## Chlamydia

- In the absence of a contraindication, the following treatment options are recommended:

*Table 1. Chlamydia. Adults (non-pregnant and non-lactating): Urethral, endocervical, rectal, conjunctival infection*

| Preferred | Alternative |
|---|---|
| • **Azithromycin** 1 g PO in a single dose if poor compliance is expected[*]<br>**OR**<br>• **Doxycycline** 100 mg PO bid for 7 days | • **Levofloxacin** 500 mg PO bid for 7 days |

Source: Canadian Guidelines on Sexually Transmitted Infections 2022.

[*]If vomiting occurs more than 1 hour post-administration, a repeat dose is not required.

**Notes:**

- In Saskatchewan azithromycin is generally the preferred treatment due to poor compliance of multiday treatments.

*Table 2. Chlamydia. Children*

| | |
|---|---|
| **First week of life** | Infants ≤ 2000 g<br>• **Erythromycin** 20 mg/kg/day PO in divided doses for at least 14 days[‡§]<br><br>Infants > 2000 g<br>• **Erythromycin** 30 mg/kg/day PO in divided doses for at least 14 days[‡§] |
| **>1 week to 1 month** | • **Erythromycin** 40 mg/kg/day PO in divided doses for at least 14 days[‡§] |

| | |
|---|---|
| **>1 month to <9 years** | • **Azithromycin** 12-15 mg/kg (max. 1 g) PO in a single dose<br><br>Alternatives<br>• **Erythromycin** 40 mg/kg/day PO in divided doses (max. 500 mg qid for 7 days or 250 mg qid for 14 days) ‡§<br>**OR**<br>• **Sulfamethoxazole** 75 mg/kg/day PO in divided doses (max. 1 g bid) for 10 days§ |
| **9-18 years** | Preferred<br>• **Doxycycline** 5 mg/kg/day PO in divided doses (max. 100 mg bid) for 7 days<br>**OR**<br>• **Azithromycin** 12-15 mg/kg (max. 1 g) PO in a single dose if poor compliance is expected<br><br>Alternatives<br>• **Erythromycin** 40 mg/kg/day PO in divided doses (max. 500 mg qid for 7 days or 250 mg qid for 14 days) ‡§ |

Source: Canadian Guidelines on Sexually Transmitted Infections 2017.

†Test of cure should be performed 4 weeks after the completion of treatment in prepubertal children.
‡Erythromycin dosages refer to the use of erythromycin base. Equivalent dosages of other formulations may be substituted (with the exception of the estolate formulation being contraindicated in pregnancy).
§If erythromycin or sulfamethoxazole has been used for treatment, repeat testing after completion of therapy is advisable.

**Notes:**

- Neonates born to infected mothers must be tested for *C. trachomatis.* Neonates should be treated if their test results are positive. They should be closely monitored for signs of chlamydial infection (e.g., conjunctivitis, pneumonitis). Prophylaxis is not recommended unless follow-up cannot be guaranteed.

**Additional Information Regarding Treatment**

- Topical therapy alone for conjunctivitis is NOT adequate and is unnecessary when systemic treatment is used.
- The use of erythromycin in infants under 6 weeks of age has been associated with infantile hypertrophic pyloric stenosis (IHPS). The risk of IHPS with other macrolides (e.g., azithromycin, clarithromycin) is unknown. The risks and benefits of using erythromycin in such infants must be explained to parents. When erythromycin is used in such infants, it is important to monitor for signs and symptoms of IHPS. IHPS following erythromycin use should be reported to the Canadian Adverse Drug Reaction Monitoring Program at 1-866-234-2345.
- The need to treat infants under 6 weeks for *C. trachomatis* can be avoided by screening pregnant women and treating before delivery.
- Doxycycline is contraindicated in children less than 9 years of age.
- Quinolones have been associated with articular damage in young animals. Such joint changes have not been clearly attributable to quinolone use in children. Its safety in children has not been established. Quinolones should not be used in prepubertal patients. Experience in pubertal patients under 18 years of age is limited.

*Table 3. Chlamydia. Pregnant women and nursing mothers: Urethral, endocervical, rectal infection*

- **Amoxicillin** 500 mg PO tid for 7 days
  **OR**
- **Azithromycin** 1 g PO in a single dose, if poor compliance is expected[‡]

Source: Canadian Guidelines on Sexually Transmitted Infections 2017.

[‡]If vomiting occurs more than 1 hour post-administration, a repeat dose is not required.

**Notes:**

- Test of cure should be performed 4 weeks after the completion of treatment in all pregnant women.

**Revisions**

| Date | Change |
|---|---|
| September 2023 | • Removed reference to Erythromycin delayed-release tablets as an alternate due to drug manufacturer discontinuation.<br>• Changed Ofloxacin to Levofloxacin in alignment with the Canadian Guidelines on Sexually Transmitted Infections |

## Gonorrhea

**Revisions**

| Date | Change |
|---|---|
| December 2025 | • Deleted Gonorrhea section in response to updates to the preferred treatment recommendations due to growing concerns of AMR<br>• Link to current Canadian treatment recommendations are included in the Gonorrhea chapter (also included here for convenience: https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/gonorrhea/treatment-follow-up.html ) |
| September 2018 | • Removed reference to Spectinomycin<br>• Added Gentamicin as the alternate treatment<br>• Removed reference to use of Azithromycin 2g as monotherapy.<br>• Updated into new format of CDC Manual |

## Lymphogranuloma Venereum (LGV)

- In the absence of a contraindication, the following treatment options are recommended:

*Table 1. LGV. Treatment of lymphogranuloma venereum*

| | |
|---|---|
| **First Line** | • Doxycycline 100 mg PO bid for 21 days |
| **Alternative** | • Erythromycin 500 mg PO qid for 21 days* |
| **Possible** | • Azithromycin 1 g PO once weekly for 3 weeks† |

Source: Canadian Guidelines on Sexually Transmitted Infections 2010.

*Erythromycin dosage refers to the use of erythromycin base. Equivalent dosages of other formulations may be substituted (with the exception of the estolate formulation, which is contraindicated in pregnancy); erythromycin (NOT the estolate formulation) should be used in pregnancy.
†While some experts believe azithromycin to be effective in the treatment of LGV, clinical data are lacking.

- Clients should be followed until chlamydial tests are negative (test of cure) and the client has clinically recovered. Test of cure should be performed at 4 weeks after the completion of effective treatment.
- Testing for chancroid and donovanosis (granuloma inguinale) should also be considered especially if there has been travel to regions where these infections are endemic.
- Aspiration of buboes may help symptomatically; however, incision/drainage or excision of nodes is not helpful and may delay healing.
- Suspected cases should be treated (with appropriate antibiotic regimen) empirically for LGV while awaiting test results.

## Syphilis

- In the absence of a contraindication, the following treatment options are recommended:

*Table 1. Syphilis. Treatment: Non-pregnant adults*

| Stage | Preferred treatment[Ψ] | Alternative treatment for penicillin-allergic patients |
|---|---|---|
| All **non-pregnant adults who are not co-infected with HIV**<br>• **Primary**<br>• **Secondary**<br>• **Early latent** (<1year duration) | Benzathine penicillin G 2.4 million units IM as a single dose[*] | • Doxycycline 100mg PO bid for 14 days<br>**Alternative agents (only to be used in exceptional circumstances and should be discussed with the MHO)**[†]<br>• Ceftriaxone 1 g IV or IM daily for 10 days |
| **All non-pregnant adults**<br>• **Late latent** syphilis<br>• **Latent** syphilis of unknown duration<br>• **Cardiovascular syphilis** and other **tertiary syphilis** not involving the central nervous system | Benzathine penicillin G 2.4 million units IM weekly for 3 doses | • Consider penicillin desensitization<br>• Doxycycline 100mg PO bid for 28 days<br>**Alternative agents (only to be used in exceptional circumstances and should be discussed with the MHO)**[†]<br>• Ceftriaxone 1 g IV or IM daily for 10 days |
| **All adults**<br>• **Neurosyphilis** | Penicillin G 3-4 million units IV q4 h (16-24 million units/day) for 10-14 days | • Strongly consider penicillin desensitization followed by treatment with penicillin<br>• Ceftriaxone 2 g IV/IM qd x 10-14 days |

| Stage | Preferred treatment[Ψ] | Alternative treatment for penicillin-allergic patients |
|---|---|---|
| Epidemiological treatment of sexual contacts in the preceding 90 days to primary, secondary and early latent syphilis[§] | Benzathine penicillin G 2.4 million units IM as a single dose. | See comment on Azithromycin[¥] |

Source: Adapted from Canadian Guidelines on Sexually Transmitted Infections 2018.

[Ψ]Reports from some jurisdictions have indicated inappropriate use of short-acting benzylpenicillin (Penicillin G) (IM) for the treatment of infectious syphilis rather than long-acting Benzathine penicillin G (Bicillin-LA). Practitioners, pharmacists and purchasing agents should be aware of the similar names of these two products to prevent and avoid inappropriate and inadequate treatment. Long-acting benzathine penicillin achieves detectable serum levels of penicillin for 2-4 weeks in non-pregnant adults and is required to adequately treat infectious syphilis; short acting penicillin agents are not adequate for achieving cure.
[†]The efficacy data supporting the use of these agents is limited, and as such they should only be used in exceptional circumstances and when close patient follow-up is assured.
[*]Some experts recommend 3 weekly doses (total of 7.2 million units) of benzathine penicillin G in HIV infected individuals.
[§]If sexual contact is unreliable or unable to test, then epidemiological treatment should be strongly considered. Epidemiological treatment should be strongly considered in these individuals; even if more than 30 days after exposure (see -Management of Contacts – below).
[¥]Azithromycin In light of recent reports of failure of azithromycin for the treatment of early syphilis and the rapid development of azithromycin resistance in *T. pallidum*, this agent should not be routinely used as a treatment option for early or incubating syphilis unless adequate and close follow up can be ensured, and only in jurisdictions where little to no azithromycin genotypic resistance in *T. pallidum* has been demonstrated. It should be noted, however, that at the present time, very limited Canadian data on the prevalence of Azithromycin resistance in *T. pallidum* is available, with 1 of 47 specimens between 2000-2003 as compared with 4 of 9 specimens from MSM in 2004-2005 collected in Vancouver demonstrating resistance. A recent analysis of specimens from Alberta showed that 4 of 14 syphilis cases between February 2007 and January 2008 were azithromycin resistant; all cases were in MSM except for one neonate with congenital syphilis whose father acquired syphilis outside of Canada.

*Table 2. Syphilis. Treatment: Pregnant women*

| Stage | Preferred treatment[Ψ] | Alternative treatment for penicillin-allergic patients |
|---|---|---|
| **Pregnant women**<br>• **Primary**<br>• **Secondary**<br>• **Early latent** (<1year duration) | Benzathine penicillin G 2.4 million units IM weekly for 1-2 doses[*¥] | • There is no satisfactory alternative to penicillin for the treatment of syphilis in pregnancy; insufficient data exist to recommend ceftriaxone in pregnancy.<br>• Strongly consider penicillin desensitization followed by treatment with penicillin |
| **Pregnant women**<br>• **Late latent** syphilis<br>• **Latent** syphilis of unknown duration<br>• **Cardiovascular syphilis** and other **tertiary syphilis** not involving the central nervous system | Benzathine penicillin G 2.4 million units IM weekly for 3 doses | |

Source: Adapted from Canadian Guidelines on Sexually Transmitted Infections 2018.

[Ψ]Reports from some jurisdictions have indicated inappropriate use of short-acting benzylpenicillin (Penicillin G) (IM) for the treatment of infectious syphilis rather than long-acting Benzathine penicillin G (Bicillin-LA). Practitioners, pharmacists and purchasing agents should be aware of the similar names of these two products to prevent and avoid inappropriate and inadequate treatment. Long-acting benzathine penicillin achieves detectable serum levels of penicillin for 2-4 weeks in non-pregnant adults and is required to adequately treat infectious syphilis; short acting penicillin agents are not adequate for achieving cure.
[*]Some experts recommend 3 weekly doses (total of 7.2 million units) of benzathine penicillin G in HIV infected individuals.
[¥]Given the complexity of accurately staging early syphilis, some experts recommend that primary, secondary and early latent cases in pregnancy be treated with 2 doses of benzathine penicillin G 2.4 million units 1 week apart; the efficacy of this regimen in preventing fetal syphilis is not known. Refer to the Saskatchewan Health Authority Maternal/Children's Health - Clinical Resources for further guidance.

## Revisions

| Date | Change |
|---|---|
| July 27, 2023 | Added link in Table 2 footnote to Saskatchewan Health Authority Maternal/Children's Health - Clinical Resources |