.

Interactions

None known.

Amounts to be administered and administration route

Routine treatment: Administer orally, 1 Syringe per 600 kg bodyweight

(= 7.5 mg fenbendazole/kg bodyweight)

Practical dosage recommendations:

Weight	Type	Routine treatment
Up to 100 kg	Miniature ponies	Syringe mark 100 kg
101-300 kg	Donkey, Shetland and other small ponies, foals	Syringe mark 300 kg (½ syringe)
301-400 kg	Dartmoor, New Forest, Welsh etc	Syringe mark 400 kg
401-500 kg	Light hunter, Arabs etc.	Syringe mark 500 kg
501-600 kg	Thoroughbreds	1 syringe
601 kg and over	Heavy hunters, draught horses	1 syringe + additional 100 kg syringe marks for each extra 100 kg bodyweight

Increased dosing for specific infections:

Five day course:

For the treatment and control of migrating and tissue larval stages of large strongyles, encysted mucosal 3rd and 4th stage small strongyle larvae and encysted inhibited 3rd stage small strongyle larvae in the mucosa, administer 1 syringe per 600 kg bodyweight daily for 5 days.

(= 7.5 mg fenbendazole/kg bodyweight daily for 5 days)

For the treatment and control of migrating and tissue larval stages of large strongyles, encysted mucosal 3rd and 4th stage small strongyle larvae and encysted inhibited 3rd stage small strongyle larvae in the mucosa, administer 1 syringe per 600 kg bodyweight daily for 5 days.

(= 7.5 mg fenbendazole/kg bodyweight daily for 5 days)

Single dose treatments:

For the treatment and control of encysted mucosal stages of small strongyles administer 1 syringe per 150 kg bodyweight.
(= 30 mg fenbendazole/kg bodyweight)

For the treatment and control of migrating stages of large strongyles administer 1 syringe per 75 kg bodyweight.
(= 60 mg fenbendazole/kg bodyweight)

For the treatment and control of *Strongyloides westeri* in sucking foals administer 1 syringe per 90 kg bodyweight.
(= 50 mg fenbendazole/kg bodyweight)

Panacur Equine Paste should be administered orally by squeezing the paste from the syringe onto the back of the tongue. No dietary control is required before or after treatment.

To ensure administration of a correct dose, body weight should be determined as accurately as possible; accuracy of the dosing device should be checked.

Recommended dosing programme

All horses should be routinely wormed with the single dose of Panacur Equine Paste every 6-8 weeks.

Treatment of encysted inhibited and encysted mucosal dwelling larvae should be performed in the autumn (ideally late October/November) and again in the spring (ideally in February). However, for horses who fail to maintain condition or bought-in horses with unknown worming history, the treatment can be given at any time of the year.

Overdose

Benzimidazoles have a high margin of safety.

Withdrawal periods

Meat and offal: 5 days

The product is not authorized for use in mares producing milk for human consumption.

Pharmacological particulars

Pharmacodynamic properties

Fenbendazole is an anthelmintic belonging to the benzimidazole carbamate group (ATCvet code: QP52AC13).

Fenbendazole acts by interfering in the energy metabolism of the nematode. The anthelmintic efficacy is based on inhibition of the polymerisation of tubulin to microtubuli. The anthelmintic affects both adult and immature stages of gastro-intestinal and respiratory nematodes.

Pharmacokinetic properties

Fenbendazole is only partly absorbed from the intestine and reaches maximum plasma concentration 6 (4-8) hours after oral administration.

Fenbendazole is metabolised mainly by enzymes of the cytochrome P-450 system in the liver. The major oxidative metabolite is fenbendazole sulfoxide which is further metabolised to fenbendazole sulfone.

Fenbendazole and its metabolites are distributed throughout the body but highest concentrations are found in the liver.

Fenbendazole and its metabolites are detectable in the plasma only during the first 48 hours following drug administration at a single dose rate of 10 mg fenbendazole/ kg bodyweight.

Administration of fenbendazole at a dose rate of 10 mg/kg bodyweight daily for five consecutive days lead to accumulation of fenbendazole during the multiple dosing period whereas the concentrations of its two metabolites show only a slight increase. After the last administration on day 5, all three compounds are eliminated from blood very rapidly, within two or three days.

The elimination of fenbendazole and its metabolites occurs primarily via the faeces.

Pharmaceutical particulars

Excipients

Methyl Parahydroxybenzoate, Propyl Parahydroxybenzoate, Propylene Glycol, Apple and Cinnamon Flavour, Carbomer 980, Glycerol (85%), Sorbitol (70%, crystalising), Sodium Hydroxide and Water Purified.

Major Incompatibilities

None known.

Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 3 years

Special precautions for storage

Do not store above 25 °C. Protect from direct sunlight.

Immediate packaging

A 24 g, white, opaque, high density polyethylene, graduated oral syringe with a low density polyethylene plunger and plunger head. The closure is a white, opaque, low density polyethylene cap (push-fit).

Disposal

Dangerous to fish and aquatic life. Do not contaminate ponds, waterways or ditches with the product or used container.

Any unused veterinary medicinal product or waste materials derived from such veterinary medicinal products should be disposed of in accordance with local requirements.

Marketing Authorisation Number

Vm 01708/4439

Significant changes

Date of the first authorisation or date of renewal

29 January 1993

Date of revision of the text

May 2013.

Any other information

For animal treatment only. Keep out of the sight and reach of children.

Legal category

Legal category: POM-VPS

GTIN

GTIN description: Panacur PA FLAV 10x24gr

GTIN: 08713184042347

Manufacturer

MSD Sante Animale

Rue de Lyons

F-27460 Igoville

France





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