

Preventing Parasitic Infection In The Developing World

University of Minnesota



Amoebiasis is not what you'd call a commonly known disease, at least in the industrialized world.

But unfortunately, it is all too familiar to many people in Africa, Asia and South America, where up to 20 percent of the population is infected and as many as 100,000 die from the disease each year.

“*Amoebiasis is among the most serious parasitic infections in the world, affecting anywhere from 50 million to 100 million people.*”

Among those who are infected, 10 percent experience colitis, liver abscesses and other serious symptoms.

Amoebiasis is caused by a fairly common parasitic amoeba, *Entamoeba histolytica* that leads to the breakdown of body tissues in infected people. It is typically transmitted through contaminated water or food; overcrowding and poor sanitation are key factors in the spread of the disease.

However, Professors Jonathan I. Ravdin, M.D., and Mohamed D. Abd-Alla, Ph.D., of the University of Minnesota have made significant progress in combating amoebiasis. The two developed an experimental synthetic vaccine, which stimulates the immune system to create antibodies against the key protein that enables the parasite to infect the

human body. As people are continually exposed to the parasite in geographic areas where it is common, immunized people actually can boost their resistance to the parasite.

Phase one clinical trials for the vaccine are planned. Additionally, the University of Minnesota is working toward licensing the rights to market and further develop the technology. The goal is for the eventual development of low-cost doses for use in affected countries.

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