

Cyclosporiasis

Summary

Cyclosporiasis is a parasitic intestinal infection that causes profuse, non-bloody, watery diarrhea. Anorexia, nausea, vomiting, abdominal bloating or cramping, and weight loss may occur. Transmission is primarily waterborne through drinking or swimming in contaminated water. Foodborne outbreaks do occur and those in the US and Canada have been associated with various types of imported fresh produce, including raspberries, basil, snow peas, and mesclun lettuce. Diagnosis is made by identification of oocysts in stool. Effective antibiotic treatment is available.

Agent

Cyclospora cayatanensis is a protozoan intestinal parasite.

Transmission

Reservoir:

Contaminated water; there are no known other animal reservoirs.

Mode of transmission:

Mainly waterborne, through drinking or swimming in contaminated water. Outbreaks have been reported from ingestion of fresh berries and other fresh produce.

Period of communicability:

Unknown, person to person transmission has not been documented.

Clinical Disease

Incubation period:

Median seven days; range 1-14 days.

Illness:

Low-grade fever, which can occur in 50% of cases (mainly children), and non-specific flu-like symptoms before or with onset of profuse, watery non-bloody diarrhea. Anorexia, nausea, vomiting, abdominal bloating or cramping, and weight loss may occur. Illness may last for weeks; relapse may occur even in healthy people with normal immune function. Persons with impaired immune function may have more prolonged signs and symptoms.

Laboratory Diagnosis

- Fecal parasite examination; 8-10 micron diameter wrinkled oocysts visible by safranin or modified acid-fast stain; oocysts are autofluorescent under ultraviolet illumination.
- Deoxyribonucleic acid (DNA)-based assays (e.g., PCR) are available through CDC and other reference laboratories.
- Culture Independent Diagnostic Testing (CIDT) is becoming a common method for diagnoses. CIDT is a molecular PCR test with a fast turnaround time (approximately 1 hour), however, the PCR is run as a stool GI panel, that is highly sensitive and often result in detection of several conditions.

Treatment

Trimethoprim/sulfamethoxazole (TMP/SMX) in standard dosage for seven to ten days is effective therapy. People with HIV may need higher doses and long-term maintenance therapy.

Surveillance

Case Definition:

Laboratory criteria - Requires detection of *Cyclospora* either by: oocysts in stool by microscopic examination; or oocysts in intestinal fluid or small bowel biopsy specimens; or demonstration of sporulation; or identification of DNA (by PCR) in stool, duodenal/jejunal aspirates or small bowel biopsy specimens.

Confirmed – a laboratory confirmed case that is either symptomatic or asymptomatic.

Probable – a case that has been clinically diagnosed and is epi linked to a confirmed case.

Reporting:

Report all confirmed cases of cyclosporiasis to the Epidemiology and Response Division (ERD) at 505-827-0006. Information needed includes: patient's name, age, sex, race, ethnicity, home address, home phone number, occupation, and health care provider.

Case Investigation:

Complete the CDC Cyclosporiasis Surveillance Report form and mail to the Epidemiology and Response Division P.O. Box 26110, Santa Fe, New Mexico 87502-6110, or fax to 505-827-0013. Investigation information should also be entered in NM-EDSS per established procedures.

Control Measures

Control measures for CIDT cases that tested positive for more than one condition should be prioritized as follows: *Vibrio*> *STEC*> *Cryptosporidium*> *Salmonella*> *Shigella*> *Campylobacter*> *Cyclospora*> *Giardia*.

1. Case management
 - 1.1. Isolation: No isolation is required for the general population, however, in child care centers, children and staff should be excluded until diarrhea stops; in hospitalized patients, contact precautions are recommended for diapered or incontinent children.
 - 1.2. Prophylaxis: Not applicable.
2. Contact management
 - 2.1. Isolation: None required.
 - 2.2. Prophylaxis: Not applicable.
3. Prevention
 - 3.1. Immunization: Not applicable.
 - 3.2. Avoiding food or water that may be contaminated with feces, and thoroughly washing fresh produce before eating, are the best ways to prevent cyclosporiasis.

References

American Academy of Pediatrics. In: Kimberlin, DW, et al eds. Red Book: 2018 Report of the Committee on Infectious Diseases. 31st ed. Itasca, IL: American Academy of Pediatrics; 2018.

Heymann, DL, ed. Control of Communicable Diseases Manual. 19th edition. Washington, DC: American Public Health Association; 2008.

See Cyclosporiasis Fact Sheets ([English](#)) ([Spanish](#)).