Syphilis Fact Sheet

Epidemiology and Statistics

- Syphilis is a sexually transmitted infection caused by bacterium *Treponema pallidum*
- Syphilis can cause long-term complications and/or death if left untreated
- Transmitted person-to-person by direct contact with syphilitic sore (chancre)
- Transmission occurs during oral, anal, or vaginal sex

- 1990s: Syphilis occurred among heterosexual, racial/ethnic minority men and women
- 2000s: Cases increased among men who have sex with men (MSM)
- In 2011, primary and secondary syphilis rates were highest among men 20-29 years old
- This epidemiologic shift reflects increasing cases reported among young MSM

Primary and Secondary Syphilis Rates Per 100,000 Population, LA County, California, and USA, 2007-2011

- Rates fell steadily from 2007 to 2010 (8.6 to 6.5 per 100,000 population), before increasing again in 2011 (8.1 per 100,000 population)
- From 2010 to 2011, rates increased 25%

Early Latent Syphilis Rates Per 100,000 Population, LA County, California, and USA, 2007-2011

- Rates have increased steadily from 2007 to 2011, from 8.3 to 11.3 per 100,000 population
- From 2010 to 2011, rates increased 24%

Primary and Secondary Syphilis Cases, LA County, 1999-2013

[Graph showing syphilis cases from 1999 to 2013 with an orange bar representing estimated cases for September - December, 2013]
## Signs and Symptoms

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
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| **Primary Stage** | • Appearance of a single sore (chancre), usually firm, round, and painless; appears where syphilis entered the body  
• Incubation period: 10 to 90 days, average of 21 days  
• Sore lasts 3 to 6 weeks and then heals regardless of whether a person is treated  
• If left untreated, the infection progresses to the second stage |
| **Secondary Stage** | • Rash on one or more areas of the body  
• Appears rough, red, or reddish brown spots on the palms of hands and bottoms of feet  
• Symptoms may include fever, swollen lymph glands, headaches, hair loss, sore throat, fatigue, and muscle aches  
• If left untreated, the infection progresses to the third stage |
| **Latent Stage** | • Infection occurred within the past 12 months  
• Late latent syphilis: Infection occurred more than 12 months ago  
• Develop in ~15% of people who have not been treated  
• Can appear 10 to 20 years after initial infection  
• Damage the internal organs, including the brain, nerves, eyes, heart, blood vessels, liver, bones, and joints |

## Diagnosis

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<th>Blood Tests</th>
<th>Details</th>
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| **Nontreponemal Blood Tests** | • Known as VDRL and RPR  
• Simple and inexpensive  
• May produce false-positive results  
• Are insufficient for diagnosis on their own  
• Classic sequence testing: Persons with a reactive nontreponemal test should receive a treponemal test to confirm a syphilis diagnosis |
| **Treponemal Blood Tests** | • FTA-ABS, TP-PA, various EIAs, and chemiluminescence immunoassays  
• Detect antibodies specific for syphilis  
• Treponemal antibodies remain detectable for life, even after successful treatment  
• Reverse sequence testing: Can be more convenient for labs, but its clinical interpretation is problematic |

## Treatment

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| **Primary, Secondary, or Early Latent Syphilis** | • There are no home remedies or over-the-counter drugs that will cure syphilis, but syphilis is easy to cure in its early stages  
• A single intramuscular injection of long acting Benzathine penicillin G |
| **Late Latent Syphilis** | • Three intramuscular injections of long acting Benzathine penicillin G at weekly intervals  
• Treatment will kill the syphilis bacterium and prevent further damage, but it will not repair damage already done |

## Prevention

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<th>Method</th>
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| **Condoms** | • Correct and consistent use of latex condoms can reduce the risk of syphilis only when the infected area or site of exposure is protected  
• Microbicide or male circumcision do not prevent syphilis |
| **Partner Notification** | • Sexual partners of infected patients should be considered at risk and provided treatment immediately  
• It is important that sex partners talk to each other about their STD history |

Sources: Centers for Disease Control and Prevention, California Department of Public Health, and Los Angeles County Department of Public Health