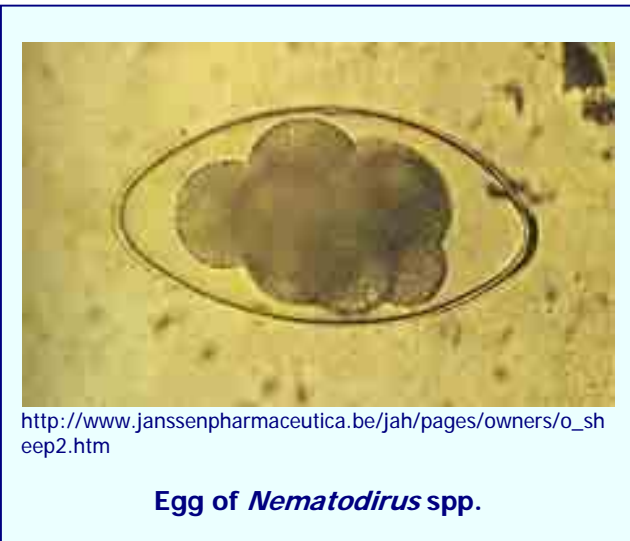


Nematodirus leporis

Esther van Praag, Ph.D.

N. leporis (thin-necked intestinal worm) is rarely found in rabbits and hares, except during the spring months. It is encountered mainly in wild rabbits, rarely in house-rabbits, living in temperate, cold, and elevated environments. *N. neomexicanus*, *N. arizonensis* and *N. triangularis* have furthermore been reported in wild rabbits. There is no reported public health danger related to this parasite.

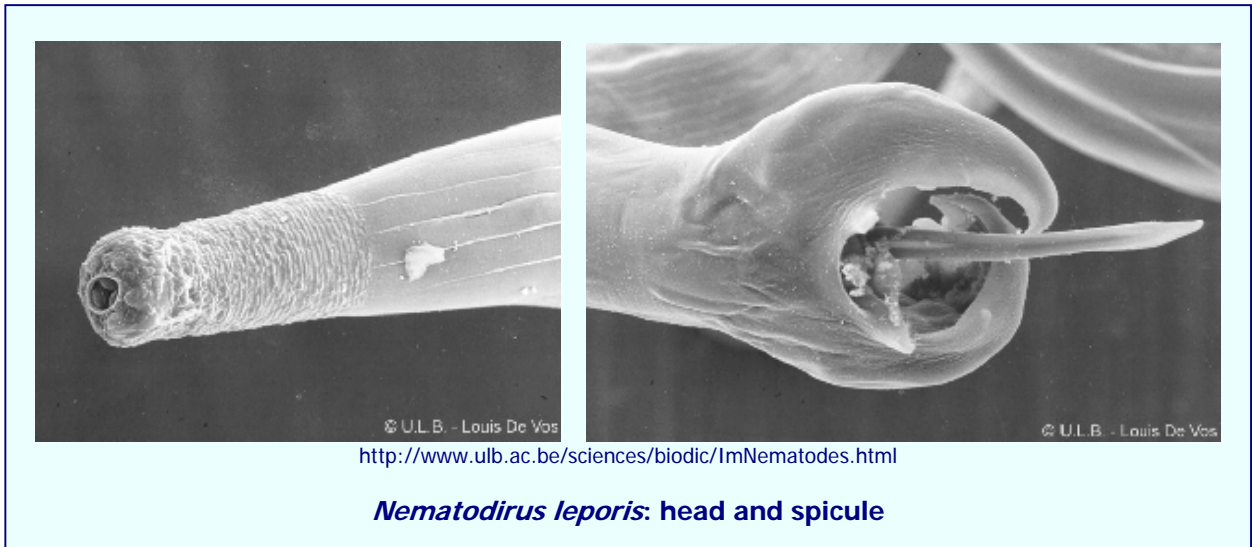
The life cycle of *Nematodirus leporis* is direct, with no intermediate host. The thick-layered eggs are much larger (250*100 µm) than those from other Trichostrongylidae and are extremely resistant to desiccation and to freezing conditions or snow. Usually the eggs have started to divide rapidly and 1 to 8 dark cells can be observed. The development of the larvae is generally slow, up to 2 months in temperate climates, and depends on the humidity and the temperature of the environment. During hatching, the



larva shed the first-stage-cuticle, which is left behind in the egg-shell. The L₃ larva remains within in the egg- shell, which provides it with a double protection against adverse environmental conditions. The L₃ larvae can thus survive up to one year in pasture fields. Once the L₃ larva is ingested by the host, it will exsheath and move to the paramucosal lumen of the small intestine, and molt into the L₄ and immature adults.

The adult parasite is very slender and generally measures 30 mm long. Its body shape is curled and present 18 longitudinal striations. The anterior part is reduced, with an inflated cuticle, which is usually striated. The anterior part is inflated with a noticeable dorsal esophageal spicule. The male worms possess a bursa with 2 large lateral lobes, covered with mediolateral and caudolateral striations. The female has a tale that ends bluntly.





Clinical signs

The clinical and pathological sign of the presence of *Nematodirus* sp. only becomes noticeable with a heavy infestation, leading to diarrhea, a loss of weight and affected performance. Necropsy shows that the large numbers of worms form clumps resembling cotton wool, and are usually intertwined around the intestinal villi, causing atrophy, degeneration and necrosis of the surface enterocytes.

The occurrence of *Nematodirus* sp. is analyzed by fecal flotation, for the presence of the particularly large Strongyle-type eggs.

Treatment

Benzimidazoles	fenbendazole	20 mg/kg, PO, repeated after 10-14 days
Macrolides	ivermectin	0.4 mg/kg, PO, SC, repeated after 10-14 days

Further information

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