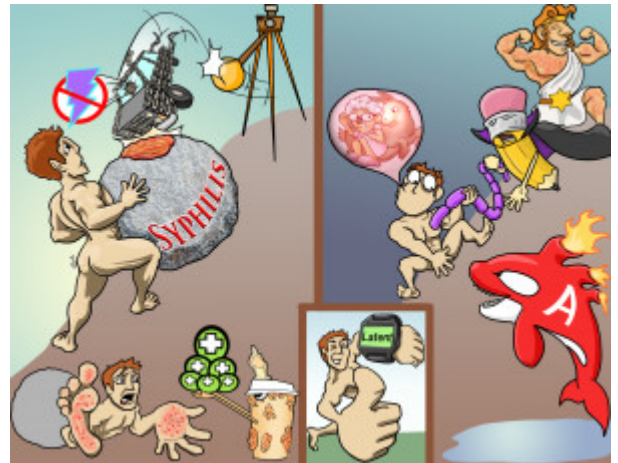


# Syphilis

Syphilis is a spirochete bacterial infection caused by *Treponema pallidum*, which is commonly associated with spread by sexual contact. Syphilis has a variety of presentations according to the time since initial contact, systemic spread of disease, and individual susceptibility to infection. Primary syphilis presents as a painless chancre in the genital or groin region. Secondary syphilis presents as an erythematous rash involving the palms and soles or a condyloma lata which is similar to the lesions of primary syphilis in its infectivity but differs in appearance. Lastly tertiary syphilis is a representation of widespread systemic involvement and can present with major vessel changes, such as in the aorta, permanent CNS changes, or even benign mucosal growths called gummas. All manifestations of syphilis are secondary to invasion of the blood vessel walls. Penicillin is the treatment of choice for any syphilis manifestation.



PLAY PICMONIC

## Mechanism

### Treponema pallidum

#### Tripod Pendulum

Syphilis is caused by the bacteria *Treponema pallidum*. This bacterium enters the body through small breaks in the skin or mucous membranes. Its entry is facilitated by the minor abrasions that can occur during sexual intercourse.

## Assessment

### Primary Stage

#### Painless Chancre

##### Chain-car No Pain-bolt sign

Painless, indurated skin lesions are usually localized to the groin or genital area. These are the characteristic sign of primary syphilis and usually appear 2-4 weeks after exposure to the disease. If present, they can be scraped for spirochete rather than order blood test for diagnosis. Chancres are painless as opposed to chancroids that are painful. The exudate from the chancre is highly infectious.

## Secondary Stage

#### Rash on Palms and Soles

##### Rash on Palms and Soles

During the secondary stage, a symmetric rash begins on the trunk. Rash on palms and soles are highly characteristic of syphilis.

#### (Generalized) Lymphadenopathy

##### Lymph-lime-add (+)

Generalized lymphadenopathy is characteristic of secondary syphilis.

#### Condylomata Lata

##### Condom Latte-with-warts

Condylomata lata are moist, weeping papules or wart-like lesions in the anal and genital area. They are the characteristic lesions of secondary syphilis are present in about one third of people who had signs of primary syphilis.

## Latent Stage

### Asymptomatic

#### Thumbs-up

During the latent stage of syphilis, patients are often asymptomatic. This stage can last throughout the person's lifetime with a fourth of persons developing late syphilis, in some cases many years later.

## Tertiary (Late) Stage

### Aortitis

#### A-orca-on-fire

Aortitis occurs secondary to obliterative endarteritis as *Treponema pallidum* bacteria destroys the vessels walls. This can cause aortitis or aortic dissection in the most severe cases. Aortitis is characteristic of tertiary syphilis and presents after years of untreated illness.

### Neurosyphilis

#### Neurons-sisyphus

Presenting in a variety of ways, syphilis can attack both the brain and spinal cord, resulting in permanent, severe disability. Syphilis testing is a routine screening for patients with atypical dementia. A type of neurosyphilis that can develop is known as tabes dorsalis. This condition is characterized by the destruction of the dorsal column in the spinal cord. Patients will show changes in proprioception, as well as ataxia.

### Gummas

#### Granny-llama in Gum

Gummas are granulomatous skin lesions that present as a non-cancerous growth. Gummas can also present on internal organs as well. It is a characteristic lesion of tertiary syphilis and results from obliterative endarteritis. They reflect coagulative necrosis of the area and are non-infectious.

## Interventions

### Penicillin

#### Pencil-villain

Penicillin is often given as a treatment for syphilis and other spirochete infections.

### Jarisch-Herxheimer Rash

#### Jewish Hercules

This is a severe reaction after the administration of antibiotics, particularly penicillin which presents similarly to septic shock with fever, chills, hypotension, tachycardia and hyperventilation. This reaction is associated with penicillin treatment of syphilis infections and is hypothesized to be the result of spirochete toxins released after death by antibiotic.