



Iowa Department of Public Health

Advancing Health Through the Generations

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The Iowa Department of Public Health (IDPH) hereby issues the following PUBLIC HEALTH BULLETIN pursuant to the authority granted by Iowa Code section 135.11(1), (2), and (3).

Background

The number of people with syphilis infections in north central Iowa is increasing. Two clusters of cases in the area have been identified. This infection is being spread person to person. Since some individuals who have been infected or exposed to this infection are traveling in and out of state, all health care providers should be vigilant in recognizing risk factors, signs and symptoms. The spread of infection beyond north central Iowa (including across state lines) is suspected.

Syphilis is a systemic disease caused by *T. pallidum*. Patients who have syphilis may seek treatment for signs or symptoms of primary infection (i.e., ulcer or chancre at the infection site), secondary infection (i.e., manifestations that include but are not limited to skin rash, mucocutaneous lesions, and lymphadenopathy), or tertiary infection (e.g., cardiac, ophthalmic, auditory abnormalities, and gummatous lesions). Latent infections (i.e., those lacking clinical manifestations) are detected by serologic testing. Latent syphilis acquired within the preceding year is referred to as early latent syphilis; all other cases of latent syphilis are either late latent syphilis or latent syphilis of unknown duration. Treatment for both late latent syphilis and tertiary syphilis theoretically may require a longer duration of therapy because organisms are dividing more slowly; however, the validity of this concept has not been assessed.

Syphilis Testing

Darkfield examinations and direct fluorescent antibody tests of lesion exudate or tissue are the definitive methods for diagnosing early syphilis. After the lesion has healed, a diagnosis of syphilis can be made by a serologic test for antibodies. Antibodies usually appear 4-6 weeks after infection. A presumptive diagnosis is possible with the use of two types of serologic tests for syphilis: a) nontreponemal tests (e.g., Venereal Disease Research Laboratory [VDRL] and Rapid Plasma Reagin [RPR]) and b) treponemal tests (e.g., fluorescent treponemal antibody absorbed [FTA-ABS] and *T. pallidum* particle agglutination [TP-PA]). The use of only a nontreponemal test (RPR or VDRL) is insufficient for diagnosis, because false-positive nontreponemal test results may occur secondary to various other medical conditions.

Nontreponemal antibody tests are very sensitive (but nonspecific) screening tests for syphilis and positive results should be confirmed using a treponemal test (FTA-ABS or TP-PA). RPR and VDRL tests are reported quantitatively, i.e.: with a titer. Nontreponemal tests usually become nonreactive with time after treatment; however, in some patients, nontreponemal antibodies can persist at a low titer for a long period of time, sometimes for the life of the patient. This response is referred to as the "serofast reaction."

Most patients who have reactive treponemal tests will have reactive tests for the remainder of their lives, regardless of treatment or disease activity. Treponemal test antibody titers are not performed because they correlate poorly with disease activity and cannot be used to assess treatment response. The University Hygienic Lab (UHL) offers the VDRL screening test and the TP-PA confirmatory test. To

submit serum samples to UHL or to obtain further information from UHL, call (319)-335-4500. A UHL serology test request form must be submitted with any serum samples.

Syphilis Treatment Δ

	Recommended Rx	Dose/Route	Alternatives
Early – primary, secondary, or latent <1year	Long acting benzathine penicillin G**	2.4 million units IM in a single dose	Doxycycline 100 mg 2x/day for 14 days OR Tetracycline 500 mg orally 4x/day for 14 days
Latent >1year, latent of unknown duration, late(cardiovascular, gumma)	Long acting benzathine penicillin G**	2.4 million units IM each at 1 week intervals (7.2 million units total) over 3 weeks	Doxycycline 100 mg 2x/day for 28 days OR Tetracycline 500 mg orally 4x/day for 28 days

Sexual partners exposed within the 90 days preceding the diagnosis of primary, secondary, or early latent syphilis should be treated presumptively, even if seronegative.

**There can be confusion regarding long acting benzathine penicillin. The sole manufacturer of the appropriate treatment is King Pharmaceuticals, Inc. The label of the appropriate treatment reads Bicillin® L-A.

Δ For treatment information for pregnant women, neurosyphilis, congenital syphilis, children, and adolescents see the complete CDC treatment guidelines at <http://www.cdc.gov/std/treatment/2002TG.htm#Syphilis>. Iowa’s guidelines are consistent with the CDC.

Reporting

Syphilis is a reportable disease as required by Iowa Administrative Code [641] Chapter 1. To report a case of Syphilis, contact the IDPH, Bureau of Disease Prevention and Immunization at (515-281-3031).

Case Investigation

Syphilis follow up and partner notification is coordinated and conducted by state and local health investigators. Contact the Bureau of Disease Prevention and Immunization for questions and assistance with syphilis case investigation, testing, treatment recommendations and referral at (515-281-4936).

Routine case investigation, controlling further spread, treatment of cases, protection of contacts, antibiotics used for treatment and prevention are outlined in the syphilis chapter of the Epi-Manual. The Epi-Manual is available at http://www.idph.state.ia.us/adper/surveillance_manual.asp.

Resources

Fact sheets and handouts for patients are located on the IDPH web site at: http://www.idph.state.ia.us/adper/std_control.asp under “Facts about Syphilis” and on the CDC web site at <http://www.cdc.gov/std/Syphilis/STDFact-Syphilis.htm>.