Serological Tests are used for:
- Patients with history/clinical signs consistent with syphilis, or are contacts
- Screening at-risk asymptomatic individuals
- Assessment of stage of syphilis infection
- Monitoring therapeutic response to treatment
- Standard prenatal screen
- Anyone with any other STI
- Detecting or excluding current or past infection in HIV patients
- Immigration screening
- Screening blood and organ tissue donors

Assessment of risk factors:
- Contact with known case of syphilis
- Men who have sex with men
- Commercial sex work/street involvement
- Previous STI including HIV
- Multiple sex partners
- Person originating from a syphilis-endemic area or sex (oral, vaginal, anal) with a person from a syphilis-endemic area
- IDUs
- Sex partners of any of the above

Taking a clinical history:
- History of a painless indurated chancre (genital area or mouth)
- A high proportion fail to recall primary chancre
- History of a non-pruritic maculopapular eruption, lymphadenopathy, fever, malaise
- Has client ever been given injectable penicillin or is aware of previous treatment or testing for syphilis
- Is client from a syphilis-endemic area?

Syphilis Screen
CMIA - Chemiluminescent Microparticle Immunoassay (serum) Reported as T. pallidum (IgG/IgM) CMIA
VDRL - Venereal Disease Research Laboratory (CSF)
Quantitative Test
RPR - Rapid Plasma Reagin Test. Detects total IgG/IgM antibody to syphilis (T. pallidum). Automatically done by lab if CMIA is reactive.
Confirmatory Tests
TP.PA - Treponema pallidum particle agglutination. Automatically done by lab if CMIA is reactive.
FTA.ABS - Fluorescent treponemal antibody
Positive confirmatory test(s) are often reactive for life

Syphilis Serology Result Interpretation Flowchart

CMIA

Reactive CMIA and Reactive RPR and Reactive Confirmatory Test(s)
- Positive syphilis result
- Contact local health unit
- Assess risk factors
- Take clinical history
- Determine staging of disease
- Determine treatment
- Provide treatment

Repeat serology in one month for comparison. If same, no further follow-up required

False Positive

Reactive CMIA and Non-reactive RPR and Reactive Confirmatory Test(s)
- Early infection?
- Previous treated infection?
- Assess risk factors
- Take clinical history

Repeat serology in 1 month for comparison

If reactive, treat as needed

CMIA and VDRL

Reactive CMIA and Non-reactive RPR and Non-reactive Confirmatory Test(s)
- Positive syphilis result
- Contact local health unit
- Assess risk factors
- Take clinical history
- Determine staging of disease
- Determine treatment
- Provide treatment

Repeat serology post treatment as recommended (see back for post treatment serology schedule and adequate response)

Repeat serology in one month for comparison. If same, no further follow-up required

Adapted with permission from Wellington-Dufferin-Guelph Public Health