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| Syphilis |
| Factsheet for clinicians |
| OFFICIAL |

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# The facts

* There is an increased prevalence of syphilis across Victoria in all demographic groups.
* Congenital syphilis, where the pathogen is transmitted vertically from parent to child, can cause foetal death or developmental problems in the child. Congenital syphilis has re-emerged in Victoria.
* Syphilis is highly infectious and is transmitted through unprotected vaginal, anal and oral sex and skin to-skin contact during sex.
* Syphilis increases the risk of both acquiring and transmitting HIV infection.
* There are three clinical stages: primary, secondary, tertiary syphilis (see next page for details).
* Syphilis is asymptomatic in up to half of all cases.
* Reinfection is possible and is frequent in groups at risk such as gay, bisexual and other men who have sex with men (GBMSM).

## Who should be tested?

### Symptomatic patients

Patients presenting with any signs and symptoms of infectious syphilis (e.g. genital ulcers, rash affecting palms or soles, or persistent and unexplained lymphadenopathy).

### Asymptomatic patients

* All sexually active people as part of a routine sexual health check
* Pregnant people: test all pregnant people a minimum of 3 times: at the first antenatal visit, at 26-28 weeks, and at 36 weeks or birth (whichever is earlier).
* GBMSM: at least annually, and more frequently (up to four times a year) for those at higher risk (e.g. men who have had more than ten partners in the last year).
* HIV positive GBMSM: on each occasion of routine HIV monitoring (three to six monthly).
* Sexual contacts of a person diagnosed with syphilis.

Note: Consider including testing for HIV and hepatitis B in people at risk and testing for other sexually transmitted infections in people found to have syphilis infection.

## How is it diagnosed?

A combination of serology, history and clinical assessment.

* **Treponemal specific tests (EIA, TPPA, TPHA):** detect antibodies against T. pallidum. Usually remain positive for life; if serology is negative repeat testing after two weeks (if there is clinical suspicion of syphilis).
* **Non treponemal tests (RPR, VDRL):** detect antibodies to lipoidal material released from damaged host cells and possibly cardiolipin released from treponemes. Give an indication of current disease activity and are used to monitor treatment response and diagnose re-infection.
* **Nucleic Acid Amplification Test (NAAT) (PCR swab of ulcer):** NAAT may be positive prior to seroconversion

## How should cases be managed?

* [Notify cases to the Department of Health](http://ideas.health.vic.gov.au/notifying.asp) <http://ideas.health.vic.gov.au/notifying.asp>
* Treat according to [current guidelines](http://www.sti.guidelines.org.au/sexually-transmissible-infections/syphilis) <[www.sti.guidelines.org.au/sexually-transmissible-infections/syphilis](http://www.sti.guidelines.org.au/sexually-transmissible-infections/syphilis)> using benzathine penicillin, not shorter-acting benzylpenicillin, which is not effective.
  + Benzathine penicillin is available for prescription as part of the PBS Doctor’s Bag, allowing a stock to be held by GPs for use when required.
* Early referral or discussion with a sexual health specialist is strongly recommended.
* Advise no sexual contact for seven days after treatment is administered to both the case and contacts.
* Provide education regarding prevention and early symptom recognition.
  + **Partner notification:** contact sexual partners of patients with syphilis at the time of diagnosis;   
    online tools are available to contact partners anonymously via SMS or email [Local Public Health Units](https://www.health.vic.gov.au/local-public-health-units) <https://www.health.vic.gov.au/local-public-health-units> and Partner Notification Officers from the Department of Health are also available to assist with partner notification (see Additional resources on the next page).

### Follow-up:

* RPR at 3, 6, 12 months to monitor treatment response and screen for reinfection.
* Ensure that partner notification has occurred.
* Retest for BBVs following the relevant window period where appropriate.

## How should contacts be managed?

* Treat all sexual contacts of syphilis cases without waiting for serological results if their exposure was in the last 90 days.
* Treat with a single dose of intramuscular benzathine penicillin 1.8g (2.4mU).
* Provide education regarding prevention.

# Classification of syphilis

**Neurosyphilis:** Can occur at any time after initial infection. CSF findings with raised protein and cell count in the absence of other causes of these abnormalities. A positive CSF VDRL is confirmatory.

**Congenital syphilis**: A condition affecting an infant whose mother had untreated or inadequately treated syphilis during pregnancy or delivery.

**Reinfection:** Syphilis at any stage in a previously infected person with a fourfold or greater rise in RPR titre. Reinfection is common amongst GBMSM, particularly in HIV positive GBMSM.

## Early infection acquired within last two years (infectious syphilis)

### Primary

* **Clinical:** One or more ano-genital ulcers (chancre) present which may vary in appearance. May be in an occult site (e.g. rectal or perivaginal).
* **Laboratory:** Serology may still be negative very early on. Repeat serology is recommended. Usually EIA, TPPA, TPHA and RPR will be positive. Presence of IgM can be a strong indicator for early infection. Swab from lesion likely to be PCR +. Demonstration of spirochaetes by dark field microscopy.

### Secondary

* **Clinical:** Skin spots or rash, particularly on the trunk, palms and soles. Skin lesions are infectious. Symptoms that can be present include generalised lymphadenopathy, constitutional symptoms, headache, neurological symptoms (especially in HIV+ patients), elevated liver function tests. Primary chancre can still be present.
* **Laboratory:** Serology is positive (+EIA, +TTPA, +TPHA). Usually, +IgM. RPR is reactive (titre usually > 1:4)

### Early latent

* **Clinical:** No symptoms of syphilis. No history of adequate treatment.
* **Laboratory:** Serology is positive (+EIA, +TTPA, +TPHA). IgM may be negative. RPR is reactive

## Late syphilis acquired more than 2 years ago or at an unknown time (non-infectious)

### Late latent

* **Clinical:** No symptoms of syphilis. No history of adequate treatment.
* **Laboratory:** Serology is positive (+EIA, +TTPA, +TPHA). RPR may still be reactive at low titre.

### Tertiary

* **Clinical:** Characteristic abnormalities of the cardiovascular, skin, bone, brain or other system.
* **Laboratory:** Seek expert advice

# Additional resources

#### Clinical information

* Advice on the diagnosis and management of syphilis and other STIs can be obtained from Melbourne Sexual Health Centre through a doctor’s only information line, phone: 1800 009 903 (Mon–Fri 9:30am–12:30pm, 1:30pm–5:00pm) or through their website www.mshc.org.au
* [Australian STI Management Guidelines for Use in Primary Care](http://www.sti.guidelines.org.au/sexually-transmissible-infections/syphilis) <www.sti.guidelines.org.au>
* Innovative partner notification tools are available to contact partners anonymously via SMS or email. You can undertake partner notification at the time of consultation or strongly encourage your patients to contact their partners themselves. Partner notification tools are available at:

– [Let them know](https://letthemknow.org.au/) <https://letthemknow.org.au/>

– [Drama Downunder](http://www.thedramadownunder.info/introduction) <www.thedramadownunder.info/introduction>

* [Local Public Health Units](https://www.health.vic.gov.au/local-public-health-units) < https://www.health.vic.gov.au/local-public-health-units> and the Partner Notification Officers (PNOs) from the Department of Health are available to assist with partner notification and can contact the sexual partners of a person diagnosed with an STI, provide advice and referral for testing. Any identifying information about your patients is kept confidential. The PNOs can be contacted on 9096 3367.
* [Australasian Contact Tracing Guidelines](https://contacttracing.ashm.org.au/) <https://contacttracing.ashm.org.au>

#### Patient information

* [Better Health Channel – Syphilis](https://www.betterhealth.vic.gov.au/health/ConditionsAndTreatments/syphilis) <https://www.betterhealth.vic.gov.au/health/ConditionsAndTreatments/syphilis>
* [Department of Health website - Congenital syphilis](https://www.health.vic.gov.au/infectious-diseases/congenital-syphilis)   
  <https://www.health.vic.gov.au/infectious-diseases/congenital-syphilis>

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