

# Syphilis Screening During Pregnancy

Pregnant patients must be screened for syphilis three times during each pregnancy, as required by the NYC Health Code and New York State Public Health Law.

- **First prenatal care examination:** Pregnant patients should be screened serologically for syphilis when pregnancy is first confirmed. Screening can be performed in one of two ways:
  - Manual nontreponemal antibody testing, such as rapid plasma reagin (RPR) using the traditional syphilis screening algorithm
  - Treponemal antibody testing, such as immunoassays using the reverse sequence algorithm
- **Third trimester screening:** A syphilis test should be conducted at 28 weeks or as soon thereafter as reasonably possible, but no later than at 32 weeks. It is strongly advised to couple third trimester syphilis screening with recommended third trimester HIV screening.
- **Delivery:** All pregnant patients are required to be screened serologically for syphilis at delivery. The recommended practice is to screen the pregnant patient for syphilis on admission to delivery. If they test positive for syphilis, the infant should be tested as well.

## Diagnostic considerations and common tests



To diagnose syphilis, laboratory testing must include both treponemal and nontreponemal tests. Unless specified by the provider, whether a treponemal or nontreponemal test is performed first differs across laboratories, and results must be carefully interpreted to distinguish a current syphilis infection from a previous infection. In cases where the laboratory evidence of syphilis is inconclusive or ambiguous, pregnant patients should be presumed infected, regardless of whether they have symptoms, unless syphilis can be ruled out through evidence of treatment and patterns in follow-up titers documented in their medical record.

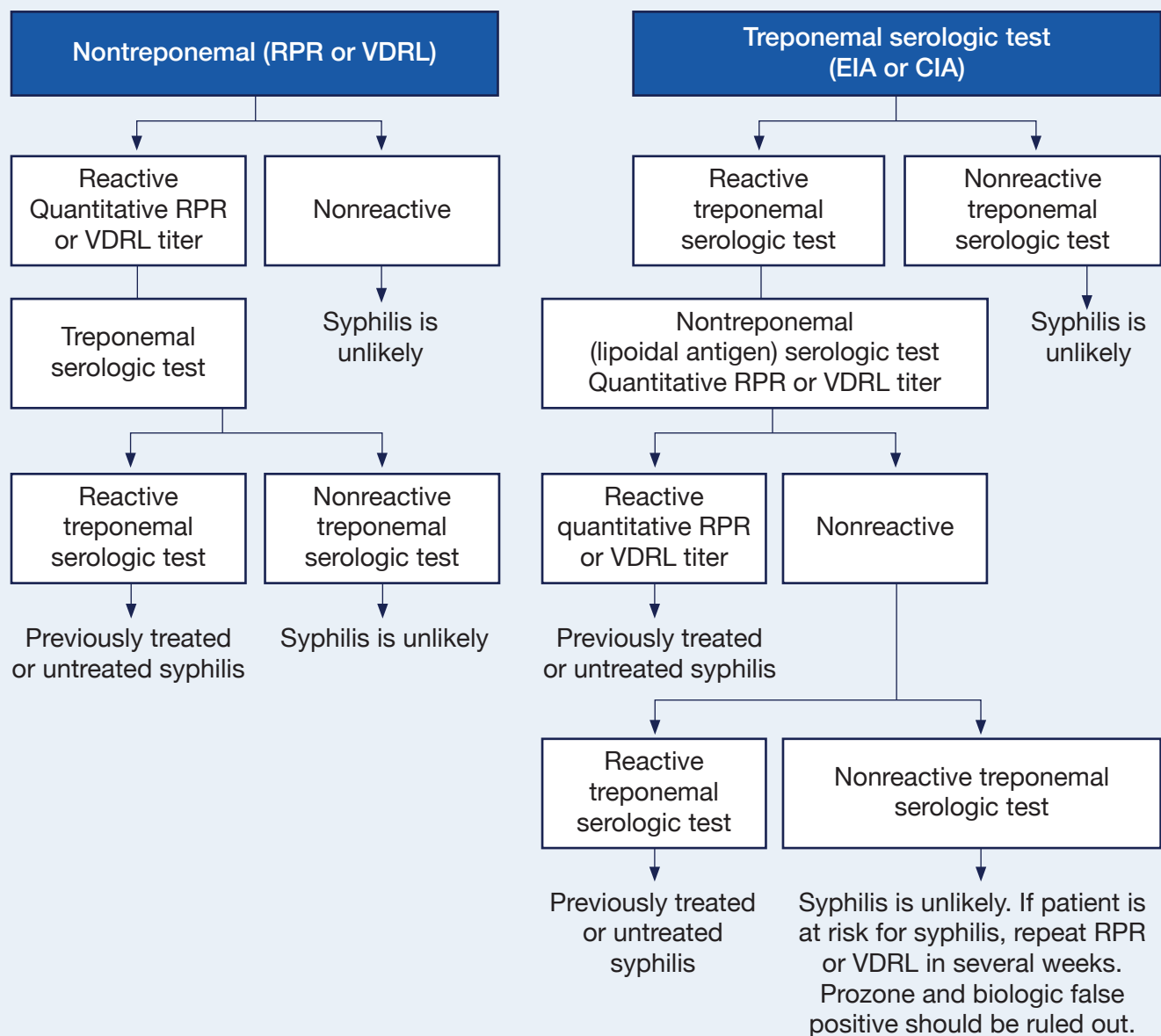
Test	Full name	Type	Target	Notes
RPR	Rapid plasma reagin	Non-treponemal	Cardiolipin antibodies	Quantitative results reported as a titer.
VDRL	Rash or mucus membrane lesions	Non-treponemal	Cardiolipin antibodies	Quantitative results reported as a titer. Only test approved for cerebrospinal fluid specimens.
FTA-ABS	None	Treponemal	<i>Treponema pallidum</i> antibodies	
TPPA	<i>Treponema pallidum</i> particle agglutination	Treponemal	<i>Treponema pallidum</i> antibodies	
MHA-TP	Microhemagglutination <i>Treponema pallidum</i>	Treponemal	<i>Treponema pallidum</i> antibodies	
EIA	Enzyme immunoassay	Treponemal	<i>Treponema pallidum</i> antibodies	May be initial test in reverse sequencing algorithm.
CIA	Chemiluminescence immunoassay	Treponemal	<i>Treponema pallidum</i> antibodies	May be initial test in reverse sequencing algorithm.



# Traditional and reverse algorithms for syphilis screening

Each algorithm has its advantages and disadvantages. Serologic tests that measure antibodies to both nontreponemal (lipoidal) and treponemal antigens related to syphilitic infections should be used in combination when the primary test is reactive to aid in the diagnosis of syphilis. Sole reliance on one reactive serologic test result can misclassify a patient's syphilis status. Both the traditional syphilis screening algorithm and the reverse syphilis screening algorithm are acceptable. The preferred algorithm should be based on laboratory resources, including staff, space and costs, test volume, and patient populations served.

## Recommended algorithms that can be applied to screening for syphilis with serologic tests



Adapted from: Centers for Disease Control and Prevention. CDC laboratory recommendations for syphilis testing, United States, 2024. *MMWR Recomm Rep.* 2024;73(RR-1):1-32. <https://www.cdc.gov/mmwr/volumes/73/rr/pdfs/rr7301a1-H.pdf>