

# THE MOST COMMON PARASITES IN CATS

How do they affect your cat's health and sometimes your own?



## ROTTEN ROUNDWORMS

(*TOXOCARA SP.* AND *TOXASCARIS LEONINA*)

### HOW DOES MY CAT GET ROUNDWORMS?

Roundworms are the most common of the parasitic worms found inside our cats: indeed, a recent UK study found more than a quarter of adult cats are infested with *Toxocara cati*.<sup>1</sup> and infestation rates in kittens are much higher.

Roundworms are highly prolific and females can lay up to 300 000 eggs per day. Infested cats shed these microscopic eggs via their droppings into the environment where they become infective after 2 to 3 weeks. The eggs can stay alive and infective for up to 5 years, being resistant to hot or cold temperature, as well as disinfectants. Cats (and other animals) may swallow those eggs by sniffing or licking soil or other substances soiled by faeces. Cats may also get infested when hunting rodents or other small mammals that can carry roundworm larvae.

Kittens are commonly infested with roundworms soon after birth, as they can be infested via their mother's milk when feeding.

### HOW WILL ROUNDWORMS AFFECT MY CAT?

Adult roundworms live in the affected cat's intestines. Many cats do not show any sign of illness, however, cats with a major infestation, especially kittens, may show digestive signs such as a potbelly, diarrhoea and vomiting. They may also show respiratory signs as the immature worms pass through their lungs, typically leading to coughing and pneumonia.

### DID YOU KNOW THAT?

- Humans can be affected by pet roundworms too. In infested people, the worms can cause a variety of health problems, one of the worst being blindness.
- Children are particularly at risk because they often play on the ground or in soil where worm eggs may be present (in parks, sandpits etc.). Adults may be exposed during activities such as gardening. In one study 66% of soil samples from parks in a major city were positive for *Toxocara* eggs.<sup>2</sup>

1. Wright et al. The prevalence of intestinal nematodes in cats and dogs from Lancashire, north-west England. *Journal of Small Animal Parasitology*, 2016, 57 (8), 393-395.
2. Fisher. *Toxocara cati*: an underestimated zoonotic agent. *Trends in Veterinary Parasitology*, 2003, 19 (4) 167-170.



## HORRIBLE HOOKWORMS

(*ANCYLOSTOMA TUBAEFORME*, *A. BRAZILIENSE*, *UNCINARIA STENOCEPHALA*)

### HOW DOES MY CAT GET HOOKWORMS?

Hookworms are parasites that live in the cat's digestive system. Recent European studies showed that up to 10% of our cats are infested with these worms, depending on their lifestyle.<sup>1,2</sup>

The hookworm attaches to the lining of the intestinal wall and feeds on tissue and blood. Its eggs are laid into the cat's digestive tract and are passed into the environment via the faeces.

Larvae hatch out from the hookworm eggs after about 10 days and live in the soil. They can infest your cat either through penetration of the skin or through swallowing after licking contaminated areas.

### HOW WILL HOOKWORMS AFFECT MY CAT?

Through their feeding activity hookworms cause internal blood loss. They may be a serious threat to cats, especially to kittens as they induce bloody diarrhoea and severe anaemia, which may sometimes lead to death. In older cats the blood loss may be more chronic, and the cat may additionally lose weight.

### DID YOU KNOW THAT?

- Humans can be infested with hookworms too when coming into contact with soil that contains hookworm larvae. These larvae may penetrate the skin and causing skin condition, including an itching sensation at the point of entry and visible tracks on the skin where the worm is burrowing.

1. Martinez-Moreno et al., Estimation of canine intestinal parasites in Cordoba (Spain) and their risk to public health. *Veterinary Parasitology*, 2007; 143: 7-13.
2. Mircean et al., Prevalence of endoparasites in household cat (*Felis catus*) populations from Transylvania (Romania) and association with risk factors. *Veterinary Parasitology*, 2010, 171: 163-166.



## TROUBLESOME TAPEWORMS

(*DIPYLIDIUM CANINUM*, *TAENIA TAENIAEFORMIS*, *ECHINOCOCCUS MULTILOCULARIS*)

## HOW DOES MY CAT GET TAPEWORMS?

The “tapeworm” group covers different flat worms that all reside in the small intestine. *Dipylidium caninum*, the flea tapeworm, is one of the most common as its larvae are hosted by fleas. When a cat swallows infested fleas during grooming, the immature *Dipylidium* inside the fleas develop into adult tapeworms in the cat’s intestine. Good flea control therefore plays an important role in preventing this tapeworm.

*Taenia* tapeworms usually affect hunting cats who become infested when they eat small mammals such as mice that host tapeworm larvae.

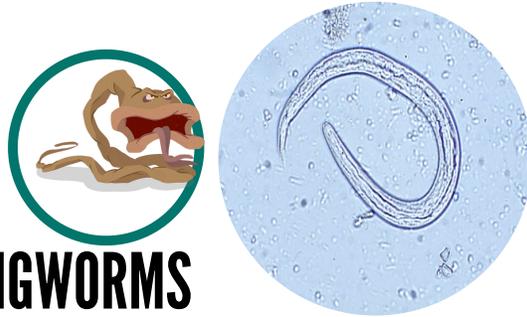
*Echinococcus* tapeworms are less commonly found, but can be a problem in certain parts of Europe. Cats become infested when they eat wild rodents harbouring *Echinococcus* larvae.

## HOW WILL TAPEWORMS AFFECT MY CAT?

Whatever the tapeworm species, infested cats may not show any sign, except perhaps excessive licking of the anal region. This is due to irritation caused by the egg-containing segments as they are being passed. However, heavy tapeworm infestation may cause mild digestive signs such as varying appetite and alternating phases of diarrhoea and constipation.

## DID YOU KNOW THAT?

- Humans can be infested with tapeworms, although this is quite rare. However, cases have been reported in children that had accidentally ingested fleas and thus developed adult *Dipylidium* infestation. This does not lead to severe disease but can be distressing. People may also become infested with other tapeworm species, but cats do not play a role in their transmission.
- *Echinococcus* infestation can cause serious illness in humans, but cats are not believed to be an important source of contamination.



## LOATHSOME LUNGWORMS

(*AELUROSTRONGYLUS ABSTRUSUS*)

## HOW DOES MY CAT GET LUNGWORMS?

Lungworms are emerging parasites of cats throughout Europe. Cats may become infested with lungworms when they eat slugs/ snails or prey hosting the larval stage of the worm.

The larvae migrate out of the intestines and reach the lungs via the bloodstream. They develop into adult worms that lay eggs in the cat’s lungs. After hatching, new larvae are coughed up and passed via the faeces. They may then infest birds, rodents or snails.

## HOW WILL LUNGWORMS AFFECT MY CAT?

Some infested cats show no signs of illness, while others show signs of bronchial and pulmonary (lung) disease. Common clinical signs include coughing and sneezing and in rare cases pleural effusion (fluid in the chest). The cat may have difficulty breathing and appear to be lethargic.



# HEARTWORMS

(*DIROFILARIA IMMITIS*)

Heartworms are not found in the UK or Ireland, but they may be a risk for any cat that travels abroad.

## HOW DOES MY CAT GET HEARTWORMS?

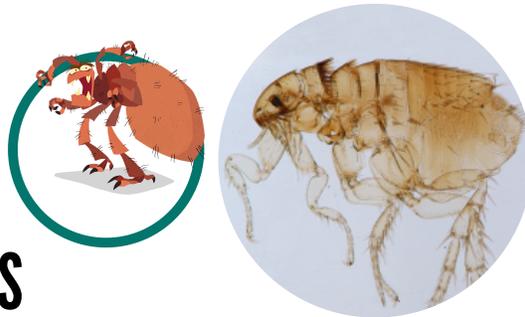
Heartworms are an emerging risk for pets throughout southern and eastern European countries.<sup>1</sup> Climate changes are favourable to these parasites as heartworms are transmitted by mosquitoes. Once mature, adult heartworms live in the heart and large blood vessels of the lungs. They can measure up to 30 cm in length.

## HOW WILL HEARTWORMS AFFECT MY CAT?

Heartworm larvae deposited by the feeding mosquito migrate over several months to the heart chambers or into the vessels of the lungs. Once matured, those worms may affect respiratory function and blood flow through the heart and lungs.

Most commonly, cats show no sign of disease. Some of them may nevertheless develop respiratory signs, whereas other cats will suddenly die, without having shown any prior clinical sign. That is why in geographic areas where heartworm is found, cats as well as dogs should be treated preventively against heartworm infestation.

1. Morchon et al., Heartworm disease (*Dirofilaria immitis*) and their vectors in Europe – new distribution trends. *Frontiers in Physiology*, June 2012.



# FEARSOME FLEAS

(*CTENOCEPHALIDES FELIS*)

## HOW DOES MY CAT GET FLEAS?

Fleas are a year round problem and the most common external parasites to affect our cats. The adult fleas found on our pets only represent 5% of the flea population. The rest are lurking as eggs, larvae and pupae (cocoons containing pre-emerged fleas) in the environment. This may be outside in the garden, park or woods or may be within our homes – either in carpets, between floorboards, in sofas, or other places our pets like to hang out.

In the environment eggs hatch to larvae and then develop to pupae (cocoons containing pre-emerged fleas). When your cat passes by, this stimulates the young adult fleas to emerge from their cocoons and jump onto your pet. But beware pre-emerged fleas in cocoons can stay alive for 10 months or more!

Fleas are prolific breeders, and flea numbers can explode in the warm spring and summer months when one female flea is able to become 1,000 fleas in just 21 days. But that's not to say that fleas are only a problem in warmer weather. Milder, wetter winters and heated homes allow these parasites to thrive throughout the year.

You might think you have cleared a flea infestation after treating your pet, only to see new fleas appearing in the days and weeks after administering the treatment. This is actually normal, as flea products do not repel fleas, and re-infestation of your cat is due to the continued emergence of adult fleas from pre-existing cocoons in the environment. As fleas readily survive both indoors and outdoors and because of many possible sources of flea eggs, including wild and feral animals, or just untreated neighbouring cats and dogs, the source of new fleas is a never-ending story.

To really get rid of fleas, you have to disrupt their life cycle – killing fleas before they can start laying eggs, and/or preventing eggs to develop. Regular treatment of your pet will help to control the reservoir of adult and immature stages of the flea lifecycle in your home. But if your house is heavily infested, it is recommended to use a home environmental spray.

## HOW WILL FLEAS AFFECT MY CAT?

Fleas cause itching and excessive grooming when they bite our cats to feed on blood. Some cats may develop Flea Allergy Dermatitis, an allergic reaction to flea saliva resulting in intense itching, licking, hair loss, and skin thickening which can be very distressing.

Fleas also may transmit tapeworm and diseases such as feline infectious anaemia. Kittens can become anaemic due to the amount of blood sucked out by fleas when feeding - as their bodies are so small they are unable to tolerate this amount of blood loss.

## DID YOU KNOW THAT?

- Humans can be affected by fleas, too. Flea bites can cause irritation and sometimes allergic reactions in people. Fleas can also transmit diseases, such as Bartonellosis (also known as Cat Scratch Disease).



## TERRIBLE TICKS

(*IXODES RICINUS*)

## HOW DOES MY CAT GET TICKS?

Ticks are external parasites that are able to infest cats. They are most abundant from spring to autumn but can be active all year round. Because of climate change, increase in deer populations (which host ticks) and travelling pets, ticks remain active for longer periods, their numbers are increasing, and new tick species and tick-borne diseases are appearing where they were previously not present.<sup>1,2,3</sup>

Ticks are found on vegetation and cling on to our pets as they brush past. It is very difficult to prevent a cat's exposure to ticks. Ticks can attach to your cat whenever he or she is outdoors, in gardens, woodland or parks.

There are a number of different ticks which can affect our pets; some are more common in different parts of the UK and in other countries so if you travel with your cat please consult your vet about risks in the places you are visiting.

## HOW WILL TICKS AFFECT MY CAT?

They pierce the cat's skin and suck blood over several days. This can cause irritation, painful abscesses and anaemia in small animals. Ticks are a particular concern though because they can transmit bacteria such as *Anaplasma*, *Rickettsia* and *Borrelia*, to our pets.

## DID YOU KNOW THAT?

- Ticks may also transmit diseases to humans. For example, *Borrelia* is the agent of Lyme disease. It causes flu-like symptoms in people and can lead to serious health complications if left undiagnosed. Lyme disease cases in people have increased by over 300% in the UK since 2001.<sup>4</sup>

1. Scharlemann et al., Trends in ixodid tick abundance and distribution in Great Britain. *Medical and Veterinary Entomology*, 2008, 22: 238-247.

2. Dautel et al., Winter activity of *Ixodes ricinus* in a Berlin forest area. *International Journal of Medical Microbiology*, 2008, 298: 50-54.

3. Sanche-Vizcaino et al., Canine babesiosis and tick activity monitored using companion animal electronic health records in the UK. *Veterinary Record*, 2016, 179, 358.

4. <http://www.nhs.uk/news/2015/10October/Pages/Concern-about-rise-in-UK-Lyme-disease-cases.aspx>  
(<http://www.nhs.uk/news/2015/10October/Pages/Concern-about-rise-in-UK-Lyme-disease-cases.aspx>).

The parasites described above are some of the most common to affect cats, but please be aware that your cat may also be at risk from other parasites not described in detail here. Please ask your vet for advice regarding the specific parasite risks for your pet in your area and especially before travelling abroad.



**MONTHLY INSIDE & OUT TREATMENT**

helps to protect your cat against a broad spectrum of parasites and helps to reduce the risk of parasite infections in people too



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It only takes a minute: 6 questions on your cat's life style and environment will lead you to a risk-based treatment recommendation that you can act on with your vet

**TAKE THE RISK CHECK**

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