

# Gonorrhoea

## Definition

Gonorrhoea is a sexually-transmitted disease (commonly known as "the clap") caused by the bacterium

*Neisseria gonorrhoeae*

## Causes, Incidence, and Risk Factors

- Gonorrhoea is one of the most common infectious bacterial diseases and is most frequently transmitted during sexual intercourse, including both oral and anal sex.
- Gonorrhoea is a notifiable
- it is estimated that 90% of an infected male's secondary sex contacts are infected.
- There are almost 400,000 cases of gonorrhoea a year reported to the CDC (Centers for Disease control).

- Most prevalent in people 15 to 29 years old.
- Risk factors include having multiple sexual partners,
- A partner with a past history of any STD
- Unprotected sex
- It can be contracted during oral, vaginal, or anal sex.
- Men acquire gonorrhoea at a slightly lower rate than women (men 1 in 5)

- Average incubation is approximately 2 to 5 days
- Symptoms may appear as late as 2 weeks.
- The most common initial symptom is a discharge from the urethra that is either
  - mucous (clear or whitish discharge)
  - purulent (thick, yellowish, pus-like discharge).
- It appears at the opening of the penis and may stain the underwear.
- Other initial symptoms include painful urination and urethral burning (both).

- The causative organism can infect
  - the throat (gonococcal pharyngitis)
  - the urethra (urethritis)
  - Vagina (vaginitis)
  - the anus and rectum (proctitis)
- In addition, the organism may spread from the urethra to other portions of the reproductive tract producing
  - epididymitis
  - prostatitis
  - periurethral abscess

- In men untreated gonorrhoea may lead to urethral stricture, which can result in decreased urine flow, incomplete emptying of the bladder, urinary tract infection, and ultimately kidney failure.
- In Women, the organisms may spread up the female reproductive tract, through the cervix and uterus, into the Fallopian tubes and can cause PID (pelvic inflammatory disease) in 10 to 15% of untreated women.
- PID causes
  - scarring of the fallopian tubes and infertility
  - painful intercourse (dyspareunia)
  - chronic pelvic pain

## Important

- A small number of men will be asymptomatic.
- Approximately 50% of women with gonorrhoea are asymptomatic

- Other sites of infection are relatively common
  - Anorectal gonorrhoea (homosexual men 50% of women )
  - Majority of people with anorectal gonorrhoea are asymptomatic
  - throat infection (gonococcal pharyngitis).
  - 10 to 25% of homosexual men also have pharyngeal infection
  - 10 to 20% of women have pharyngeal gonorrhoea.
- Gonococcal conjunctivitis (eye infection) is very rare in adults.
- It is normally seen only in infants delivered from mothers with gonorrhoea, and is called *ophthalmia neonatorum*.

## Prevention

Abstinence is an absolute answer to preventing gonorrhoea but it is not practical nor reasonable for all people.

Safer sex behaviours may reduce the risk.

A monogamous sexual relationship.

## Male Symptoms

- increased urinary frequency or urgency
- incontinence
- urethral discharge
- pain on urination
- red or swollen opening of penis (urethra)
- tender testicles

## Female Symptoms

- vaginal discharge
- pain or burning on urination
- urinary hesitancy
- throat, sore
- sexual intercourse, painful
- mouth sores

## Male Signs and Tests

- A smear of the urethral discharge is taken, stained, and examined under the microscope for *Neisseria gonorrhoeae*.
- Cultures provide absolute proof of infection. *Neisseria gonorrhoeae* organisms may grow on any of the mucus membranes.
- Culture sites are determined depending on the person's gender, sexual preference, and sexual practices.
- Generally, cultures are obtained from the
  - urethra
  - anus
  - throat.

- Tests include:
  - gram stain of urethral discharge
  - urethral discharge culture for gonorrhoea
  - positive rectal culture
- Laboratories can give a preliminary diagnosis often within 24 hours and a confirmed diagnosis within 72 hours.

## Female Signs and Tests

- cervical gram stain
- endocervical culture for gonorrhoea
- throat swab culture
- skin lesion aspiration
- rectal culture

- **Treatment:**  
There are two aspects of treating a sexually-transmitted disease, especially one as easily spread as gonorrhoea. The first aspect is to cure the affected person. The second is to locate and test all of the other sexual contacts and to treat them to prevent further spread of the disease. Mandatory reporting has, until recently, held the number of cases of gonorrhoea at a low level. However, the [incidence](#) is rising.

Beginning about the time of the Viet Nam war, the United States encountered penicillin- and tetracycline-resistant strains of gonorrhoea. These resistant strains have been increasing over the last few years. Because of this, a new standardized treatment regimen has now been recommended by the Centers for Disease Control (CDC). Instead of the standard penicillin treatment, gonorrhoea is now treated by a large number of new and very potent [antibiotics](#).

This treatment regimen includes:

- [ceftriaxone](#), 125 mg (milligrams) injected into a [muscle](#), one time
- [cefixime](#), 400 mg by mouth, one time
- [ciprofloxacin - oral](#), 500 mg by mouth, one time
- [ofloxacin - oral](#), 400 mg by mouth, one time
- Spectinomycin, 2 grams injected into a muscle, one time
- [cefuroxime axetil](#), 1 gram by mouth, one time
- [cephodoxime proxetil](#), 200 mg by mouth, one time
- [enoxacin](#), 400 mg given by mouth, one time
- [erythromycins - oral](#), 500 mg by mouth, four times a day for one week

## Prognosis

- When gonorrhoea is treated immediately, the outcome is likely to be good, meaning that no permanent scarring of the urethra will take place and spread of the infection to other areas of the body will not occur.
- When treatment is delayed there is a greater likelihood of complication.

## Complications For Men

- Untreated gonorrhoea may spread to other parts of the body causing disseminated infection. The following is a list of possible complications:
  - periurethral abscess
  - gonococcal arthritis
  - gonococcal pharyngitis
  - gonococcal conjunctivitis
  - infection or inflammation of the male reproductive system
    - epididymitis
    - prostatitis
    - seminal vesiculitis
    - cowperitis

## Complications For Women

- salpingitis
- pelvic inflammatory disease
- peritonitis
- bacteremia (gonococcemia)
- gonococcal arthritis
- gonococcal pharyngitis
- ophthalmia neonatorum (gonococcal conjunctivitis)
- vulvovaginitis
- sterility
- dyspareunia