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Gonorrhoea

What is gonorrhoea?

Gonorrhoea is an infection of the mucous membranes caused by the bacteria *Neisseria gonorrhoeae*. It is a common sexually transmitted infection that is primarily passed from person to person during sexual contact. It may also be passed to newborns delivered vaginally if the mother is infected, causing conjunctivitis (eye infection).

Who is at risk of gonorrhoea?

Sexually active people that do not practice safe sex, including the proper use of barrier contraceptives (condoms), are most at risk of getting gonorrhoea. The bacteria are transmitted from one person to another through vaginal, oral or anal sexual contact. Sexual penetration is not necessary as the bacteria are found in mucosal discharge and mucosal surfaces. Groups who are particularly at risk of getting gonorrhoea include:

- Those with multiple sexual partners
- Sexually active adolescents and young adults
- Children sexually abused by an infected individual
- Newborns delivered through the infected birth canal of the mother
- Women are at increased risk during menstruation and pregnancy

What are the signs and symptoms of gonorrhoea?

The signs and symptoms of localised gonorrhoea are different between males and females.

Males	Females
<ul style="list-style-type: none"> • Inflammation of the urethra • Creamy or green pus-like discharge from the penis • Painful urination (burning sensation) • Painful testicles 	<ul style="list-style-type: none"> • Often there are no symptoms until the infection has progressed to a more advanced stage • Creamy or green, pus-like or bloody vaginal discharge • Itchy or irritable vulva • Painful urination (burning sensation) • Lower abdominal pain which may indicate pelvic inflammatory disease or peritonitis

Rectal infection may occur from anal intercourse, and, in women, by local spread of the organism as well. Rectal symptoms include rectal pain, pruritus (itching), constipation and rectal discharge, or more often, there may be no symptoms at all. Pharyngitis (inflammation of the throat) that may cause mild to severe difficulty in swallowing may also occur in men and women with gonorrhoea. Rarely, gonococcal infection may spread via the bloodstream to infect other organs and tissues.

Not all patients with gonorrhoea will experience symptoms of the disease. There are no symptoms at all in 10–15% of men and in up to 80% of women. However, once infected the disease will spread until properly treated. Hence, in many women, gonorrhoea may have spread to other organs (disseminated gonococcal infection) and

caused significant damage due to pelvic inflammatory disease before any signs or symptoms become apparent.

Disseminated gonococcal infection

Occasionally, widespread or disseminated gonococcal infection may occur. Signs and symptoms of disseminated gonococcal infection (gonococcaemia) include:

- Joint or tendon pain with decreased mobility. The knee is the most common site of purulent gonococcal arthritis.
- Skin rash – this is a common complaint in about one quarter of patients with disseminated gonococcal infection. On examination, rash is usually present in all patients with the disease.
 - Usually small papules that turn into pustules on broad erythematous bases and necrotic centres
 - Occur on the trunk, limbs, palms and soles (usually spares the face, scalp and mouth)
 - Haemorrhagic lesions, [erythema nodosum](#), [urticaria](#), and [erythema multiforme](#) occur less frequently.
- Fever, chills and malaise

It is important to remember that patients presenting with disseminated gonococcal infection may not show any localised signs and or symptoms at the primary site of mucosal infection.

Gonococcaemia



How is the diagnosis made?

Gram-staining and culture are the most common laboratory tests used to diagnose gonorrhoea.

- Gram-staining involves taking a sample of the discharge and staining it with a dye. Results are often ready by the end of the consultation or within a few hours. This test is more accurate for men than women, as only 1 in 2 women with infection have a positive stain.
- This involves taking a swab from the site of infection and from the cervix in females or from the urethra in males. The swab is applied to a culture plate and incubated for 2 days to allow the bacteria to multiply. This gives a much more accurate diagnosis and also guides treatment by providing information about the antibiotic susceptibility of the organism.

An ultrasound scan may be performed if pelvic inflammatory disease is suspected.

What is the treatment for gonorrhoea?

Gonorrhoea is treated with [antibiotics](#) effective against *Neisseria gonorrhoeae*, and should be started as soon as possible. Empiric therapy with an appropriate antibiotic should be started while awaiting results from culture. Chlamydial infection is often found in patients with gonorrhoea so it is important to ensure both infections are treated. The choice of antibiotic depends on local sensitivities. The current recommendation in New Zealand is for a single dose of ceftriaxone 250–500mg by intramuscular injection plus azithromycin 1g to cover chlamydia. If the organism is susceptible to these antibiotics on culture, a single dose with oral ciproflaxacin 500mg or

amoxicillin 3g with 1g probenecid may be used.

A follow-up visit after treatment completion to recheck cultures and confirm eradication of infection is important. Sexual activity should not take place until treatment is completed and all partners have been tested and treated appropriately.

If gonorrhoea is left untreated the following complications may occur:

- Urethral scarring in men – possible decreased fertility or bladder-outlet obstruction
- Scarring of the upper reproductive tract in women with PID – possible infertility, chronic pelvic pain, ectopic pregnancy
- Neonatal infection and miscarriage from gonococcal infection in pregnant women
- Scarring and permanent vision impairment or blindness resulting from conjunctival infection with gonorrhoea
- Gonococcal meningitis
- Arthritis

Can gonorrhoea be prevented?

If you think you are infected, stop all sexual contact and see your doctor or sexual health clinic. Notify all sexual contacts immediately so they can be checked for infection and treated appropriately. Safe-sex practices to prevent the spread of gonorrhoea include:

- Limiting the number of sex partners
- Use condoms

Related information

References:

- Book: Textbook of Dermatology. Ed Rook A, Wilkinson DS, Ebling FJB, Champion RH, Burton JL. Fourth edition. Blackwell Scientific Publications.

On DermNet NZ:

- [Bacterial skin infections](#)
- [Genital skin problems](#)

Other websites:

- [Gonorrhea](#) – emedicine dermatology, the online textbook

Books about skin diseases:

See the [DermNet NZ bookstore](#)

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DermNet does not provide an on-line consultation service.

If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

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