

## Syphilis (*Treponema pallidum*)

Syphilis is a sexually transmitted disease caused by a bacterium called *Treponema pallidum*.

### Transmission

Any sexually active person can be infected with syphilis. Syphilis can be transmitted via:

- **Person to person.** Direct contact with a syphilis sore, lesion, or rash through:
  - **Vaginal, anal, or oral sex**
  - **Childbirth**, from an infected mother to her baby during pregnancy or at birth.

Transmission of the infection after the first year is rare.

### Symptoms

Syphilis infection is divided into three stages (primary, secondary, latent). Symptoms appear at the initial time of infection (10 to 90 days after exposure), although they may be unrecognized symptoms can also appear several years later if the infection is not treated.

#### Primary:

- **One or more painless, firm sores** (chancres) at the spot where syphilis entered the body.
  - The sore usually lasts three to six weeks and heals regardless of whether you receive treatment.
  - If no treatment, the infection will progress to the secondary stage.

#### Secondary:

- **Rash** (often on the palms of the hands or soles of the feet)
- **Swollen lymph glands**
- **Weight loss**
- **Sore throat**
- **Muscle aches**
- **Fever**
- **Hair loss**
- **Fatigue**
- **Headaches**

The symptoms from this stage will go away without treatment, however, the infection is still present. Without the right treatment, your infection will move to the latent and possibly tertiary stages of syphilis.

#### Latent:

The latent stage of syphilis is a period when there are **no visible signs or symptoms. Without treatment, you can continue to have syphilis in your body for years.**

#### Tertiary:

Most people with untreated syphilis do not develop tertiary syphilis. However, when it does happen, it can affect many different organ systems. The tertiary stage of infection occurs 15 to 30 years after the initial infection and can damage the brain, heart, nerves, eyes, blood vessels, liver, bones, and joints.

#### Neurosyphilis, Ocular Syphilis, and Ootosyphilis:

Without treatment, syphilis can spread to the brain and nervous system (neurosyphilis), the eye (ocular syphilis), or the ear (otosyphilis). This can happen during any of the stages described above.

## Diagnosis

Blood tests are available to diagnose syphilis. Testing specimens from a sore or lesion can also be used to diagnose syphilis.

## Treatment

**Syphilis can be treated and cured with antibiotics.** The amount of antibiotics needed to treat syphilis is dependent on the stage of syphilis at the time of diagnosis. To ensure a person is cured of syphilis, all of their sex partners also need to be tested and treated for syphilis. A person can be reinfected with syphilis after treatment.

## Prevention

Most effective:

- **Abstain from sexual activity**
- **Be in a long-term mutually monogamous relationship with a partner** who has been tested and known to be uninfected

To decrease risk:

- **Condoms/dental dams** when used consistently and correctly
- **Limiting the number of sexual partners** reduces the risk

## Exclusion Guidance

**Individuals with syphilis should not be excluded from work, school, or child care** unless the [general exclusions apply](#).

## Pregnancy and Syphilis

**All pregnant women should receive syphilis testing at their first prenatal visit, 28 weeks gestation, and at delivery.** All pregnant women that test positive for syphilis should receive treatment right away to prevent infection of the baby.

**Congenital syphilis** is a disease that occurs when a mother with syphilis passes the infection on to her baby during pregnancy. Congenital syphilis can cause:

- Miscarriage
- Stillbirth
- Prematurity
- Low birth weight
- Death shortly after birth

At birth, a baby with a syphilis infection may not have signs or symptoms of disease. However, if the baby does not receive treatment right away, the baby may develop serious problems. Congenital syphilis can cause:

- Deformed bones
- Severe anemia
- Enlarged liver and spleen
- Jaundice
- Brain and nerve problems (blindness/deafness)
- Meningitis
- Skin rashes

For additional information about syphilis, contact North Dakota Health and Human Services' Public Health Division at 800.427.2180.

Resources:

1. Centers for Disease Control and Prevention. (2023, April 11). *Congenital Syphilis – CDC Basic Fact Sheet*. Centers for Disease Control and Prevention. Retrieved June 27, 2023, from <https://www.cdc.gov/std/syphilis/stdfact-congenital-syphilis.htm>
2. Centers for Disease Control and Prevention. (2022, February 10). *Syphilis – CDC Basic Fact Sheet*. Centers for Disease Control and Prevention. Retrieved June 27, 2023, from <https://www.cdc.gov/std/syphilis/stdfact-syphilis.htm>
3. Heymann, D. L. (2015). *Control of Communicable Diseases Manual*, 21st Edition. American Public Health Association. [Syphilis] [pages 624-629].
4. Kimberlin, D. W., Barnett, E. D., Lynfield, R., Sawyer, M. H. (2021) *Red Book: 2021-2024 Report of the Committee on Infectious Diseases*. 32nd ed. American Academy of Pediatrics. [Management and Prevention of Infectious Diseases; [Pages 729-744].

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