CRYPTOSPORIDIOSIS FACT SHEET

Agent: *Cryptosporidium parvum* is a coccidian parasite that is 4-6 microns in diameter.

Brief Description: An illness caused by the protozoan *Cryptosporidium parvum*. The intestinal illness is characterized by watery diarrhea, abdominal cramps, loss of appetite, low-grade fever, nausea, and vomiting. Asymptomatic infections occur and may be a source of infection for others. The disease can be prolonged and life-threatening in severely immunocompromised persons, particularly AIDS patients with CD4 counts < 200.

Reservoir: Humans, cattle and other domestic animals.

Mode of Transmission: Oocysts are shed in the infected individual's feces. Person-to-person, animal-to-person, waterborne, and foodborne transmission occur. The infectious oocysts are highly resistant to the chlorine-based disinfectants used in the routine treatment of water, but are susceptible to drying and ultraviolet rays. Many outbreaks are reported by child day care centers, and very large outbreaks have been associated with contaminated water supplies and recreational water (e.g., swimming pools, water parks, lakes and rivers).

Incubation Period: The average is about 6-7 days, with a range of approximately 1-14 days.

Laboratory Criteria for Diagnosis:

- Demonstration of *Cryptosporidium* oocysts in stool (by using a modified acid fast stain, as this organism is not seen when using standard stains looking for ova and parasites), OR
- Demonstration of *Cryptosporidium* in intestinal fluid or small-bowel biopsy specimens, OR
- Demonstration of *Cryptosporidium* antigen in stool by a specific immunodiagnostic test (e.g., enzyme-linked immunosorbent assay).

Diagnostic Testing:

1. Specimen Needed: Feces.
2. Outfit: IP & PVA outfit.
3. Form: 3414.
4. Lab Test Performed: Identification of *Cryptosporidium.*
5. Lab Performing Test: Parasitology Laboratory, Georgia Public Health Laboratory (GPHL) in Decatur, and the Regional Public Health Laboratory (Waycross).

Comment: It is important that it be specified on the laboratory request that testing for *Cryptosporidium* is desired, as routine examination for O&P is a poor test for this organism.

Case Classification:

- ***Probable****:* A clinically compatible case that is epidemiologically linked to a confirmed case.
- ***Confirmed****:* A case that is laboratory confirmed.

Period of Communicability: A person is infectious as long as oocysts are shed in the stool. Excretion begins at the onset of symptoms and may continue for several weeks after symptoms resolve. Outside the body, oocysts may remain infective for 2-6 months in a moist environment.

Treatment: Provide fluids and electrolytes if dehydration occurs. There is no known effective drug for treatment, but the use of passive antibodies and antibiotics is under investigation. Intestinal cryptosporidiosis is self-limiting in most healthy persons, but immunodeficient individuals may suffer from the disease for life or until their immunodeficient state resolves.

Investigation and Outbreak Control: Investigate clustered cases to determine the source and mode of transmission. Search for a common vehicle such as recreational water, drinking water, unpasteurized milk or contaminated food or drink. If waterborne transmission is suspected, look for oocysts using one-micron sampling filters (call the Epidemiology Branch for assistance in obtaining and testing water samples). Institute appropriate control measures. Stress proper handwashing with soap and water to prevent person-to-person transmission. Infected persons should be excluded from food handling and the care of children or patients until symptoms resolve. Also exclude or separate infected children from day care centers until diarrhea stops. To prevent transmission via contaminated drinking water, boil water for one minute.

Reporting: Report cases **WITHIN 7 DAYS** electronically through the State Electronic Notifiable Disease Surveillance System (SENDSS) at http://sendss.state.ga.us, or complete and mail a GA Notifiable Disease Report Form (#3095). Report any cluster of cases **IMMEDIATELY** by phone to the local health department, District Health Office, or the Epidemiology Branch at 404-657-2588. If calling after regular business hours, it is very important to report cases to the Epidemiology Branch answering service. If applicable, complete CDC form 52.13, "Investigation of a Foodborne Outbreak," and fax to the Epidemiology Branch at 404-657-7517 as soon as possible.

Reported Cases of Cryptosporidiosis in Georgia, 1996-1999

Year	Number of Cases
1996	93
1997	74
1998	152
1999	166

References and Further Reading:

1. Centers for Disease Control and Prevention. Case Definitions for Infectious Conditions under Public Health Surveillance. *MMWR* 1997; 46(RR10): 1-55.
2. Centers for Disease Control and Prevention. Epidemiologic Notes and Reports. Swimming-Associated Cryptosporidiosis—Los Angeles County. *MMWR* 1990; 39(20): 343-345.
3. Centers for Disease Control and Prevention. Foodborne Outbreak of Diarrheal Illness Associated with *Cryptosporidium parvum*—Minnesota, 1995. *MMWR* 1996; 45(36): 783-784.
4. Centers for Disease Control and Prevention. Foodborne Outbreak of Cryptosporidiosis — Spokane, Washington, 1997. *MMWR* 1998; 47(27): 565-567.
5. Centers for Disease Control and Prevention. Outbreak of Cryptosporidiosis at a Day Camp—Florida, July-August 1995. *MMWR* 1996; 45(21): 442-444.
6. Centers for Disease Control and Prevention. Outbreaks of *Escherichia coli* O157:H7 Infection and Cryptosporidiosis Associated with Drinking Unpasteurized Apple Cider—Connecticut and New York, October 1996. *MMWR* 1997; 46(1): 4-8.
7. Chin J, ed. Cryptosporidiosis. In: Control of Communicable Diseases Manual. 17th ed. Washington, DC: American Public Health Association, 2000: pp. 134-137.
8. MacKenzie WR, Hoxie NJ, Proctor ME, et al. A massive outbreak in Milwaukee of *Cryptosporidium* infection transmitted through the public water supply. *New England Journal of Medicine* 1994; 331:161-7.

Links:

- CDC Cryptosporidiosis Fact Sheet – http://www.cdc.gov/ncidod/dpd/parasites/cryptosporidiosis/factsht_cryptosporidiosis.htm
- FDA Bad Bug Book – http://vm.cfsan.fda.gov/~mow/chap24.html