**Global Community Partnerships** 

## Consigning lymphatic filariasis to history











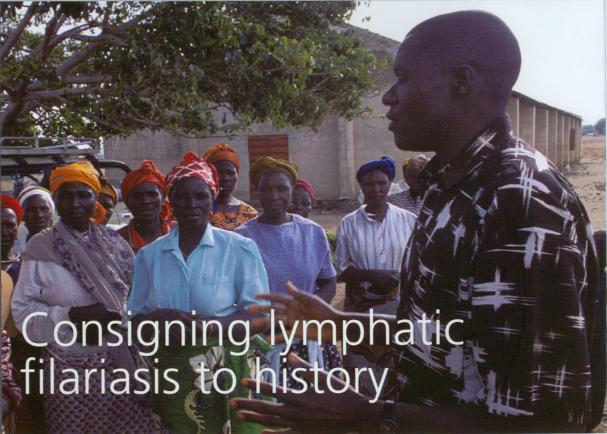




Cover: Faces from communities around the world who will benefit from the elimination of lymphatic filariasis.

Right: Distribution of medicines in a Nigerian village.

Below: LF infection can lead to hydrocele.





(Source: WHO/TDR).

GlaxoSmithKline is an active partner in one of the world's boldest health initiatives – the international, multi-agency effort to rid the world of the disfiguring and disabling tropical disease lymphatic filariasis (LF).

ore than one billion people in 80 countries – 20 per cent of the world's entire population – are at risk of LF infection. Over 120 million people are already permanently affected. It is one of the leading causes of disability globally, while the economic cost of working days lost through LF illness is estimated to run into billions of dollars.

The disease, transmitted from person-to-person by mosquitoes, principally affects people in tropical and sub-tropical areas of Asia, Africa and Latin America. Infection can lead to elephantiasis (a chronic swelling, or lymphoedema, of arms and legs, breasts or genitals, as well as a thickening of the skin), hydrocele (fluid-filled enlargement of the scrotum) or a number of other signs and symptoms.

LF is currently one of seven diseases or disorders targeted by the World Health Organization (WHO) for elimination or eradication. In December 1997 GlaxoSmithKline (GSK) formed a unique collaboration with the WHO to spearhead the global effort to eliminate it as a public health problem and committed to donate albendazole, one of three anti-parasitic drugs essential for that purpose, for as long as was needed to make the disease a thing of the past. Since then, the programme has evolved into a major public-private partnership

known as the Global Alliance to Eliminate Lymphatic Filariasis.

The initiative is a huge and historic challenge. It involves treating over one billion people worldwide once a year for five years. Best estimates suggest that six billion treatments of albendazole, worth over \$1 billion, will be needed to succeed.

The goal of the LF Global Alliance is to interrupt the transmission of LF country by country. WHO recommends that LF infection can be prevented by treating entire endemic communities once a year with albendazole plus one of two co-administered antiparasitic drugs. Endemic communities in African countries are being treated with albendazole and Mectizan<sup>TM</sup> (ivermectin, donated by Merck & Co. Inc.) and communities in other at-risk countries are receiving a combination of albendazole and the generic drug diethylcarbamazine (DEC).

In both cases, the aim is to control the infectious larval parasites in the blood and so break transmission of the disease to uninfected members of the community. For people already showing the symptoms of LF, there are separate WHO, Ministry of Health and non-governmental disability prevention programmes using simple skin hygiene for lymphoedema and surgery for male hydrocele.

## Educating populations and strengthening infrastructures

rugs and medical intervention will not be enough to eliminate lymphatic filariasis (LF) on their own. To interrupt the transmission of LF, more than 80 per cent of each at-risk population must be treated, which means reaching out to the remotest communities and ensuring that everyone there actually takes the tablets. To do that, those communities have to be made aware of the disease and motivated to prevent it.

In addition to donating albendazole tablets worldwide, GlaxoSmithKline (GSK) provides Global Alliance partners with around \$1 million each year to help fund coalition-building, planning, training, education and communication initiatives. A dedicated team of GSK staff also works with the Ministries of Health, as well as with Alliance partners, to assist the global programme.

And there's an added benefit to all this activity. Because the LF programme integrates well with other disease control efforts, such as malaria bednets, school deworming, river blindness prevention and schistosomiasis treatment, it can also help strengthen primary health infrastructures generally at country level.

For centuries LF was a neglected disease, since there was little hope for either treatment or prevention. That has all changed and there is now new hope for both the control of the disease and for those afflicted by it. By the year 2020, it is the intention of WHO, GSK and the Global Alliance to have placed the name of lymphatic filariasis alongside smallpox as a disease that exists only in history.



Above: Drug distribution in a Sri Lankan Village.

## Poverty spread by mosquitoes

hen it bites someone infected with lymphatic filariasis, a mosquito ingests microscopic worms (microfilariae) that are circulating in the blood. Over a period of seven to 21 days, these develop into an infective larval stage, before migrating to the mosquito's mouth ready to enter the bloodstream of the next person to be bitten.

It is actually quite difficult to get LF: a person needs hundreds of infected mosquito bites over several months for the disease to establish itself in the body. So it is people who live in a tropical or sub-tropical area where the disease is prevalent, or at least stay there for a prolonged period, who are most at risk.

Once LF has become established in a community, however, it can stay there for generations, even though most people won't know they have it until years after the initial infection. Around half of those affected do not appear to have symptoms, but they may still have active infection in their bodies.

While not life-threatening, individuals who experience symptoms are often affected in their most productive stage of life. In addition to the physical effects, LF disease can impose a tremendous economic and psycho-social burden on individuals and families.

The disease primarily infects children, often those under the age of five. Protecting children from infection is, therefore, a principal aim of the Global Alliance to Eliminate Lymphatic Filariasis. And treatment with albendazole, a wellestablished anti-parasitic, has the added benefit of preventing the intestinal worms that can cause anaemia and diarrhoea.



Left: Ghanaian woman with elephantiasis of the right leg and lymphoedema in the left. (Source: WHO/TDR).





Villagers lining up at the filariasis clinic, India. (Source: WHO/ TDR/Chandra)

## The Global Alliance to Eliminate Lymphatic Filariasis

GlaxoSmithKline is proud to be working with a wide range of partners in the Global Alliance to Eliminate Lymphatic Filariasis:

■ Ministries of Health in LF endemic countries (see map below).



- International organisations: The World Bank; United Nations Children's Fund; World Health Organization.
- International development agencies and foundations: Arab Fund for Economic and Social Development, Kuwait; Bill and Melinda Gates Foundation, USA; Centers for Disease Control and Prevention, USA; Department for International Development, UK government; Directorate General for Development Cooperation, Italy; Japan International Cooperation Agency; Ministry of Health and Welfare, Japan; Ministère fédéral des Affaires sociales, de la Santé publique et de l'Environment, Belgium; Ministerio de Sanidad Y Consumo, Spain; Ministry of Health, Welfare and Sport, Netherlands.
- Private sector: Binax, Inc., USA; GlaxoSmithKline, UK; Merck & Co., Inc., USA.
- Non-governmental organisations: Amaury Coutinho, Brazil; The Carter Center, USA; Handicap International, France; Health and Development International, Norway; Interchurch Medical Assistance, USA; International Foundation for Dermatology, UK; International Skin Care Nursing Group, UK; International Volunteers in Urology, USA; Mectizan Donation Program, USA; World Alliance for Community Health, Canada.
- Academic and research organisations: Ain Shams University, Egypt; Bernhard Nocht Institute for Tropical Medicine, Germany; Chinese Academy of Preventive Medicine; Danish Bilharziasis Laboratory, Denmark; Emory University LF Support Center, USA; Institute for Medical Research, Malaysia; James Cook University, Australia; Liverpool School of Tropical Medicine LF Support Centre, UK; Michigan State University, USA; Notre Dame University, USA; Universidade Federal de Pernambuco, Brazil; Tulane University, USA; Vector Control Research Centre, Indian Council of Medical Research, India; Washington University in St. Louis Barnes-Jewish Hospital, USA.

Websites

For further information on GlaxoSmithKline and lymphatic filariasis visit www.gsk.com/filariasis or www.filariasis.org

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GlaxoSmithKline's participation in the Global Alliance to Eliminate Lymphatic Filariasis is funded by the company's Global Community Partnerships department and is one of many programmes that reflect GSK's commitment to social investment. For further information on other initiatives, please write to the address above and state your area of interest.