Syphilis Testing Algorithm for Staging and Recommended Treatment

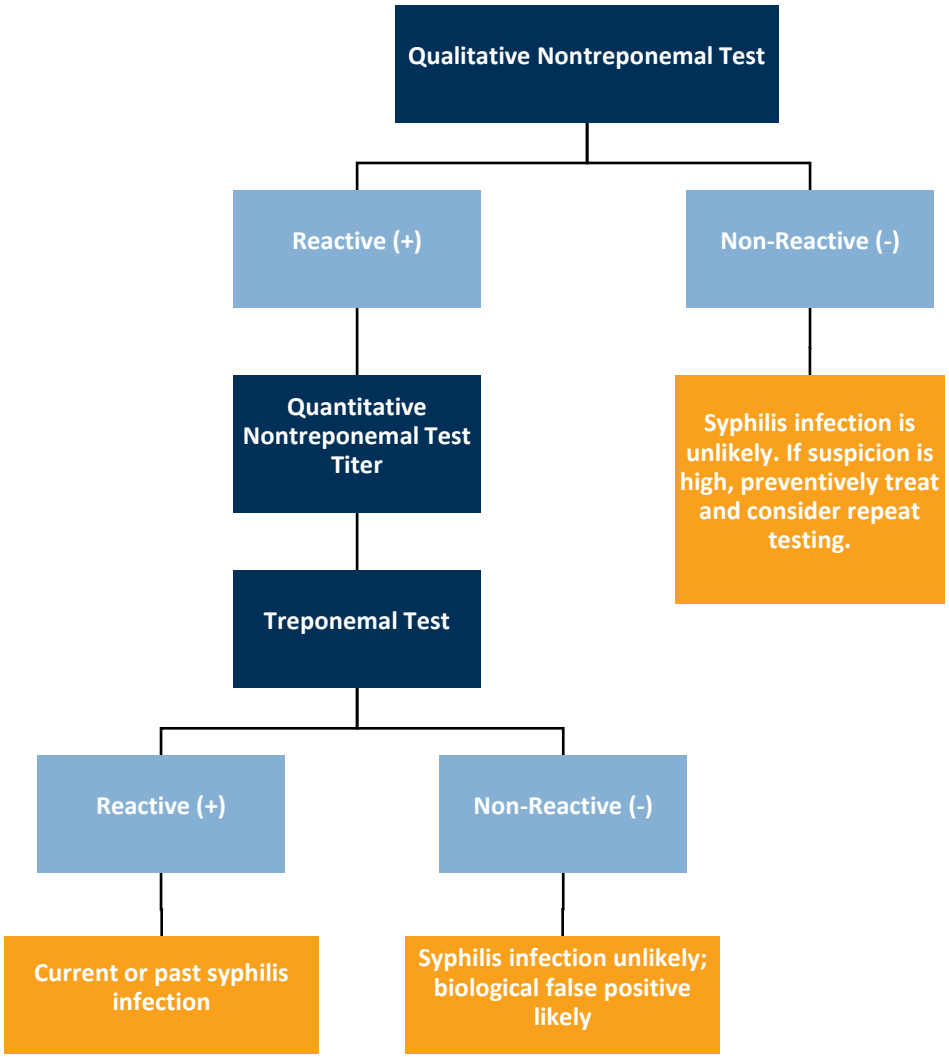
SOUTH DAKOTA DEPARTMENT OF HEALTH

TEST

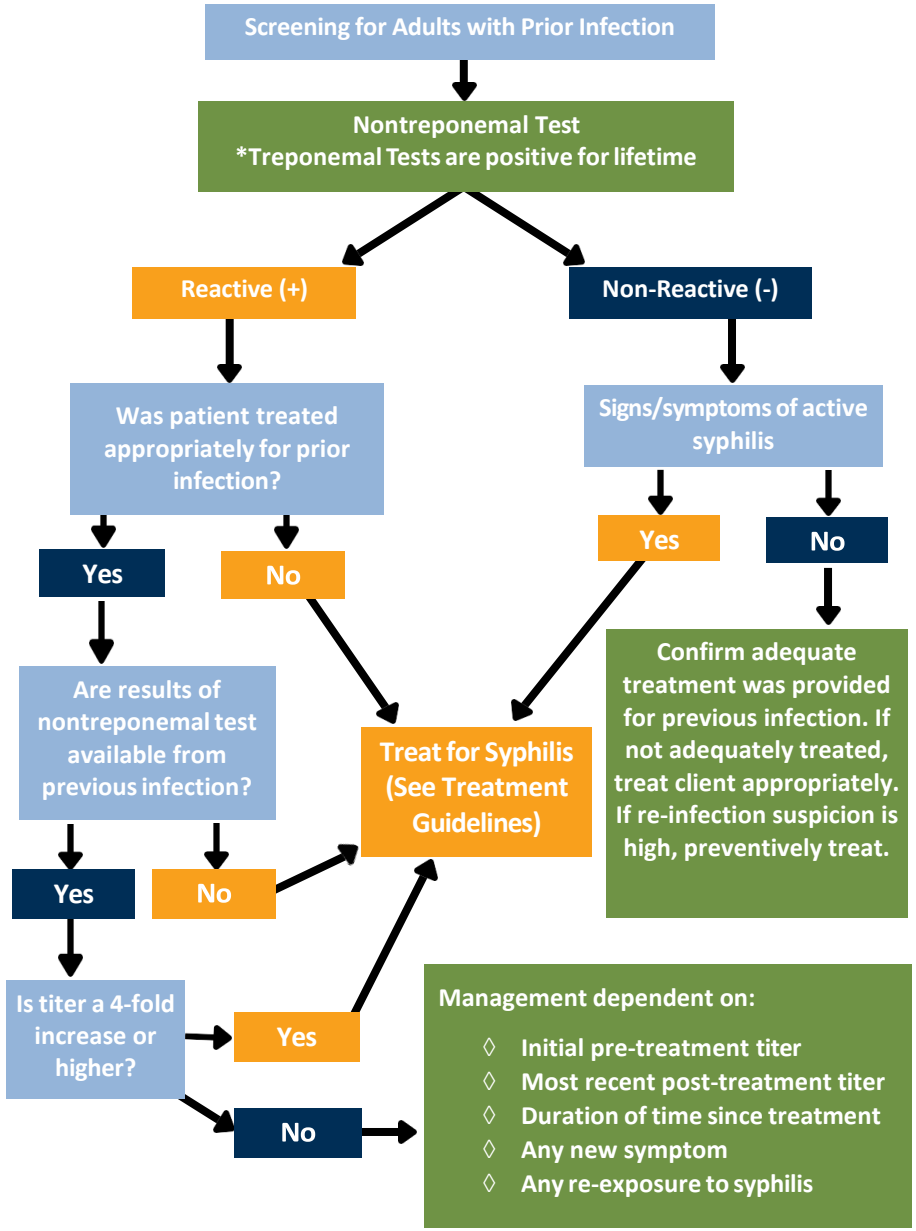
Presumptive syphilis diagnosis requires use of two serologic tests:
A nontreponemal test (RPR or VDRL) **AND** A treponemal test (FTA-ABS, TPPA, EIA, or CIA)

Traditional Testing Algorithm

The traditional testing algorithm for syphilis begins testing with the nontreponemal test. If the nontreponemal test is reactive, a treponemal test is then used to indicate syphilis infection.



Clinically Evaluating Patient with Prior Infection



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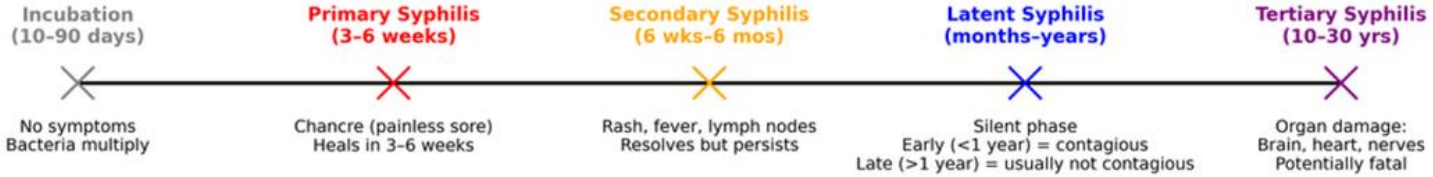
Progression of Untreated Syphilis



- Neuro-, Ocular-, and Otic syphilis can occur at ANY stage
- Congenital syphilis can be transmitted from mother to child at ANY stage

STAGE

Does the patient have signs or symptoms at the time of test?

YES

- + Chancre (lesion is usually firm, round, and painless) → **YES** → **PRIMARY SYPHILIS**
- + Rash, and/or other signs including: condyloma lata, alopecia, and mucous patches → **YES** → **SECONDARY SYPHILIS**

NO

- Negative syphilis test in the last 12 months? **OR**
- Infected partners staged with primary, secondary, or early syphilis? **OR**
- History of typical signs/symptoms in the past 12-months? **OR**
- If previously treated for syphilis, has a 4-fold increase in RPR titer? **OR**
- Only possible exposure was within the 12 months prior to test.

YES → **EARLY LATENT** (Early Non-Primary or Non-Secondary)

NO → **LATE OR UNKNOWN**

TREAT

PRIMARY SYPHILIS / **SECONDARY SYPHILIS** / **EARLY LATENT**

Benzathine penicillin G (Bicillin)

2.4 million units, IM in a single dose.

LATE OR UNKNOWN

Benzathine penicillin G (Bicillin)

2.4 million units IM every 7 days, for 3 doses (7.2 mu total), if any doses are late or missed, restart entire 3 dose series.

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OTHER INFORMATION

SOUTH DAKOTA DEPARTMENT OF HEALTH

SEXUAL HISTORY, RISK ASSESSMENT, & PHYSICAL EXAM

Risk Assessment & Exposure History (past year)

- Partners (Gender, # of partners, type of sex, etc.)
- Past history of STIs/HIV serostatus
- Protection (Condom/barrier use)
- Pregnancy

Physical Exam

- Oral cavity
- Lymph nodes
- Skin
- Palms & soles
- Neurologic
- Eyes
- Genitalia/pelvic
- Perianal

REPORTING & PARTNER MANAGEMENT

- All syphilis cases and presumptive cases must be reported to the South Dakota Department of Health (SDDOH) within three days.
- SDDOH will assist in partner notification & management.
- SDDOH Contact Number: 605-773-3737

Reporting Diseases in South Dakota

SDDOH Free Testing Sites

DIAGNOSTIC CONSIDERATIONS

- Both **non-treponemal** (RPR or VDRL) and **treponemal** test needed to make initial syphilis diagnosis.
- Use same non-treponemal test (RPR or VDRL) in sequential testing; titers are not interchangeable.
- Treponemal tests (TP-PA, FTA-ABS, EIA, CIA) can remain positive for life; utility of treponemal tests are limited in patients with history of prior syphilis.
- RPR/VDRL titer interpretation should be taken in context of prior titers, clinical scenario and documented treatment history.
- Certain diseases and pregnancy can affect non-treponemal results.
- Congenital Syphilis can be transmitted from mother to baby at any stage of syphilis if mother is not treated appropriately.
- Evaluate for neurosyphilis by assess if neurologic, ophthalmic, or otic symptoms are present, as neurosyphilis can occur at any stage of syphilis.

Note: Also test for HIV, GC/CT, and pregnancy (if female of reproductive age).

TREATMENT & FOLLOW-UP

Recommended Treatment Regimen for Early Syphilis

- Benzathine Penicillin G 2.4 million units IM x 1

Recommended Treatment Regimen for Unknown Duration/Late Syphilis

- Benzathine Penicillin G 2.4 million units IM x 3 doses

CDC STI Treatment Guidelines:

*Pregnant patients with penicillin allergy should be desensitized and treated with penicillin.

****Additional Testing and Follow-up**

- 1-2 weeks: clinical follow-up
- HIV+ patients: serologic follow-up at 3, 6, 9, 12, 24 months
- HIV- patients: serologic follow-up at 6, 12 months
- Failure of titer to decline fourfold (e.g. 1:64 to ≤ 1:16) within 6-12 months from titer at time of treatment may indicate treatment failure. Titer decline may be slower in HIV+ patients. Consider retreatment and CSF evaluation if titer fails to decline appropriately.

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