

GONOCOCCAL INFECTION

Disease Overview

Gonorrhoea is a common sexually transmitted infection (STI) caused by the bacterium *Neisseria gonorrhoeae*. If undetected and undiagnosed, gonococcal infections can cause serious harm such as, pelvic inflammatory disease, infertility, or septicemia.

Symptoms

The majority of infected females and some infected males will not show any symptoms. Symptoms usually appear 2-7 days after infection.

Symptoms in males: infection generally presents as an acute purulent urethral discharge with painful urination (dysuria). Epididymitis (inflammation of the epididymis), orchitis (inflammation of one or both of the testicles) or disseminated gonococcal infection may also develop. In homosexual males pharyngeal and anorectal infections (inflammation of the rectum or proctitis) are not uncommon.

Symptoms in females: infection is followed by vaginitis, mucopurulent cervicitis and vaginal discharge that may progress to uterine invasion and result in endometritis, salpingitis, or pelvic peritonitis and subsequent risk of infertility. Disseminated gonococcal infection may also develop. Pharyngeal and anorectal infections (inflammation of the rectum or proctitis) are not uncommon.

Symptoms in infants and children: conjunctivitis can occur in infants and children; complications include sepsis. Co-infections with chlamydia are common.

Mode of Transmission

Primary mode of transmission is vaginal, anal and oral sexual contact.

Vertical transmission may occur during childbirth after exposure of the baby to the mother's infected cervix or birth canal.

Incubation Period

Generally 1 to 14 days, although can be longer.

Period of Communicability

May be communicable for months, if untreated; effective treatment ends communicability within hours.

Risk Factors

Increased risk of acquiring and/or severe illness.

- Those who have had contact with a person with proven infection or a compatible syndrome.
- Those who have had unprotected sex with a partner originating from an area with high endemicity (there is also a higher risk of antibiotic resistance in this population).
- Travellers to an endemic country who have had unprotected sex with a resident of that area (there is also a higher risk of antibiotic resistance in this population).

- Sex workers and their sexual partners.
- Sexually active youth <25 years of age with multiple partners.
- Street-involved youth.
- Men who have unprotected sex with men.
- Previous gonorrhoea and other STI infection.

Surveillance Case Definition

Confirmed Case Genital Infection is laboratory evidence of infection in genitourinary specimens:

- detection of *Neisseria gonorrhoeae* by culture

OR

- detection of *N. gonorrhoeae* nucleic acid

Confirmed Case Extra-Genital Infection is laboratory confirmation of infection from pharynx, rectum, joint, conjunctiva, blood and other extra-genital sites:

- detection of *N. gonorrhoeae* by culture

OR

- detection of *N. gonorrhoeae* nucleic acid

Confirmed Case Perinatally Acquired Infection is laboratory confirmation of infection from a neonate in the first four weeks of life leading to the diagnosis of gonococcal conjunctivitis, scalp abscess, vaginitis, bacteremia, arthritis, meningitis or endocarditis:

- detection of *N. gonorrhoeae* by culture

OR

- detection of *N. gonorrhoeae* nucleic acid

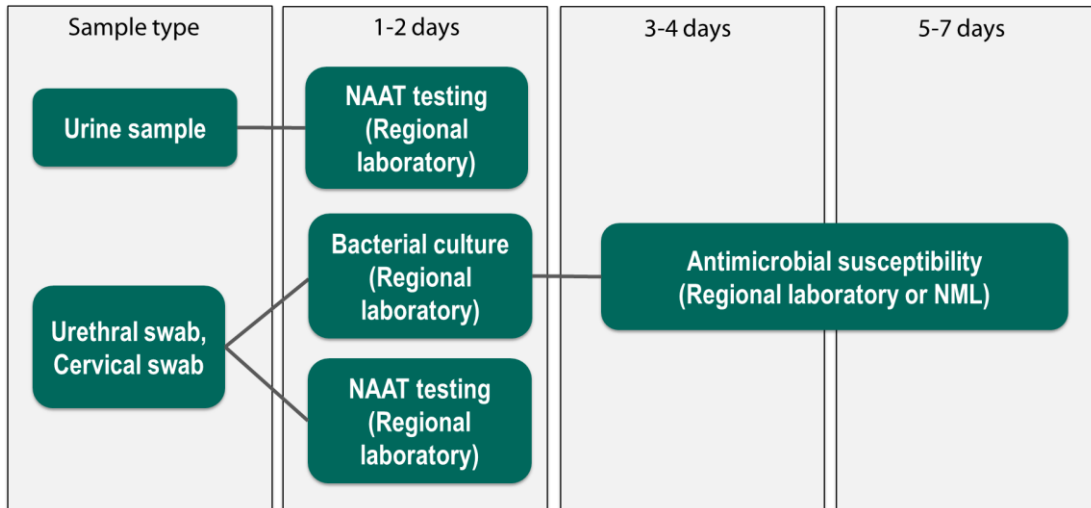
Diagnosis and Laboratory Guidelines

Laboratory confirmation of gonorrhoea is either isolation of the *Neisseria gonorrhoeae* bacteria from a clinical specimen (culture) or detection of the genetic material of the bacteria by nucleic acid amplification tests (NAAT). Specimen can be collected from the cervix, urethra, urine, pharynx and rectum. Refer to [Canadian Guidelines for Sexually Transmitted Infection](#) for guidance on specimen collection.

All regional labs have the capacity to do *Neisseria gonorrhoeae* culture and molecular detection tests (NAAT). Some regional laboratories will also do antibiotic susceptibility testing and others refer to NML for antibiotic susceptibility testing. Contact your laboratory for information on specimen collection and testing timelines.

Laboratory Testing

An overview of testing timelines for samples after the sample has been received by the laboratory. Turnaround times are averages and may change depending on the urgency of the situation.



Reporting

Per Policy 2.2 Disease and Event Notification to OCMOH and Disease and Event Reporting section.

- Enhanced Surveillance. For all confirmed cases an enhanced surveillance form should be completed and information sent to OCMOH on a monthly basis (STBBI Database).
- Routine Surveillance (RDSS) for all confirmed cases.

Case and contact Management

Case and contact management, investigation, treatment and follow-up according to STBBI Introduction and recommended per the [Canadian Guidelines for Sexually Transmitted Infection](#).

Education

The case or relevant caregiver should be informed about:

- Nature of the infection, length of the communicable period, and mode of transmission
- Sexually Transmitted and Blood Borne Infections Precautions
- Safer Sex Practices
- All confirmed cases should be encouraged to have additional STBBI testing for chlamydia, hepatitis B and C, syphilis and HIV.
- Follow-up cultures for test of cure from all positive sites should be done **3–7 days** after the completion of therapy
- If NAAT is the only choice for test of cure, tests should not be done for 2–3 weeks after treatment to avoid false-positive results due to the presence of non-viable organisms

- Repeat screening for individuals with a gonococcal infection is recommended 6 months post-treatment

Investigation

Use Gonorrhea Investigation Form

Case management should be initiated according to the [Canadian Guidelines for Sexually Transmitted Infection](#) or as directed by the Regional Medical Officer of Health (RMOH).

Exclusion/ Social Distancing

Patients and contacts should abstain from unprotected intercourse until 3 days after treatment of both partners is complete and symptoms resolved. The length of abstinence from unprotected sexual intercourse should be discussed with the treating clinician.

Contact isolation for all newborn infants with gonococcal infection effective therapy has been administered for 24 hours.

Treatment

- Due to the rapid increase in quinolone resistant *Neisseria gonorrhoeae*, quinolones such as ciprofloxacin and ofloxacin are no longer preferred drugs for the treatment of gonococcal infections in Canada.
- Combination therapy (with a cephalosporin and a macrolide) is currently recommended for all cases of gonorrhoea. Ideally the 2 drugs should be administered concurrently. If they are not, the effectiveness of the treatment may be reduced.
- Based on the pharmacokinetics/pharmacodynamics of cephalosporins and macrolides, there is insufficient evidence to make recommendations related to the need to repeat treatment when the 2 medications are not given concurrently.
- Clinicians are encouraged to assess each case individually to guide their decision-making related to retreatment, and to consult an experienced colleague or infectious disease specialist as necessary.

Immunization

Consideration of immunization for other STI's such as HPV and Hepatitis B and Hepatitis A based on the New Brunswick [Eligibility Criteria for Publicly Funded Vaccines/Biologics](#)

Outbreak Management

In consultation with the Regional Medical Officer of Health activate the local outbreak plan when an outbreak is declared.