

CAT ANTIPARASITICS A GUIDE FOR PHARMACISTS



Royal
Pharmaceutical
Society
of Great Britain

FACTS AND FIGURES

There are more than seven million cats in nearly five million households in the UK (Pet Food Manufacturers Association 2008), making them the country's favourite pet. People mainly keep cats for companionship and love, which means they have important therapeutic benefits, particularly for the elderly and people living alone.

CATS CHEER UP ELDERLY PEOPLE AND CHILDREN

A study of 500 cat owners aged over 55 years old conducted by the charity Cats Protection revealed:

- 82% found that their cat helped them overcome feelings of stress

- 62% said cat ownership helped overcome feelings of loneliness
 - 75% sometimes preferred to share their feelings with their cat rather than a partner or friend.
- The same survey also looked at 100 younger cat owners aged 13 years and under:
- 80% said their cat helped them get on better with family and friends
 - 81% said they would rather chat to their cat about their feelings, than to their mum, dad or a friend
 - 87% of children regard their cat as a 'close friend'.

Cats are also low maintenance, affectionate and independent, and fit in well with urban, working lifestyles. The average UK cat owner spends around £476 a year on their pet, which includes veterinary bills, food, bedding and toys, making a grand figure of around £4 billion being spent on the feline population of the UK each year.

ANTIPARASITIC PRODUCTS

Not surprisingly, veterinary care and medicines for cats are a growing business — particularly the routine prophylactic antiparasitics for worms and fleas. Many new, highly effective compounds, in easy-to-dose formulations have come to the market over the past 10 years. Most are prescription-only medicines, but a number are effectively pharmacy-only or are being reclassified for over-the-counter sales in pharmacies and certain pet shops (see below)

It is important that pharmacists advise cat owners to use worming and flea products regularly, not just to maintain the animal's health but also to minimise the slight risk of associated infections in humans. For instance, it is recommended that cats should be

wormed at least every three months. More frequent worming is recommended in hunting cats because of a higher susceptibility to picking up tapeworms from infected hosts such as birds and mice.

ENDOPARASITES OF CATS

(see Table 1)

Roundworms (or nematodes)

Toxocara spp These are common in both cats and dogs and are associated with a zoonotic risk, particularly to young children who may play with their pets. *Toxocara cati* is one of the most common roundworm species of cats and can be passed on to humans. Good hygiene should always be practised with children living with pets, and regular worming of cats with effective products is highly recommended.

Toxascaris leonina and *Ancylostoma spp* are other roundworms that can affect cats in the UK but are much less common.

Tapeworms (or cestodes)

Dipylidium Perhaps the most common tapeworm in cats (which also affects dogs) is the flea tapeworm, *Dipylidium caninum*. The flea is used as an intermediate host and is swallowed while grooming. Once in the gut, the worm larva carried by the flea begins to develop into an adult worm, which can grow to a length of two feet. Flea control in the environment is also important to help reduce the risk of infection

Taenia spp The other common tapeworm of UK cats is *Taenia taeniaeformis*, which uses mice, rats and other small rodents as intermediate hosts. Infection is picked up from hunting and adult tapeworms can cause anaemia if left untreated.

TABLE 1: PARASITES OF CATS

Parasites	Species	Prevalence	Zoonotic risk	Effective parasiticides
ENDOPARASITES				
Roundworms (nematodes)				
Ascarids	<i>Toxocara cati</i>	very common	yes (children)	emodepside, fenbendazole, piperazine, selamectin, milbemycin, pyrantel, moxidectin
	<i>Toxascaris leonina</i>	rare	yes	
Hookworms	<i>Ancylostoma spp</i>	very rare	possible	emodepside, fenbendazole, piperazine, selamectin, moxidectin
Tapeworms (cestodes)				
	<i>Dipylidium spp</i>	very common	yes	praziquantel
	<i>Taenia spp</i>	very common	none	fenbendazole, praziquantel
ECTOPARASITES				
Fleas	<i>Ctenocephalides spp</i>	very common	possible (cat scratch disease/tapeworm infection)	fipronil, imidacloprid, lufenuron, metaflumizone, nitenpyram, selamectin, permethrin, propoxur, pyrethrins, methoprene (insect growth regulator) selamectin, moxidectin
Mites	<i>Otodectes spp</i>	common	none	
	<i>Notoedres spp</i>	very rare	none	
Ticks	<i>Ixodes spp</i>	common	possible (Lyme disease)	fipronil
Lice	<i>Felicola spp</i>	very rare	none	fipronil, selamectin



ECTOPARASITES OF CATS

(see Table 1)

Fleas

Fleas are small, black, blood-sucking insects and are among the commonest parasites found on cats. Indeed nearly all cats will suffer from a flea infestation at some point in their lives. The symptoms can vary from no visible signs to severe itching, especially of the lower back and tail base. Flea faeces are seen as small black grains, which can be combed from the cat and dissolved to produce brown/red swirls on wet paper. This is a way of identifying flea infestation.

Environmental control of fleas: household sprays/pesticides

Only 5% of a flea infestation are adults found on the pet. The other 95% exist as eggs, larvae and pupae in the pet's environment—in carpets, furniture and bedding. It is therefore important to advise owners to regularly vacuum and wash pets bedding to reduce adult fleas and larvae. They should also use an effective pesticide (usually in the form of sprays) around these areas. Several products are available such as methoprene (an insect growth regulator) and permethrin/pyrethrin based insecticides. There are also non-insecticide silicone-based products available. **It should be noted that permethrin can be extremely toxic to cats.**

Mites

Ear mites (*Otodectes spp*) are highly contagious parasites that live in the external ear canal and cause intense irritation. Cats will scratch and shake their heads as a sign of infection and a brown/black crusty discharge (like coffee grounds) may be evident in the ear.

Lice

Lice are wingless insects that attach themselves to the fur of the cat. They possess powerful jaws and bite into the skin of the animal causing intense itching. Treatment is by the application of a suitable insecticide to all affected, in-contact animals and washing bedding.

Ticks

Ticks are small, greyish, bean-shaped arachnids that attach themselves to cats and feed on their blood. Frequently found on the ears, face or legs, ticks are mainly active in spring and early summer and from late summer in to autumn. They are mainly found in rural areas of wood-

land, heaths, moorlands and urban parks. Ticks can carry a number of potentially serious infectious diseases but these are rare, although Lyme disease is one zoonotic risk pharmacists need to be aware of that has been reported in the UK.

PRODUCTS AVAILABLE FOR CATS

(see Table 2)

A wide range of antiparasitics is available to control endo- and ectoparasites of cats. Many of these products are relatively new to the market and are prescription only (POM-V) but fortunately a number of effective medicines can be sold OTC in the pharmacy. They are either NFA-VPS (effectively P medicines in the pharmacy) or AVM-GSL which can be sold without supervision (see Table 2).

For a complete list of authorised medicines for cats please refer to the NOAH Compendium (see below) or visit www.noah.co.uk

FURTHER SOURCES OF INFORMATION

Textbooks

The Veterinary Formulary. Yolande Bishop. Pharmaceutical Press

Veterinary Pharmacy. Steven Kayne & Michael Jepson. Pharmaceutical Press

The NOAH Compendium - published annually containing all veterinary data sheets/SPC information

Websites

General pet health information:

www.pethealthinfo.org.uk

www.pethealthcouncil.co.uk;

www.cats.org.uk

Veterinary Medicines Directorate: www.vmd.gov.uk

Legal categories

The legal categories are as follows:

AVM-GSL (authorised veterinary medicine – general sales list). This may be sold by anyone. (Formerly GSL.)

NFA-VPS (non-food animal medicine – veterinarian, pharmacist, suitably qualified person). A medicine for companion animals that must be supplied by a veterinarian, pharmacist or suitably qualified person. (Formerly PML companion animal products and a few P products.)

POM-V (prescription only medicine – veterinarian). A medicine, to be supplied only on veterinary prescription, that must be prescribed by a veterinarian to animals under his/her care, and which may be dispensed by a veterinarian or pharmacist in accordance with the prescription. (Formerly POM products and a few P products.)

Rob Morris June 2008

Table 2: Antiparasitic products available for cats

Source NOAH Compendium 2008. (Not all manufacturers are members of NOAH so the following list of products is not exhaustive)

Active ingredients	Product	Formulations	Roundworm			Tapeworms				Fleas	Ticks	Mites	Lice
			<i>Toxocara cati</i>	<i>Toxascaris</i> spp	<i>Ancylostoma</i> spp	<i>Dipylidium</i>	<i>Taenia</i> spp						
<i>POM(V) cat antiparasitics¹</i>													
flipronil + methoprene	Frontline Combo	spot-on	-	-	-	-	-	-	-	+	+	-	+
imidacloprid	Advantage	spot-on	-	-	-	-	-	-	-	+	-	-	-
imidacloprid + moxidectin	Advocate ²	spot-on	+	-	+	-	-	-	-	+	-	+	-
metallumizone	ProMeris	spot-on	-	-	-	-	-	-	-	+	-	-	-
milbemycin + praziquantel	Milbemax ²	tablet	+	?	+	+	+	+	-	-	-	-	-
selamectin	Stronghold ²	spot-on	+	-	+	-	-	-	-	+	-	+	+
emodepside + praziquantel	Profender	spot-on	+	+	+	+	+	+	-	-	-	-	-
<i>NFA(VPS) antiparasitics</i>													
fenbendazole	Panacur, Granofen, Zerofen	granules, paste, treats, liquid suspension.	+	+	+	-	-	+	-	-	-	-	-
flipronil	Frontline	spot-on, spray ³	-	-	-	-	-	-	-	+	+	-	+
pyrantel + praziquantel	Drontal Cat	tablet	+	+	+	+	+	+	-	-	-	-	-
lufenuron	Program	suspension, tablets, injection ¹	-	-	-	-	-	-	-	+	-	-	-
<i>AVM(GSL) antiparasitics</i>													
nitfenpyram	Capstar	tablet	-	-	-	-	-	-	-	+	-	-	-
praziquantel	Droncit	tablet, spot-on, injection ¹	-	-	-	-	+	+	-	-	-	-	-
propoxur	VetKem Breakaway	collar	-	-	-	-	-	-	-	+	-	-	-
piperazine	various	tablet, syrup	+	+	+	-	-	-	-	-	-	-	-
permethrin ⁴	various	powder, spray, collar	-	-	-	-	-	-	-	+	-	-	-
pyrethrins	various	shampoo, spray, powder	-	-	-	-	-	-	-	+	-	-	-

NOTES

1. A number of POM(V) products are under review for a possible reclassification to NFA(VPS). Please refer to VMD for latest information
2. Advocate, Milbemax and Stronghold are also effective against *Dirofilaria immitis* (heartworm), which is not a UK problem
3. These formulations are POM(V)

4. Permethrin is very toxic to cats in spot-on and shampoo formulations



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