

BAKENKOP
DIEREKLINIEK • ANIMAL CLINIC

Address

1 Caper avenue, Eldoraigine x 3, Centurion

Tel 012 653 4474/2

After hours 082 5511 966

Fax 012 653 4353

Web bakenkopvet.co.za

Hookworm (Ancylostoma)

Hookworm is a *common* intestinal parasitic worm. They are small, thin worms, about 0.6 to 1.3cm long and hardly ever visible to the naked eye. They bite into the mucosa of the small intestines and *suck blood and tissue fluids* from the host. This can lead to severe blood loss and malnutrition. Young animals are more severely affected. Dogs and cats are affected by different species of this worm.

How do pets get infected?

There are 5 routes by which our pets can acquire the infection:

- Migration through the placenta in utero
- Ingesting larvae in mother's milk
- Ingesting larvae in the soil
- Direct penetration of the skin (usually through foot pads or belly)
- Ingesting an intermediate host e.g. cockroaches

Cats are usually infected only by two routes:

- Direct penetration of the skin
- Eating infected insects e.g. cockroaches

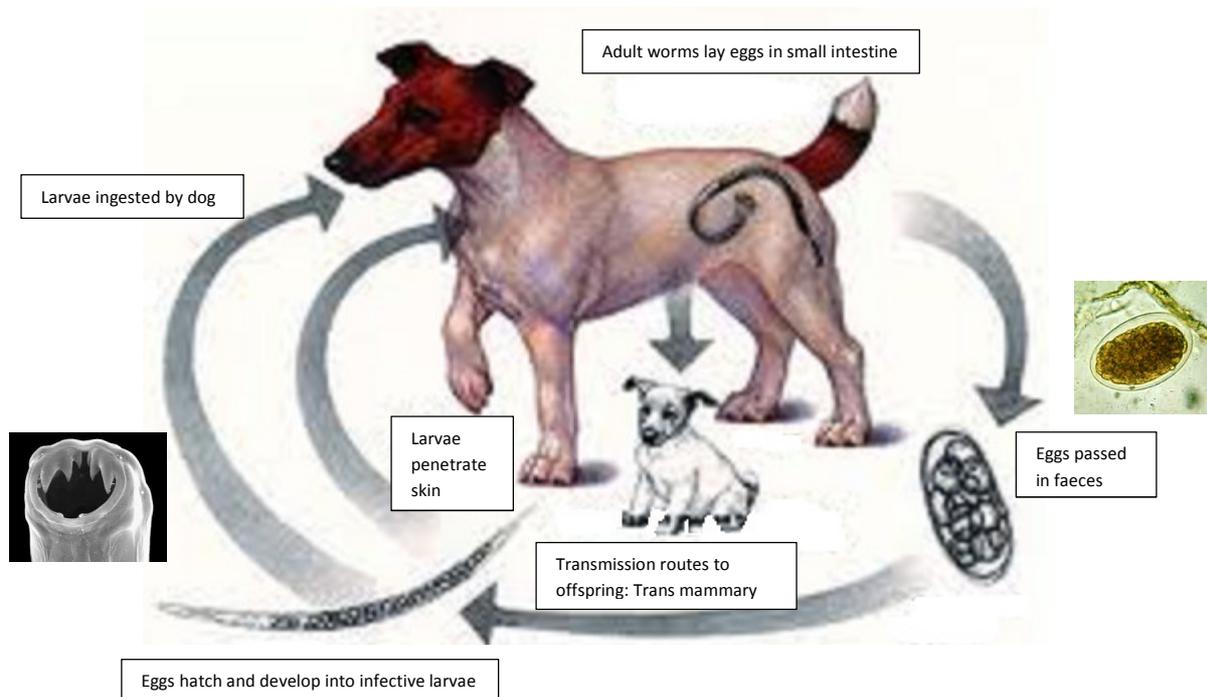
The majority of serious hookworm infestations in *puppies and kittens* occur during the first two months of life and are acquired through the mother's milk.

In *adult animals*, the most common routes of infection are ingesting larvae and larvae migrating through the skin. Some larvae encyst (stage of arrest) in tissues, while others migrate through the lungs to the intestines, where they mature into adults. In 2-3 weeks, the animal begins to pass eggs in its faeces. These eggs incubate in the soil. Under favourable conditions (warm temperatures and humidity), the eggs hatch within 5-7 days.

Pregnancy and Hookworm

Larval cysts embedded in the tissues of a pregnant animal, *become active due to the hormones* produced during pregnancy. These larvae migrate to the unborn puppies or kittens and to the mammary glands.

Hookworm Lifecycle



Clinical Symptoms of Hookworm Infestation

- **Anaemia:** Mucus membranes and gums are pale. Hookworms attach to the small intestine with six sharp teeth and suck blood and tissue fluids from the host. This can lead to severe blood and nutrient loss and even death of young puppies or kittens.
- **Diarrhoea:** Tarry/Bloody. Worms irritate the wall of the gut, resulting in diarrhoea which may contain blood or mucus. Digested blood in stool will be seen as dark or tarry diarrhoea.
- **Weight loss and emaciation:** Due to vital vitamins and nutrients being utilized by the worms, animals will often lose weight while still having a ravenous appetite.
- **Other symptoms:**
 - Some puppies or kittens in a litter die suddenly
 - Poor appetite
 - Coughing
 - Abdominal pain
 - Dull and rough coat
 - Impaired fertility
 - Lethargy
 - Inflammation of skin between toes
 - Pets with a chronic hookworm infestation, often have no symptoms
 - Most animals become carriers via larvae encysted in their tissues. During periods of stress or illness, these larvae are released and a new outbreak of bloody diarrhoea occurs as worms appear in the intestines.

Hookworm is contagious to humans

Hookworm larvae from infected soil can *penetrate the skin* of humans, causing itchy red tracks as they migrate within the layers of the skin. The condition is known as cutaneous larva migrans or creeping eruption. *Children are more at risk* of contracting the disease, since they often play in sandy soil or in contaminated sandpits. Scratching will lead to a secondary bacterial infection.

Treatment: Pets

- Treat *all the in contact dogs* with an effective worm remedy daily for 10 days or with Advocate (new spot on product) monthly for 2 months.
- Treat all in contact cats with a broad spectrum effective worm remedy.
- *Deworm all animals again 2 weeks* after the 10 day course has been completed.
- Deworm *4 times/year* with a broad spectrum de-wormer. (Deworming remedies cannot be absorbed into the host's body from the GI tract and can only kill the worms living within the GI tract. The follow up deworming is thus important to kill the migrating worms, migrating from tissues back to the intestines.)
- We recommend a *balanced intestinal diet* to support the gut wall for at least 3 months after diagnosis.
- Severely affected animals might need to be *hospitalised* for blood transfusions, fluid therapy and general support. Be aware there is a possibility of sudden death even with treatment.

Treatment: Environment

- The environment where your pets roam must be clean.
- *First ten days*: Remove faeces daily. Place faeces in a black bag and remove with trash.
- *Soil* can be treated with a strong salt solution: 160g/l of boiling water and spray infected areas profusely. Note: Salt is detrimental to soil quality and plants.
- *Paving* can be treated with bleach. Use a 1% bleach solution (10ml bleach per 1 litre of water). This will cause the larvae to shed their protective sheath and become subject to dehydration.
- After initial clean-up, faeces must be removed at least *twice weekly*.
- *Litter trays* must be cleaned out daily.

General tips on preventing worm infestation

In animals

- Deworm your pets *every 3 months* with a broad spectrum effective worm remedy
- Keep your animals and their bedding free from adult and immature fleas as fleas transmit tapeworm infestation to the pet and family!
- Do not feed raw or undercooked offal to your pets – many tapeworm species are transmitted via infected meat and complete their life cycle in the dog and cat. Do not feed raw fish to cats.
- Remove faeces at least twice a week from the environment and clean out litter trays daily.
- Any *new pet* should be examined by a veterinarian for parasites and other signs of disease. All pets should be routinely examined at least once a year for parasites and to receive their yearly vaccinations.
- *Puppies and kittens* should be dewormed from two weeks after birth.

In humans

- Do not allow children to play in areas where dogs and cats defecate.
- Wash your hands well after handling pets.
- Teach children to wash their hands before eating and not to play with pets whilst eating.
- Deworm family members at least 2-4 times a year with a broad spectrum anthelmintic. Seek advice from your doctor or pharmacist.



Deworming guidelines for Cats and Dogs	
Kittens & Puppies	Every 2 weeks until 3 months, then once/month to 6 months of age and then 4 times/year
Adult Cats & Dogs	Treat regularly, every 3 months
Breeding Cats & Dogs	Treat all queens/bitches before mating and again 10 days before young are born
Lactating Cats & Dogs	Lactating cats/dogs should be treated concurrently with the kittens/puppies
Newly acquired kittens, puppies, cats and dogs	Should be treated immediately and repeat after 2 weeks and then follow the guidelines above