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2025 European guideline on the management of *Chlamydia trachomatis* infections

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Abstract

Sexually transmitted *Chlamydia trachomatis* infections remain common globally and most frequently are asymptomatic. The 2025 European *C. trachomatis* guideline provides up-to-date guidance regarding indications for testing and treatment of *C. trachomatis* infections. It includes advice on urogenital and extragenital *C. trachomatis* testing including the use of self-collected specimens; recommendation to use only validated NAATs for diagnosis; and recommendation to treat all *C. trachomatis* infections with doxycycline as first line in preference to single-dose azithromycin regimens. The absence of evidence and limited value of broad screening in asymptomatic populations for *C. trachomatis* infections is also discussed.

Keywords

Chlamydia trachomatis, Europe, diagnosis, treatment, antibiotic

Aetiology, transmission and epidemiology

Chlamydia trachomatis is a common sexually transmitted infection[1] with the majority of infections being asymptomatic (no symptoms recognised by the individual who is infected), especially in women and extragenital infections.[2]

Notification rates continue to be highest among young adult heterosexual women (https://atlas.ecdc.europa.eu/public/index.aspx, https://www.ecdc.europa.eu/sites/default/files/documents/Syst-review-prevalence-stis.pdf).[3] Younger age and behavioural risk factors such as prior *C. trachomatis* infection, condomless sex and new or multiple partners remain the major risk factors for acquisition.[4]

Transmission of *C. trachomatis* usually occurs via direct mucosal contact between individuals during sexual intercourse (vaginal, anal or oral sex); vertical transmission can result from vaginal delivery through an infected cervical canal.[2]

Clinical features, complications and sequelae

Spontaneous clearance occurs in most untreated asymptomatic women at an estimated rate of 45–54% at 1 year of follow-up, 82% at 2 years, and 94% at 4 years.[5,6] A long duration of undetected and untreated infection in women can result in ascending infection causing pelvic inflammatory

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disease (PID) and associated sequelae such as ectopic pregnancy, chronic pelvic pain and tubal factor infertility.[2]

Urogenital infections

Symptoms and signs in women

- 70–95% asymptomatic[2]
- Dysuria
- Vaginal discharge
- Postcoital bleeding and intermenstrual bleeding
- Menorrhagia
- Abdominal pain or lower abdominal pain
- Mucopurulent cervicitis, with or without contact bleeding
- Cervical friability
- Cervical oedema
- Endocervical ulcers
- Urethritis

Symptoms and signs suggestive of PID

- Lower abdominal tenderness and pain – usually bilateral[7–9]
- Deep dyspareunia – particularly of recent onset
- Abnormal vaginal bleeding – intermenstrual bleeding, post coital bleeding and menorrhagia can occur secondary to associated cervicitis and endometritis
- Abnormal vaginal or cervical discharge – as a result of associated cervicitis, endometritis or bacterial vaginosis
- Cervical motion tenderness on bimanual vaginal examination
- Adnexal tenderness on bimanual vaginal examination – unilateral or bilateral
- Fever (>38°C) – in moderate to severe PID

Complications of C. trachomatis *in women (see also below)*

- PID (endometritis, salpingitis, parametritis, oophoritis, tubo-ovarian abscess and/or pelvic peritonitis)[2]
- Chronic pelvic pain
- Tubal factor infertility
- Ectopic pregnancy
- Sexually acquired reactive arthritis (SARA)
- Fitz-Hugh-Curtis syndrome (PID and perihepatitis)

Symptoms and signs in men

- Usually more than 50% (25–100% in different studies) asymptomatic[2,10]
- Dysuria
- Urethral discharge
- Urethral irritation, e.g., pain or itching
- Testicular pain
- Urethritis
- Epididymitis

Complications in men (see also below)

- SARA[2]
- Epididymo-orchitis

Rectal and pharyngeal infections

C. trachomatis infections of the rectum (non-LGV serovars) are typically asymptomatic; however, anal discharge and discomfort can be present.[11,12] Rectal *C. trachomatis* positivity is around 9% in MSM and women[13]; around 70% of women diagnosed with urogenital *C. trachomatis* also have rectal infection[14] and this cannot be predicted from a history of anal sex or presence of symptoms in women.[13,15] Pharyngeal *C. trachomatis* infections are also usually asymptomatic, but symptoms of a mild sore throat can occur.[16] Pharyngeal *C. trachomatis* positivity is between 1% and 3% in both women and MSM and does not appear to be associated with reported oral sex.[16–19]

Ocular infections

Ocular infections especially with serovars D-K of *C. trachomatis* can result in conjunctivitis in neonates and adults,[2,20–22] and, if untreated, can cause chronic conjunctivitis and persist for several months.

Neonatal infections

Infants born to mothers through an infected birth canal can become colonized and develop chlamydial conjunctivitis and/or pneumonia.[23]

Lymphogranuloma venereum (LGV)

LGV is an invasive ulcerative disease caused by the serovars L1-L3 of *C. trachomatis*.[24]

Recent case finding studies show that approximately 30% of LGV infections are asymptomatic.[25–27]

Testing for *C. trachomatis* in pregnancy [level of evidence: low certainty; Grade 2 recommendation]

C. trachomatis is associated with premature rupture of membranes,[29–33] preterm labour and delivery,[34–38] chorioamnionitis,[30,39] stillbirth,[30,35] low birth weight,[38,40] congenital infection,[41] neonatal mortality,[42,43] as well as infant eye and lung disease (including pneumonia).[41,44–46] Transmission occurs in 50%–75% of infants born to mothers with urogenital *C. trachomatis*; 30–50% of these infants will develop chlamydial conjunctivitis, and 10–20% will develop pneumonia.[41,47]

Screening and treatment of *C. trachomatis* infection in pregnancy can prevent the complications noted above. We suggest testing for *C. trachomatis* is considered in pregnant women, particularly in settings with higher *C. trachomatis* incidence, as it has the potential to prevent adverse maternal and newborn sequelae.

Indications for laboratory testing for *C. trachomatis* [level of evidence: high certainty; Grade 1 recommendation]

- Symptoms or signs of urethritis
- Cervical or vaginal discharge with risk factors for STI
- Acute epididymo-orchitis in a male aged <40 years or with risk factors for STI
- Acute pelvic pain and/or symptoms or signs of PID
- Proctitis/proctocolitis with risk factors for STI
- Purulent or follicular conjunctivitis in a neonate or adult
- Atypical neonatal pneumonia

Indications for laboratory testing for *C. trachomatis* [level of evidence: low certainty; Grade 2 recommendation]

The available evidence regarding asymptomatic screening to prevent longer-term adverse outcomes and reduce population spread is weak or absent[28]

- Risk factor(s) for *C. trachomatis* infection and/or other STI (age <25 years, new sexual contact in the last year, more than one partner in the last year)
- Diagnosis of other STIs, including human papillomavirus or bacterial vaginosis (BV)
- Termination of pregnancy
- Prior to any transcervical procedure e.g. intrauterine interventions or manipulations
- Sexual contact of persons with a *C. trachomatis* infection or other STI or PID

Laboratory diagnostics

Recommended diagnostic assays

NAATs identifying *C. trachomatis*-specific nucleic acid (DNA or RNA) in clinical specimens are recommended for diagnosis, due to their superior sensitivity, specificity, and speed [High Certainty; Grade 1].[48–65] Only if *C. trachomatis* NAATs are not available or affordable, should isolation of *C. trachomatis* in cell culture or identification of *C. trachomatis* by direct fluorescence assays (DFAs) be used for diagnosis of *C. trachomatis* infection.

Evidence on the minimum time period between exposure to infection and identification of *C. trachomatis* on testing is lacking, although clinical experience suggests that a positive NAAT result may be observed within 1–3 days. Patients should be tested when they first present; however, if there is concern about a sexual exposure within the last 2 weeks, they should have a repeat NAAT test 2 weeks after the exposure [Low certainty; Grade 2].

The recommendations from the assay manufacturer should be followed for collection, transportation, and storage of samples, as well as operating the specific assay, including internal controls (positive, negative and, if required in NAATs, inhibition controls) and participation in an appropriate national and/or international external quality assessment (EQA) scheme [High Certainty; Grade 1].

Nucleic acid amplification tests (NAATs)

Due to the high specificity of appropriately validated NAATs, a relatively high prevalence of *C. trachomatis* in most European settings and risk of not detecting low-positive results in repeated testing, confirmatory testing of NAAT-positive specimens is not recommended [Low certainty; Grade 2].[57,66]

NAATs should ideally include two targets, including a chromosomal target, as in rare cases *C. trachomatis* strains lacking the plasmid may not be detected if only a plasmid target is used.[67] Furthermore, laboratories should use NAATs capable of detecting all known *C. trachomatis* variants[68–76] and further investigate any unexplained significant increases or declines in the local incidence or positivity rate [High Certainty; Grade 1].

C. trachomatis NAATs are the preferred test for extragenital specimens and most commercial NAATs have also been adequately validated for these specimens [High Certainty; Grade 1].[63–65,77–82]

Point of care tests (POCTs)

Compared to NAATs, the sensitivity of the current, mostly immunochromatographic, tests is substantially inferior.[83–89] Accordingly, currently available non-NAAT POCTs do not meet the necessary quality and performance standards to ensure accuracy and reliability, and cannot be recommended in Europe [High Certainty; Grade 1].

Serological testing

Serology is not recommended for screening or diagnosis of acute uncomplicated anogenital *C. trachomatis* infections [High Certainty; Grade 1]. Nevertheless, when NAATs are not available, detection of specific antibodies to *C. trachomatis* may support the diagnosis of recent or past invasive infections, such as LGV involving the lymph nodes or neonatal pneumonia (*C. trachomatis* specific IgM).[90–95] Serology might also have limited value in the diagnosis of

ascending infections[96–98] and for investigation of infertility.[99]

Specimen types

Urogenital specimens. The recommended first choice specimens for diagnosis of urogenital *C. trachomatis* infections with NAATs are first-void urine for men (up to 20 mL, preferably sampled >1 h after previous micturition) and vulvo-vaginal swabs (health-care worker- or self-collected) for women [High Certainty; Grade 1].[48,50,52,58,60,100–116] Self-collection of a meatal swab for *C. trachomatis* NAAT is a reasonable approach for men who are either unable to provide a urine specimen or prefer to collect their own meatal swab over providing urine [Low certainty; Grade 2].[61,62,117–119] Non-meatal penile skin swabs are not recommended.[120]

If clinical examination is performed, collection of a vulvo-vaginal swab specimen prior to speculum insertion is advised. Due to suboptimal sensitivity, first-void urine for women should only be used if other specimens are not available [High Certainty; Grade 1].[48,56,60,121]

The use of Pap-smear specimens is not recommended for screening, case finding or other diagnostic purposes, even though several methods to optimize detection in cytological screening specimens have been published [Low certainty; Grade 2].[122,123]

Self-collection of specimens for C. trachomatis testing

When tested by *C. trachomatis* NAATs, self-collected vulvo-vaginal, pharyngeal and rectal swabs have been shown to have similar accuracies as sampling by clinicians [High Certainty; Grade 1],[100,124–126] and are also highly acceptable among men[58,107] and women.[58,112,116]

Pharyngeal and rectal specimens. The relative low prevalence of pharyngeal-only *C. trachomatis* (1–3%) and its likely low clinical and public health significance do not provide support for routine universal pharyngeal testing.

Given the higher prevalence of rectal LGV infections in MSM,[24,127–130] it is recommended to test for LGV in all MSM who test positive for anorectal *C. trachomatis* infection with a NAAT performed on a rectal swab, irrespective of the presence of anorectal symptoms [High Certainty; Grade 1].[131] For additional information, see the latest versions of the "European Guideline on the Management of Lymphogranuloma Venereum"[27] and the "European Guideline on the Management of Proctitis, Proctocolitis and Enteritis Caused by Sexually Transmissible Pathogens".[131]

Semen specimens. Testing of semen specimens is not recommended [High Certainty; Grade 1].

Transgender and gender diverse people

Providers caring for transgender women with a neovagina should have knowledge of their patients' current anatomy and patterns of sexual behaviour to guide testing and counselling regarding risk. *C. trachomatis* has been reported in neovaginas that involved penile skin and grafts with urethra mucosa or abdominal peritoneal lining.[132] Gender-based testing for *C. trachomatis* should be done on the basis of anatomy. No data are available regarding the optimal screening method (urine or vulvo-vaginal swab) for bacterial STIs of the neovagina.

Due to the limited evidence available, we suggest [Low Certainty; Grade 2]:

- *C. trachomatis* NAAT should be performed on a vulvo-vaginal swab and a urine NAAT specimen for transgender women who have had vaginoplasty surgery to maximise detection of any infection.
- *C. trachomatis* NAAT should be performed on a vulvo-vaginal swab specimen for transgender men and non-binary persons with a vagina/cervix who have not had gender affirmation surgery and report having receptive vaginal sex.
- If transgender men have undergone metoidioplasty surgery with or without urethral lengthening, irrespective of hook up, a urine specimen will likely be inadequate to detect *C. trachomatis;* however, it should still be performed. If the person has not had a vaginectomy and practices receptive vaginal sex, then a *C. trachomatis* NAAT should also be performed on a vulvo-vaginal swab specimen.
- If transgender men have undergone phalloplasty surgery, a urine NAAT should be performed. If the person has not had a vaginectomy and practices receptive vaginal sex, then a *C. trachomatis* NAAT should also be performed on a vulvo-vaginal swab specimen.
- Extragenital swab specimens should be tested by *C. trachomatis* NAAT.

Testing in STI and sexual health clinics including repeat testing

Since most *C. trachomatis* infections are asymptomatic, the paradigm in *C. trachomatis* control has long been to proactively screen asymptomatic individuals, to enable timely detection and treatment, and to prevent transmission and complications. However, recent randomised controlled clinical trials found that intensified *C. trachomatis* screening had no effect on the prevalence of *C. trachomatis* in the general population.[133–135] The evidence for screening

asymptomatic individuals to prevent PID is mixed, showing a reduction at the individual level, but no reductions at the population level in practice.[136–138] There is also an absence of evidence that screening for *C. trachomatis* prevents late complications such as infertility[28] and recent estimates suggest that the risk of PID and infertility is considerably lower than previously thought.[139] Therefore, there is a paucity of evidence for screening for asymptomatic C. *trachomatis*, and an absence of evidence to guide an optimal approach to screening for asymptomatic *C. trachomatis*. In addition, there are possible harms caused by screening asymptomatic individuals.[28]

Countries that consider implementing a reduction in asymptomatic *C. trachomatis* screening will benefit from dialogue with stakeholders: explaining reasons for change and addressing possible concerns of scaling down testing. Countries should consider using an implementation framework to maximize adoption (involving key populations, health workers, policy makers, and including communication, behavioural change, and implementation theory), as well as having surveillance systems to monitor benefits and harms of test policy changes.[28]

The European guidance on testing is formulated here based on the level of evidence and therefore includes suggested advice, rather than strict recommendations.

- Annual *C. trachomatis* testing in STI or sexual health clinics is suggested for all sexually active young females (<25 years of age) [Low certainty; Grade 2].
- Annual *C. trachomatis* testing in STI or sexual health clinics is suggested for all sexually active MSM [Low certainty; Grade 2].

Pharyngeal C. trachomatis *testing*

- Routine testing for asymptomatic *C. trachomatis* infection in the pharynx is not recommended [High certainty; Grade 1].

Rectal C. trachomatis *testing*

- Annual routine testing for asymptomatic *C. trachomatis* infection in the rectum is suggested in all sexually active MSM [Low certainty; Grade 2].
- Routine testing for asymptomatic *C. trachomatis* infection in the rectum in women is not recommended [Low certainty; Grade 2].

Regarding rectal and pharyngeal non-LGV *C. trachomatis*, both infections have limited associations with sexual risk behaviours and no other risk predictors have been identified to guide selective testing.[13,140,141] Therefore, no recommendation to test based on reported sexual risk or other factors is supported by the current evidence [Low certainty; Grade 2].

Management of patients

Information, explanation and advice for the patient

- Patients with a positive *C. trachomatis* test should be advised to abstain from sexual contact for 7 days after they and their sexual partners have completed treatment and any symptoms have resolved [Low certainty; Grade 2].
- Patients with a positive *C. trachomatis* test (and their sexual contacts) should be given information about the infection, including details about transmission, prevention and complications. It is recommended that both verbal and written information be provided [Low certainty; Grade 2].
  - Information for patients is available on the IUSTI Europe website for guidelines (https://iusti.org/wp-content/uploads/2019/11/ChlamydiaLeaflet2017.pdf);
- Patients with a positive *C. trachomatis* test should be advised to test for other STIs, including gonorrhoea, syphilis and HIV [Low certainty; Grade 2].
- MSM with a positive rectal *C. trachomatis* test should be offered HIV pre-exposure prophylaxis if not already taking it or not known to be living with HIV [Low certainty; Grade 2].

Therapy

Treating *C. trachomatis* can prevent adverse reproductive health complications and interrupts sexual transmission. Treatment should be provided as promptly as possible, as treatment delays can result in complications such as PID in a proportion of women.[142] Treatment of *C. trachomatis*-positive sex partners can prevent reinfection as well as onward transmission to other partners. Treatment of pregnant women usually prevents intrapartum transmission of *C. trachomatis* to neonates.[32,143–145]

There is still no evidence of any stable, homotypic genetic and phenotypic antimicrobial resistance in *C. trachomatis*.[146–152] However, treatment regimens with azithromycin are less effective than doxycycline for urogenital *C. trachomatis* infections in men, and for pharyngeal and especially rectal *C. trachomatis* infections in both sexes.[153–155] Clinical failures observed in patients with *C. trachomatis* treated with azithromycin 1 g single oral dose are of ongoing concern.[156–159]

Rectal infection

Doxycycline is more efficacious for treating rectal *C. trachomatis* infection than azithromycin 1 g and azithromycin's efficacy is consistently below 95%.[160–167] The majority of women with vaginal/cervical *C. trachomatis* also have rectal infection (70%)[167] and auto-inoculation from persistent rectal *C. trachomatis* may lead to genital infection.[167] Treatment evidence for doxycycline versus azithromycin is summarised in Table 1.

Azithromycin resistance in Mycoplasma genitalium

Mycoplasma genitalium has emerged as a significant STI and coinfection rates of 3–15% with *C. trachomatis* have been reported.[170–173] A five-day azithromycin treatment regimen is the first-line treatment for *M. genitalium* infections in Europe.[174] However, macrolide resistance continues to increase in *M. genitalium*, likely especially due to the widespread use of single-dose azithromycin 1 g to treat other STIs, and the limited availability of diagnostic tests for *M. genitalium* in many countries. For details regarding treatment of *M. genitalium* infections in Europe, see the latest version of the "European Guideline on the Management of *Mycoplasma genitalium* Infections".[174]

Duration of azithromycin regimens

It has been suggested that a prolonged course of azithromycin is more likely to be bactericidal to *C. trachomatis*[175] and in respiratory tract infections azithromycin 1.5 g administered over 3–5 days can achieve therapeutic levels in target tissues for up to 10 days.[176,177] Use of a five-day azithromycin treatment regimen for genital infections showed an eradication rate for *C. trachomatis* of 98.8% (79 of 80 patients infected with both *M. genitalium* and *C. trachomatis*).[178] However, appropriately designed clinical studies are required before a multi-day azithromycin treatment regimen can be recommended for *C. trachomatis* infections.

People living with HIV should be treated in the same way as those without HIV [Low certainty; Grade 2].

The use of doxycycline to treat *C. trachomatis* in pregnancy in the absence of a suitable alternative appears to be low risk and should be considered on a case-by-case basis [Low certainty; Grade 2].[179]

Pelvic inflammatory disease (PID)

For detailed and updated information, see the latest version of the "European Guideline for the Management of Pelvic Inflammatory Disease".[180]

C. trachomatis *conjunctivitis*

C. trachomatis infection should be included in the differential diagnosis in sexually active individuals presenting with acute or chronic follicular conjunctivitis.[181–183] *C. trachomatis* conjunctivitis should prompt testing for anogenital and pharyngeal *C. trachomatis* infection. As anogenital or pharyngeal infection is often also present in those with adult *C. trachomatis* conjunctivitis, it is recommended that first line treatment is the same as that for anogenital infection.

Indications for therapy [Low certainty; Grade 2]

- Identification of *C. trachomatis* in a clinical or screening specimen
- Treatment of sexual contacts should be offered if *C. trachomatis* infection of the sexual contact is confirmed on NAAT testing (or if exposure was within the window period for testing)
- On epidemiological grounds, the mother of a neonate with confirmed *C. trachomatis* infection (maternal NAAT specimens should also be obtained for testing)
- Treatment can be considered following sexual assault if there is a high level of concern about possible infection (NAAT specimen should also be obtained for testing)
- Purulent urethral discharge in men, mucopurulent cervicitis in women, or purulent anorectal discharge in MSM or women when diagnostic tests are not available and after specimen collection for laboratory testing. In these circumstances, dependent on local gonorrhoea incidence, combined treatment for chlamydial infection and gonorrhoea should be considered

Table 1. Proportion of doxycycline or azithromycin treated patients with microbiological cure by a negative nucleic acid amplification test for *C. trachomatis* at 4–6 weeks, by anatomic site, study design, and study population.

Anatomic site of *C. trachomatis*	Study design	References	Study population	Microbiological cure: doxycycline[a]	Microbiological cure: azithromycin[b]
Rectal	Randomised controlled trial	164,165	MSM	97–100%	74–76%
Rectal	Randomised controlled trial	168	Women	94%	85%
Rectal	Observational study	167	Women	95%	78%
Pharyngeal	Observational study	168,169	Men and women	98–100%	90–94%
Urogenital	Meta-analysis of randomised controlled trials	154	Men and women	97% (men) 99% (women)	92% (men) 98% (women)

[a]100 mg orally twice per day for 7 days.
[b]1 g orally single dose.

Recommended treatment for uncomplicated urogenital, rectal and pharyngeal *C. trachomatis* infections

All recommended regimens are oral.

First-line [High certainty; Grade 1]:

- Doxycycline 100 mg twice a day for 7 days*

Second-line [High certainty; Grade 1]:

- Azithromycin 1 g stat

Third-line [High certainty; Grade 1]:

- Erythromycin 500 mg twice a day for 7 days

Or

- Levofloxacin 500 mg once a day for 7 days**

Or

- Ofloxacin 200 mg twice a day for 7 days**

* Contraindicated in second and third trimesters of pregnancy.

** Contraindicated in pregnancy.

Partner notification and management of sexual contact(s)

- Partner notification and testing/treatment should be performed and documented by appropriately trained professionals at the time of diagnosis to improve outcomes [High certainty; Grade 1]. Health care professional-led partner notifications (provider referral) is more effective than patient-led partner notifications (patient referral),[184] although professionals need to be aware of barriers and facilitators in an effective partner notification process.[185]
- Sexual contacts should be contacted and testing recommended. Treatment should be offered if *C. trachomatis* is identified (or if exposure was within the window period for testing). Counselling (as a potential new index patient) for *C. trachomatis* infection and other STIs should be provided [Low certainty; Grade 2].[66,186–189]

Treating all sexual contacts empirically risks overuse of antibiotics; recent studies suggest that only between 12% and 64% of contacts to *C. trachomatis* positive patients test positive for *C. trachomatis*[190–193] and reserving treatment for those in whom *C. trachomatis* is confirmed can improve antimicrobial stewardship.

- For male index cases with urethral symptoms: contact all partners since the onset of symptoms, and in the 4 weeks prior to symptom onset [Low certainty; Grade 2].[189]
- For all other index cases (all females, asymptomatic males and those with *C. trachomatis* at other sites, including rectum, pharynx and eye): contact all partners in the 6 months prior to presentation, or the most recent partner if this was outside the 6-month lookback [Low certainty; Grade 2].[66,186,187,189]

Where no regulatory barriers exist, expedited partner therapy or patient-delivered partner treatment (PDPT) can be an efficient way to treat partners and reduce infection rates.[194–196] However, PDPT should only be implemented as part of a larger system of partner notification strategies.

Recommended treatment for uncomplicated urogenital *C. trachomatis* infection in pregnancy and during breast feeding

All recommended regimens are oral.

First-line [High certainty; Grade 1]:

- Azithromycin 1 g stat

Second line [High certainty; Grade 1]:

- Amoxicillin 500 mg 3 times a day for 7 days

Or

- Erythromycin 500 mg 4 times a day for 7 days

Third line [Low certainty; Grade 2]:

- Doxycycline 100 mg twice a day for 7 days*

* Only for use in first trimester and only when other treatments are contraindicated or have been ineffective.

Recommended treatment for uncomplicated *C. trachomatis* conjunctivitis

All recommended regimens are oral.

First-line [High certainty; Grade 1]:

- Doxycycline 100 mg twice a day for 7 days

Second line [High certainty; Grade 1]:

- Azithromycin 1 g stat

PDPT could be considered as additional tool for specific situations where heath care-provided treatment is not possible. PDPT could also improve partner notification rates when provided in combination with low threshold methods for testing[197] (e.g. home-based sampling and e-healthcare).

For further information, see the latest version of the "European Guidelines for the Management of Partners of Persons with Sexually Transmitted Infection".[198]

Follow-up and test-of-cure (TOC)

A routine TOC is not recommended in patients treated with the recommended first-line regimen of doxycycline 100 mg twice a day for 7 days.

TOC should be performed [Low certainty; Grade 2]:

- in pregnancy[199]
- in complicated infections
- if symptoms persist

- if second or third-line regimens have been used
- if non-adherence to therapy has occurred
- if re-exposure to infection from an untreated partner is suspected

When TOC is indicated, *C. trachomatis* NAATs should be performed at least 4 weeks after completion of therapy [Low certainty; Grade 2].[66,186,187,189,200,201]

Repeat infection rates peak at 2–5 months after the initial infection[202–206] supporting a recommendation to retest for *C. trachomatis* within 3–12 months of treatment.[66,186,187,189,207]

- Repeated testing in 3–6 months should be offered to young women (<25 years of age) who test positive for *C. trachomatis* [High certainty; Grade 1].

Notification of *C. trachomatis* cases

C. trachomatis infections should be monitored and registered at the local, regional and national level as mandated by relevant local guidance or statute. The ECDC is responsible for the EU/EEA-wide surveillance of communicable diseases including *C. trachomatis* infections.

Doxycycline post-exposure propylaxis (PEP)

Doxycycline post-exposure prophylaxis (DoxyPEP) has been evaluated in randomised clinical studies in France[208,209] and USA,[210] and significantly reduced the incident cases of syphilis, chlamydia and, in the US study,[210] also gonorrhoea among mostly MSM. Doxycycline 200 mg was taken, by mainly MSM on HIV PrEP and/or living with HIV and who had ≥1 bacterial STI in the recent year, ideally within 24 h (less than 72 h) after condomless sex.[208–210] For details regarding DoxyPEP use in Europe, see the "IUSTI Europe Position Statement on Use of DoxyPEP: June 2024".[211]

Author notes

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Composition of the IUSTI European STI Guidelines Editorial Board: The composition of the current IUSTI European STI Guidelines Editorial Board can be found at: https://iusti.org/treatment-guidelines/

Contributing organisations: A list of contributing organisations can be found at: https://iusti.org/treatment-guidelines/

Search strategy: This guideline represents an updated and substantially revised version of the "2015 European guideline for the management of *Chlamydia trachomatis* infections".[186] The present guideline was produced according to the protocol for production and revision of European STI guidelines, which has been written and approved by the IUSTI European STI Guidelines Editorial Board, and an evidence-based approach.

Evidence was provided by a thorough and systemic review of the literature in the databases Embase.com, Medline (OvidSP), PubMed (articles supplied by publishers not yet indexed in Medline), Web-of-science, Scopus, Cinahl, Cochrane DARE, and Google Scholar. Searches were performed on 28th of July 2021 and updated on 9th of March 2023 and 15th November 2023, and the following broad search terms were used: *Chlamydia trachomatis*, systematic review, meta-analysis, guideline, protocol. Relevant STI guidelines, including those produced by the World Health Organization, the US Centers for Disease Control and Prevention (https://www.cdc.gov/std/treatment-guidelines/) and the British Association for Sexual Health and HIV (https://www.bashh.org), were also reviewed.

Levels of evidence and grading of recommendations: The strength of the recommendations and the certainty of the evidence to support the recommendations in accordance with the GRADE system can be found in the 2023 protocol for the production of European guidelines at: https://iusti.org/treatment-guidelines/.

Qualifying statement: Decisions to follow these recommendations must be based on professional clinical judgement, consideration of individual patient circumstances and available resources. All possible care has been undertaken to ensure publication of the correct dosage of medication and route of administration. However, it remains the responsibility of the prescribing clinician to ensure the accuracy and appropriateness of the medication they prescribe.

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The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: JW works part time as a Medical Director for Preventx Ltd, a UK-based company providing home sampling tests for blood borne viruses and STIs, including *C. trachomatis*. JR reports personal fees from GSK Pharma and ownership of shares in GSK Pharma and AstraZeneca Pharma. Other authors: none declared.

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