Screening for Syphilis

In this issue of JAMA, the US Preventive Services Task Force (USPSTF) has published recommendations on screening for syphilis infection in adults and adolescents.

What Is Syphilis?
Syphilis is a sexually transmitted infection caused by bacteria called Treponema pallidum. There are several different stages of syphilis. Primary syphilis occurs 2 or 3 weeks after infection, with development of 1 or more small, painless ulcers (chancre) in areas of sexual contact. Because the chancre are painless and go away on their own, many people do not seek treatment. This can lead to secondary syphilis a few weeks or months later. Symptoms of secondary syphilis include flu-like symptoms, fever, a widespread rash, and swollen lymph nodes. If left untreated, these symptoms typically resolve within weeks, and a period of latent syphilis follows, during which time people have no symptoms. Years later, symptoms of tertiary syphilis (or late-stage syphilis) can arise and cause serious damage to many organs, including the brain, spinal cord, and visual system, which may result in dementia, paralysis, and blindness.

The risk of syphilis transmission is highest during primary and secondary stages of syphilis. Syphilis can also be transmitted to a fetus during any stage of pregnancy. Syphilis infection increases the risk of becoming infected with HIV or transmitting HIV. Syphilis can be prevented by practicing safe sex and is treatable at any stage with antibiotics (penicillin).

What Tests Are Used to Screen for Syphilis?
Screening for syphilis is typically performed with blood testing to detect antibodies indicating possible infection with syphilis. If the first test is positive, a second blood test is performed to confirm the diagnosis.

Rapid point-of-care testing for antibodies against syphilis, which gives results in 5 to 30 minutes, are generally less accurate and less widely used.

What Is the Patient Population Under Consideration for Screening for Syphilis?
This recommendation applies to asymptomatic nonpregnant adolescents and adults who are at increased risk for syphilis infection. People with HIV; men who have sex with men; individuals with a history of drug use, sex work, incarceration, or military service; and young adults are considered to be at higher risk of contracting syphilis. However, there is much variation among different communities and regions within the US, so local trends in syphilis infection rates should be considered when making decisions about screening.

Screening for syphilis
Syphilis is a sexually transmitted infection that can progress through different stages and cause serious health problems over time if left untreated.

Population
Asymptomatic, nonpregnant adolescents and adults who are at increased risk for syphilis infection

USPSTF recommendation
The USPSTF recommends screening for syphilis infection in persons who are at increased risk for infection.

What Are the Potential Benefits and Harms of Screening for Syphilis?
There is convincing evidence that the benefits of early detection and treatment of syphilis are substantial, including curing the infection, preventing transmission to others, and preventing late-stage disease.

Potential harms of screening for syphilis are likely to be small and include false-positive results that lead to further testing, anxiety, and possible stigma. Potential harms of treatment, including allergic reactions to penicillin, are also small.

How Strong Is the Recommendation to Screen for Syphilis?
Given current evidence, USPSTF concludes with high certainty that the net benefit of screening for syphilis infection in nonpregnant persons who are at increased risk for infection is substantial. The optimal frequency of screening is not well established.

How Does This Compare With Prior USPSTF Recommendations?
This recommendation is consistent with the 2016 USPSTF recommendation.

FOR MORE INFORMATION
US Preventive Services Task Force

Author: Jill Jin, MD, MPH
Author Affiliation: Northwestern University Feinberg School of Medicine, Chicago, Illinois.
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