

SHIGELLOSIS FACT SHEET

Agent: *Shigella* spp. (*sonnei*, *flexneri*, *boydii*, and *dysenteriae*).

Brief Description: A bacterial illness of variable severity characterized by diarrhea, fever, nausea, abdominal cramps, and tenesmus. The stool typically contains blood and mucus. High fever with accompanying convulsions can occur in children. Mild and asymptomatic infections occur.

Reservoir: Humans are the reservoir, although primates such as monkeys and chimpanzees can also become infected.

Mode of Transmission: Mainly by fecal-oral transmission from an ill person or carrier. *Shigella* spp. are spread either directly by physical contact or indirectly in food and water contaminated by feces of an infected person. The infectious dose is very small (10 or more organisms). Secondary attack rates in households can be as high as 40%.

Incubation Period: Usually 1 to 3 days, but ranges from 12 hours to 4 days (up to one week for *Shigella dysenteriae* 1, which is a rare serotype in the United States).

Laboratory Criteria for Diagnosis:

- Isolation of *Shigella* from a clinical specimen.

Diagnostic Testing:

A. Culture

1. Specimen: Feces.
2. Outfit: Stool culture outfit, order #0555.
3. Form: 3416.
4. Lab Test Performed: *Shigella* culture.
5. Lab Performing Test: Bacteriology Laboratory, Georgia Public Health Laboratory (GPHL), in Decatur.

B. Typing

1. Specimen: Pure culture.
2. Outfit: Culture referral outfit, order #0505.
3. Form: 3410.
4. Lab Test Performed: *Shigella* typing.

5. Lab Performing Test: Bacteriology Laboratory, GPHL in Decatur.
- C. Culture of Food (Outbreaks Only).
1. Specimen: At least a one serving portion of suspected food, if available. Immediately obtain and refrigerate all foods served. Broad testing of all foods served is discouraged. Coordinate with the Epidemiology Branch regarding which food(s) should be tested. If the specimen is frozen, keep frozen. If not frozen, ship foods to be tested with freezer packs.
 2. Outfit: Sterile plastic bags, label and instructions.
 3. Form: 3450.
 4. Lab Test Performed: *Shigella* culture.
 5. Lab Performing Test: Bacteriology Laboratory, GPHL in Decatur.

Case Classification:

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

Period of Communicability: During acute infection and until the infectious agent is no longer present in the feces, usually within 4 weeks after illness. Rarely, the asymptomatic carrier state may persist for months or longer. Appropriate antimicrobial treatment usually reduces the duration of this carrier state to a few days.

Treatment: Provide fluids and electrolytes if dehydration occurs. Antibacterials should be used in individual cases if warranted by the severity of the illness. Depending upon sensitivities, treatment for adults may include trimethoprim-sulfamethoxazole (TMP-SMX), ciprofloxacin or ofloxacin. Treatment for children may include TMP-SMX, ampicillin or nalidixic acid.

Investigation and Follow-up: Common-source outbreaks require prompt investigation and intervention. Cultures of contacts should generally be confined to food handlers, attendants and children in hospitals or daycare centers, and other situations where the spread of infection is likely. An organized effort to promote careful hand washing with soap and water is the single most important control measure in most settings. Institutional outbreaks may require special measures, including separate housing for cases and new admissions or cohorting of convalescent and well children within daycare centers. Infected persons should be excluded from food handling and the care of children or patients until they have two consecutive negative stool specimens obtained at least 24 hours apart.

Reporting: Report single confirmed 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** 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 Shigellosis in Georgia, 1993-2000

Year	Number of Cases
1993	474
1994	1886
1995	1359
1996	1125
1997	1204
1998	1138
1999	283
2000	339

References and Further Reading:

- Centers for Disease Control and Prevention. *Shigella sonnei* Outbreak Associated with Contaminated Drinking Water - Island Park, Idaho, August 1995. *MMWR* 1996; 45(11): 229-231.
- Centers for Disease Control and Prevention. Case Definitions for Infectious Conditions under Public Health Surveillance. *MMWR* 1997; 46(RR10): 1-55.
- Centers for Disease Control and Prevention. Public Health Dispatch: Outbreak of *Shigella sonnei* Infections Associated with Eating a Nationally Distributed Dip — California, Oregon, and Washington, January 2000. *MMWR* 2000; 49(03): 60-1.
- Chin J, ed. Shigellosis. In: Control of Communicable Diseases Manual. 17th ed. Washington, DC: American Public Health Association, 2000: pp. 451-455.
- U.S. Food & Drug Administration, Center for Food Safety & Applied Nutrition. *Shigella* spp. In: Foodborne Pathogenic Microorganisms and Natural Toxins Handbook.

Links:

- CDC Shigellosis Fact Sheet - http://www.cdc.gov/ncidod/dbmd/diseaseinfo/shigellosis_g.htm
- FDA Bad Bug Book – <http://vm.cfsan.fda.gov/~mow/chap19.html>

