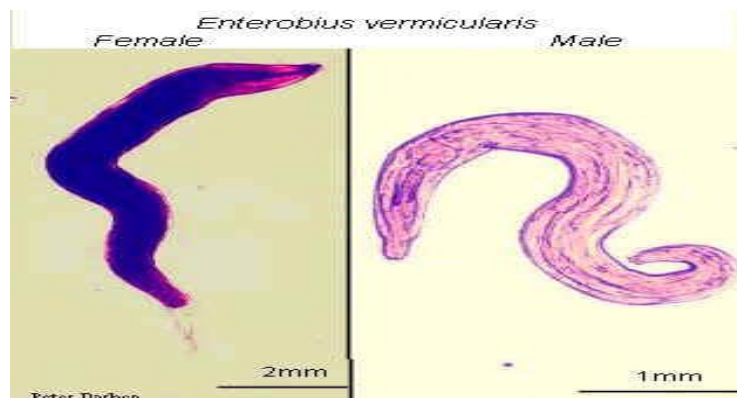


An  
e-content  
On  
*Enterobius*



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# Enterobius

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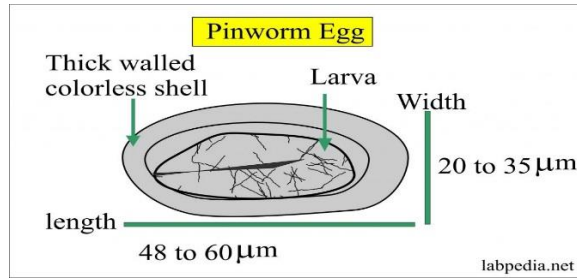
## *Enterobius*

(Common name: Pinworm, Threadworm)

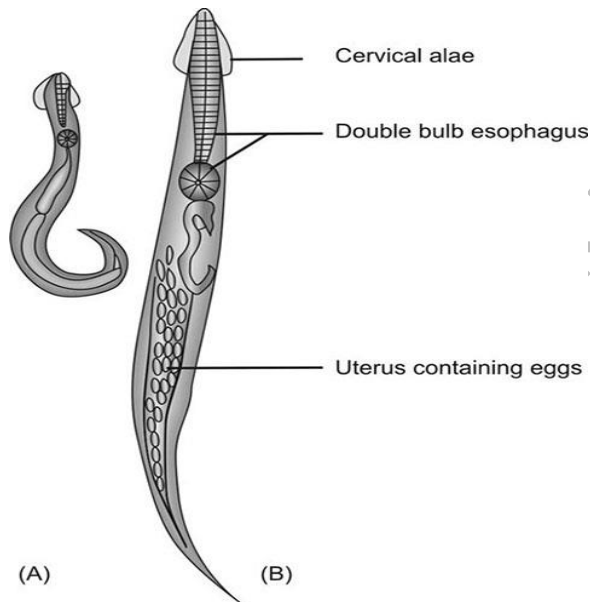
This nematode is cosmopolitan in distribution found all over the world. It is considered as the most popular infection of the world specially affects children. The adult worms remain attached to the mucosa of caecum and appendix with their oral end. Sometimes they may be found in the ascending colon and ileum.

### **Morphology**

- It is small and white colored thread like in structure and can be seen with naked eyes.
- It is spindle shaped, pointed at both the ends.
- Both male and female possess a pair of cervical alae (wing like expansion) at the anterior end.
- Buccal cavity is absent.
- Oesophagus is dilated in a globular bulb like structure at its posterior end forms a double bulb oesophagus which is a characteristic feature of the nematode.
- Male is 2-4 mm in length and .1-.2 mm in breadth. The posterior one third of the body is curved. Male is difficult to obtain as it dies after fertilization.
- Female is larger than male, 8-12mm in length and 0.3-0.5mm in breadth. It is straight and possesses a long tapering and pointed tail. Female dies after oviposition.
- Eggs are colorless and asymmetrical i.e. flattened on one side and convex on other side. They are 50-60- $\mu$ m in length and 30  $\mu$ m in breadth, surrounded by a transparent double layered shell containing a coiled tadpole like larva.



Source- labpedia.com



*Enterobius* Adult (A) Male (B) – Female

Source- jaypee digital | e-book reader

**Life cycle**

Man is the **only host**, no intermediate host required.

<b>Host</b>	- Man
<b>Site of Location</b>	-Caecum and vermiform appendix
<b>Mode of Infection</b>	- Ingestion of contaminated food and water/through air
<b>Infective stage</b>	- Embryonated eggs
<b>Larval stage</b>	- Rhabditiform larva
<b>Portal of entry</b>	- Alimentary canal
<b>Disease caused</b>	- Enterobiasis

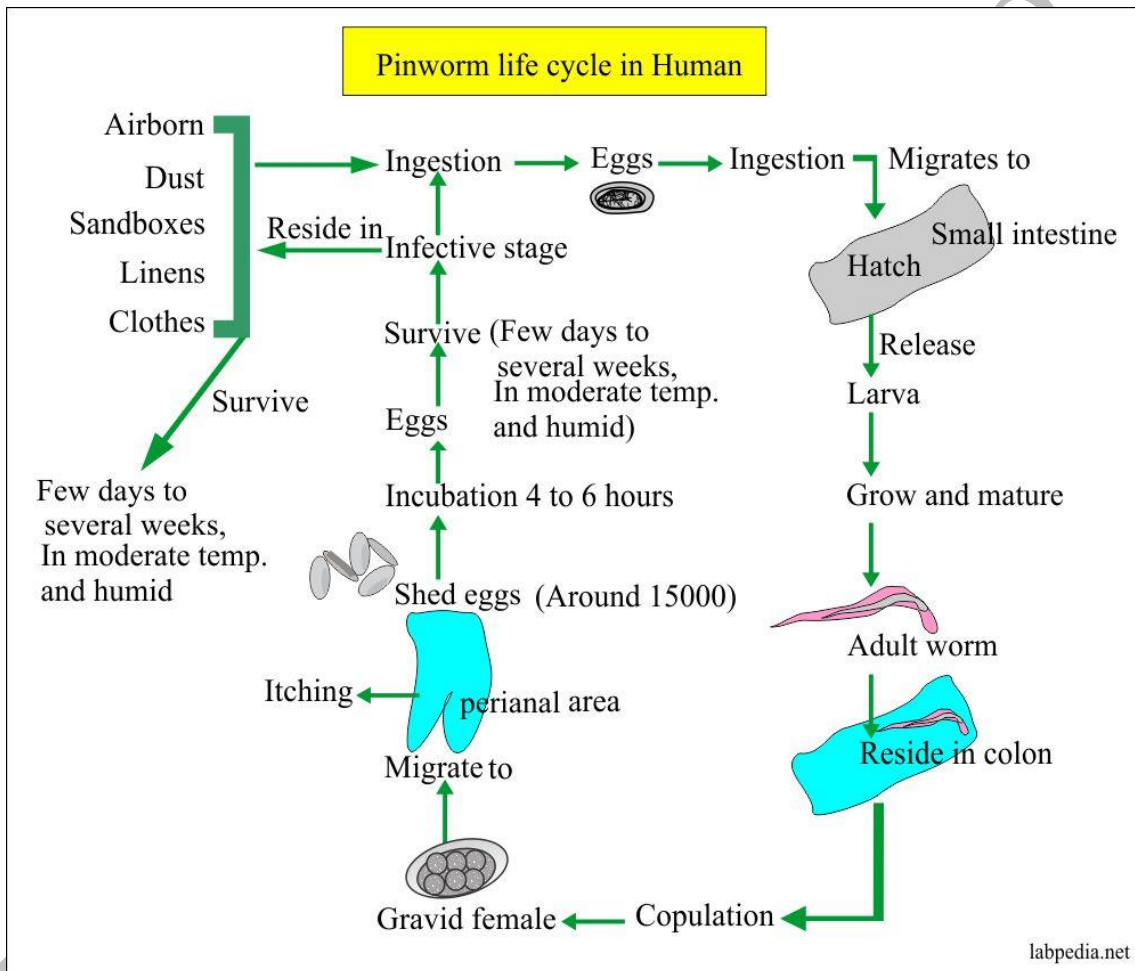
## Some other modes of infection

### 1. Autoinfection

The eggs cause intense itching and irritation of the perianal skin and due to scraping of that area fingers become contaminated and ingestion of food with contaminated fingers by the patient himself transfers the eggs again into the patient's body.

### 2. Retrograde infection

In this type of infection, eggs hatch in the perianal fold and larval worms migrate again to rectum and large intestine.



## Pathogenesis and Clinical Symptoms

1. Most of the infections are asymptomatic.
2. Infection is more common in children. The worm causes intense itching in peri-anal area (Pruritus perani) when it crawls out of anus to lay eggs.
3. Sometimes severe itching causes small abscesses which becomes sites for secondary bacterial infection.

4. In very rare cases worm migrate to female genital tract and may crawl to vulva and vagina producing irritation and mucoid discharge.

### Diagnosis

Detection of adult worms-

1. The worms are often discovered by patient himself.
2. The adult worms may be recovered by stool after an anema.
3. At the time of itching observation of anal region may reveal the gravid female.

Demonstration of eggs-

1. Microscopic examination of stool.

### Treatment

1. Single dose of mebendazole (100mg) or Pyrantelpamoate (10mg/kg body weight) and repeated after two weeks is highly effective.
2. Treatment of whole family or group is advisable to eradicate the infection.

### Prophylaxis

1. To maintain personal hygiene is very important.
2. Bed, linens and towels should be washed regularly.
3. Mass treatment of infected cases is required.

### Suggested reading

1. Chandler A. C., (1947). Introduction to Parasitology: With Special Reference to the Parasites of Man, 7<sup>th</sup> ed., John Wiley & Sons, Inc., London.
2. Noble, E. R. and Noble, G. A., (1982). Parasitology: The Biology of Animal Parasites, 5<sup>th</sup> edn, Lea & Febiger, Philadelphia.
3. Chakraborty, P. (2005). Text Book of Medical Parasitology, 2<sup>nd</sup> ed., New Central Book agency (P) Ltd., Kolkata-700009.
4. Chatterjee, K.D. (2012). Parasitology: Protozoology and Helminthology, 13<sup>th</sup> ed, CBS Publishers and Distributors Pvt. Ltd. Ansari Road, Daryaganj, New Delhi 110 002, India
5. Maheshwari Nanda (2016) Clinical microbiology and parasitology (for DMLT students) 3<sup>rd</sup> edition, Chapter 59, doi-10,5005/jp/books/12721\_60, ISBN 9789352500185.