



Toxocara canis



Toxocara canis is the causative agent of toxocarosis. Mean antibody prevalence levels of about 1-8% were measured in healthy persons in Germany, Austria and Swiss in serological screening based on a specific ELISA.

After infection, the Toxocara larvae hatch from the eggshells in the small intestine, penetrate the intestinal wall, and migrate hematogenously into the liver, lungs, CNS, eyes, musculature, and other organ systems. Larvae caught in the capillary filter leave the vascular system and begin to migrate through the organ involved.

This results in hemorrhages and tissue destruction as well as inflammatory reactions and formation of granulomatous foci. Living larvae are encapsulated in connective tissue in all organs except the CNS, but they can also leave the capsules and continue migrating. The larvae can live for a number of years. Development of adult Toxocara stages in the human intestine is a very rare occurrence.

After human infection a visceral larva migrans (VLM) develops. The VLM remains inapparent in most cases. Symptomatic cases are most frequently observed in children aged two to five years. The clinical symptoms depend on the localization and degree of pathological changes and include non-specific and varied conditions such as eosinophilia, leukocytosis, hepatomegaly, brief febrile episodes, mild gastrointestinal disorders, asthmatic attacks, pneumonic symptoms, lymphadenopathy, urticarial skin changes, central nervous disorders with paralyses, or epileptiform convulsions. Eye infections are seen in all age groups and present as granulomatous chorioretinitis, clouding of the vitreous body and other changes. Ocular toxocariosis is often observed without signs of visceral infection.

Dogs all over the world, especially younger animals, are frequently infected with adult Toxocara roundworms. Intensive contact with dogs is a direct way of infection. Fairly high levels of contamination of public parks and playgrounds with Toxocara eggs (sandboxes >1-50%) have been found in many cities in Europe and elsewhere. Also wheelchair users are endangered.

Species	Disease	Symptoms	Mechanism of infection
Toxocara canis	Toxocarosis Visceral larva migrans (VLM)	Eosinophilia, leukocytosis, fever, cough, asthmatic attacks, lymphadenopathie, hepatomegaly, gastrointestinal disorders, cardiac symptoms, urticarial skin changes	Humans are infected by accidental peroral ingestion of infective eggs (geophagia, contaminated foods).

Infections may be diagnosed by:

- Microscopy: Determination of eggs resp. adult worms is impossible
- Serology: Determination of specific antibodies based on the ELISA-technique

NovaLisa™ Toxocara canis IgG ELISA:

The NovaLisa™ Toxocara canis IgG ELISA is intended for the qualitative determination of IgG-class antibodies against Toxocara canis in human serum or plasma (citrate).

Antigens:

Synthetic oligopeptides with glycosylation

Specific performance characteristics:

	Intraassay			Interassay			Sensitivity %	Specificity %
	n	Mean	CV %	n	Mean	CV %		
IgG	12	1,017	2,6	5	1,049	8,1	>95	>95

Order information:

ELISA	Number of determinations	Product number
Toxocara canis IgG	96	TOCG0450