National Park Service
U.S. Department of the Interior

Public Health Program
1201 Eye Street, NW
Room 52
Washington, DC 20005

Public Health Information Factsheet

Director
202-513-7217

Assistant Director
202-513-7226

National Capital
202-619-7070

Northeast
978-970-5033

Southeast
404-562-3124
x697

Midwest
402-221-3786

InterMountain
303-969-2922

Desert Southwest
505-988-6040

Pacific West/Pacific Islands/Alaska
510-817-1375
206-220-4270

Web Resources

NPS Public Health:
http://www.nps.gov/public_health/

CDC:
http://www.cdc.gov

State and Local Health Departments:
http://www.cdc.gov/mmwr/international/relres.html

Cryptosporidium

Cryptosporidium as a cause of human illness has only been recognized since 1976. The disease gained national attention in 1993 when an outbreak of cryptosporidiosis affected over 400,000 people in Milwaukee. The source of this outbreak was the city's water treatment system.

People become infected when they inject the infective cysts of this protozoan parasite. Disease symptoms usually include diarrhea, abdominal cramps, nausea, and less frequently fever, headache, and vomiting. Persons with healthy immune systems improve without medication. Those with compromised immune systems, including AIDS patients, cancer patients undergoing chemotherapy, transplant patients, the very young, and the elderly, may develop a severe, long-lasting infection, with diarrhea, that persists for several weeks to months, or even years.

Exposure to this infection can be minimized by:

- Washing hands after any possible contact with human or animal feces, and before and prior to handling food.
- Avoiding drinking or accidentally swallowing water from rivers, lakes, streams, swimming pools or jacuzzis.
- The most certain treatment to destroy Cryptosporidium is to bring water to a rolling boil for at least one minute. Boiling will also destroy other organisms causing waterborne disease, although at high altitudes you should maintain the boil 3 - 5 minutes for an additional margin of safety.
- A far less reliable treatment is the use of portable water filters. Some claim to remove Cryptosporidium oocysts, but test protocols are not uniform in the industry and many have not been tested in unbiased laboratories. Purchase only from reputable dealers, and check product literature to ensure that the filter is labeled according to filter manufacturing standards as at least an "Absolute" 1 micron filter, or is labeled as meeting American National Standards Institute (ANSI/NSF) (formerly the National Sanitation Foundation) International Standard #53 for "Cyst Removal". No other filters are reliable for removing Cryptosporidium.
- Chemical disinfectants such as iodine or chlorine tablets or drops are not reliable for killing Cryptosporidium oocysts. These disinfectants do work well against most disease causing waterborne bacteria and viruses that may not be removed by filtration so water that has been filtered should be disinfected before consumption. Add 8 drops of liquid household bleach or 20 drops of tincture of iodine per gallon of water and let stand for 30 minutes. Double the concentration if the water is cloudy. (Iodine and chlorine tablets are available in drug stores and camping or sporting stores. Use according to directions.)

For short trips, take a supply of water from home or from other treated domestic sources. Due to the lack of labeling and manufacturing standards, there is no assurance that bottled water is safer than public drinking water and may require boiling also.

Reference:

Health Information, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Department of Health and Human Services.

If you have any questions, please contact a Regional Public Health Consultant, park sanitarian, or call WASO Public Health for more information at 202-513-7226.

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