

# Meningitis

## Reporting Obligations

Meningitis is designated as a disease of public health significance and is reportable under the Ontario Health Protection and Promotion Act. Report all suspect and confirmed cases within **one business day** to the health unit.

### REPORTING FORM

## Epidemiology

### Aetiologic Agent:

Bacterial meningitis is caused by the following bacteria: *Haemophilus influenza* (non-b types); *Staphylococcus aureus*; *E. coli*, *Enterobacter aerogenes*, *Proteus morganii* and *Klebsiella pneumoniae*.

Viral meningitis may be caused by a variety of viruses, many of which are associated with other diseases that can cause the illness. These include:

- Enteroviruses, coxsackievirus, echovirus, and arboviruses
- Measles, mumps, herpes simplex, varicella
- Lymphocytic choriomeningitis virus

At least half the cases of viral meningitis have no obvious causative agent.

### Clinical Presentation:

Meningitis has a very sudden onset, usually with high fever, severe headache, vomiting, confusion, seizures, progressive lethargy, drowsiness, stiff neck, and skin rash especially on hands and feet. Petechial rashes and other types of rashes may also occur depending on causative agent. Newborns and infants may not have all the classic symptoms above. They may present with irritability, may refuse meals, have unusual sleep patterns and constant crying; newborns and infants may also have the soft spots on their heads bulge and a lower-than-normal body temperature.

### Modes of transmission:

Depends on infectious agent, however, usually by direct contact, droplets, carrier state and discharges from nose or throat.

### Incubation Period:

Depends on causative agent for both bacterial and viral.

### Period of Communicability:

For bacterial, usually as long as organisms are present; effective antibiotic treatment reduces communicability after 24 – 48 hours. For viral, it varies according to causative agent.

## Risk Factors/Susceptibility

Susceptibility decreases with age; those not immunized with relevant vaccines are also susceptible.

Other risk factors include:

- Injection drug use/alcoholism
- Chronic illness/underlying medical condition
- Immunocompromised
- Maternal infection/pregnant
- Organ/tissue transplant
- Receipt of cochlear implant (bacterial)

## Diagnosis & Laboratory Testing

**Probable case:** Clinically compatible signs and symptoms of meningitis (characterized by fever, headache, stiff neck and pleocytosis).

**Confirmed Case:** As above with: Isolation of an organism (i.e., bacterial, viral, or other) from an appropriate clinical site (e.g., cerebrospinal fluid (CSF), blood).

### TESTING INFORMATION & REQUISITION

## Treatment & Case Management

For bacterial meningitis, routine practices and respiratory droplet precautions are recommended until 24 hours after the start of treatment depending on the causative organism. Treatment with the appropriate and strain sensitive antibiotic is under the direction of the attending health care provider. Provide education to the case about the illness and methods to prevent the spread of infection.

Personal prevention measures for bacterial meningitis include vaccination if available, avoiding crowded living quarters whenever practical, education about cough etiquette, hand hygiene and the risk of sharing items contaminated with saliva, e.g., cutlery, water bottles, lipstick, etc. For viral meningitis, there are no specific preventative measures available.

Contacts are those persons who live in the same household, attend the same child day care setting, or have had sexual and other intimate contact, such as sharing eating utensils, or drinks, with the case.

Public Health will follow up as needed.

## Patient Information

### PATIENT FACT SHEET

## References

1. [Ministry of Health, Infectious Diseases Protocol - Ontario Public Health Standards, 2022.](#)

## Additional Resources

1. [Meningitis: HealthLink BC](#)
2. [CDC. "Meningitis."](#)