

Parasitic Helminths
and
Arthropod Agents and Vectors of Diseases

Objectives :

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By the end of this lecture the student should be able to :

- **Name the three main groups of parasitic helminths and their characteristic morphological features .**
- **Describe the life cycle of *Ascaris lumbricoides* as an example of parasitic heminth .**
- **Discuss the role of arthropods as agents and as vectors of diseases in humans.**
- **Give examples of the main arthropod vectors of diseases.**

I :PARASITIC HELMINTHS

Nematodes :

General features:

Elongated worm, cylindrical, unsegmented and tapering at both ends.

Variable in size, measure <1 cm to about 100cm. Sex separate and male is smaller than female

Location of parasitic nematodes:

- Intestinal nematodes e.g. *Ascaris lumbricoides* .
- Tissue nematodes e.g. filarial worms

Trematodes :

leaf-like , unsegmented worms example: Bilharzia worms (*Schistosoma mansoni* causing intestinal schistosomiasis , *Schistosoma haematobium* causing urinary schistosomiasis).

Cestodes:

Tapeworms , segmented : example *Taenia saginata* the beef tapeworm.

II: ARTHROPODS:

Include 3 classes:

- Insecta e.g mosquitoes , flies,
- Arachnida: e.g scorpions spiders
- Crustacea : e.g.Cyclops

MEDICAL IMPORTANCE OF ARTHROPODS

1)As aetiologic agents (causes) of diseases.

- Tissue damage
- Induction of hypersensitivity reactions.
- Injection of poisons
- Entomophobia (acarophobia)

2) As vectors of diseases:

I: Mechanical transmission - simple carriage of pathogens.

II: Biological transmission:

- - cyclical
- - propagative
- - cyclopropagative

III: Transovarian transmission

Life-cycle of *Ascaris lumbricoides* , as an example of parasitic worms.

