

# Urethral discharge

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The commonest cause of urethral discharge in men is urethritis; the two commonest causes of urethritis are non-specific urethritis (NSU) and gonococcal urethritis. Other related symptoms include dysuria and urethral pruritus while epididymitis can also be present. A sexual history should be sought, particularly a history of unprotected intercourse, oral sex and anal intercourse. A routine investigative screen includes a Gram stain of the discharge, dipstick testing and culture of a urine specimen as well as nucleic acid amplification testing (NAAT) of either a urine specimen or a urethral swab. If relevant, the same techniques can be used for vaginal, endocervical, anal and pharyngeal swabs. NAAT is a sensitive way of identifying both gonococcal and chlamydial urethritis. As with all sexually transmitted infections (STIs) the possibility of other infections (such as HIV) should always be borne in mind and, where appropriate, tested for. Non-specific urethritis (synonym: non-gonococcal urethritis) NSU is an STI that is the commonest cause of urethritis in the western world. In around 40% of cases it is due to *Chlamydia trachomatis*, with other cases being caused by *Ureaplasma urealyticum*, *Trichomonas vaginalis* or *Mycoplasma genitalium* causative agent in up to 50% of cases is unknown. NSU can affect both men and women and asymptomatic infection is common in both. In men, dysuria and a white mucopurulent urethral discharge appear up to 6 weeks after sexual intercourse. Dysuria is usual. The urine appears to be clear but may contain 'threads' or pus cells. Epididymitis is common and urethral stricture is a potential late complication. In women, the condition is usually asymptomatic, although it can present as vaginal discharge or as a form of urethrotigonitis. It may result in cervicitis or pelvic inflammatory disease. Exclusion of gonorrhoeal infection is important. The diagnostic test of choice is NAAT: in men either a first-catch urine specimen or a urethral swab can be used; in women urine, endocervical or vaginal swabs can be used. If testing is positive, then partners should be screened. The standard treatment regimens are azithromycin as a single dose (1 g) or doxycycline (100 mg orally twice daily) for 7 days. Treatment is usually effective, although relapse is common, especially in men, in whom the prostate may act as a reservoir of infection. It is important to treat both partners as reinfection is probable if this is not done; retesting of both partners at 3 months is recommended. Hans Christian Joachim Gram, 1853–1938, Professor of Pharmacology (1891–1900) and of Medicine (1900–1923), Copenhagen, Denmark, described this method of staining bacteria in 1884. Albert Ludwig Siegmund Neisser, 1855–1916, Director of the Dermatological Institute, Breslau, Germany (now Wrocław, Poland). Hans Conrad Julius Reiter, 1881–1969, President of the Health Service and Honorary Professor of Hygiene, Berlin, Germany, described this condition in 1916. He was subsequently convicted of war crimes as a consequence of his involvement in the death of hundreds of inmates in Buchenwald. Daniel Elmer Salmon, 1850–1914, veterinary pathologist, Chief of the Bureau of Animal Industry, Washington, DC, USA. Gonorrhoea is a sexually transmitted disease caused by *Neisseria gonorrhoeae* (gonococcus), a Gram-negative kidney-shaped diplococcus that infects the anterior urethra in men, the urethra and cervix in women and the oropharynx, rectum and anal canal in both sexes, but especially men. It is transmitted by unprotected sexual intercourse and is the second commonest cause of urethritis in western countries. Most men have symptoms of urethral discomfort and urethral discharge within a few

days of infection. There is often scalding dysuria. In women it is often asymptomatic. There can be mild dysuria or slight urethral discharge, which can go unnoticed by the patient. Cervicitis can occur with about 10% suffering from pelvic inflammatory disease (salpingitis), which, if bilateral, may lead to infertility. A mother may transmit gonorrhoea to her newborn during childbirth, with the risk that blindness of the child can result. In addition, in both men and women exposed orally or anally, gonococcal infections can cause a predominantly asymptomatic pharyngitis or proctitis. Traditionally, the diagnosis was made by identification of pus and gonococci in a Gram-stained urethral smear with subsequent culture. However, more recently, NAAT, which is more sensitive, has become the norm. Complications are prevented by effective early treatment. In men complications include posterior urethritis, prostatitis (acute or chronic), acute epididymo-orchitis, periurethral abscess and urethral stricture. Gonococcal arthritis, iridocyclitis, septicaemia and endocarditis are unusual. Treatment is with antibiotics. Ceftriaxone (250 mg intramuscularly) and azithromycin (1 g orally) are currently the treatment of choice. There is increasing antibiotic resistance to more traditional antibiotics such as ciprofloxacin or penicillin. Contact tracing is important in controlling the spread of the disease and management is usually by a genitourinary physician. Failure to respond to first-line treatment should raise the possibility of antibiotic resistance or co-infection with Chlamydia.

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