

Lymphatic Filariasis (LF)

Lymphatic Filariasis (LF) is a mosquito borne parasitic disease commonly known as Elephantiasis or Haathi Paon.



Fig 1 : Elephantiasis of leg

Lymphatic Filariasis is a disfiguring and disabling disease. The infection is usually acquired in childhood. In the early stages, there are either no symptoms or non-specific symptoms. Although there are no outward symptoms, the lymphatic system is damaged. This stage can last for several years. The persons having circulating microfilariae are outwardly healthy but transmit the infection to others through mosquitoes.

The infected persons have swollen limbs or enlarged lymph nodes/lymph vessels or hydrocele at a late stage when their lymphatic system is already damaged.

Transmission Cycle (Man-Vector Cycle)

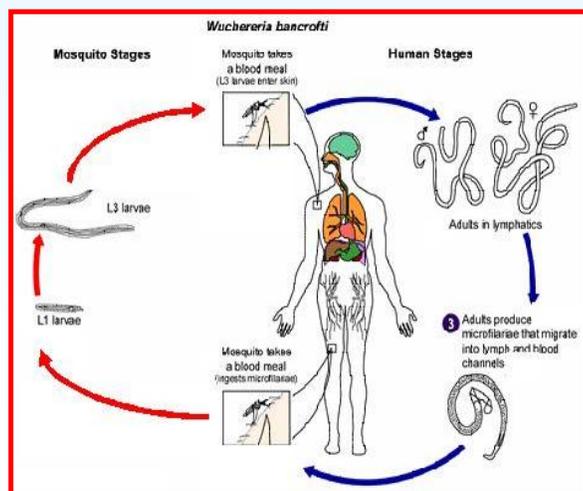


Fig 2 : Transmission cycle of Lymphatic Filariasis

Lymphatic Filariasis is caused by nematode worm named *Wuchereria bancrofti* and transmitted through the bites of the common house mosquito, *Culex*. When the mosquito feeds on the blood of a person carrying microfilariae in his/her blood, the microfilariae enter the body of the mosquito along with the blood meal. The mosquito picks up these microfilariae from the peripheral blood at night time. It takes 7-21 days for the microfilariae to develop inside the mosquito body. Within the mosquito body, the microfilariae migrate to the thoracic muscles. Here, the microfilariae develop into a sausage shape (L1) and then migrate to the mid-gut of the mosquito. Then, they become long thread like larvae and enter the mosquito's proboscis. These infective larvae (L3) are deposited on the wound made by the mosquito when it bites a person for blood meal.

These infective larvae develop into adult male and female worms in the human host, mate and produce the young ones called microfilariae. The person gets the symptoms of filaria disease after 5-8 years. In the adult stage, filarial worms live in the vessels of the lymphatic system.



Fig 3 : Filaria transmitting mosquitoes breeding in polluted water

Diagnosis of Filaria -

Health workers screen the population to detect and treat microfilaria carriers in districts affected by the disease. Health workers make door-to-door visits from 8.30 p.m. to 12 midnight to conduct a night blood survey. They collect a few finger prick blood drops from every individual of a household. This is because only at night microfilariae appear in the peripheral blood of microfilaria carrier. The next day, the blood smear is examined under a microscope and the persons found to be carrying microfilariae in their blood are given treatment. Laboratory confirmation of diagnosis is necessary to identify asymptomatic patients and those with non-specific symptoms.

Healthy people may have filaria parasite -

A person who is found to harbour these parasites (microfilariae) is generally free from disease symptoms. Such people are not aware of their disease conditions and hence become a source for the spread of the infection to other persons. Such persons must be treated immediately. If they are treated in time, filaria disease including elephantiasis can be prevented. The persons with chronic filarial swellings suffer severely from the disease but may no longer transmit the infection.

Mass Drug Administration -

The Government of India has introduced the 'Elimination of Lymphatic Filariasis' programme. Under the programme, Mass Drug Administration (MDA) campaign is organised and an annual single dose of Diethylcarbamazine citrate (DEC) tablets is administered to the eligible population in the affected areas on a single day designated as National Filaria Day. The drug distribution is made by door-to-door campaign. In addition, booths are established at health facilities, both in public and private sectors. Co-administration of DEC and Albendazole will be implemented in all the endemic districts by 2008 in a phased manner.

LF is transmitted through bites of filaria infected mosquitoes. The mosquito breeds in polluted water in and around houses.

Symptoms of Filariasis -

Symptoms of Filariasis include swelling in the limbs, testicles and other parts of the body. Initially the swelling may be transient, but later becomes permanent and incurable. Lymphatic Filariasis is not a hereditary disease and contrary to popular belief, does not affect the reproductive capacity of individuals. Like other diseases, Lymphatic Filariasis can be prevented and its complications mitigated through morbidity management.



Fig 4 : Administration of anti-filarial drugs



National Vector Borne Disease Control Programme
HEALTH BULLETIN FOR ASHA
ON PREVENTION AND CONTROL OF VECTOR BORNE DISEASES :
MASS DRUG ADMINISTRATION



Healthy Village, Healthy Nation

DEC and Albendazole Dosage -

Diethylcarbamazine citrate (DEC) and Albendazole are safe and effective drugs for the treatment of filaria. The dose for different age groups is indicated below.

Age (in years)	DEC Dosage	Albendazole Dosage *
2 to 5 years	1 tablet of 100 mg each	1 tablet of 400 mg each
6 to 14 years	2 tablets of 100 mg each	1 tablet of 400 mg each
15 years & above	3 tablets of 100 mg each	1 tablet of 400 mg each

** Co-administration of DEC and Albendazole will be implemented in all the endemic districts by 2008 in a phased manner. Albendazole kills intestinal helminthic infections also.*

Table: Anti-filarial drugs dosage chart

The people, who are living in filaria affected areas, may be having microfilariae in their blood. These people look healthy and may not show signs and symptoms at early stage. Even if people feel well, they may be infected by the parasite and can develop the disease later. The parasites in them will spread the infection to others through the mosquitoes. A single dose of DEC and Albendazole will kill the microfilariae and prevent the transmission of filariasis in the area.

ASHA should advise the community to take an annual single dose of DEC and Albendazole tablets for 5-7 consecutive years on National Filaria Day to ensure a healthy future free from filariasis for the children and community.

The benefits of MDA should be explained and communicated. The messages should be, if the whole community takes DEC and Albendazole, the microfilariae in the blood will be killed and the mosquitoes will no longer spread the infection. Thus, the disease progression will be halted. By consuming DEC and Albendazole, the next generation would be free from the disease and unless everybody takes the drug, the disease will continue to spread.

DEC and Albendazole tablets are distributed free of cost by health workers or volunteers through house to house visits and booths/camps at schools, work places, health facilities, town centres, etc. during MDA campaign on National Filaria Day.

However, the following groups should not be given the medicine:

- Children below two years of age,
- Pregnant women,
- Seriously ill persons.

How to take DEC and Albendazole tablets?

DEC AND ALBENDAZOLE TABLETS SHOULD NOT BE TAKEN ON EMPTY STOMACH. If the tablets are taken on an empty stomach, it may cause a stomach upset. Therefore, tablets should be consumed with a glass of water after eating food.

Consumption of DEC and Albendazole tablets is safe

