

Neglected tropical diseases burden those overseas, but travelers also at risk

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Though little known to most Americans, lymphatic filariasis, trachoma, leishmaniasis, onchocerciasis, schistosomiasis and other so-called neglected tropical diseases are responsible for severe health burdens, especially among the world's poorest people. Together, it is estimated that these illnesses, most of which are caused by worms or other parasites, rank sixth among all conditions worldwide in robbing people of quality of life and life itself through disability or premature death, respectively.

The National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, has a long-standing, robust program of research and clinical trials devoted to better understanding and combating neglected tropical diseases, most notably those caused by parasites. In 2006, NIAID devoted \$117 million to these projects, which are carried out both in the United States and in countries where the diseases are endemic.

While most sufferers of neglected tropical diseases reside permanently in tropical regions, Americans and other travelers to such areas may also be exposed to these disease-causing organisms. To better gauge illnesses following travel to the tropics and subtropics, the GeoSentinel Surveillance Network, a network of travel/tropical medicine clinics on six continents, was established in 1995.

A new paper by NIAID scientist Thomas Nutman, M.D., and colleagues reviews network data collected between 1997 and 2004 to determine demographic and travel characteristics of travelers diagnosed with parasitic worm (filarial) infections. The researchers found that filarial infections responsible for such diseases as onchocerciasis (river blindness), lymphatic filariasis (elephantiasis) and loiasis (African eyeworm illness) made up 271 (0.62 percent) of the 43,722 medical conditions reported to the network during that time period.

Additionally, the data showed that immigrants from filarial-endemic regions were most likely to come to the travel/tropical diseases clinics, and that long-term travel of more than one month was more likely to be associated with filarial infection than were shorter trips. The most commonly acquired filarial infection (37 percent) was *Onchocerca volvulus*, the worm that causes river blindness.

While clinical presentation of filarial disease is known to differ between visitors to and natives of endemic regions, this new analysis provides a quantitative assessment of the characteristics of those who acquire filarial infections following travel. Furthermore, the information collected by the GeoSentinel network can be used to assess not only acute but also chronic infections. Ultimately, the authors write, these data will provide a comprehensive backdrop to pre-travel advice and post-travel treatment for those at risk of acquiring a filarial infection.

Citation: EM Lipner et al., Filariasis in travelers presenting to the GeoSentinel surveillance network. *PLoS Neglected Tropical Diseases*, DOI: 10.1371/journal.pntd.0000088 (2007).

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