SALMONELLOSIS FACT SHEET

Agent: *Salmonella* spp.

Brief Description: An illness of variable severity commonly manifested by diarrhea, abdominal pain, nausea, vomiting, fever and headache. Asymptomatic infections may occur and the organism may cause extraintestinal infections. Dehydration, especially among infants or in the elderly, may be severe. Deaths are uncommon, except in the very young, the very old, the debilitated and the immunosuppressed.

Reservoir: Domestic and wild animals, including poultry, swine, cattle, rodents and pets such as reptiles, chicks, dogs and cats. Humans are also reservoirs.

Mode of Transmission: By ingestion of *Salmonella* spp. in food derived from infected animals or food contaminated by feces of an infected animal or person. Common vehicles include undercooked eggs, raw milk, contaminated water, meat and poultry. Pet turtles, iguanas and chicks are common sources for infants and children. Fecal-oral transmission from person to person is important, especially when diarrhea is present.

Incubation period: Usually about 12-36 hours, but ranges from six hours to seven days. The incubation period tends to be longer when the dose of *Salmonella* ingested is smaller.

Laboratory Criteria for Diagnosis:

- Isolation of *Salmonella* from a clinical specimen

Diagnostic Testing:

A. Culture
   1. Specimen: Feces
   2. Outfit: 0555 - Stool culture
   3. Lab Form: 3416 – Feces Culture for Bacterial Enteric Pathogens
   4. Lab Test Performed: Salmonella culture
   5. Lab: Bacteriology, Georgia Public Health Laboratory

B. Serotyping
   1. Specimen: Pure culture
   2. Outfit: 0505 - Culture referral
   3. Lab Form: 3410
   4. Lab Test Performed: Salmonella serotyping
   5. Lab: Bacteriology, Georgia Public Health Laboratory

C. Culture (Outbreaks only)
   1. Specimen: At least one serving portion of suspected food, if available. Immediately obtain and refrigerate food specimens. If frozen, keep frozen. If not frozen, ship with freezer packs. Broad testing of all foods served is discouraged. Coordinate with the Epidemiology Branch regarding which food(s) should be tested.
   2. Outfit: Sterile plastic bags, label and instructions.
   3. Lab Form: Food Report Form 3450
   4. Lab Test Performed: Salmonella culture
   5. Lab: Bacteriology, Georgia Public Health Laboratory

Case Classification:

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

Period of Communicability: Throughout the course of infection, which varies greatly. An infected person usually excretes *Salmonella* spp. for several days to several weeks. A temporary carrier state occasionally continues for months, especially in infants.

Treatment: Usually none indicated, except rehydration therapy for patients with diarrhea. Antibiotics are usually not necessary unless the patient is at risk of extraintestinal infection,

such as infants < 3months old or those with HIV infection, hemoglobinopathies, or malignancies, or who are otherwise immunocompromised. Depending upon sensitivities, treatment may include ampicillin, amoxicillin, TMP-SMX, third generation cephalosporins or ciprofloxacin.

Investigation: Outbreaks should be investigated to determine the possible source of infection. The questionnaire should place emphasis on animal contact, food-handling procedures, cooking times and temperatures, the possibility of cross-contamination between cooked and raw foods, and food handler health and hygiene. The District or local Environmentalist should collect samples of food(s) and forward selected samples to the State Public Health Laboratory in coordination with the Epidemiology Branch (404-657-2588). For *Salmonella enteritidis* outbreaks in which dishes containing eggs are implicated, initiate trace back to the egg source and notify the U.S. Department of Agriculture. Complete "Investigation of a Foodborne Outbreak" and send a copy to Epidemiology Branch as soon as the investigation is complete.

Infected foodhandlers should be excluded from handling food until they have three consecutive negative stool specimens obtained at least 48 hours apart. Ciprofloxacin has been effective in clearing chronic infection in adults.

Reporting: Report 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 Salmonellosis in Georgia, 1993-1999

Year	Number of Cases
1993	1292
1994	1584
1995	1661
1996	1468
1997	1380
1998	1839
1999	1976

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. Salmonellosis Associated with Chicks and Ducklings —Michigan and Missouri, Spring 1999. *MMWR* 2000; 49(14): 297-9.
3. Chin J, ed. Salmonellosis. In: Control of Communicable Diseases Manual. 17th ed. Washington, DC: American Public Health Association, 2000: pp. 440-444.
4. U.S. Food & Drug Administration, Center for Food Safety & Applied Nutrition. *Salmonella* spp. In: Foodborne Pathogenic Microorganisms and Natural Toxins Handbook.

Links:

- CDC Salmonellosis Fact Sheet –http://www.cdc.gov/ncidod/dbmd/diseaseinfo/salmonellosis_g.htm
- FDA Bad Bug Book – http://vm.cfsan.fda.gov/~mow/chap1.html