



**This potentially serious parasitic disease can cause heart failure and other complications. In most countries where the disease occurs, preventative treatment is given to pet dogs to ensure they do not become infected.**

### What is heartworm?

The disease, as the name suggests, is caused by a parasitic worm called *Dirofilaria immitis* which lives in the heart. The life-cycle of this parasite involves both dogs (where it can cause serious disease) and mosquitos, which act as a *vector*, transmitting worm larvae between dogs and spreading infection. Cats and ferrets can also be infected.

Heartworm is an important disease in several parts of the world, including:

- Parts of Europe (not UK, except in imported dogs).
- South-eastern and mid-western America and the Atlantic coasts.
- Australia.
- Japan.

### How can my dog be infected?

The tiny immature forms of the worm (larvae) enter a dog via a mosquito bite. They are carried in the blood and settle in the right side of the heart. Here the larvae develop and grow into adult worms. The presence of the worms in this location can lead to serious symptoms, depending on how many there are.

### How do I know if my dog is affected?

Mild signs may show as tiring and an inability to cope with strenuous exercise; there may be a cough. More advanced or heavier infections can result in heart failure:

- Fatigue.
- Breathing difficulties and cough, sometimes with blood.
- Abdominal swelling due to fluid accumulation.
- Weight loss and poor overall condition.

### How will my vet confirm the disease?

The disease may be strongly suspected from clinical history and tests such as x-ray and ultrasound. Infection can be confirmed by finding tiny worm larvae known as *microfilaria* in a blood sample. Another blood test, to detect antigens (foreign proteins associated with the parasitic worms), may be used when microfilaria are not present.

### Can heartworm be treated?

Infected dogs can be treated with drugs to kill adult worms and microfilaria. These drugs are usually given by injection or by mouth. Side-effects and toxicity may occasionally occur during treatment, either due to the drugs or in response to effect of the drugs on the worms. As the worms are killed an allergic shock reaction develops in some dogs. If side-effects occur, additional treatment may be needed to support the dog and further treatment may need to be delayed to allow the dog time to recover.

If the animal has already developed heart failure when the disease is diagnosed additional treatment may be needed.

Normally, drugs to kill larvae are given 3-4 weeks after the adult worms have been eliminated. Medication to prevent further infection (monthly) is then started 2-3 weeks after larvae have been killed and a blood test has come back negative to prove that the dog is clear.

### How can I prevent my dog getting heartworm?

In areas where infection is high, preventative medication (milbemycin and avermectins), usually given monthly under veterinary prescription, is used to guard against heartworm infection. This prevention can be started in puppies at around 6-10 weeks of age. If your dog does not live in, or travel to, an area where heartworm is present they cannot catch the disease. Dogs in the UK are not at risk and preventative

## Heartworm disease



treatment is not routinely required.

**If you want any other information on health issues concerning your dog please contact your local Veterinary Surgeon.**