

# Salmonellosis

## Epidemiology

**Source:** Poultry, livestock, reptiles, amphibians, insects, pets

### Transmission

- Ingestion of contaminated food (poultry, eggs, meat, dairy) or water
- Contact with reptiles, amphibians
- Direct person-to-person contact

### Infectious dose

Large (~1 million bacteria)

**Incubation**  
12-36 hrs  
(6-72 hrs)

**Asymptomatic carriers**

1.4-2.5 million infections per year in the US

### Clinical case definition

- Diarrhea
- Headache
- Vomiting
- Abdominal cramps
- Fever
- Nausea

**Contagious** several days to several weeks after infection

**Complication:** Bacteremia, Dehydration  
**Death:** <1%

Most cases are sporadic but outbreaks can occur (nosocomial, institutional, nursery)

**Symptomatic food handlers and health care workers should be excluded. Children should be excluded until diarrhea is gone or contained**

Send culture to OPH

## Diagnosis

*Salmonella* are gram-negative bacilli in the *Enterobacteriaceae* family. There are >2460 serotypes. The majority of human isolates are *S. enterica*.

### Lab Diagnosis

- **Culture:** Isolation of salmonella organisms from stool cultures. Collect on cotton tipped swabs and place in tube of Cary-Blair culture medium.
- Rapid tests using enzyme immunoassay, latex agglutination, DNA probes, and monoclonal antibodies are available

**Probable:** Clinically compatible case that is epidemiologically linked to a confirmed case

**Confirmed:** Clinically compatible case that is laboratory confirmed

## Treatment

### Treatment

- Fluids and electrolytes to prevent dehydration
- Specific treatment is not recommended in cases of mild gastroenteritis because it does not reduce the severity of or shorten the length of the disease and can actually prolong the duration of excretion
- Patients at high risk of invasive disease (<3 mos. old, hemoglobinopathies, malignancies, immunosuppression, chronic gastro-intestinal diseases) or those with severe symptoms should be treated
- **Ampicillin** and **trimethoprim-sulfamethoxazole** can be used but because of resistance, treatment of choice is usually **fluoroquinolones** for adults and **ceftriaxone** for children.

## Standard, contact precautions

## Control

Report case to OPH

### Food preparation

- Wash hands before, during, and after preparing food
- Cook all food (esp. poultry, eggs, meat) thoroughly
- Refrigerate perishable items
- Thaw frozen food in a cold environment
- Clean pots, pans, and cutting boards after use for raw food items
- Do not eat batters/mixes containing raw eggs

Exclude symptomatic foodhandlers and health care workers

- Proper sanitation methods for food preparation
- Sanitary water supplies
- Proper hand hygiene
- Sanitary sewage disposal
- Caution when handling amphibians, reptiles