

Filariasis

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introduction



Filariasis is the pathological condition caused by infection of filarial nematodes transmitted by different vectors.



Infection occurs in blood vessels, lymphatic system, connective tissues and serous cavities of man.



Disease of tropical warm lands.



Caused by different worms and are characterized by different clinical features.

Types of Filariasis

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graph TD; A[Types of Filariasis] --> B[Lymphatic Filariasis]; A --> C[Subcutaneous Filariasis]; A --> D[Serous Cavity Filariasis];
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Lymphatic Filariasis

- Caused by three main species of filarial worms: *Wuchereria bancrofti*, *Brugia malayi*, and *Brugia timori*.
- The worms primarily affect the lymphatic

Subcutaneous Filariasis

- This type of filariasis is caused by the filarial worms *Onchocerca volvulus* or *Loa loa*, commonly known as the "eye worm" or "African eye worm"

Serous Cavity Filariasis

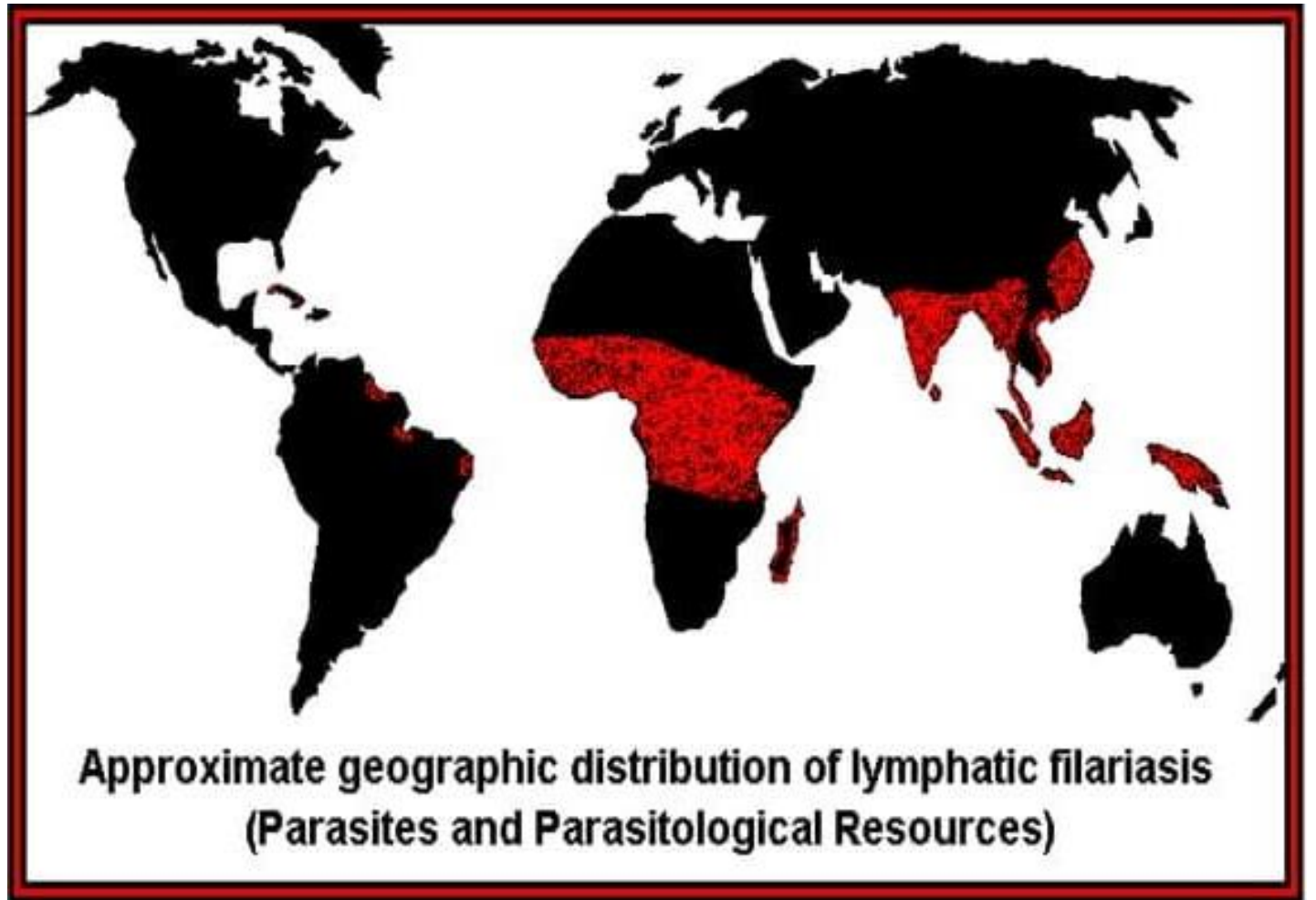
- This form of filariasis is caused by the filarial worm *Mansonella spp.*
- These worms primarily reside in the serous cavities of the body, such as the pleural cavity around the



Epidemiology

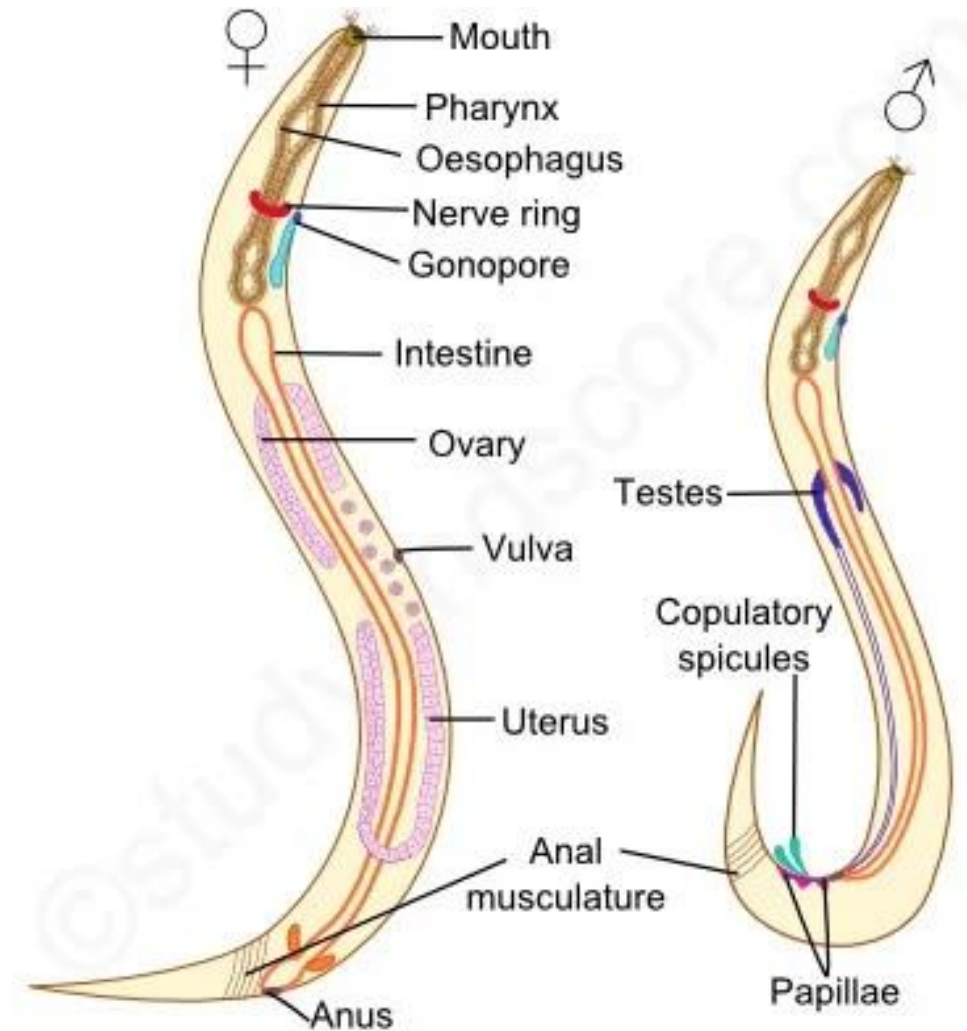
- Lymphatic filariasis is caused by infection with nematodes of the family Filarioidea
- 120 millions in 80 countries .
- 90% - *wuchereria bancrofti*
- Remainder- *Brugia Malayi*

Epidemiology



Morphology

- *Wuchereria bancrofti*
 - Adult worms are long hair-like transparent nematodes, filariform in shape with tapering ends.
 - Male measures 2.5 to 4 cm in length by 0.1 mm in thickness and female measures 8 to 10 cm in length and 0.3 mm in thickness.



WUCHERERIA - ADULT FEMALE AND MALE

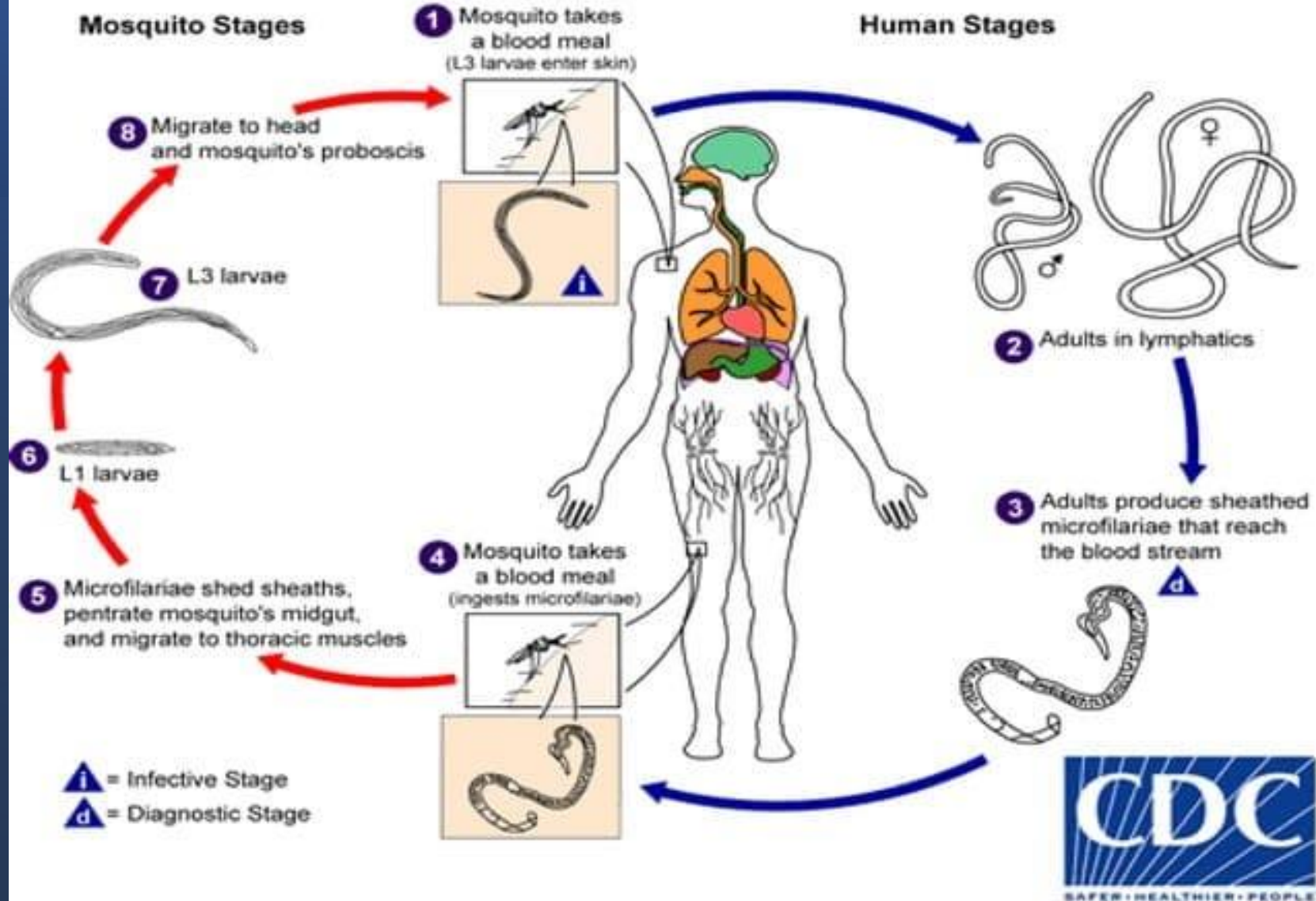
Morphology

- Tail end of male worm is curved ventrally while that of female worm is narrow and abruptly pointed.
- *Brugia malayi*
- The adult females of *B. malayi* resembles to *W. bancrofti* but the adult males differ.





Brugia malayi



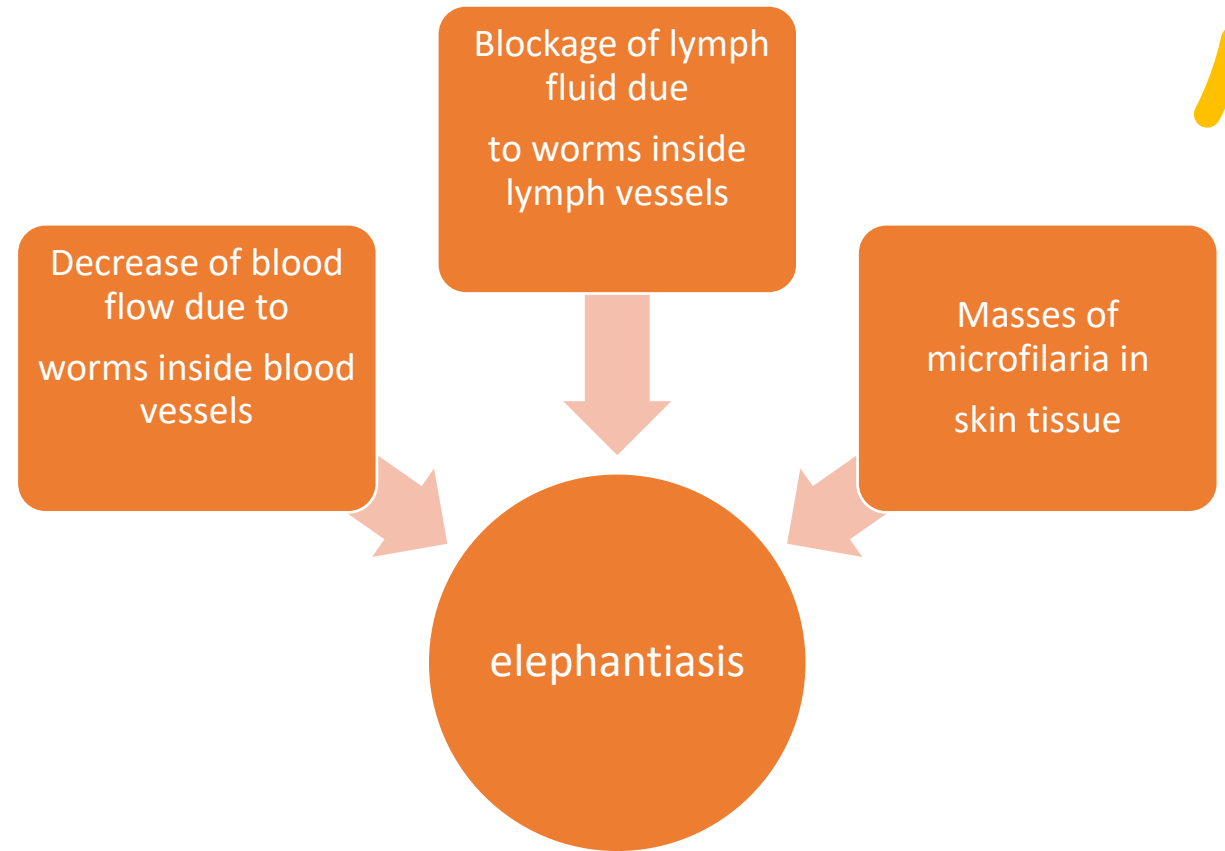
Symptoms



- Fever
- Kidney damage
- Skin abnormalities due to bacterial infection.
- Elephantiasis :
 - Swelling of limbs and genitalia.
 - Thickening and hardening of the skin.



What causes elephantiasis ?





Filariasis Diagnosis Tests



Blood Smear Examination



Polymerase Chain Reaction (PCR)



Immunochromatographic Card Tests



Serological Tests



Xenomonitoring



Antigen Detection Tests



Ultrasound Imaging

"Detect the Threat: Filariasis Diagnosis Test, Uncover the Enemy!"

www.drlogy.com



Diagnosis

- DETECTION OF MICROFILARIAE IN BLOOD :





Treatment

- Currently used :
 - Diethylcarbamazine (DEC) and Ivermectin are useful against larval offspring .
 - Albendazole and DEC :
- Given together once a year
- Found to be 99% effective in removing microfilariae from blood for full year after treatment
- All of these treatments are microfilaricides, they have no effect on the adult worms.





Treatment

-Side effects of the drugs:

- headaches
- fever
- myalgia
- lymphadenopathy and occasionally rash , itching
- Surgical treatment:

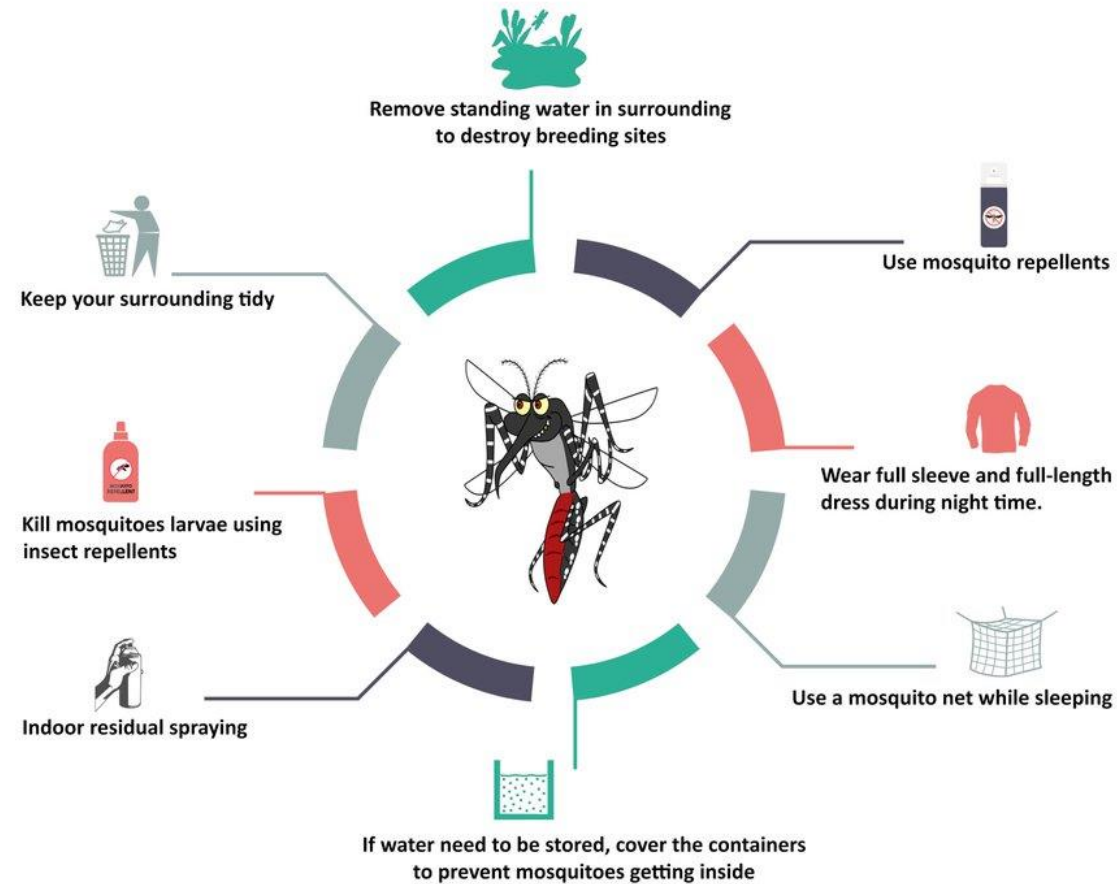
Large hydroceles and scrotal elephantiasis can be managed with surgical excision



Prevention

- Refrain from going outdoors at dusk or dawn when the mosquitoes that transmit filariasis are highly active
- Cover yourself with long sleeved shirts and trousers
- Refrain from sporting strong perfume or cologne which can draw the attention of mosquitoes
- Sleep inside an insecticide-treated or plain mosquito net
- Use mosquito repelling or mosquito killing products
- Keep windows and doors closed or covered with screens to keep mosquitoes out of your house.

How to prevent Filariasis?





Thank you