

FRONTLINE[®]
WORMER

DEALING WITH INTESTINAL WORMS IN CATS & DOGS

CPD A3357 - 3 Points



How cats and dogs pick up worms

By **ingesting worm eggs** from soil or other substances contaminated with faeces.¹ Some worm eggs can lay dormant in the environment for several months or even years.



By **swallowing fleas** infected with tapeworm larvae (*Dipylidium caninum*) while grooming.¹



By eating or scavenging **carcasses** of other animals and from **raw meat**.¹



Almost all **puppies and kittens** become infected by roundworm from their mother – either across the placenta or via her milk when nursing.²

The worry with worms

Although they are very common and can cause serious health issues to both pets and humans, intestinal worms are ranked only fifth in parasite importance by UK dog and cat owners.³

However, female *Toxocara spp.* worms can lay up to 200,000 eggs per day.⁴



1 Intestinal worms live in the digestive tract and feed on blood and food ingested by cats and dogs.¹

4 Some worms are zoonotic and can compromise the health of the rest of the family.¹

2 Worm infections can go unnoticed as healthy cats and dogs often don't show any clinical signs.¹

3 Clinical signs can include:¹

- Pot belly
- Vomiting and/or diarrhoea
- Scooting
- Excessive bottom cleaning
- Worm or worm segments/larvae in the stool

5 Some species of worms can affect both cats and dogs.

Worms affecting cats and dogs – roundworms¹

Roundworms are the most common type of worms found in cats and dogs: up to 30% of dogs and 70% of puppies at 12 weeks of age are infested with *Toxocara canis*.^{2,5,6} Up to 76% of cats are infested with *Toxocara cati*.⁷

Appearance: large, white worms up to 15cm long.

Life cycle and transmission: direct and indirect through ingestion of an intermediate host.*

3 types: ascarids, hookworms and whipworms.

Type	Species	Zoonosis ^{1,8}
Ascarids	<i>Toxocara canis</i> (dog roundworm)	YES
	<i>Toxascaris leonina</i> (dog & cat roundworm)	YES
Hookworms	<i>Uncinaria stenocephala</i>	YES
	<i>Ancylostoma spp.</i>	YES
Whipworms	<i>Trichuris vulpis</i>	NO



Worms affecting cats and dogs – tapeworms¹

There are several different types, or species, of tapeworms that can infect cats and dogs, each with a different intermediate host, which the cat or dog eats to become infected.

Appearance: flat, segmented worms.

Life cycle and transmission: indirect, through ingestion of an intermediate host.

Type	Species	Intermediate Host	Zoonosis ¹
Tapeworms	<i>Dipylidium caninum</i> (flea tapeworm)	Fleas	YES
	<i>Taenia spp.</i> (taeniid tapeworm)	Ruminants, pigs, rabbits, rodents	NO
	<i>Echinococcus spp.</i> (dog/fox tapeworm)	Ruminants, pigs, rodents	YES



Worms pose a threat to the whole family¹

Humans become infected by ingesting worm eggs from contaminated soil or food, or from a pet's coat.

Main risk is *Toxocara* (roundworm) infection.

- Children, pregnant women and older people are most at risk.¹
- Symptoms: stomach pains, headaches, coughs, cognitive disorders and blindness.^{8,9,10}
- Studies have shown eggs are present in the soil of gardens, parks and children's play areas,^{11,12,13} and across Europe, between 2-31% people have been exposed to *Toxocara*.²

Echinococcus tapeworms can also affect humans with very serious medical consequences due to the development of cysts in vital organs.



Quiz

1. How long can worm eggs persist in the environment?

- A. Days
- B. Months
- C. Years

Quiz

2. Which clinical sign is associated with worm infestation?

- A. Scooting
- B. Worm segments in the stools
- C. Both of the above

Quiz

3. How many eggs can some worms lay per day?

- A. 10,000
- B. 100,000
- C. 200,000

Quiz

4. How can humans get infected with worms?
- A. By ingesting worm eggs from contaminated soil or dog fur
 - B. By ingesting worm eggs from contaminated food
 - C. Both of the above

Quiz

5. How do cats and dogs get infected with the flea tapeworm?

- A. From swallowing an infected flea
- B. From flea bites
- C. From tick bites

Quiz

6. Which worm poses the biggest risk to human health?

- A. Roundworms
- B. Tapeworms
- C. Hookworms

Worm control – Regular deworming is key

Deworming frequency: at least four times a year.¹

- More frequent treatment may be recommended depending on the cat or dog's age and lifestyle:¹
- Cats or dogs living with children below 5 years, pregnant women and older people – deworm monthly
- Weaned puppies and kittens up to six months of age – deworm monthly
- Cat or dog that has had a flea infestation – treat for tapeworms

Checklist to assess the risk of worms and recommend a tailored deworming frequency:

- ✓ The age and reproductive/health status of the cat or dog
- ✓ Whether children or pregnant women live in the home
- ✓ Whether the cat or dog spends time outdoors/in kennels/travels
- ✓ Whether the cat or dog hunts/scavenges/eats raw meat
- ✓ Whether the cat or dog has signs of worms or the owner has seen worms
- ✓ Whether there are other pets in the household and they are receiving deworming treatment

Worm control – Active ingredients

Active ingredients against worms available to SQPs:

Active Ingredients	Intestinal Worms					
	Roundworms	Hookworms	Whipworms	Tapeworms		
				<i>Dipylidium</i>	<i>Taenia</i>	<i>Echinococcus</i>
Praziquantel				✓	✓	✓
Febantel		✓	✓			
Pyrantel	✓					
Fenbendazole	✓	✓	✓		✓	
Nitroscanate	✓	✓		✓	✓	limited
Piperazine citrate	✓					

Due to the human health risks from some *Echinococcus* worms not found in the UK, tapeworm treatment is compulsory for dogs returning to the UK from abroad.¹²

FRONTLINE® WORMER

The tasty wormer that's a treat to give

FRONTLINE® WORMER is a tasty tablet that helps protect pets from all types of intestinal worms commonly found in the UK.

In dogs FRONTLINE® WORMER is effective for treatment of mixed infections of roundworms, tapeworms, hookworms and whipworms.

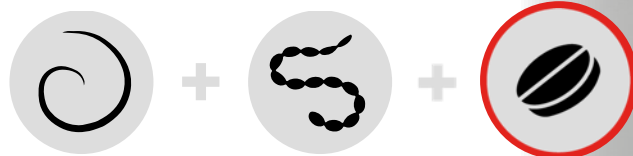


FRONTLINE[®]

WORMER

The tasty wormer that's a treat to give

In cats FRONTLINE[®] WORMER is effective for treatment of roundworms and tapeworms.



**KILLS
ROUNDWORMS**

**KILLS
TAPEWORMS**

**TASTY
TABLETS**



Checklist for supplying FRONTLINE® WORMER

Check with the customer that:

- ✓ The cat weighs at least 1 kg, or the dog at least 3 kg. For XL tablets, the dog should weigh at least 17.5 kg.
- ✓ The correct size and number of tablets is being supplied for the cat or dog's weight.
- ✓ The cat or dog shows no signs of illness – if they do, refer the owner to a veterinary surgeon.
- ✓ The owner knows how often to deworm their cat or dog.

Also, please take note of the following advice:

- ✓ Do not use in kittens less than 6 weeks of age. Do not use in dogs less than 2 weeks of age.
- ✓ Cats: do not use during pregnancy but may be used during lactation.
- ✓ Dogs: consult a veterinary surgeon before treating pregnant animals.
- ✓ The product may be used in lactating bitches from 2 weeks after giving birth and every 2 weeks until weaning.

Legal category: **AVM-GSL**

Active ingredients:

For dogs: febantel + pyrantel + praziquantel

For cats: pyrantel + praziquantel



Worm control – Simple preventative measures¹

Our seven tips to protect the whole family from worms:

- 1 Treat your pets with a wormer regularly
- 2 Wash hands after handling pets and before eating food, and teach children to do the same
- 3 Wash all fruits and vegetables before eating
- 4 Pick up and carefully dispose of pet faeces as soon as possible
- 5 Cover children's sandpits when not in use
- 6 Wear gloves when gardening
- 7 Avoid feeding unprocessed, raw meat to dogs



How to help protect against worms



Quiz

7. What simple measures can minimise the risk of worms for the family?

- A. Practising good hygiene
- B. Deworming pets regularly
- C. Both of the above

Quiz

8. Which active ingredient available to SQPs kills all tapeworms in cats and dogs?

- A. Febantel + pyrantel
- B. Praziquantel
- C. Fenbendazole

Quiz

9. How often should cats and dogs be dewormed to help protect children from picking up *Toxocara* eggs?

- A. Every 3 months
- B. Every 6 months
- C. Every 12 months

Quiz

10. Which categories of worms does FRONTLINE® WORMER for Dogs kill?

- A. Roundworms
- B. Tapeworms
- C. Hookworms
- D. Whipworms
- E. All of the above

Quiz

11. Which categories of worms does FRONTLINE® WORMER for Cats kill?

- A. Roundworms
- B. Tapeworms
- C. Both of these



Well done
and thanks
for listening

Summary and references

For more information, please visit uk.frontline.com.

References

1. ESCCAP (2021). Guideline 01 Worm control in dogs and cats. 6th ed.
2. Overgaauw, PA. and van Knapen, F. (2013). Veterinary and public health aspects of *Toxocara* spp. *Vet Parasitol*, 193(4), pp. 398-403.
3. Consumer research conducted by Opinium 2–5 Feb 2018 among 2,000 UK adults.
4. Glickman, L.T., Schantz, P.M. and Cypress, R.H. (1979) Canine and human toxocariasis: review of transmission, pathogenesis and clinical disease. *JAVMA* 175, 1265–1269.
5. Schartz R et al. (2022) The epidemiology and control of *Toxocara canis* in puppies. *Parasite Epidemiology and Control*. Vol 16 pp. 1 -8
6. Pennelegion et al. (2020) Survey of UK pet owners quantifying internal parasite infection risk and deworming recommendation implications. *Parasites Vectors* Vol 13(218) pp. 1 -11
7. Overgaauw (1997) General introduction Aspects of *Toxocara* epidemiology, *Toxocarosis* in dogs and cats. *Critical Reviews in Microbiology* Vol 23: pp. 233-51
8. Walsh, G.W. & Haseeb M.A. (2012) Reduced cognitive function in children with toxocariasis in a nationally representative sample of the United States. *Int J Parasitol*. 42 pp. 1159-1163
9. Martinez-Pulgarin et al. (2015) Ocular Toxocariasis: New Diagnostic and Therapeutic Perspectives. Vol. 10(1), pp. 35-41(7)
10. Traversa et al. (2014) Environmental contamination by canine Geohelminths. *Parasites and Vectors*. 7(67) pp. 1-9
11. Uga, S. (1993). Prevalence of *Toxocara* eggs and number of faecal deposits from dogs and cats in sandpits of public parks in Japan. *J Helminthol*, 67(1), pp. 78-82.
12. Kirchheimer, R. and Jacobs, DE. (2008). *Vet Rec*, 163(13), pp. 394-395
13. Aird et al. (2022) WormWatch: Park soil surveillance reveals extensive *Toxocara* contamination across the UK and Ireland. *Vet Rec*. Vol. 109(1) pp. 1-12
14. Animal Health and Plant Agency (APHA). Commercial Import of Dogs, Cats and Ferrets. Accessed August 2023.

