

# Hymenolepis nana

**Hymenolepiosis** is a diarrheal disease, caused by *Hymenolepis nana*. The transfer takes place *orofecally* by the parasite's eggs. The infection is worse in malnourished children and in individuals with immune deficiency.

## *Hymenolepis nana*

*Hymenolepis nana* (Baby Tapeworm) has a scolex, which is equipped with rostellar hooks. The female is 4-8 cm large<sup>[1]</sup> and produces eggs that enter the intermediate host (especially insects) with food. The "oncosphere" is released from the egg, which penetrates the intestinal mucosa and mechanically damages it. Inside the mucosa, a "cysticercoid" is formed, which is infectious to the definitive host (rodents, "human"). In addition to this classic two-host cycle, there may be a single-host cycle, in which the mature cysticercoid is released into the lumen of the intestine and develops into an adult. The parasitic tapeworm, which is attached to the wall of the Small Intestine, gradually separates the cells, which break down to release infectious eggs. Typically, this cycle takes place in a human being, who is therefore both an *intermediate host* and a *definitive host*. The one-host cycle significantly facilitates dissemination in children's groups or areas with reduced hygiene standards.

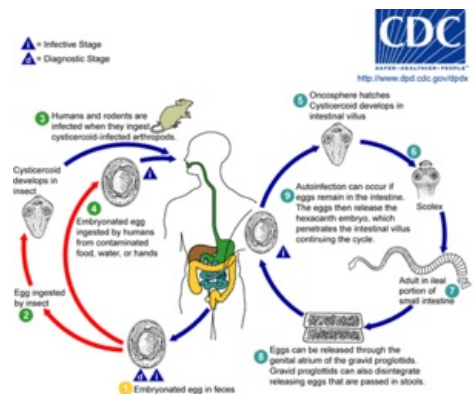


Adult tapeworm *Hymenolepis nana*

## Clinical course

Mild infections are asymptomatic. In the case of severe infection parasites significantly **damage the intestinal mucosa**, that manifests in the patients as a dull abdominal pain regardless of the food intake. Another signs are:

- diarrhea,
- mental anorexia,
- nausea,
- vomiting,
- heartburn,
- itching,
- anemia.



Life cycle of *H. nana*

## Diagnostic

Tapeworm eggs can be detected by microscopic examination of stool, but they are not shed regularly.

## Treatment

- Praziquantel – single dose.

## Links

## Related articles

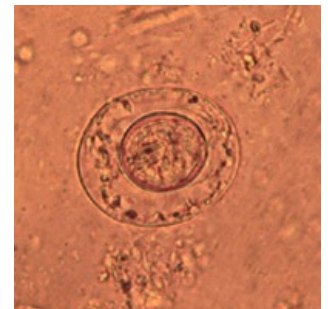
- Gastrointestinal parasitosis
- Diarrheal diseases

## Literature

- VOLF, Petr a Petr HORÁK. *Paraziti a jejich biologie*. 1. vydání. Praha : Triton, 2007. 318 s. ISBN 978-80-7387-008-9.
- BEDNÁŘ, Marek, Andrej SOUČEK a Věra FRAŇKOVÁ, et al. *Lékařská mikrobiologie : Bakteriologie, virologie, parazitologie*. 1. vydání. Praha: Marvil, 1996. 558 s. ISBN 8023802976.
- GOERING, Richard V a Hazel M DOCKRELL. *Mimsova lékařská mikrobiologie*. 5. vydání. 2016. 568 s. ISBN 978-80-7387-928-0.

## References

1. VOLF, Petr a Petr HORÁK. *Paraziti a jejich biologie*. 1. vydání. Praha : Triton, 2007. 318 s. s. 186. ISBN 978-80-7387-008-9.



Egg of *H. nana*

2. BEDNÁŘ, Marek, Andrej SOUČEK a Věra FRAŇKOVÁ, et al. *Lékařská mikrobiologie : Bakteriologie, virologie, parazitologie*. 1. vydání. Praha : Marvil, 1996. 558 s. s. 508. ISBN 8023802976.

## Source

- ws: <https://www.wikiskripta.eu/w/Hymenolepi%C3%B3za>
  - BENEŠ, Jiří. *Studijní materiály* [online]. ©2007. [cit. 2009]. <<http://www.jirben.wz.cz/>>.
1. VOLF, Petr – HORÁK, Petr. *Paraziti a jejich biologie*. 1. edition. Praha : Triton, 2007. 318 pp. pp. 186. ISBN 978-80-7387-008-9.