



LYMPHATIC FILARIASIS ELIMINATION PROGRAM

What is lymphatic filariasis?

Lymphatic filariasis is a debilitating parasitic infection caused by thin worms that are transmitted by the bites of mosquitoes in tropical and subtropical regions of the world.

How do you get lymphatic filariasis?

An infected mosquito deposits microscopic larvae while biting a person. The larvae migrate to the human lymphatic system, where they mature into adult worms. In the lymphatic system, these worms cause blockages to the return of fluids to the circulatory system. This lymphatic blockage results in fluid collection in the tissues (most commonly the legs and genitalia), grotesque swellings, and periodic fevers resulting from frequent bacterial infections of the collected fluid.

A longstanding infection with lymphatic filariasis results in a condition called elephantiasis, in which changes in the affected limbs result in hardening that resembles elephant skin. Without community health education to help inform people about lymphatic filariasis, the affected individual is more likely to be highly stigmatized in his or her community and lead an isolated existence.

How widespread is the problem?

The World Health Organization ranks lymphatic filariasis as a leading cause of permanent and long-term disability worldwide.

There are approximately 1.1 billion people in 80 countries at risk for contracting this disease and 120 million people infected worldwide.

How is the disease treated and infection prevented?

Studies have demonstrated that transmission of lymphatic filariasis by mosquitoes can be halted by treating entire communities with annual doses of a combination of oral medicines. In Nigeria and Ethiopia, where The Carter Center works, the medicines used are Mectizan,[®] donated by Merck, and albendazole, donated by GlaxoSmithKline.

Health education and improved hygiene also help prevent bacterial infections associated with lymphatic filariasis.

Reducing mosquito bites adds a layer of prevention to stop transmission; thus, another important preventive strategy is the use of long-lasting insecticidal mosquito nets—the same nets used to control malaria. Distribution of long-lasting insecticidal bed nets is included in program efforts, helping to protect pregnant women and children who cannot take drug treatment.

What is the Carter Center's role in lymphatic filariasis elimination

In 1993, the Carter Center's International Task Force for Disease Eradication determined lymphatic filariasis could be eradicated with current tools and technologies.

Since 1998, at the invitation of the Nigeria Ministry of Health, The Carter Center has worked in two Nigerian states—Nasarawa and Plateau—to demonstrate elimination of lymphatic filariasis is feasible on a large scale in this highly endemic country.



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- From 2000 to 2012, the Center has helped the Nigerian Ministry of Health distribute more than 36 million combination treatments to stop the transmission of lymphatic filariasis. As a result of these and other efforts, the burden of this disfiguring disease has been dramatically reduced.
- In 2011, the World Health Organization (WHO) released new guidelines for determining when lymphatic filariasis transmission had been interrupted and drug treatments could be stopped safely. Based on the results of a Carter Center-supported survey using these new guidelines, the Nigeria Federal Ministry of Health directed that mass drug administration for lymphatic filariasis was stopped in 2013 in both Plateau and Nasarawa states, and post-treatment surveillance has been launched. This major achievement, accomplished in the world's third most lymphatic filariasis-endemic country, presents an important example for Africa and elsewhere about what may be possible in other hard hit, impoverished areas that struggle with this debilitating disease.
- In September 2008, The Carter Center, in partnership with the Dominican Republic and Haiti, launched a historic 18-month initiative to help the two countries and their other partners accelerate the elimination of two devastating mosquito-borne infections—malaria and lymphatic filariasis. The initiative stems from a 2006 recommendation of the Carter Center's International Task Force for Disease Eradication (ITFDE) that it is "technically feasible, medically desirable, and would be economically beneficial," to eliminate these two parasitic diseases from their shared island of Hispaniola. The binational project broke new ground in collaboration between these two countries for the betterment of public health on the entire island and region.
- The Carter Center has pioneered the concept and implementation of integrating lymphatic filariasis, river blindness, malaria, and schistosomiasis prevention activities on the ground to help Nigerian state ministry of health programs reach communities more efficiently.
- And in Ethiopia, the Center is supporting efforts to eliminate lymphatic filariasis through mass drug administration and health education. These activities are integrated with river blindness and malaria control in 18 out of 21 lymphatic filariasis-endemic areas of the country in communities where the Center works.
- The success of such joint programs has further demonstrated that one community-based health education and drug distribution system can support the control and elimination of multiple diseases.