

LYMPHATIC FILARIASIS

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Lymphatic filariasis, commonly known as elephantiasis, is a neglected tropical disease. The first documentation of symptoms occurred in the 16th century, when Jan Huyghen van Linschoten wrote about the disease during the exploration of Goa. This disease is common in Africa and Asia. Infection is usually acquired in childhood causing hidden damage to the lymphatic system. The painful and profoundly disfiguring visible manifestations of the disease, lymphoedema, elephantiasis and scrotal swelling occur later in life and can lead to permanent disability. The global baseline estimate of persons affected by lymphatic filariasis was 25 million men with hydrocele and over 15 million people with lymphoedema. At least 36 million persons remain with these chronic disease manifestations. Eliminating lymphatic filariasis can prevent unnecessary suffering and contribute to the reduction of poverty. Lymphatic filariasis is caused by infection with parasites classified as nematodes (roundworms) of the family Filarioidae. There are 3 types of these thread-like filarial worms: *Wuchereria bancrofti* is responsible for 90% of the cases; *Brugia malayi* is the cause most of the remainder of the cases.

Mosquitoes are infected with microfilaria by ingesting blood when biting an infected host. Microfilaria matures into infective larvae within the mosquito. When infected mosquitoes bite people, mature parasite larvae are deposited on the skin from where they can enter the body. The larvae then migrate to the lymphatic vessels where they develop into adult worms, thus continuing a cycle of transmission. Lymphatic filariasis is transmitted by different types of mosquitoes for example by the *Culex* mosquito, widespread across urban and semi-urban areas, *Anopheles*, mainly found in rural areas, and *Aedes*, mainly in endemic islands in the Pacific. The worms can live for an average of 6–8 years and, during their life time, produce millions of microfilaria (immature larvae) that circulate in the blood. The majority of infections are asymptomatic, showing no external signs of infection. These asymptomatic infections still cause damage to the lymphatic system and the kidneys, and alter the body's immune system.

The World Health Organization recommends mass deworming-treating entire groups of people who are at risk with a single annual dose of two medicines, namely albendazole in combination with either ivermectin or diethylcarbamazine citrate. Avoiding mosquito bites, such as by using insecticide-treated mosquito bed nets, also reduces the transmission of lymphatic filariasis.