



KAREN L. SMITH, MD, MPH
Director and State Public Health Officer

State of California—Health and Human Services Agency
California Department of Public Health



EDMUND G. BROWN JR.
Governor

Health Advisory: Increase in Cyclosporiasis Cases in the San Francisco Bay Area

July 2018

Key points:

- Since May 2018, there has been an increase in the reported number of domestically-acquired cyclosporiasis cases in the San Francisco Bay Area. The potential source(s) of this increase is under investigation.
- Cyclosporiasis is a reportable disease in California, but may be difficult to diagnose.
- California healthcare providers [in the San Francisco Bay Area](#) are encouraged to consider cyclosporiasis in patients presenting with compatible symptoms, such as persistent diarrhea.
- If cyclosporiasis is suspected, healthcare providers should specifically request testing for *Cyclospora*.
- Identification of *Cyclospora* oocysts in stool may require the use of special stains and laboratory techniques.

Current Situation. Since May 2018, there has been an increase in the reported number of *Cyclospora cayetanensis* infections (i.e., cyclosporiasis) in the San Francisco Bay Area. The reasons for the increase in reported cases, including sources of infection, are unknown but are under active investigation. As of July 9, 2018, a total of 50 patients with laboratory-confirmed *Cyclospora* infection without a history of international travel have been reported, mainly from the San Francisco Bay Area. Reported illness onset occurred in May and June 2018, mostly among adults. The recent increase of cyclosporiasis in California appears to be unrelated to the large outbreak of cyclosporiasis in several Midwestern states that has been linked to pre-packaged Del Monte Fresh Produce vegetable trays, as the recalled lots were not distributed in California: <https://www.cdc.gov/parasites/cyclosporiasis/outbreaks/2018/a-062018/index.html>.

Background. *Cyclospora cayetanensis* is a single-celled parasite that is transmitted through contaminated food or water; it is not transmitted directly from person to person. The most common symptom of cyclosporiasis is watery diarrhea, which can be profuse. Other common symptoms include anorexia, fatigue, weight loss, nausea, abdominal cramping, and myalgia; vomiting and low-grade fever may also occur. Disease may be severe and life-threatening in elderly or immunocompromised patients. Symptoms of cyclosporiasis begin approximately 7 days (range 2 days to ≥ 2 weeks) after ingestion of



the parasite. If untreated, the illness may last for a few days to a month or longer, and may have a remitting-relapsing course.

Epidemiology. Cyclosporiasis is endemic in tropical or subtropical regions of the world, and humans are the only natural hosts of *C. cayetanensis*. In previous years, most cases in California have been associated with international travel. Past large summertime outbreaks of cyclosporiasis have occurred in other states, and have been linked to various types of fresh produce (e.g., basil, cilantro, mesclun lettuce, raspberries, and snow peas), usually imported from Central America or Mexico.

Diagnosis. In the setting of compatible illness where cyclosporiasis is suspected, **healthcare providers should specifically request testing for *Cyclospora***. Testing for *Cyclospora* is not routinely performed on stool specimens in most U.S. laboratories, and therefore often requires a specific request or order by a healthcare provider. Cyclosporiasis is usually diagnosed by examining stool specimens (ova and parasite examination by microscopy). However, oocysts may be shed in low numbers during infection. Therefore, concentration of stool specimens, use of special stains to highlight oocysts, and collection of multiple specimens may be required to make the diagnosis. The healthcare provider should alert the clinical laboratory when the diagnosis of cyclosporiasis is suspected, so that appropriate techniques are utilized. Although microscopy is the most common method of diagnosis, molecular diagnosis using culture-independent diagnostic techniques (CIDT) is now available and has become more common; however, not all gastrointestinal CIDT panels include *Cyclospora*.

Treatment. Trimethoprim/sulfamethoxazole (TMP/SMX) is the treatment of choice for cyclosporiasis. No highly effective alternative antibiotic regimen has been identified yet for patients who do not respond to the standard treatment or have a sulfa allergy.

Reporting. Per California Code of Regulations, Title 17, reporting of cyclosporiasis to the local health department is mandated. A Confidential Morbidity Report must be submitted for each identified laboratory-confirmed cyclosporiasis case. Contact your local health department for instructions as necessary.

Additional Information.

- CDPH Cyclosporiasis webpage:
<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Cyclosporiasis.aspx>
- Diagnosis of cyclosporiasis: CDC DPDx:
<https://www.cdc.gov/dpdx/cyclosporiasis/index.html>
- CDC Cyclosporiasis:
<https://www.cdc.gov/parasites/cyclosporiasis/index.html>