

Giardia infection in dogs and cats

What is *Giardia*?

Giardia duodenalis (also known as *G. intestinalis* or *G. lamblia*) is a global, widespread protozoal parasite found in humans and animals, including dogs and cats. The parasite occurs commonly in densely populated environments such as kennels, pet shops and animal shelters.

Clinical signs

Giardia infection can cause watery, soft, sometimes intermittent, diarrhoea in all species which is known as giardiasis. However, the majority of infected dogs and cats do not present clinical signs.

Prognosis is good in most cases but young, debilitated, geriatric or immunocompromised animals are at increased risk of complications.

Epidemiology

Patency usually persists for several weeks or months. *Giardia* cysts present in faeces and the environment are immediately infectious to other animals. The parasite can be transmitted by ingesting these cysts from contaminated ground, food or drinking water and only a few cysts are needed to cause infection.

Diagnosis

Giardia infection can be diagnosed by examining the faeces of symptomatic dogs and cats with direct smear, faecal flotation with centrifugation (relatively low sensitivity, with concentration methods such as SAFC* or MIFC* having a higher sensitivity), or an antigen test such as a sensitive, specific faecal *Giardia* ELISA*. Positive faecal ELISAs* should be interpreted in relation to clinical presentation as many clinically healthy dogs and cats will test positive but do not require treatment.

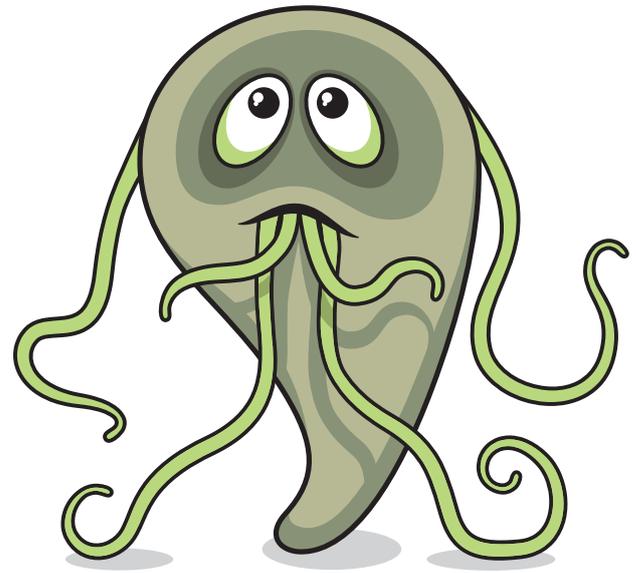
Diagnostic testing should be repeated in animals where clinical signs have not improved. This should be done no more than 5 days after the completion of treatment to establish if infection is persisting. A later positive test, e.g. 2–4 weeks after completion of treatment, can also indicate reinfection has occurred.

If the animal has been treated and *Giardia* cannot be detected, but clinical signs persist, further diagnostic procedures are advised (e.g. for other protozoal infections, chronic inflammatory bowel diseases, food allergy).

Treatment

When a healthy animal without clinical signs has tested positive for *Giardia*, therapy is not advised. This is generally considered a transient, insignificant finding. The exception is when treatment to control the parasite is part of an overall control programme in breeding or kennel establishments.

Therapy is indicated in animals testing positive for *Giardia* presenting clinical signs.



Fenbendazole (directly or after metabolisation of its prodrug febantel) and metronidazole, are effective against *Giardia* in animals. Neurological side effects from metronidazole can occur, especially in small cats and kittens therefore fenbendazole (or febantel in licensed preparations) should be the first line treatment. Metronidazole (alone or in combination with fenbendazole or febantel) may be used in cases of refractory giardiasis. Restrictions apply for all three compounds and data sheets should be read carefully, especially if being given to lactating animals. Febantel is only available as a multi-drug formulation and therefore other drugs included may be used without indication if giardiasis is the sole reason for treatment.

In summary, veterinary-approved first line treatment is fenbendazole (50 mg/kg qd) for 3–10 days. A 3-day treatment duration in line with product licences is often not sufficient; if required, longer courses of treatment would be off licence.

For clinically affected animals, the perineum and hindquarters can be washed with a chlorhexidine shampoo to remove cysts from the hair.

Control

A low-residue, highly digestible diet may help to reduce diarrhoea during treatment. Diet should also be low in carbohydrates and high in protein to inhibit excessive growth and replication of *Giardia* and *Clostridium* spp.

To reduce contamination with cysts, the kennel environment should be cleaned, dried and disinfected with chlorine bleach, chloroxylenol or quaternary ammonium compounds. The areas should then be allowed to dry for 48 hours before reintroducing pets. Bedding should be washed at 60°C or above.

Zoonosis

The risk of transmission from dogs and cats to humans is considered to be very low. Dog and cat specific *Giardia* assemblages are rarely found in humans but human assemblages may circulate within dog and cat populations. An infected human may therefore be a source of infection to a dog or cat which may then in turn represent a zoonotic risk. While the zoonotic risk is low, people in contact with infected pets should consult their GP if they have relevant clinical signs.

For more information about *Giardia* infections, please refer to ESCCAP's Guideline 6: Control of Intestinal Protozoa in Dogs and Cats

*SAFC (sodium acetate-acetic acid-formalin-concentration) *MIFC (merthiolate-iodine-formalin concentration) *ELISA (enzyme linked immunosorbent assay)