

Lungworm and French Heartworm

Here we aim to try to clarify the many theories on this horrible problem so here goes!

Dogs first

There are two main lungworms which attack your dog. One is strictly not so much a lungworm as a heartworm – *Angiostrongylus vasorum*. The other is known as the dog lungworm – *Oslerus osleri*. The heartworm is passed on via a host such as slugs and snails or frogs. Your dog doesn't have to eat the host – simply by leaving a bowl or toy in the garden for the slug to crawl over leaving its slimy trail can be enough. This picture was taken in the Lab garden! An old plastic bag had been left out and was colonized by over 50 snails! This could so easily happen in your garden. If you walk out in the countryside how many times have you passed an old fertilizer bag in the hedgerow? This could be lurking underneath and each one is a potential time bomb!



Oslerus osleri or dog lungworm, is passed from dog to dog or through the environment by being passed out in an infected dog's poo – dogs sniff poo!

Lifecycle of *Angiostrongylus vasorum*

In a nutshell, the lifecycle of the heartworm *A. vasorum* starts in the host (slug or snail). The dog picks up the larvae from that host by eating or even sniffing the slug or snail, and these larvae go through the dog's liver and then migrate through the body ending up in the pulmonary artery or right side of the heart. Here they lay eggs which hatch into larvae and those larvae move to the lungs, are coughed up, swallowed and passed out in the poo. They are then picked up by the slug or snail and the whole thing starts again. This can take as little as seven weeks although adult worms can live in the heart for 2 years!

Lifecycle of *Oslerus osleri*

O. Osleri has a much simpler lifecycle. An infected dog passes out first-stage larvae into the environment. Your dog picks these up and they make their way to the lung where they develop into adults in nodules in the trachea and bronchi. Here females lay eggs which hatch in the lung. These larvae are carried back up the trachea and are swallowed and then passed out to start the cycle again – the dog may also vomit up the larvae. The lifecycle takes about 10 weeks.

Symptoms of both infestations are coughing, loss of breath and stamina, profuse bleeding after a cut (*A. vasorum*), loss of weight and general depression. However! The sinister thing about both these parasites is that your dog may show no symptoms at all but the damage is being done within your dog's organs. The wetter the weather the more likely it is that there will be slugs, snails and frogs about! If you walk your dog in the country, parks or even in the town he or she may pick up parasites from sniffing other dogs' infected poo.

Now for the cats:

Capillaria aerophila in cats has a direct cycle, with infective eggs being ingested with food or water. It is found very rarely in the UK however, cats coming in from the USA can be infected. *Aelurostrongylus abstrusus* is much more common here. As with *A. Strongylus* in dogs, the intermediate hosts are snails and slugs, as well as paratenic hosts, including rodents, birds, amphibians, and reptiles. A paratenic host is not strictly necessary for the life cycle of the worm but is a useful transporter for them! The cat eats the host and the larvae then travel to the lungs via the lymphatic system or the bloodstream. They form nodules on the lungs. They then hatch out, and are coughed up and swallowed. The parasite enters the gut and is passed out in the faeces.

Respiratory signs are usually progressive and worsening. Heavy infections can cause severe bronchopneumonia, with your cat showing open-mouth, strained breathing. There might also be coughing and sneezing and longer term signs such as anorexia, lethargy and wasting.

For both animals the worst infestations have traditionally been confined to the South of England, pockets of the Midlands and the North West but we at Wormcount.com Veterinary Laboratory are seeing positive samples being sent in from wider afield. So what can I do about it?

There are two options to help protect your dog or cat. You can either use a chemical wormer such as Advocate monthly as a prophylactic to ensure that if the parasites are picked up, then they should be killed immediately. This is a very strong-arm approach but in certain areas of the country it is often the only way to ensure peace of mind. Unfortunately it is widely held within the animal health community that natural wormers (excellent for roundworm infestation) are not effective against lungworm and heartworm as they tend to work in the gut and not in the other organs.

Alternatively you can have your dog lungworm tested regularly (at least every six months, three monthly in high risk areas) to ensure that he or she has not picked up any of the harmful larvae. If you have a positive result you can then start a course of medicine to kill the parasites. We understand that Wormcount.com is the only veterinary laboratory that accepts samples direct from the pet owner without referral from your vet. This means that you save a lot of time and money as if your animal gets a positive result from us then you can take the results email that we send you to your vet who can start treatment immediately without having to do the tests first. We have heard that some vets charge £80 for this lungworm test! Of course you will need to go to your vet to start medication immediately you receive a positive result but thankfully this is a relatively straightforward if longwinded procedure but the good news is that most dogs and cats, if caught early enough, will make a good recovery.

But that is the essence of treatment. Catching the infestation before the worms start to do too much damage. The lungworm test we do here at Wormcount Dotcom looks for live larvae, not eggs and we ask that you send us a sample made up of poo from 3 consecutive days so that we minimize the risk of missing anything. So if you think your dog or cat is showing signs of a lungworm infestation or if you live in a high risk area or if you just want peace of mind, order a lungworm or combination worm egg count and lungworm kit on our website.

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