



# CRYPTOSPORIDIOSIS OUTBREAKS

1. **Agent:** *Cryptosporidium parvum* or *C. hominis*, a protozoan parasite that exists as a trophozoite and oocyst.
2. **Identification:** A parasitic disease of humans and animals.
  - a. **Symptoms:** Principally diarrhea, which can be watery and profuse, and with cramping abdominal pain. Children may have anorexia and vomiting, but these are less common in adults; fever, malaise, and nausea are less common in all ages. In the immunocompromised, e.g. HIV disease, illness can be unremitting and ultimately fatal due to chronic malabsorption and wasting.
  - b. **Differential Diagnosis:** Other diarrheal diseases, including parasitic, viral, and bacterial.
  - c. **Diagnosis:** Examination of stool for oocysts, after special concentration and staining; detection of various life cycles in intestinal biopsy. Difficult to detect unless looked for specifically.
3. **Incubation:** Average of 7 days; range 1-12 days, but not precisely known.
4. **Reservoir:** Humans and animals, including cattle, and domestic dogs, and cats.
5. **Source:** Oocysts survive for prolonged periods of time in environment after excretion by animals or humans.
6. **Transmission:** Fecal-oral, person-to-person, waterborne, animal-to-person.
7. **Communicability:** Oocysts appear in stool at onset of symptoms, and continue for several weeks after recovery. May survive for months under proper humidity and temperature.
8. **Specific Treatment:** Generally self-limited in the immunocompetent person. Nitazoxanide approved for treatment of diarrhea in

immunocompetent. Improved immune status of immunosuppressed will decrease symptoms of cryptosporidiosis.

9. **Immunity:** None known.

## REPORTING PROCEDURES

1. Report within 1 working day of identification of a case or suspected case, *California Code of Regulations*, Title 17, Section 2500.

**Note:** Individual cases will not be investigated by district public health staff. **Investigate outbreaks only. ACDC will notify the specific district public health center of an outbreak for investigation and follow up.**

2. **Case Definition:**

**Confirmed:** A case that is diagnosed with *Cryptosporidium* spp. infection based on laboratory testing using a method demonstrating evidence of *Cryptosporidium* organisms or DNA in stool, intestinal fluid, tissue samples, biopsy specimens, or other biological sample by certain laboratory methods with a high positive predictive value (PPV), e.g., direct fluorescent antibody [DFA] test, polymerase chain reaction [PCR], Enzyme immunoassay [EIA], OR light microscopy of stained specimen.

### **Outbreak Definition:**

A cluster of 2 or more infections caused by the same agent(s) and linked in time and common exposure.

3. **Report Forms:**

**For Outbreaks:** [Other Outbreak/ Other Reportable Disease or Disease Of Unusual Occurrence \(CDPH 8554\)](#)<sup>1</sup>

**For Waterborne Disease Outbreak:** See [Waterborne Disease Outbreaks](#)<sup>2</sup> for outbreak investigation.

4. **Epidemiologic Data:**

1 <http://publichealth.lacounty.gov/acd/Diseases/EpiForms/OBUnusualDiseaseReportCDPH8554.pdf>

2 <http://publichealth.lacounty.gov/acd/procs/b73/DiseaseChapters/B73WaterborneOB.pdf>



- a. Exposure to animals.
- b. Sexual orientation.
- c. History of colonic irrigation. When and where.
- d. Emigration from or travel to a developing country within 6 months prior to onset. Specify dates and places.
- e. Exposure to carrier and other persons with diarrheal illness within incubation period.
- f. Occupation of case and household members.
- g. Consumption of or exposure to non-potable water: pools, lakes, rivers, etc. Specify dates and places.

#### **CONTROL OF CASE, CONTACTS & CARRIERS (Investigate outbreaks only)**

##### **CASE:**

1. **Sensitive Occupations or Situations:**  
**Currently Symptomatic:** Restrict/exclude until 48 hours after resolution of signs and symptoms. No clearance required. Stay out of public swimming pools until 2 weeks after resolution of diarrhea.  
**Previously Symptomatic in the Past 48-72 Hours:** May return to work if asymptomatic for 48 hours. No clearance required. Stay out of public swimming pools until 2 weeks after resolution of diarrhea.
2. **Child ≤ 5 years in group setting:**  
**Currently Symptomatic:** Restrict/exclude until 48 hours after resolution of signs and symptoms. No clearance required. Stay out of public swimming pools until 2 weeks after resolution of diarrhea.  
**Previously Symptomatic in the Past 48-72 Hours:** May return to group care if asymptomatic for 48 hours. No clearance required. Stay out of public swimming pools until 2 weeks after resolution of diarrhea.
3. **Non-sensitive Occupation or Situation:**

**Currently Symptomatic:** Stay out of public swimming pools until 2 weeks after resolution of diarrhea.

**Previously Symptomatic in the Past 48-72 Hours:** Stay out of public swimming pools until 2 weeks after resolution of diarrhea.

##### **CONTACTS:**

Household members or persons who share a common source.

##### **1. Sensitive Occupations or Situations:**

**Currently Symptomatic:** Restrict/exclude until 48 hours after resolution of signs and symptoms. No clearance required.

Stay out of public swimming pools until 2 weeks after resolution of diarrhea.

**Asymptomatic:** No restriction.

##### **2. Child ≤ 5 years in group setting**

**Currently Symptomatic:** Restrict/exclude until 48 hours after resolution of signs and symptoms. No clearance required.

Stay out of public swimming pools until 2 weeks after resolution of diarrhea.

**Asymptomatic:** No restriction.

##### **CARRIERS:**

Immunosuppressed patients remain infected chronically.

##### **PREVENTION-EDUCATION**

1. Stress hand washing and personal hygiene.
2. Advise about increased risk with genital-anal and oral-anal sex.
3. Dispose of feces in a safe, sanitary fashion.
4. Take precautions with food and water when traveling to endemic areas.
5. Advise regarding risk associated with colonic irrigation.
6. Water (drinking water and recreational water) is the most common way to spread the parasite. Protect water supply from fecal contamination. Stay out of public swimming pools until 2 weeks after resolution of diarrhea.

##### **DIAGNOSTIC PROCEDURES**



1. **Microscopic:**

**Container:** Feces-Parasite.

**Laboratory Form:** [Public Health Laboratory Test Requisition Form H-3021<sup>3</sup>](#) (Rev. 01/14)

**Examination Requested:** Ova & Parasite (O&P) for *Cryptosporidium*. Check appropriate boxes on laboratory form.

**Material:** Feces. Follow instructions provided with container.

**Amount:** 20-30 ml liquid stool.

**Storage:** Do not refrigerate; protect from overheating.

**Remarks:** Mix thoroughly with PVA preservative. Do not collect specimen(s) for 7-10 days after barium, mineral oil, bismuth, antibiotics, antimalarials or antidiarrheal preparations such as kaolin have been ingested.

2. **Antigen Detection:**

**Container:** Feces-Parasite.

**Laboratory Form:** [Public Health Laboratory Test Requisition Form H-3021<sup>3</sup>](#) (Rev. 01/14)

**Examination Requested:** Cryptosporidium DFA.

**Material:** Feces in 10% formalin.

**Amount:** 20-30 ml.

**Storage:** Do not refrigerate; protect from overheating.

**RESOURCES**

Additional information on control of outbreak of cryptosporidiosis:

[Cryptosporidiosis Outbreak Response & Evaluation \(CORE\) Guidelines<sup>4</sup>](#)

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<sup>3</sup> <http://www.publichealth.lacounty.gov/lab/docs/H-3021%20Test%20Request%20Form.pdf>

<sup>4</sup> [https://www.cdc.gov/parasites/crypto/resources/core\\_guidelines.pdf](https://www.cdc.gov/parasites/crypto/resources/core_guidelines.pdf)