

Gonorrhea

Summary

Gonorrhea is a sexually transmitted infection (STI) caused by a bacteria. It can be passed on through sexual contact. All people who are sexually active may be at risk for gonorrhea.

Gonorrhea can infect the urethra (the tube that allows urine and semen to pass out of the body), cervix, rectum, throat, mouth and eyes. Many people with gonorrhea do not have any symptoms. If symptoms do occur, they usually appear two to seven days after infection. Symptoms can include vaginal pain, painful urination, and an abnormal discharge from the vagina, urethra or rectum.

To test for gonorrhea, samples are taken from the sites of suspected infection and tested for the presence of the bacteria. Gonorrhea can be treated and cured using antibiotics, although some strains of gonorrhea have become resistant to some antibiotics.

Gonorrhea can increase the risk of sexual transmission of HIV. However, people living with HIV who are on effective HIV treatment do not pass on HIV sexually, even when they or their partners have an STI, including gonorrhea.

Correct and consistent condom use reduces the risk of getting gonorrhea or passing it on to someone else.

Key messages on gonorrhea for clients are available at the end of this fact sheet.

The words we use here – CATIE is committed to using language that is relevant to everyone. People use different terms to describe their genitals. This text uses medical terms, such as vagina and penis, to describe genitals. Cisgenderⁱ people can often identify with these terms. Some transⁱⁱ people may use other terms, such as front hole and strapless. CATIE acknowledges and respects that people use words that they are most comfortable with.

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What is gonorrhea?

Gonorrhea is a sexually transmitted infection (STI) caused by the bacterium *Neisseria gonorrhoeae*. The bacterium infects the “wet” linings (mucous membranes) of the body. Gonorrhea can infect the genital tracts, including the cervix, uterus, fallopian tubes, urethra (the tube that allows urine and semen to pass out of the body) and epididymis (a tube in the testicle that stores and carries sperm). It can also infect the mouth, throat (pharynx), anus and rectum. It can also infect the eye.¹⁻³

How is gonorrhea transmitted?

Gonorrhea can be passed from one person to another through sexual contact and sharing of sex toys.

Condomless insertive vaginal sex and anal sex are the activities that carry the highest-risk for the transmission of gonorrhea.

Gonorrhea can be passed on when a person who has gonorrhea in their mouth or throat gives oral sex to another person, or when a person gives oral sex to a person who has gonorrhea in the genitals. Gonorrhea can also be passed through oral-anal contact (rimming).

Gonorrhea can also be passed when sharing sex toys, particularly if a new condom is not used and the toy is not washed between uses. It is possible to transmit gonorrhea through a hand job or fingering if semen or vaginal fluids are transferred.

Gonorrhea can be passed to a newborn during childbirth (delivery).¹⁻⁴

Who is at risk?

Gonorrhea is the second most common bacterial STI in Canada. Anyone who is sexually active, including people who experience sexual violence, can get gonorrhea.

Some activities, more than others, increase the chances of a person getting gonorrhea or passing it on to someone else:

- condomless sex with a person who has gonorrhea

- condomless sex with a resident of an area where gonorrhea is common
- condomless sex with multiple partners

Some groups carry a higher burden of gonorrhea (it is more common). These include

- gay, bisexual and other men who have sex with men (gbMSM)
- Indigenous people
- members of racialized communities
- sexually active young people
- children born to a pregnant person with gonorrhea
- people who do sex work
- people who have had other STIs^{2, 5-7}

Symptoms

Many people with gonorrhea have no symptoms. If symptoms do occur, they usually appear two to seven days after infection (the incubation period). The severity of symptoms varies. The symptoms of gonorrhea are similar to, and sometimes confused with, the symptoms of other STIs such as chlamydia.

Gonorrhea in the cervix: Symptoms may include an increase or change in vaginal discharge (fluid), vaginal bleeding between menstrual periods, painful vaginal intercourse, painful urination and/or pain in the lower abdomen. Because these symptoms are often mild and not specific to gonorrhea, they may be mistaken for infections of the vagina or bladder.

Gonorrhea in the urethra: Symptoms may include urethral discharge (white, yellow or green), painful urination, urethral itching, and testicular pain and swelling.

Note that the symptoms of gonorrhea may vary for trans people if they have had bottom surgery and depending on the type of surgery.

Gonorrhea in the rectum or anus: Symptoms may include rectal or anal itching, pain, inflammation (proctitis), discharge and/or bleeding.

Gonorrhea in the throat: Infections in the mouth or throat often have no symptoms; however, individuals with these infections may experience a sore throat.

Gonorrhea in the eye: Gonorrhea in the eye can cause a condition called conjunctivitis (also known as pink eye). Symptoms include swollen eyelids, itchy, red eyes, and a green, white or yellow discharge that may crust over the eye. In newborns, this condition is considered a medical emergency.^{1-3,8}

Complications

Gonorrhea can lead to complex infections, some of them very serious, particularly if it is not detected and treated promptly.

Gonorrhea in the cervix can spread to the uterus and fallopian tubes and cause pelvic inflammatory disease (PID). This can result in chronic abdominal pain, infertility and an increased risk of ectopic pregnancy (a potentially serious complication of pregnancy where the embryo implants outside the uterus).

Gonorrhea can be passed to a newborn during childbirth. Severe complications from an infection acquired by a newborn during birth can include blindness, arthritis, meningitis (inflammation of the protective membrane that surrounds the brain and spinal cord) and sepsis (infection of the bloodstream).

Gonorrhea in the urethra can result in inflammation of the epididymis (called epididymitis). The epididymis is a tube in the testicle that stores and carries sperm. Epididymitis can sometimes result in infertility.

An untreated eye infection (conjunctivitis) caused by gonorrhea can cause scarring of the cornea and can result in vision damage.

If left untreated, the bacteria that cause gonorrhea can enter the bloodstream and spread through the body (disseminated gonorrhea). This can lead to arthritis, skin lesions and tenosynovitis (inflammation of the sheath surrounding the tendons - the tissues that connect muscle to bone). In rare cases, disseminated gonorrhea may lead

to meningitis as well as inflammation of the heart or liver.^{1-3,8,9}

Testing and diagnosis

The Public Health Agency of Canada (PHAC) recommends annual screening for gonorrhea among sexually active people under 25 years old and anyone presenting with risk factors for STIs. Screening is also recommended for pregnant people and neonates born to pregnant people with gonorrhea.

To screen for gonorrhea, samples are taken from the sites of possible infections and tested for the presence of the bacteria. Testing for infection in the urinary and genital tracts may require a urine sample or a swab of the vagina, cervix or urethra. If there is discharge from the urethra or vagina, a swab may be taken of the discharge.

There are two primary methods of testing collected samples for gonorrhea: NAATs (nucleic acid amplification tests) and cell cultures.

NAATs are more sensitive than cultures and result in more diagnoses. NAATs should be used to screen individuals who have no symptoms (such as during routine STI screening). NAATs can be used to test urine samples and swabs of the vagina, cervix or urethra. NAATs can be used to detect infection less than 48 hours after a possible exposure to gonorrhea. NAATs can also be used to test for gonorrhea in the rectum or throat. However, availability of NAATs validated for testing of the rectum and throat varies by geographic location.

Cell culture can be used to test samples taken from the urethra, vagina, cervix, rectum and throat. Cultures may not detect an infection if they are obtained less than 48 hours after an exposure. The Public Health Agency of Canada (PHAC) strongly recommends the use of cultures (together with NAATs) for infections with suspected antibiotic resistance. PHAC also recommends cultures (together with NAATs) for testing of symptomatic individuals, pregnant people, in cases of sexual abuse/assault, and to evaluate pelvic inflammatory disease (PID).

In addition to NAAT and cell culture, a test called a "Gram stain" is sometimes done, using a swab

taken of discharge from the urethra or vagina. Gram stains can confirm the presence of gonorrhea bacteria using a microscope. They are most reliable with samples taken from the urethra.

PHAC recommends that anyone with risk factors for STIs and blood-borne infections (STBBIs), be screened and given appropriate treatment at the time of testing for gonorrhea. In particular, additional specimens should be obtained for chlamydia testing because there are high rates of chlamydia among people who have gonorrhea. PHAC also recommends testing for HIV and syphilis, and recommends vaccination for hepatitis B, hepatitis A and human papillomavirus (HPV).^{2,10}

Notification of partners

Gonorrhea is a reportable infection in Canada. This means that when an infection is confirmed by a clinic, healthcare provider or laboratory it must be reported to public health authorities. When someone has a confirmed gonorrhea diagnosis, they will be asked by the healthcare provider to contact or provide contact information for all of their sexual partners in the 60 days before they were tested or noticed symptoms. If the client chooses not to contact their sexual partners, the healthcare provider or public health personnel will attempt to contact the partners and encourage them to test for gonorrhea and get treated. PHAC recommends that all notified partners be treated without waiting for test results. In an attempt to protect the original client's anonymity, their name is not given to sexual partners when they are contacted.²

Treatment

Gonorrhea can be cured with treatment using antibiotics. However, effective treatment of gonorrhea can be a challenge because some strains of gonorrhea are resistant to some treatments.

To increase the chances of treatment being effective, and to combat antibiotic resistance, PHAC guidelines recommend dual therapy with two different kinds of antibiotics: a third-generation cephalosporin (usually ceftriaxone) *and*

azithromycin. This combination is also effective in treating chlamydia, which is important because people with gonorrhea often have chlamydia as well. Treatments may differ depending on the person's risk factors, the site and complexity of the infection, the presence of antibiotic resistance, and drug contraindications (such as an allergy). Preferred treatment for urethral, cervical, vaginal, rectal and pharyngeal gonorrhea is a single intramuscular injection of Ceftriaxone combined with a single oral dose of azithromycin. A preferred alternative therapy for urethral and rectal infection among gbMSM replaces the Ceftriaxone injection with a single oral dose of cefixime.

Preferred treatments differ for symptoms associated with complicated infections. These include epididymitis and PID. For gonorrhea of the eye and disseminated infections (arthritis, meningitis, endocarditis) hospitalization is recommended for initial management. The preferred initial course involves a higher dose of ceftriaxone administered by IV, while awaiting consultation with an infectious disease specialist.^{2,7,10}

Test of cure

To make sure a gonorrhea infection has been cured after treatment, PHAC recommends conducting a test of cure (TOC) three to seven days after treatment, for all infected sites. This is especially important in cases of pharyngeal or rectal gonorrhea, persistent or recurrent symptoms, and sub-optimal treatment adherence (missed doses). TOC is also strongly recommended when alternate treatments or treatments with a documented record of antibiotic resistance are used, when the same treatment has failed in a linked case (such as a past sexual partner), and in people undergoing therapeutic abortion.

Cultures are the preferred method for TOC. If NAAT is the only option, it should not be done until two to three weeks after treatment.²

Antibiotic resistance

Some strains of gonorrhea are resistant to some antibiotics. Although cephalosporins are currently

used to treat the gonorrhea, some strains of gonorrhea are resistant to these drugs.

Culture tests can be used to determine if a gonorrhea sample is antibiotic resistant. These tests are important, both for individual treatment and for public health monitoring of antibiotic resistant strains.

To increase the chance of successful treatment, PHAC currently recommends combination (dual) therapy, using a third-generation cephalosporin *combined with* azithromycin.^{2,6,11}

What about HIV?

Having gonorrhea can cause the amount of HIV in the genital and rectal fluids of a person with HIV to increase. This can increase the risk of passing on or getting HIV. However, evidence shows that people living with HIV who are on effective HIV treatment do not pass on HIV sexually, even when they or their partners have an STI, including gonorrhea.^{1,12-15}

Prevention

Correct and consistent use of condoms reduces the risk of transmitting gonorrhea during insertive vaginal or anal sex. There are two types of condoms available. The external condom (sometimes called the “male” condom) is a sheath made from polyurethane, latex or polyisoprene that covers the penis during sex. The internal condom (sometimes called the insertive or “female” condom) is a pouch made of polyurethane or a synthetic latex material called nitrile that can be inserted into the vagina or rectum.

Some trans men may cut a condom or oral dam to fit their genitals.

The use of condoms or oral dams can reduce the risk of gonorrhea during oral sex or rimming.

When sharing a sex toy, cleaning the sex toy and putting a new condom on it between each use can reduce the risk of passing on gonorrhea by preventing the exchange of bodily fluids.

Someone who is diagnosed with gonorrhea should avoid having sex until they have been treated and all symptoms have gone. The notification, testing

and treatment of all sexual partners of an individual with gonorrhea all help to prevent the spread of gonorrhea.

After a person is cured of one gonorrhea infection, they cannot pass it on to someone else. But they can get another gonorrhea infection in the future, and then pass this on.

Using HIV PrEP (pre-exposure prophylaxis) does not prevent someone from getting or passing on gonorrhea.^{1,2,4}

Notes

i Cisgender – someone whose gender identity aligns with the sex they were assigned at birth

ii Transgender – an umbrella term that describes people with diverse gender identities and gender expressions that do not conform to stereotypical ideas about what it means to be a girl/woman or boy/man in society

(Definitions taken from *Creating Authentic Spaces: A gender identity and gender expression toolkit to support the implementation of institutional and social change*, published by The 519, Toronto, Ontario.)

Resources

Condoms for the prevention of HIV – *fact sheet*

Safer Sex Guide – *client resource*

Oral Sex – *client resource*

Bacterial STI basics – *fact sheet*

Sexually Transmitted Infections – *booklet (Public Health Agency of Canada)*

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What you need to know about gonorrhoea

Gonorrhoea is a sexually transmitted infection (STI) that is most easily passed on during sex without a condom. It can infect the genitals, rectum, mouth, throat and eyes. Gonorrhoea infections can be cured with antibiotics, and there are ways to reduce the chances of getting or passing on gonorrhoea, such as using a new condom correctly each time you have sex.

The words we use here – CATIE is committed to using language that is relevant to everyone. People use different terms to describe their bodies. This text uses medical terms, such as vagina and penis, to describe genitals.

Some people may use other terms, such as private parts or dick or front hole. CATIE acknowledges and respects that people use words that they are most comfortable with.

What is gonorrhoea?

Gonorrhoea is a sexually transmitted infection (STI). It most commonly infects the genitals, rectum, throat and eyes. A person with gonorrhoea can pass it on to another person during sex.

Many people with gonorrhoea have no symptoms, so they don't know they have an infection. When symptoms do occur, they usually take two to seven days to appear. Common symptoms vary depending on where the infection is.

Some common symptoms are:

- *Gonorrhoea in the genitals* can cause an unusual fluid (or discharge) to come out of the vagina or penis, pain when urinating (peeing), vaginal bleeding, bleeding between periods, painful vaginal sex, swelling or pain in the testicles or pain in the abdomen.
- *Gonorrhoea in the rectum or anus* can cause anal itching, discharge from the anus, painful bowel movements or the feeling of needing to have a bowel movement.
- *Gonorrhoea in the throat or mouth* can cause a sore throat.

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- *Gonorrhea in the eye* can cause an eye infection (conjunctivitis) causing itchy, swollen eyelids, bloodshot eyes (“pink eye”), and white, yellow or greenish discharge that may crust over the eye

If it is not treated, gonorrhea may lead to infertility, abdominal pain or pregnancy complications.

Untreated gonorrhea in the eye can damage vision.

Am I at risk of getting gonorrhea?

Anyone who is sexually active, including people who experience sexual violence, can get gonorrhea.

Gonorrhea is most easily passed on during sex without a condom; this includes insertive vaginal and anal sex.

Although less common, gonorrhea can also be passed on:

- when a person with gonorrhea in their mouth or throat gives oral sex to someone
- when a person gives oral sex to a person with gonorrhea in the genitals
- through oral-anal contact (rimming)
- through sharing sex toys or during a hand job or fingering if fluids with gonorrhea in them get onto the toy or hand

Gonorrhea can be passed from a pregnant parent to their child during childbirth (delivery).

Gonorrhea and HIV

Having gonorrhea can cause the amount of HIV in the genital and rectal fluids of a person with HIV to increase. This can increase the risk of sexual transmission of HIV. However, evidence shows that people living with HIV who are on effective HIV treatment do not pass on HIV sexually, *even when they or their partners have an STI, including gonorrhea.*

What can I do?

Reduce your chances of getting gonorrhea

- Use a condom during insertive vaginal and anal sex
- Use a condom or oral dam during oral sex
- When sharing a sex toy, wash the sex toy and put a new condom on it between each use

There is no vaccine approved to protect against gonorrhea.

HIV PrEP does not prevent the transmission of gonorrhea.

Get tested

The only way to know for sure whether or not you have gonorrhea is to get tested.

You should get tested if you experience symptoms of gonorrhea or if you have a current or recent sex partner diagnosed with gonorrhea.

Consider getting tested if you:

- have condomless oral, anal or vaginal sex
- have had multiple sex partners within the last 12 months
- have had sex with someone from, or who has visited, an area where gonorrhea is common
- have, or have had another STI
- are pregnant or planning to become pregnant

A healthcare provider can do the test. The test involves a swab of the genitals, rectum or throat or a urine (pee) sample. Tell the healthcare provider about all the kinds of sex you are having so they can test the appropriate parts of your body.

It is a good idea to get tested for other STIs, including HIV, when you get tested for gonorrhea. Many STIs can be passed on in the same way as gonorrhea. Talk to your healthcare provider about how often you should test for gonorrhea and other STIs.

If you are diagnosed with gonorrhoea, a healthcare provider or public health staff person will talk to you about informing your sex partners that they might have been exposed to gonorrhoea, and encourage them to get tested. If you aren't comfortable or able to notify your sex partners, a healthcare provider or public health staff member will contact them, and your identity will not be revealed.

Get treated

Gonorrhoea can be cured with “dual-treatment”, using two different antibiotics in combination. One is taken orally (as a pill) as a single dose; the other is given by injection, also in a single dose. However, treatment guidelines vary in different regions. After you have been treated, another test may be performed to ensure that you no longer have gonorrhoea. You should wait 7 days after treatment is finished to have sex again.

After you are cured of one gonorrhoea infection, you cannot pass it on to someone else. But you can get another gonorrhoea infection in the future, and pass this on.

This information sheet was developed in partnership with the Sex Information and Education Council of Canada (SIECCAN).



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