



Understanding Flea, Tick, Mite and Worm Control (part 2)



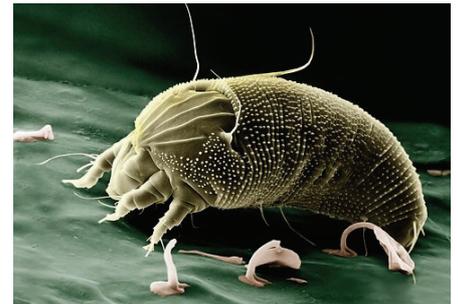
In part 2 of 'understanding flea, tick, mite and worm control', we will cover mites and the intestinal worms (worms that live within the small and large intestines).

Mites

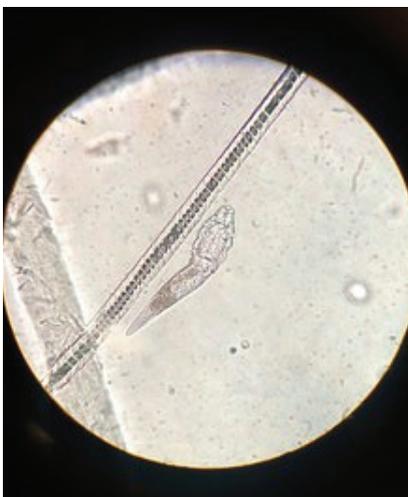
Mites are responsible for the condition known as 'mange'. There are a number of species of mites, including *Sarcoptes*, *Demodex*, *Cheyletiella* ('walking dandruff'), *Otodectes* ('ear mites') and *Trombicula* ('harvest mites').

'Scabies' (*Sarcoptes*)

'Scabies' is caused by the *Sarcoptes* mite. It is a highly contagious and serious disease found in dogs. The cat equivalent, 'feline scabies', is caused by a related mite called *Notoedres*, but is very rare in the UK. The mites bury deep into the skin, **causing extreme itchiness and irritation**. Fortunately, it is not seen too commonly in well-cared-for pets (this is mainly because a number of flea control products also protect against *Sarcoptes* mites), but it can be caught from foxes so will always remain a threat. It can also spread to humans, though human infections are often short-lived.



'Demodex'



'Demodex' is caused by the *Demodectes* mite. It is most commonly seen in puppies and is contracted via the mother's muzzle in the first few days after birth. Most adult dogs with healthy immune systems carry the mite in their hair follicles in small numbers with no adverse effects. However, young puppies may suffer **scaly bald patches on the face and top of the head**. In rare cases, it may spread further along the body and this can be more serious.

'Walking Dandruff' (Cheyletiella)

Cheyletiella mites have received the nickname 'walking dandruff' because they look like **flecks of dandruff that move across the skin and fur**. They also cause genuine dandruff. They can cause itchiness, but this tends to be very sporadic and often goes unnoticed. They are spread via close dog-to-dog or cat-to-cat contact. Despite being a relatively large mite, it still requires examination of the animal's dandruff under the microscope to confirm diagnosis.



'Ear mites' (Otodectes)

As their nickname suggests, Otodectes mites are found in the **ears of cats and dogs**. They cause irritation, inflammation, a **dark brown waxy discharge** and often an unpleasant odour. The animal may shake their head or scratch their ears. Ear mites are very difficult to see with the naked eye and need to be checked for under a microscope.

'Harvest mites' (Trombicula)

Harvest mites are picked up from long grass, small bushes, other vegetation and clods of earth. It is actually the larvae that cause a problem, not the adult mite. The larvae are visible as **minute orange clusters** often deep between the paws, under the armpits or around the ears. The mites cause irritation by secreting digestive juices into the skin. This leads to inflammation, redness, rubbing, licking and chewing. Some animals are allergic to harvest mites and show particularly severe discomfort. These are very common during late Summer and Autumn.



Whilst some flea control products also treat mites, not all do and some mites need specific treatment. This will all be discussed in the final article of this series. Bear in mind, dogs and cats can also suffer from lice, but these are not particularly common and I have not discussed them here.

Intestinal Worms

The intestinal worms include roundworms, hookworms, tapeworms and whipworms.

Roundworms

Roundworms are **white, 'spaghetti like'** worms that live freely in the intestinal tract. Adult animals may not show any obvious sign of roundworm infection, but the worms may be

clearly visible in the stool. Puppies and kittens will often show a 'pot-bellied' appearance and poor growth. They may develop diarrhoea and vomiting. A serious complication of roundworm infection in young animals is complete blockage of the intestinal tract.

Regular de-worming of both young and adult animals is essential to prevent roundworm infection. Female roundworms can produce 200,000 eggs a day which are shed in faeces. The eggs are protected by a hard shell and can survive in the environment for years. Hence, any animal can unwittingly consume roundworm eggs at any time.

Furthermore, **a large percentage of puppies and kittens are born infected with roundworm.** Roundworm larvae can infect the foetus in the womb, and can also be transmitted to the newborn via the mother's milk. The larvae migrate to the intestinal tract of the puppy or kitten, where they mature into adult worms.



For those interested, the reason why so many puppies and kittens are born infected with roundworm is because, in adult animals, the roundworm larvae can escape the intestinal tract and become 'encysted' in other body tissues. They then lie dormant until the late stages of pregnancy, during which the larvae re-activate to infect the unborn young. No wormer we have is able to kill the encysted larvae, so we must wait until they reactivate in late pregnancy and develop into adult worms before we can kill them.

Hookworms

Hookworms affect both cats and dogs. They attach themselves onto the wall of the small intestine and **feed on blood.** This leads to vomiting, haemorrhagic (bloody) diarrhoea, abdominal pain, and anaemia. High burdens will be fatal in very young animals.

Hookworms are extremely small, and it requires microscopic identification of hookworm eggs in faeces to diagnose them.



As with roundworm, puppies and kittens can contract hookworm in utero and via their mother's milk. Adult animals are infected with hookworm by inadvertently swallowing hookworm larvae when sniffing faeces and contaminated ground, or when grooming themselves. Hookworm larvae can also **burrow through the skin** causing skin irritation and itchiness.

Regular de-worming will ensure any adult hookworm and hookworm larvae are killed before they are able to cause damage to the gut wall.

Tapeworms

Tapeworms are flat worms that attach to the intestinal wall by their head (scolex), and absorb digested nutrients from within the intestinal tract.

Tapeworms can go completely unnoticed for long periods of time, or may cause diarrhoea, occasional vomiting, poor growth and weight loss. However, it is more usual to see **licking or chewing of the anal area and scooting** (dragging the bum across the floor). You may see **'grains of rice'** on the animal's coat or in fresh faeces.



Dogs and cats do not contract tapeworm infections through eating tapeworm eggs, so it is not passed directly from dog to dog, or cat to cat. Instead they must ingest an 'intermediate host' to become infected. It is the intermediate host, which eats the tapeworm eggs.

The most common species of tapeworm in the UK is *Dipylidium caninum*, for which the intermediate host is the **flea**. Dogs and cats will ingest the infected flea whilst grooming. For other tapeworm species, the intermediate host may be rabbits, sheep, mice or rats.



Therefore, animals fed raw food, cats that hunt and eat wildlife, or dogs that have access to sheep carcasses, for example, are at **increased risk**.

In the case of the *Dipylidium caninum* tapeworm, **good flea control** will significantly reduce the likelihood of your pet becoming infected. However, regular de-worming with a product effective against all tapeworm species is essential to ensure your pet is fully protected.

Whipworms

Whipworms are exclusive to dogs and live only in the large intestine. Whipworm infections can show no signs at all, or they can cause **watery, bloody and 'mucousy' diarrhoea**. Their microscopic eggs are passed in the faeces, but only intermittently and in small numbers. Unless multiple stool samples are examined, diagnosis may be missed. Like roundworms, their eggs are very resistant and can remain 'alive' in the environment for many years. A dog is infected by eating eggs from faeces or contaminated ground. Eggs can also be present in food, water or in animal carcasses.

Again, regular de-worming will prevent your dog from being infected with whipworms.

In the next article, I shall discuss 'the other' worms (heartworm and lungworm), and giardia. If you have any questions about mites or the intestinal worms, please get in touch with us.