

CAMPYLOBACTERIOSIS

Case definition

CONFIRMED CASE

Laboratory confirmation of infection with or without symptoms:

- Isolation of *Campylobacter sp.* from an appropriate clinical specimen.

PROBABLE CASE

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

Causative agent

Campylobacter jejuni [*C. jejuni*] and *Campylobacter coli* [*C. coli*], gram-negative rods.

Source

Feces of an infected animal or human, most frequently poultry and cattle. Puppies, kittens and other pets, swine, sheep, rodents, birds and other farm animals including poultry are also common sources. Pigs are the primary host of *C. coli*.

Incubation

Dependent on infectious dose. Usually 2-5 days, range from 1-10 days.

Transmission

Ingestion of contaminated food, including unpasteurized milk, raw or undercooked meat such as poultry, beef and pork, untreated drinking water and recreational water. Fecal-oral through direct contact with infected animals also possible, especially with young children and pets (especially those with diarrhea). Person-to-person transmission is uncommon.

Communicability

In persons not treated with antibiotics, communicability ranges from 2-7 weeks. Once antibiotics are started communicability is reduced to 2-3 days.

Symptoms

Symptoms include diarrhea (sometimes bloody, watery or containing white blood cells), abdominal pain, fever, nausea, vomiting and malaise. Symptoms can range from mild to severe and may also be asymptomatic. Generally last 2-10 days, with relapse occurring in 5-10% of untreated cases.

Post-infection complications possible; *C. jejuni* is associated with Guillain-Barré syndrome and reactive arthritis and both *C. jejuni* and *C. coli* are related to post-infection complications such as bacteremia, hepatitis, pancreatitis, etc.

Diagnostic testing

Stool for culture

Treatment

Supportive therapy. Erythromycin, azithromycin, tetracycline and quinolones will shorten the period of excretion and duration of illness only when administered early in the illness and the infecting organism is known.

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, if reported via a health care provider.
2. Interview the case, review clinical information, determine food history and activities, employment and potential source of exposure.
3. Educate the case and/or family about campylobacteriosis and prevention measures, providing access to website, general information, etc. If the case identifies a local food establishment (including institutional settings) as a possible source, contact a Food Safety Specialist with the Department of Environment.
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].
5. Document the information on the Enteric Case Report Form and the Campylobacter 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 OR treatment with appropriate antibiotics has been completed.
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 OR treatment with appropriate antibiotics has been completed.
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 OR treatment with appropriate antibiotics has been completed.
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:

- Inform cases that are identified as belonging to any of the Risk Groups listed in Criteria for Exclusion in the “[Exclusion of cases and carriers](#)” section.
- Recommend that cases not employed in any of the Risk Groups (listed in the “[Exclusion of cases and carriers](#)” section) to adhere to the same Exclusion Criteria.
- Remind cases about the importance of hand hygiene in stopping the spread of campylobacter 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 campylobacter or any other gastrointestinal illness should not prepare or serve food to other people (for food handlers see “[Exclusion of cases and carriers](#)” section).

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

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
<p>Contacts who are employed in:</p> <ul style="list-style-type: none">• food handling,• child care*• health care and/or other staff who have contact with susceptible persons <p>*Inclusive of those attending child care.</p>	<p><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 OR treatment with appropriate antibiotics has been completed.</p> <p><i>Asymptomatic:</i> Stools do not need to be screened. Exclude only when there is a concern about inadequate hand washing.</p>

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

Outbreak control

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

For outbreaks in child care 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/Campylobacter_Case_Report_Form.pdf

General Information Sheet

References

Campylobacter cdc.gov/foodsafety/diseases/campylobacter/index.html