



Trichuris



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Trichuris

Family: Trichuridae

Common name: Whip worm



Trichuris

Morphological Characters:

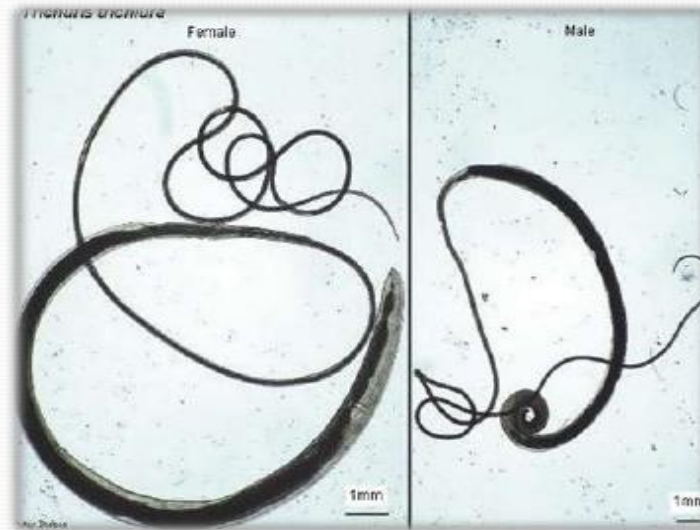
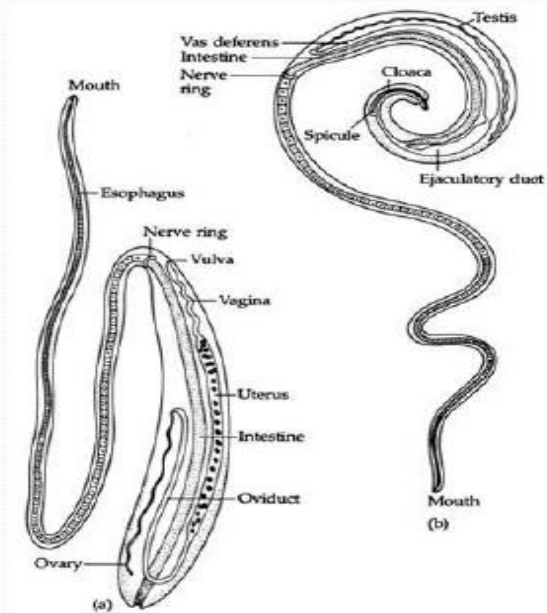
- ⌚ Commonly called “whip worms” due to thin whip-like anterior part of the body.
- ⌚ Anterior part of body is long and slender whereas posterior part is thicker.
- ⌚ Females are oviparous.
- ⌚ Hind end of male is curled and there is one spicule.
- ⌚ Eggs are brown in colour with thickened shell, barrel or lemon shaped, with a transparent plug at either pole whereas egg of *Trichuris trichura* has football shaped.

Egg



Trichuris

morphology



male, 30-45 mm; female, 35-50 mm

Egg



Trichuris species

Species	Host
<i>Trichuris ovis</i>	Sheep, goat, cattle etc.
<i>Trichuris discolor</i>	Cattle, buffalo, sheep & goat
<i>Trichuris globulosa</i>	Camel, sheep, goat, cattle etc.
<i>Trichuris vulpis</i> (Whip worm of dog)	Dog, cat & wild carnivores
<i>Trichuris campanula</i> <i>Trichuris serrata</i> (Whip worm of cat)	Cat
<i>Trichuris suis</i> (Whip worm of pig)	Pig
<i>Trichuris trichiura</i> (Whip worm of man)	Man

Trichuris

Final Hosts : Dog, cat, sheep, goat, pig, cattle, buffalo, man etc.

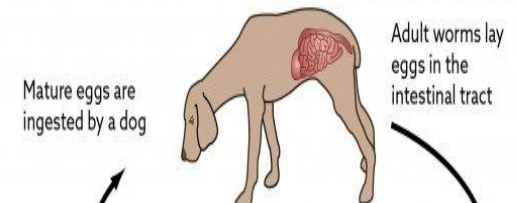
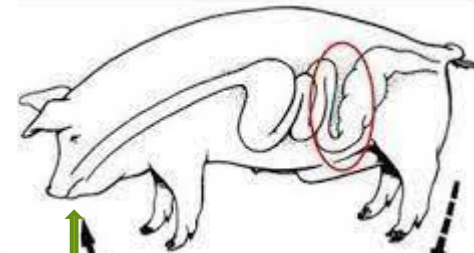
Location: Large intestine
(Caecum & Colon)



Trichuris

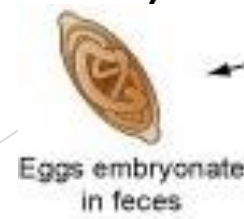
Life-cycle:

- ✓ Direct life-cycle
- ✓ Infective stage : egg containing L₁
- ✓ Soil transmitted worm



Mature eggs are ingested by a dog

Adult worms lay eggs in the intestinal tract



Eggs embryonate in feces

Trichuris

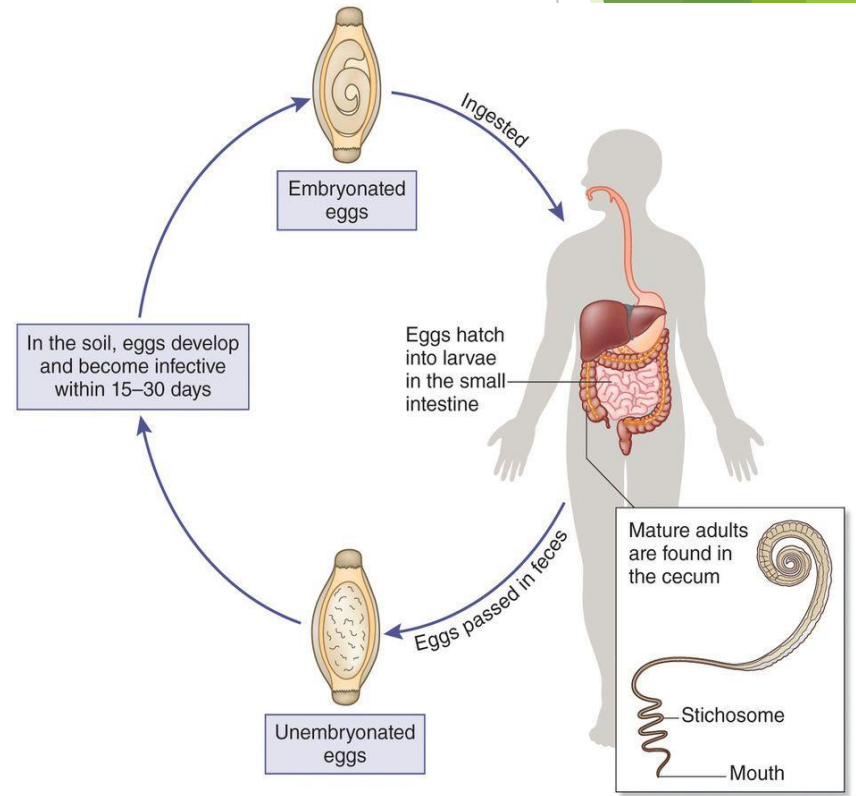
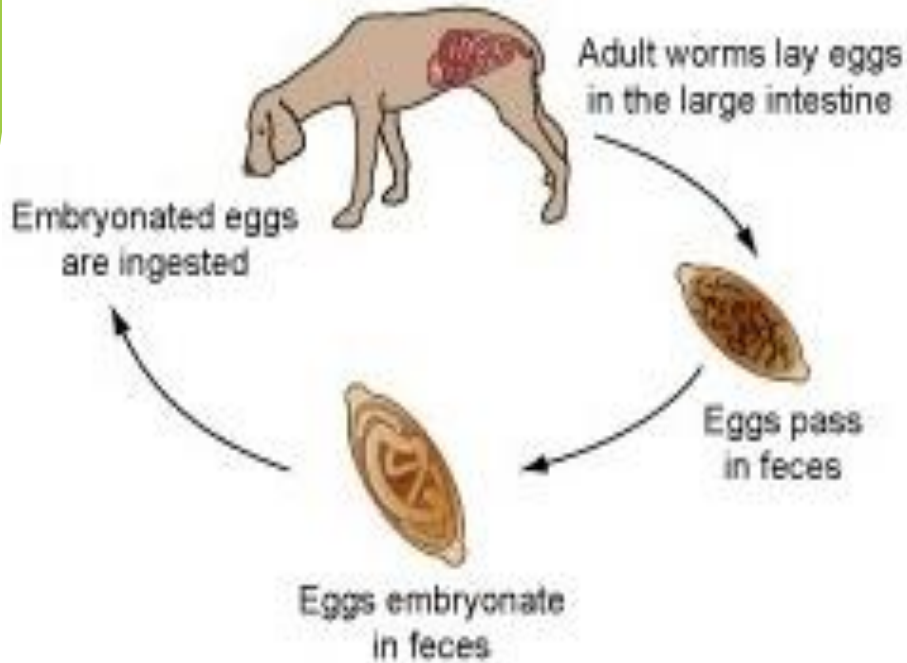
Transmission:

Final hosts get the infection

- by the ingestion of egg containing L₁ with feed /water/soil.
- Fertilized female worms produce numerous eggs (3,000-10,000 per day) which are excreted with faeces of infected host.

Trichuris

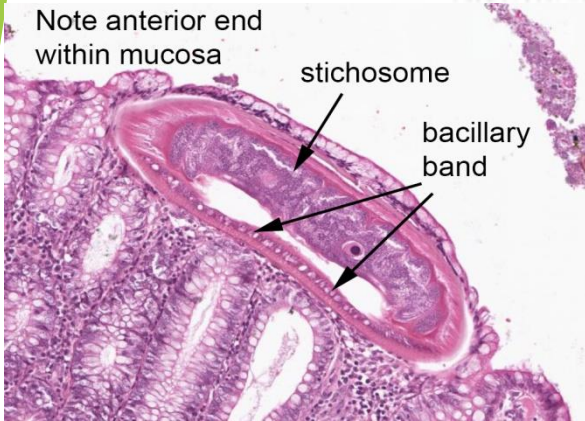
Life-cycle:



Note anterior end within mucosa

stichosome

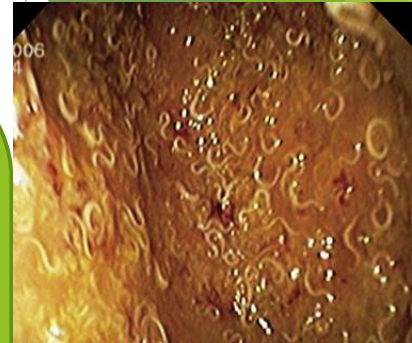
bacillary band



Trichuris

Pathogenesis:

- *Trichuris vulpis* and probably other *Trichuris* species are blood sucker.
- *Trichuris suis* infection leads to caecitis and colitis, mucosal necrosis and haemorrhage.
- Worms cause diphtheritic inflammation of the caecal mucosa in heavy infections.
- Rectal bleeding and rectal prolapse found in *Trichuris* spp. infection



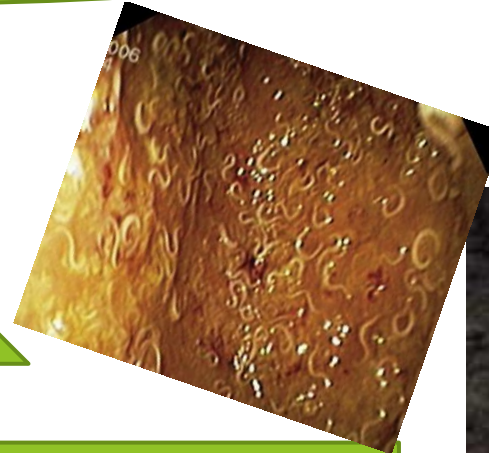
Rectal prolapse



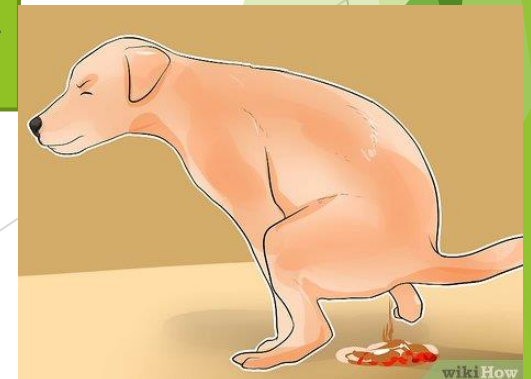
Trichuris

Clinical signs:

- ✓ Usually asymptomatic in sheep, goat and cattle.
- ✓ In pig, *Trichuris* infection caused anaemia, dehydration, anorexia, dysentery and weight loss.
- ✓ Severe infection in dog may lead to profuse diarrhoea, loss of body weight and unthriftiness.



Dysentery in pig



Trichuris

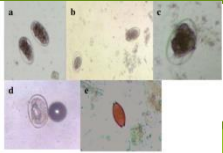


Diagnosis:



Faeces

Usually found mixed infection with other worms like Strongyle.



a. *H. contortus*, b. *Trichostrongylus* spp. and *H. contortus*, c. *Nematodirus* spp., d. *S. papillatus*, e. *Trichuris* ovis

- On the basis of symptoms.
- Microscopic examination of faeces reveals eggs of worm.
- Eggs are brown in colour with thickened shell, barrel or lemon shaped, with a transparent plug at either pole



EGG

Trichuris

Treatment :

- 🕒 **Fenbendazole**
- 🕒 **Pyrantel**
- 🕒 **Levamisole – Immunomodulator and anthelmintic properties**
- 🕒 **Ivermectin etc. are effective.**

Trichuris

Control:

- Adoption of improved hygiene measures.
- Animal faeces remove regularly from the animal houses
- Dog kennel should be kept cleaned
- Eggs are extremely resistant to cold (even frost) and dryness, and can remain infective in the soil for many years.





**THANK
YOU**