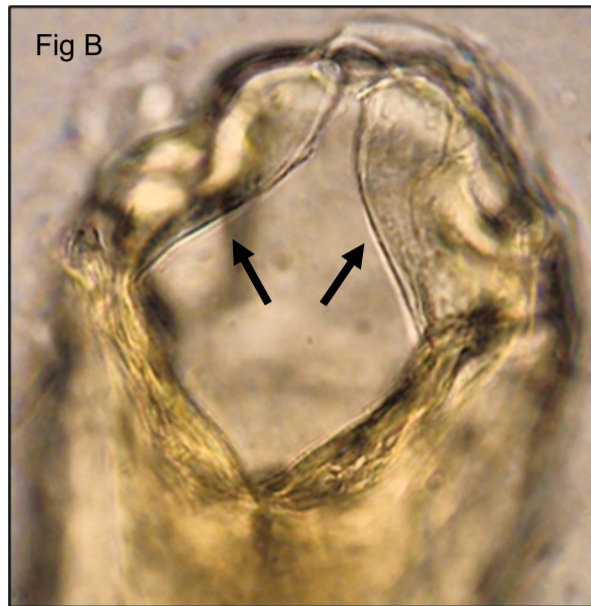


Uncinaria stenocephala 'the northern hookworm' of dogs is prevalent in temperate and cold climate countries. The overall life cycle is similar to that of the more pathogenic species *Ancylostoma caninum* which is endemic in tropics and warm temperate regions of the world. Other hookworms in these regions of the world include *A. braziliense* of dogs and cats, and *A. tubaeforme* of cats.



2. Adult worms produce eggs which appear in faeces. Eggs of *Uncinaria* measure up to 80 x 50µm

1. *Uncinaria stenocephala* (Fig A) are found in the small intestine and are smaller than *A. caninum*, being 1cm in length. They do not possess teeth as such, but the mouth margins are modified into two cutting plates (Fig B, arrows). These worms do not suck blood but anchor on the mucosa as 'shallow plug feeders'. *Uncinaria* is less pathogenic than *A. caninum* but the worm can cause protein leakage from the gut and is linked with diarrhoea.



2. As for *Ancylostoma* spp., the first stage larva hatches from the egg within 24 hours under optimal conditions and feeds and moults in the environment to the L2 stage, and then to the infective third stage larva, the L3.



3. Dogs become infected by ingesting third stage larvae. Percutaneous transmission can also occur but rarely results in worms establishing in the intestine. Dermatitis may occur when L3 enter the skin, especially between the toes, causing 'Pedal dermatitis'

Uncinaria is more common in rural dogs and in greyhounds, and dogs kept in pens with hard floors on which L3 may survive better. There is no direct transmission of L3 via milk from bitch to offspring.

THE PRE PATENT PERIOD FOR *UNCINARIA* IS 2-3 WEEKS

Other hookworms of dogs and cats, and zoonotic Cutaneous Larva Migrants



Ancylostoma tubaeforme of cats has three pairs of marginal teeth.

A. braziliense (above) has two pairs.

The life cycle of *Ancylostoma tubaeforme* (cats) and of *A. braziliense* (cats and dogs) in warm countries is similar to that of *A. caninum* but there is little evidence of transmammary transmission. *Ancylostoma braziliense* does not suck blood and is not particularly pathogenic in pets but it is a significant cause of human cutaneous larva migrans (CLM), whereby the L3 can invade the dermis, and a cause pruritic lesions due to larval movement in the skin. Human CLM due to percutaneous L3 of *A. caninum* and *U. stenocephala* can also occur, but to a lesser extent. In these cases, the larvae do not develop to adult worms. Intestinal hookworm disease in humans is caused by *Ancylostoma duodenale*, *A. ceylanicum*, and *Necator americanus*.