

Gonorrhoea treatment guidelines

Also known as Gono

Gonorrhoea is a common STI caused by bacteria and can be passed on during sex without a condom.

Causes

Gonorrhoea is caused by *Neisseria gonorrhoeae*.

Risk factors

There is higher prevalence of gonorrhoea among:

- MSM, especially if they take PrEP
- remote Aboriginal and Torres Strait Islander communities
- street-based sex workers
- sexual contacts of people with gonorrhoea

In recent years, there has been a rising notification rate among heterosexual male and females.

Clinical presentation

Gonorrhoea can lead to genital as well as extragenital (pharyngeal and rectal) infection.

In women:

- infection can cause cervicitis which may be asymptomatic or result in vaginal discharge
- upper genital infection in women can lead to pelvic inflammatory disease (PID). Refer to [PID treatment guidelines](#).

In men:

- gonorrhoea can cause urethral infection which is characterised by a purulent urethral discharge
- urethral gonorrhoea usually presents with urethral discharge but can be asymptomatic in some men

In MSM:

- infection of the pharynx and rectum are common and may be present alongside urethral infection
- infections of the pharynx are asymptomatic
- rectal infections are usually asymptomatic but in a proportion cause symptoms of proctitis with anal pain and discharge
- anal discharge may be purulent

Conjunctival infection can occur in neonates born to infected mothers and in adults via exposure to infected genital secretions.

Disseminated gonococcal infection, characterised by arthritis and skin lesions is rare.

Diagnosis

Women

Test	Site/Specimen	Comments
NAAT	Endocervical swab	Best test if speculum examination is undertaken.
NAAT	Self-collected vaginal swab	As sensitive as clinician taken swabs, and are more acceptable to many women.
NAAT	FPU	If endocervical swab/self-collected vaginal swab cannot be taken by patient request. Not as sensitive as self-collected vaginal swab.
NAAT	Anorectal swab	If patient has had anal sex or has anorectal symptoms or requests test. If patient declines anal examination, instruct self-collection.

Men

Test	Site/Specimen	Comments
NAAT	FPU	If MSM, also collect anal and pharyngeal swab even if asymptomatic at these sites.
NAAT	Anorectal swab	If MSM, and patient declines anal examination or has no anorectal symptoms, instruct in self-collection. Self-collection is as sensitive as those taken by a clinician and may be preferred by some men.
NAAT	Pharyngeal swab	Collect if MSM. Self-collection is as sensitive as those taken by a clinician and may be preferred by some men. Requires swabbing of the tonsils as well as the posterior oropharynx.

Testing notes

NAAT tests such as transcription mediated amplification (TMA), polymerase chain reaction (PCR) and strand displacement amplification (SDA) are more sensitive than culture in detecting gonococci.

False positive gonococcal NAAT results do occur especially in low prevalence populations.

Interpret unexpected positive results with caution in low-risk patients.

Confirmatory testing by the laboratory using a NAAT test that targets a different part of the *N. gonorrhoeae* genome can improve the specificity of NAATs for gonorrhoea and help to exclude false positive results.

Patients who have been screened positive for gonorrhoea using AC-2 testing and who are recalled for treatment should have culture taken from the NAAT-positive site prior to treatment: urethral, pharyngeal, rectal, or cervical. This includes asymptomatic MSM for urethral swab as culture can be positive even where discharge is absent.

Culture provides an isolate for antimicrobial susceptibility testing which is important for surveillance of antimicrobial resistance, which is growing.

Microscopy can help confirm a diagnosis of gonorrhoea, and therefore guide treatment at the initial visit, by identifying gram-negative intracellular diplococci (GNDC) in a gram stain of the discharge obtained from a urethral swab, endocervical swab or anal swab:

- GNDC are virtually always seen in the discharge from men with urethral gonorrhoea, but less frequently in cases of gonococcal cervicitis or proctitis
- *Neisseria meningitidis*, though an uncommon cause of urethritis and cervicitis can cause a purulent discharge clinically indistinguishable from gonorrhoea
- GNDC seen in meningococcal discharges are morphologically identical to gonococci

Testing methods

Testing methods depend on the risk group of the individual.

Women

- Screening of women for gonorrhoea is recommended
- Women who present with vaginal discharge should be examined for signs of cervical inflammation and tested for gonorrhoea, especially where there is increased risk for gonorrhoea (overseas contact, contact with gonorrhoea).
 - Refer to [Vaginal discharge treatment guidelines](#) for information about vaginal discharge and other relevant tests in women with discharge
- Women should be tested for gonorrhoea by NAAT testing from a vaginal or cervical swab:
 - Urine can be used but may be less sensitive
 - If gonorrhoea NAAT is positive, then a cervical swab for gonorrhoea culture should be obtained prior to treatment for antimicrobial susceptibility testing

Heterosexual men

- Screening of heterosexual men for urethral gonorrhoea is recommended because of the increasing prevalence of this infection among heterosexuals
- Men who present with urethral discharge, particularly purulent discharge and/or where there is risk for gonorrhoea (such as MSM, overseas contact, contact with gonorrhoea) should be tested for gonorrhoea using two methods:
 - urine for NAAT testing
 - swab of the urethral discharge for culture
- Culture should be obtained at presentation prior to treatment for antimicrobial susceptibility testing

MSM

- Asymptomatic MSM should be screened for pharyngeal and rectal gonococcal at least once a year, with more frequent screening of higher risk men as part of comprehensive testing for other STI and HIV
- MSM taking PrEP should be screened for gonorrhoea at their 3 monthly PrEP visits
- Screening of MSM should include urine (gonorrhoea and chlamydia) and pharyngeal (gonorrhoea and chlamydia) and anal (gonorrhoea

and chlamydia) swabs

- Refer to [Chlamydia treatment guidelines](#)

Contacts of gonorrhoea

- Individuals who report sexual contact with gonorrhoea should be screened for gonorrhoea by NAAT:
 - Women: pharyngeal swab and cervical swab
 - Heterosexual men: pharyngeal swab and urine
 - MSM: pharyngeal and anal swabs and urine

Management

Index patient

Gonorrhoea is [notifiable to the Victorian Department of Health](#).

Condition	Recommended	Comments
Uncomplicated genital or anorectal gonorrhoea	Ceftriaxone 500 mg in 2 ml of 1% lignocaine, IM stat PLUS Azithromycin 1 g PO, stat	Recommendations on the treatment of gonorrhoea are constantly changing because of the development of antimicrobial resistance. Resistance to ciprofloxacin and penicillin is now common in Victoria. Combination treatment using ceftriaxone and azithromycin is recommended. If an individual reports anaphylaxis or severe allergy to cephalosporins or penicillin, advice on alternative treatment should be obtained from a sexual health specialist. Azithromycin can cause nausea and diarrhoea: patients should be instructed to take azithromycin with food.
Pharyngeal gonorrhoea	Ceftriaxone 500 mg in 2 ml of 1% lignocaine, IM, stat PLUS Azithromycin 2 g PO, stat as divided dose (1 g stat followed by 1 g, 6-12 hours later)	Nausea and diarrhoea are more common at the 2g dose of azithromycin compared to 1g dose
Mild-moderate gonococcal epididymo-orchitis	Azithromycin 1 g PO, stat ;PLUS Ceftriaxone 500mg in 2ml of 1% lignocaine IM stat PLUS Doxycycline 100mg PO, twice daily for 14 days	-

Condition	Recommended	Comments
Severe gonococcal epididymo-orchitis	Admit to hospital for intravenous therapy	-
Mild-moderate gonococcal pelvic inflammatory disease (PID)	Azithromycin 1 g PO, stat PLUS Ceftriaxone 500mg in 2ml of 1% lignocaine IM PLUS Metronidazole 400mg PO, twice daily for 14 days PLUS Doxycycline 100mg PO, twice daily for 14 days	-
Severe gonococcal PID	Admit to hospital for intravenous therapy	-

Patients with medication allergies

A history of rash or urticaria following penicillin is not necessarily a contraindication to treatment with ceftriaxone. However, if there is a history of anaphylaxis following penicillin, or those with documented allergy to cephalosporins, an alternative to ceftriaxone should be used.

Treatment choice will depend on prevailing patterns of antimicrobial resistance. Options to be considered for initial treatment include **Azithromycin 2 g together with doxycycline 100 mg twice daily for 7 days.**

Combination therapy is preferred to monotherapy because of concerns about inducing resistance if single-drug therapy is used. There is no evidence for this combination.

A single 2 g dose of azithromycin has been shown to be effective in >95% of uncomplicated susceptible genital, pharyngeal and rectal infections. However, this dose commonly causes significant gastrointestinal upset and should be taken with food (1 g stat followed by 1 g, 6-12 hours later)

In patients unable to tolerate this combination, consider:

- **Azithromycin 2 g alone, as divided dose** (1 g stat followed by 1 g, 6-12 hours later)

or

- **Doxycycline 100 mg twice daily for 7 days**

or

- **Ciprofloxacin 500 mg single dose**

High level resistance

Gonococcal isolates with high level resistance to ceftriaxone (MIC ≥ 0.125) and/or azithromycin (MIC ≥ 256) should be discussed with a senior MSHC sexual health physician and be reported to the Victorian Department of Health and Human Services and Partner Notification Officers, so that close follow up of the index case with test of cure and outbreak investigation are conducted to limit the further transmission of highly resistant gonorrhoea.

There is a formal procedure that has been adopted by the Victorian Department of Health and Human Services for managing such cases which is initiated when the Partner Notification Officers are contacted. The sexual partners of individuals with highly resistant gonorrhoea should attend MSHC and be tested and if found to have gonorrhoea have test of cure performed after treatment. These partners will be referred to MSHC for testing and treatment by the Partner Notification Officers.

Follow up

Recall patients for a test of cure if: non-standard gonorrhoea treatment is given (e.g. ceftriaxone was not given because of concerns about allergy) or ceftriaxone MIC is ≥ 0.06 (less susceptible)

- Tests of cure for gonorrhoea are only required if a non-standard treatment regimen has been used to treat gonorrhoea or if the results of antibiotic susceptibility testing indicate resistance to ceftriaxone/and or azithromycin. Clinicians should ask patients to attend for a test of cure if ceftriaxone is not used.
- Tests of cure should be with culture one week after treatment from the site(s) of infection and not NAAT as the former will be positive only if gonococci are viable whereas the latter may be positive from non-viable material.

Contact tracing & partner management

Partners should be contacted and tested; sex with untreated gonorrhoea infected partners can result in repeat infection.

Consider referring patients to [Let Them Know](#). This site supports patients to notify partners and facilitates SMS and email messages to partners.

Treatment for gonorrhoea is not routinely offered to asymptomatic individuals reporting contact with gonorrhoea because a proportion will be negative for gonorrhoea, therefore avoiding administration of ceftriaxone. However, treatment can be offered if the patient prefers, has symptoms, or is unlikely to return for the test result or treatment.

If the contact is being treated for gonorrhoea at the initial visit, gonorrhoea culture of these sites should also be performed

Individuals should abstain from sex with their partners until 7 days after both have received treatment.

Disclaimer

We recognise that gender identity is fluid. In our treatment guidelines, the words and language we use to describe genitals and gender are based on the sex assigned at birth.

The content of these treatment guidelines is for information purposes only. The treatment guidelines are generic in character and should be applied to individuals only as deemed appropriate by the treating practitioner on a case by case basis. Alfred Health, through MSHC, does not accept liability to any person for the information or advice (or the use of such information or advice) which is provided through these treatment guidelines.-

The information contained within these treatment guidelines is provided on the basis that all persons accessing the treatment guidelines undertake responsibility for assessing the relevance and accuracy of the content and its suitability for a particular patient. Responsible use of these guidelines requires that the prescriber is familiar with contraindications and precautions relevant to the various pharmaceutical agents recommended herein.