

Tapeworm

Tapeworms are worms that are characterized by a flat body and a parasitic way of life. These worms parasitize especially in the Intestine of most vertebrates, where they attach to the mucosa using the head. The tapeworm head is equipped with suction grooves, hooks, or suction cups.

The adult has a **head**(skolex) and a **articulated body**, which consists of approximately 1000-2000 cells (proglottis). Each article contains a complete set of genitals. As an individual grows, individual cells containing eggs, or "oncospheres," mature and separate from the body. The cells thus released leave the stool and the eggs contained in them are subsequently released. A mature article may contain 6000000-8000000 eggs. Tapeworms do not have a mouth opening and therefore receive nutrients **from all over the body**. They reach lengths from 3 to 12 meters.

Life cycle

Mature cells (proglottis) containing fertilized eggs are gradually separated from the body of the tapeworm living in the Small Intestine human. After separation from the tapeworm body, the cells are excreted in the faeces into the external environment. Subsequently, the intermediate host (cattle) becomes infected by ingesting eggs or separate body parts. In the duodenum intermediate host, the larvae (oncospheres) are released and then pass through the intestinal wall into the blood or lymphatic system and are introduced into organs, especially the muscle. In muscle tissue, there is a development of about ten weeks to the stage of *cysticercus bovis* - larval stage. As a definitive host, a person is usually **infected by ingesting uncooked meat** that contains bumps. In the human gut, these bumps adhere to the gut

Representatives

Taenia saginata (tapeworm defenseless)

Taenia saginata is a cosmopolitan widespread parasite whose definitive host is **human** . An adult parasitizes a person in the small intestine, where he feeds on digestion. It reaches a length of 3-10 meters. The intermediate host of the defenseless tapeworm is **cattle**. Humans are usually infected by ingesting uncooked meat containing parasite bumps.

Epidemiology

The defenseless tapeworm is a widespread parasite with the highest incidence in Central and East Africa. The incidence of those infected in the Czech Republic is declining from year to year. For example, in 2011, more than 2,300 people were infected and in 2012 only 6 were infected, and in 2016, 56,000 were infected.

Symptoms

Infections with this parasite are usually asymptomatic, **gastrointestinal problems** may occur (abdominal pain, diarrhea, constipation, nausea and weight loss).

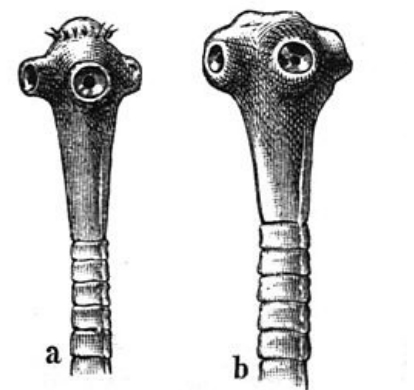
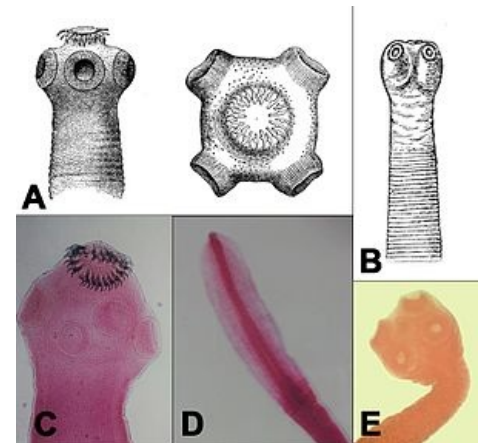
Diagnosis and treatment

The basic diagnostic methods include rectal swabs and subsequent stool examination with eggs. More specific examination methods, such as PCR or **enzymatic methods**, must be used to identify individual tapeworm species. Template:HVL or a single dose of Template:HVL is used to treat the disease. A follow-up examination [Stool examination] should be performed two months after the start of treatment to evaluate the success of the treatment.

Taenia solium (tapeworm)

It is also a cosmopolitan widespread parasite which, like the defenseless tapeworm, parasitizes in the human small intestine. The intermediate host of this parasite is most often the **domestic pig**, or the **wild boar**. A human can also become an intermediate host, where there are larvae in human organs. This serious disease is called cysticercosis.

Morphology



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tapeworm cycle

The body of an adult consists of a scolex (header) and several hundred articles. A fully developed representative of this species reaches a length of 2-4 m.

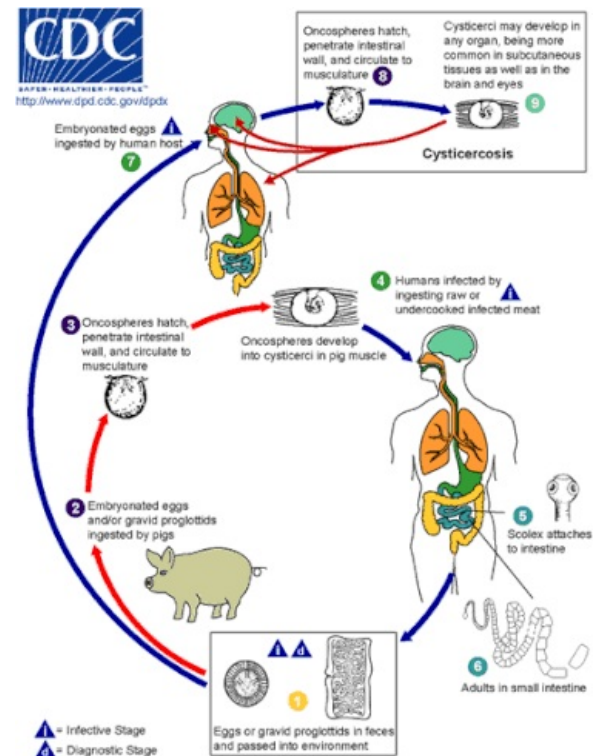
Life cycle

The adult parasitizes in the human duodenum and small intestine, followed by the separation of individual cells from the tapeworm body. These articles then leave the person with the stool. The pig (intermediate host) is usually infected by ingesting these eggs. Larvae are then released from the eggs in the small intestine and penetrate the intestinal wall. The larvae enter the bloodstream and are then distributed to organs throughout the body, especially the muscle, liver, eyes and brain. Once the larva is attached to the tissue, it is transformed into a cysticercus. Cysticercus develops 7500 days.

Links

References

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life cycle of tapeworm