

SALMONELLOSIS

Case definition

CONFIRMED CASE

Laboratory confirmation of infection with or without clinical illness:

- isolation of *Salmonella* sp. (excluding *Salmonella typhi*) from an appropriate clinical specimen (i.e., sterile site, deep tissue wounds, stool, vomit or urine).

PROBABLE CASE

Clinical illness in a person who is epidemiologically linked to a confirmed case.

Note: For further information and the Public Health Management of *Salmonella paratyphi*, please see [Paratyphoid Fever](#).

Causative agent

Salmonella enterica, a gram negative enteric bacillus. There are over 2000 serotypes.

Source

Stool of an infected person or animal, including poultry (especially chicks), swine, cattle, rodents, dogs, cats, reptiles and turtles.

Incubation

Usually 12 to 36 hours, may be from 6 to 72 hours. Longer incubation periods (up to 16 days) have been documented following low dose ingestion.

Transmission

- Fecal-oral from person-to-person or animal-to-person.
- Ingestion of food or water contaminated by feces of an infected person or animal.
- Ingestion of food derived from an infected animal and/or food contaminated by contact with a contaminated food product (cross contamination).

Communicability

Shedding of the bacteria in the stool occurs throughout entire infection, usually several days to several weeks. About 1% of adults and 5% of children go on to carry and excrete the bacteria for up to one year.

Symptoms

Headache (onset may be sudden), fever, abdominal pain and/or cramps, diarrhea (may be bloody), dehydration (may be severe), nausea and sometimes vomiting. May be asymptomatic.

Diagnostic testing

Stool for culture.

Treatment

None, antibiotic treatment may lengthen the period of communicability.

Note: Under special circumstances an antibiotic may be given (i.e., case is infant under 2 months, elderly, persons with sickle cell disease or HIV infection, or persons with continued or high fever).

PUBLIC HEALTH MANAGEMENT & RESPONSE

Case management

Follow up the case using the following steps:

1. Contact the primary care provider to obtain clinical information on the case.
2. Interview the case, review clinical information, determine food history and activities, employment, potential source of exposure and determine any contacts that may require investigation (see “[Contact tracing](#)” section).
3. Educate the case and/or family about salmonellosis and prevention measures, providing access to website, general information, etc.
4. Implement the necessary exclusions as per the “[Exclusion of cases and carriers](#)” section for those cases identifying as belonging to one or more risk group[s]. Exclusion of carriers should be done in consultation with the MOH.
5. If the case has reported a food establishment (including institutional settings) as a potential source of exposure then contact a Food Safety Specialist with the Department of Environment.
6. Document the information on the Enteric Case Report Form and the Salmonellosis Case Report Form.

Exclusion of cases and carriers

Exclude cases and carriers in the risk groups below:

Risk Group	Criteria for Exclusion
Food handlers	Until 48 hours after symptoms have subsided AND case has had 2 normal stools AND 48 hours after stopping the use of anti-diarrheal medication.
Health care, child care or other staff who have contact with susceptible persons	Until 48 hours after symptoms have subsided AND case has had 2 normal stools AND 48 hours after stopping the use of anti-diarrheal medication.
Children attending child care	Until 48 hours after symptoms have subsided AND case has had 2 normal stools AND 48 hours after stopping the use of anti-diarrheal medication.
Carriers employed in: <ul style="list-style-type: none">• food handling• child care*• health care and/or other staff who have contact with susceptible persons * Inclusive of those attending child care.	Case management should be done in consultation with the Medical Officer of Health. Carriers should be discouraged from preparing food for others as long as they shed organisms.

Education of case

Offer the following information:

- Ensure cases belonging to a high risk group are aware of exclusion criteria.
- Remind cases about the importance of hand hygiene in stopping the spread of salmonella and to wash hands before preparing food and after using the bathroom and changing diapers.
- Inform the case about the potential to infect contacts and provide information on how to minimize transmission to others; including household and close contacts, including sexual contacts.

- Recommend that cases infected with salmonella or any other gastrointestinal illness should not prepare or serve food to other people [for food handlers see “[Exclusion of contacts](#)” section].

See the [General Information Sheet](#) for further information on preventing the transmission of salmonella.

Contact tracing

Contact tracing should be initiated as part of case management if symptomatic contacts or contacts that belong to any of the Risk Groups identified in the “[Exclusion of contacts](#)” section are identified by the case.

Definition of a contact

A contact is a person who has had exposure to a case during the period of communicability and at risk of infection by the fecal-oral route by either person-to-person contact or the ingestion of contaminated food or water.

Contacts include:

- Household contacts [those living in the same residence]
- Close contacts including sexual contacts and persons that may have had hand-to-mouth contact with the case such as sharing meals the case has prepared.

Exclusion of contacts

Exclude contacts in the risk groups below:

Risk Group	Criteria for Exclusion
Contacts who are employed in: <ul style="list-style-type: none"> • food handling • child care* • health care and/or other staff who have contact with susceptible persons * Inclusive of those attending child care.	<i>Symptomatic:</i> Until 48 hours after symptoms have subsided AND case has had 2 normal stools AND 48 hours after stopping the use of anti-diarrheal medication. <i>Asymptomatic:</i> No exclusion required.

Education of contacts

If Public Health is notifying contacts, inform the contacts of the following:

- Their potential exposure
- An explanation of the illness [description of the disease, symptoms, etc.]

- The range of clinical presentation
- Incubation period
- Report to Public Health if they become symptomatic

See [General Information Sheet](#) for further information on preventing the transmission of salmonella.

Outbreak

Consult the [Outbreak Response Plan](#) for further guidance if an outbreak is suspected.

For outbreaks in childcare settings also refer to the [Guidelines for Communicable Disease Prevention and Control for Child Care Settings](#).

For Outbreaks in Long-Term Care Facilities also refer to Infection Prevention and Control Nova Scotia's (IPCNS) [Infection Prevention and Control: Guidelines for Long-Term Care Facilities](#).

Surveillance forms

novascotia.ca/dhw/populationhealth/surveillanceguidelines/NS_Notifiable_Disease_Surveillance_Case_Report_Form.docx

novascotia.ca/dhw/populationhealth/surveillanceguidelines/Enteric_Case_Report_Form.pdf

novascotia.ca/dhw/populationhealth/surveillanceguidelines/Salmonellosis_Case_Report_Form.pdf

[General Information Sheet](#)

References

Control of Communicable Diseases Manual, 20th edition. 2015. David Heymann, MD, editor.

Provincial Microbiology User's Manual. cdha.nshealth.ca/pathology-laboratory-medicine

Public Health Agency of Canada. [2009]. Case Definitions for Communicable Diseases under National Surveillance. CCDR 2009; 35S2, 1-123. Retrieved from phac-aspc.gc.ca/publicat/ccdr-rmtc/09vol35/35s2/index-eng.php

Red Book. 2012 Report of the Committee on Infectious Diseases, 29th edition. American Academy of Pediatrics.

Report of the Committee on Infectious Diseases, 2000. American Academy of Pediatrics

Salmonellosis cdc.gov/salmonella/