

***Strongyloides* spp.**

>50 species

Obligate gastrointestinal parasites of vertebrates

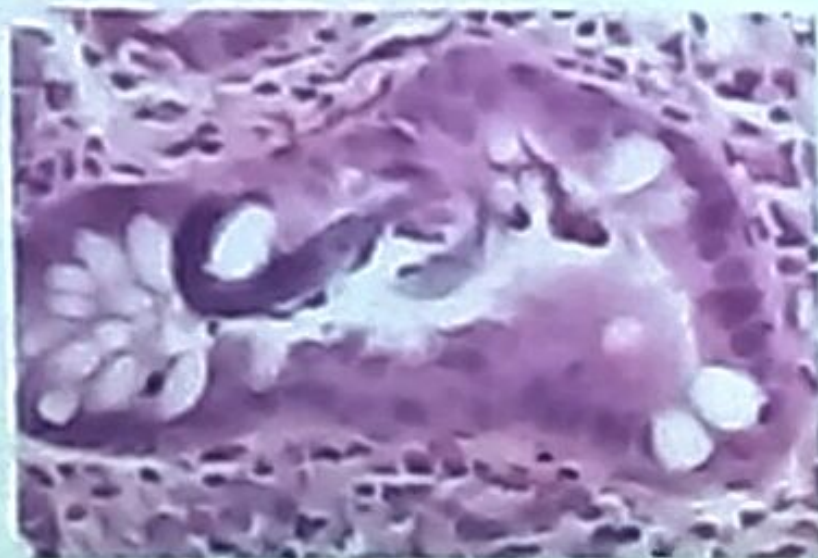
S. stercoralis & *S. fulleborni* infect humans

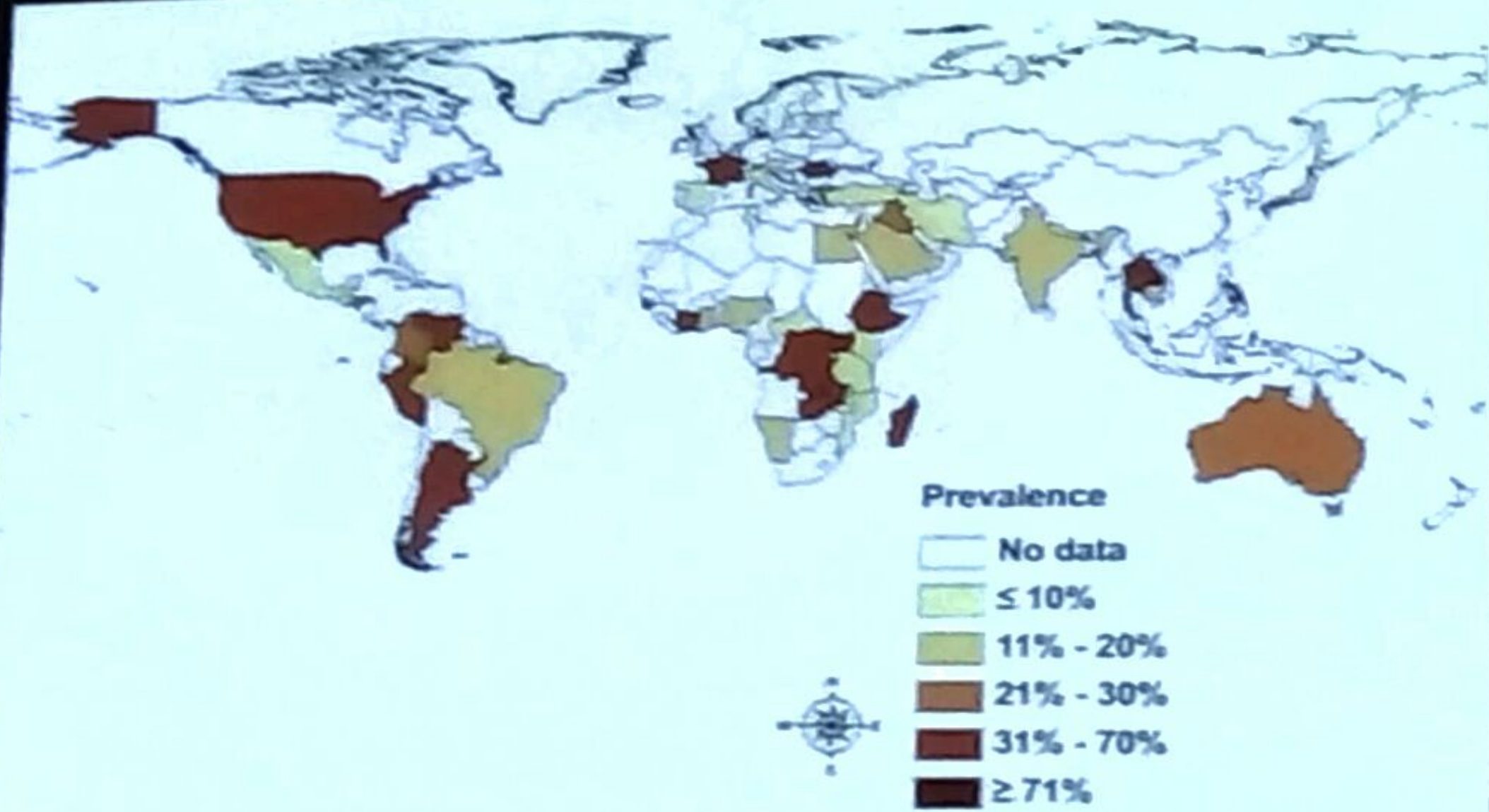
Strongyloides stercoralis

- Parasite of man, can be zoonotic
- Cosmopolitan distribution

Morphology

- Free living (males & females)
- Parasitic (females - 2.5 mm x 50 μ m)
- Females are ovo-viviparous





▲ = Diagnostic Stage

penetrates the intact skin initiating the infection.

7 The filariform larvae enter the circulatory system, are transported to the lungs, and penetrate the alveolar spaces. They are carried to the trachea and pharynx, swallowed, and reach the small intestine where they become adults.

8 The rhabditiform larvae develop into infective filariform.

4 Rhabditiform larvae hatch from embryonated eggs.

5 Eggs are produced by fertilized female worms.

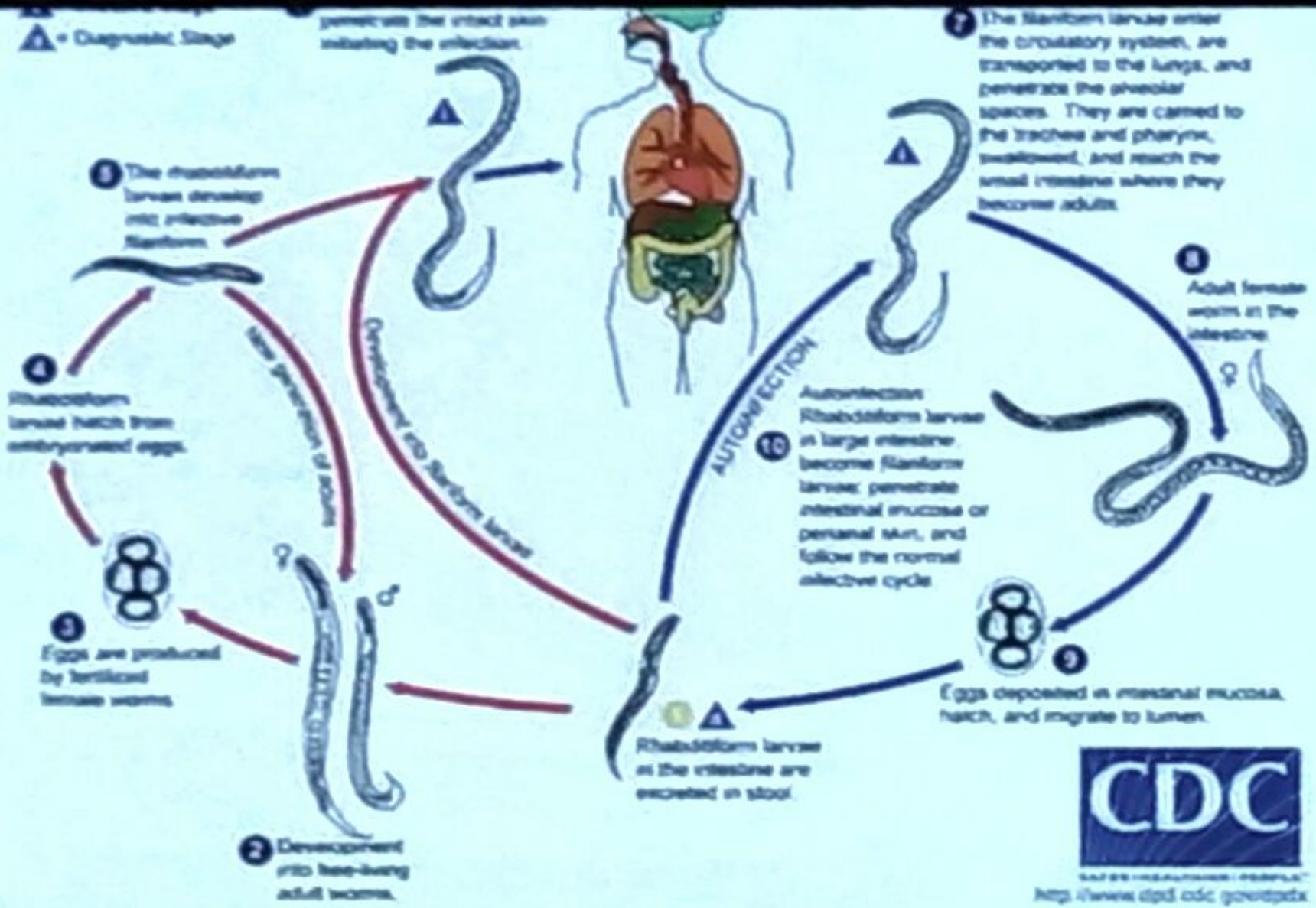
2 Development into free-living adult worms.

1 Adult female worm at the intestine.

6 Autoinfectious Rhabditiform larvae in large intestine become filariform larvae; penetrate intestinal mucosa or perianal skin, and follow the normal infective cycle.

9 Eggs deposited in intestinal mucosa, hatch, and migrate to lumen.

Rhabditiform larvae in the intestine are excreted in stool.

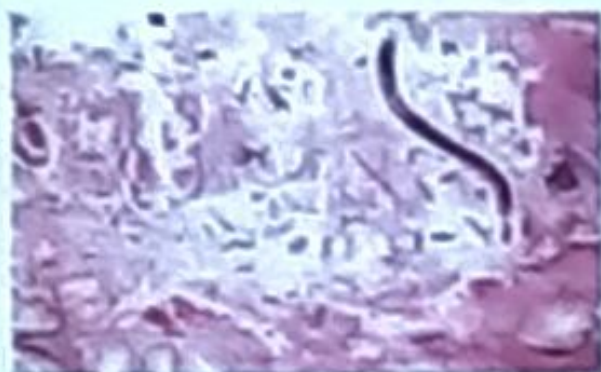


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<http://www.cdc.gov/nczod/dpdx>

Pathology

i) Cutaneous lesions

- Slight haemorrhage
- Bacterial infection
- Inflammation & necrosis



ii) Pulmonary lesions

- Haemorrhages in alveoli
- Cellular reaction
- Eosinophil infiltration

iii) Intestinal lesions

- Rarely penetrate beyond muscularis mucosa
- Destruction of tissues – sloughing of mucosa
fibrosis
- Sepsis especially in hyperinfection



Clinical manifestations

Cutaneous

- Urticarial rash
- Linear erythematous weal



Pulmonary

- Burning sensation
- Coughing
- Bronchial pneumonia

Intestinal

- Localised burning sensation/ abdominal pain
- Malabsorption
- Intractable diarrhoea



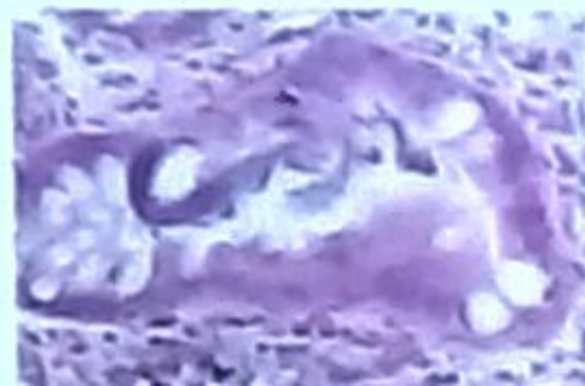
In immunosuppressive conditions

- **Severe diarrhoea**
- **Malabsorption**
- **Peritonitis**
- **Meningitis**
- **Brain abscess**
- **Bacteraemia**

Diagnosis

Larvae in:

- Sputum
- Duodenal fluid - Enterotest string test or aspiration
- *Stool examination*
 - Directly
 - Concentration (formalin-ethyl acetate)
 - Culture by the Harada-Mori filter paper technique
 - Culture in agar plates
- Immunodiagnosis



Treatment

- Ivermectin
- Albendazole
- Thiabendazole

Treatment:

Prolonged high doses

- Mebendazole (400 mg thrice a day for 14 days)
- Albendazole (400 mg twice a day for 8 – 15 days)
- Thiabendazole (25 mg/ kg twice daily for 7 days)

Assignment

- i. *Cutaneous larva migrans*
- ii. *Larva currens*
- iii. *Control of S. stercoralis*