DIAGNOSING SYPHILIS IN PREGNANCY

AMERICAN COLLEGE of NURSE-MIDWIVES

SYMPTOMS & TESTING OPTIONS FOR SYPHILIS BY STAGE

	STAGE	SYMPTOMS / MANIFESTATIONS	TESTING OPTIONS
Most contagious stages	Primary syphilis (starts 2-12 weeks after exposure; lasts for 3-6 months)	Classically presents as a single painless sore (chancre) at the site of infection but can also present with multiple, atypical, or painful lesions	If symptoms present: Darkfield examinations and Serologic testing
	Secondary syphilis (begins 1-6 months after exposure; can sometimes last more than a year)	Manifestations can include skin rash, mucocutaneous lesions, and lymphadenopathy	If symptoms present: Darkfield examinations and Serologic testing
Least contagious stages	Latent syphilis (post-symptoms; can last up to 20 years)	No clinical manifestations	Serologic testing
	Tertiary syphilis (can occur 10-30 years after infection began)	Can present with cardiac involvement, gummatous lesions, tabes dorsalis, and general paresis	Serologic testing

DIAGNOSTIC TESTING OPTIONS

Serologic Tests

Requires use of two laboratory serologic tests: a nontreponemal test and a treponemal test

- The traditional algorithm for syphilis serologic screening begins with a nontreponemal test, and any reactive specimens are tested for confirmation by a treponemal test.
- Reverse syphilis screening algorithms (initial screening with treponemal test) are acceptable too.

Testing reminders:

- Use of only one type of serologic test (nontreponemal or treponemal) is insufficient for diagnosis and can result in false-negative results among persons tested during primary syphilis and false-positive results among persons without syphilis or previously treated syphilis.
- Persons with a reactive nontreponemal test should always receive a treponemal test to confirm the syphilis diagnosis.
- If a person has a past history of testing positive for syphilis, a nontreponemal test should be used as the initial test.
- Syphilis can usually be detected 1-2 weeks after potential exposure, but the test is most accurate about 3 months (90 days) after exposure.

Darkfield Exam

Examining lesion exudate or tissue are the definitive methods for diagnosing early syphilis and congenital syphilis.

Cerebrospinal Fluid Evaluation (CSF)

Further testing with CSF is warranted for persons with clinical signs of neurosyphilis (e.g., cranial nerve dysfunction, meningitis, stroke, acute or chronic altered mental status, or loss of vibration sense).

SYPHILIS TESTING RESOURCE CORNER

For more detailed information about testing and diagnostic considerations, review U.S. Department of Health and Human Services/Centers for Disease Control and Prevention Sexually Transmitted Infections Treatment Guidelines, 2021 and CDC Laboratory Recommendations for Syphilis Testing, United States, 2024.

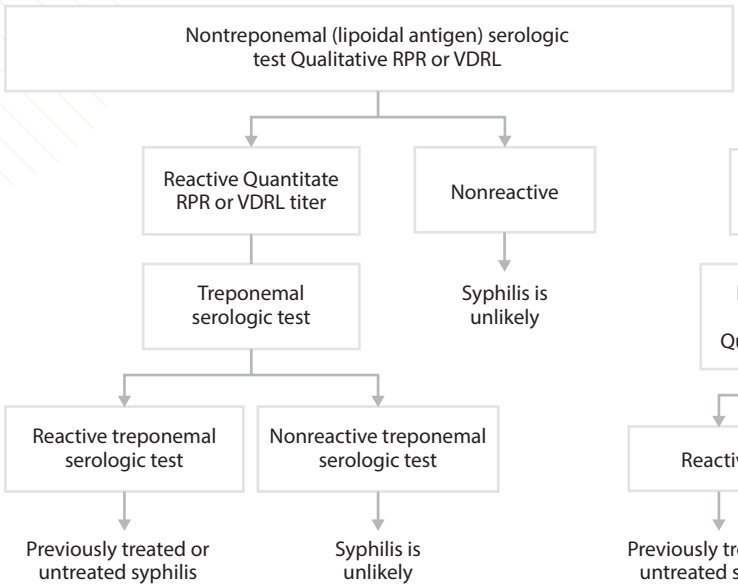
SEROLOGIC TESTS ALGORITHMS FOR SYPHILIS SCREENING (CDC, 2024)

IMPORTANT REMINDERS:

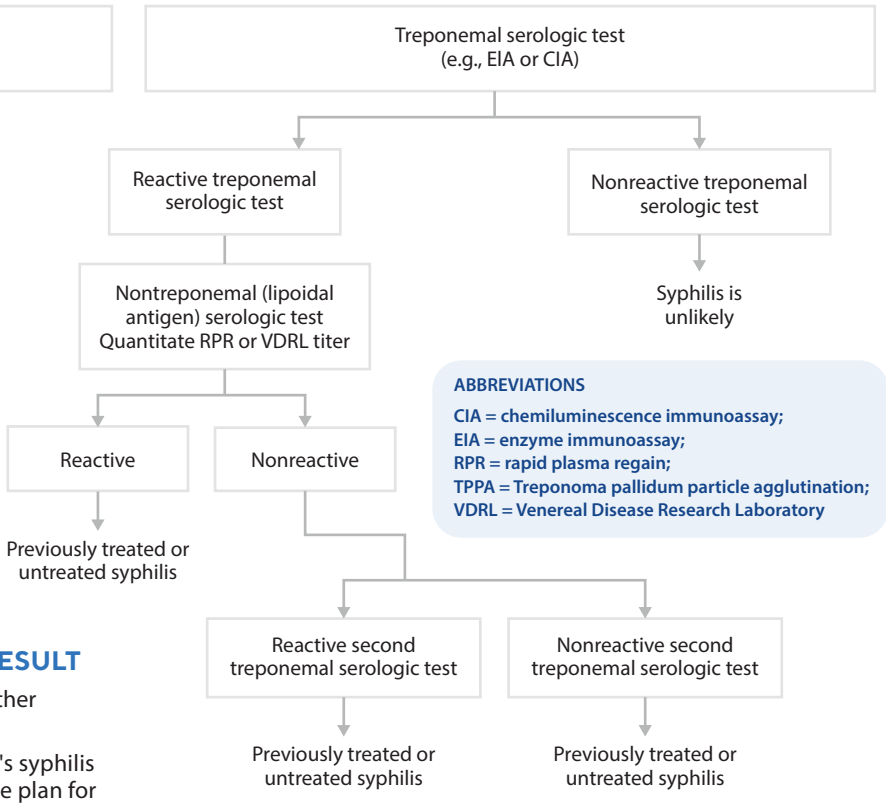
The majority of people who have reactive treponemal tests will have reactive tests for the remainder of their lives, regardless of adequate treatment or disease activity.

Treponemal antibody titers do not predict treatment response and therefore should not be used for this purpose.

TRADITIONAL ALGORITHM



REVERSE SEQUENCE ALGORITHM



ABBREVIATIONS

CIA = chemiluminescence immunoassay;
EIA = enzyme immunoassay;
RPR = rapid plasma regain;
TPPA = Treponoma pallidum particle agglutination;
VDRL = Venereal Disease Research Laboratory

ACTIONS TO TAKE AFTER A POSITIVE TEST RESULT

Talk to the patient about their results and make a plan together for next steps.

- ☑ Optional: Get help from your local health department's syphilis expert. They can help you create an individualized care plan for your patient.
- ☑ Use the "What to Know About Syphilis Testing and Treatment in Pregnancy" to support your conversation. Emphasize these points:
  - Anyone can get syphilis and knowing they have it means that you can work together to make sure it is treated so they and the baby can be protected.
  - Not treating syphilis is dangerous for the baby but treating syphilis is safe and will protect you and your baby.
  - I am required to report this test result to the local health department so they can help make sure treatment is done and partners are notified. That process is totally confidential.
- ☑ Ask whether the patient has a known allergy to penicillin.
- ☑ Ask about current and prior sexual partners and make a plan for notification.
  - Anonymous notification from the health department is an option.
  - Test partner at visit if possible OR help patient make a plan for getting current sexual partner(s) tested and treated for syphilis.
  - Talk to the patient about avoiding sex starting now and until 7 days after their treatment has ended and 7 days after the treatment of any current sexual partners has ended, whichever is later.
- ☑ Counsel on possible treatment side effects:
  - The most common side effect is mild, temporary pain and tenderness at the injection site.
  - A side effect of treatment is the Jarish-Herxheimer Reaction (JHR). This is an acute febrile reaction frequently accompanied by headache, myalgia, and fever that can occur within the first 24 hours after treatment initiation. When treatment is done in the second half of pregnancy JHR may precipitate contractions, early labor, and/or nonreassuring fetal heart tracings. Evaluation and treatment of these symptoms should follow usual obstetric standards of care. JHR is a reaction to treatment and not an allergic reaction to penicillin; it is more common in early syphilis. JHR occurs in 10-35% of cases.
  - Pregnant people should be informed about this possible adverse reaction and advised to seek obstetric attention after treatment if they notice any fever, contractions, or decrease in fetal movements.
  - Stillbirth is a rare complication of treatment.
- ☑ Follow your local reporting guidelines for syphilis.