

CYCLOSPORIASIS: Notes about the Disease

Cyclospora cayetanensis, the causative organism of cyclosporiasis, has been problematic on several fronts ever since the repetitive Guatemalan raspberry outbreaks began in the US in 1996. A major problem for the fresh produce industry has been devising an effective method for decontaminating fruits and vegetables potentially contaminated with this protozoan. Also, determination of the exact route of produce contamination remains to be satisfactorily resolved. Thirdly, to date, only humans have been confirmed as hosts for *C. cayetanensis*, but investigation into other possible hosts continues.

Like cryptosporidiosis, cyclosporiasis is an “emerging” protozoan diarrheogenic infection that first became recognized as a human pathogen in the 1970s. It is endemic in a number of developing countries, and chlorine resistance is another feature *C. cayetanensis* shares with *Cryptosporidium parvum*. Although it is technically a fecal-oral agent, as documented by University of North Carolina School of Public Health investigators, *C. cayetanensis* leaves the body in a non-infectious (oocyst) stage and must undergo sporulation outside the human host before becoming infectious, a process that can take days to weeks.¹

Laboratory methods for documentation of cyclosporiasis have improved since the mid-1990s, but still depend basically on microscopic examination of preserved stool specimens.

Besides imported raspberries and other produce, water has been an occasional vehicle for transmission of *C. cayetanensis*. Fresh basil was the apparent source of infection for several Cabarrus County residents who dined at a Myrtle Beach, SC, restaurant in May 2005;² a considerably larger outbreak traced to basil occurred in Florida concomitantly.³

Prevention of cyclosporiasis currently depends on avoiding food or water that might be fecally contaminated. At the very least, fruits and vegetables—including fresh herbs—should be washed under running potable water before consumption.

1. EM Alfano-Sobsey, et al., “Human Challenge Pilot Study with *Cyclospora cayetanensis*,” *Emerging Infectious Diseases* 10, no. 4 (2004): 726-8, www.cdc.gov/ncidod/EID/vol10no4/pdfs/03-0356.pdf.
2. “Investigation of a Cluster of Cases of Cyclosporiasis,” *South Carolina Department of Health and Environmental Control Health Advisory*, 24 June 2005, www.scdhec.net/health/disease/han/docs/DHA-Cyclo.pdf.
3. “FDA News: FDA Works to Trace Source of Foodborne Illness in Florida,” *U.S. Food and Drug Administration*, 3 June 2005, www.fda.gov/bbs/topics/NEWS/2005/NEW01183.html.