



PINWORMS

CLASSIFICATION

Phylum: Nematelminthes

Class: Nematoda

Order: *Ascaridia*

Family: *Oxyuridae*

Genus: *Syphacia*, *Aspicularis*

Syphacia obvelata

- Embryonated ova (egg) infective stage (134 x 36 μ m)
- Female adult worm: 3.4-5.8 mm long by 240-400 μ m wide, tail length = 530-675 μ m
- Male adult worm: 1.1-1.5 mm long, tail length = 130 μ m
- Reside in cecum/anterior colon
- Adult worms deposit eggs (approx. 350) on perianal area of host
- *Syphacia muris* is smaller and predominantly infects rats

Aspicularis tetraptera

- Ova (86 x 37 μ m), spindle shaped
- Female adult worm: 3-4 mm long by 215-275 μ m wide, tail length = 445-605 μ m
- Male adult worm: 2-4 mm long by 120-190 μ m wide, tail length = 117-169 μ m
- Reside in caecum and upper colon
- Females release approx. 17 eggs per day for 3 weeks (total: 357 eggs) into mucous layer of faeces
- Excreted eggs become infective 5-8 days later

PREVALENCE

Due to the ease of transmission of pinworms, they are found in varying numbers (18-92% prevalence) and may be in part reflective of the type of animal care facility (barrier versus conventional). Pinworms are also very common in wild mice.

DIAGNOSIS

Direct microscopy, tape-test

DISEASE/CLINICAL SIGNS

Pinworm infections generally do not cause clinical symptoms in rodents. However in some cases rectal prolapse, poor weight gain, rough coat, liver granulomas and perianal irritation have been reported.



INFORMATION SHEET

STRAINS

There are 7 known pinworm species with 3 infecting mice and rats. The remaining pinworm species infect rabbits, gerbils and hamsters. No true pinworm is known to infect guinea pigs.

TRANSMISSION

Transmission is via the faecal-oral route (ingestion of eggs). Embryonated eggs can remain viable for extended periods at room temperature.

INTERFERENCE WITH RESEARCH

Worms often initiate a humoral immune response in its host, thus animals with a sensitive immune system may be redundant in many research experiments.

DURABILITY

Resistant to:

- *S. muris* eggs appear to be more resilient than *S. obvelata* eggs
- *S. muris* is resistant to common disinfectants
- *S. tetraptera* is viable in faeces for 5-8 days

Susceptible to:

- Temperatures greater than 80°C for 30 minutes kills pinworm eggs
- Chemotherapy treatments

CONTROL

Maintain regular health monitoring of supplier sub-populations and strict protocols for barrier colonies. Autoclave cage and bedding materials, possibly treat colonies with chemotherapeutics. Exclude wild mice from facility.

POST INFECTION

Maintain strict protocols for barrier colonies.

BIBLIOGRAPHY

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