

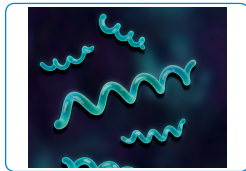
## TOPIC: SYPHILIS



### Bacterial

GRAM \_\_\_\_

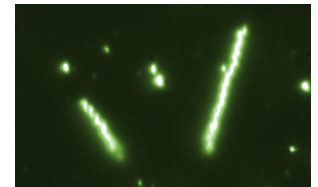
SHAPE: Spirochete (corkscrew)



### CAUSE

*Treponema pallidum* (*T. pallidum*).

- ◆ Invades host tissues rapidly from initial infection site – unique \_\_\_\_\_ provides motility.
  - Varies its surface \_\_\_\_\_ (antigenic variation), avoiding detection by immune system.
- ◆ Untreated infection will \_\_\_\_\_ and can cause serious chronic ailments.



(CDC)

### SPREAD

Direct contact with a syphilis \_\_\_\_\_ (chancre).

- Chancre contains highly \_\_\_\_\_ fluid at the center.
- Most often spread sexually but can infect other \_\_\_\_\_ membranes or breaks in skin.

Can be transmitted from pregnant woman to \_\_\_\_\_ (congenital syphilis).

### SYMPTOMS

- ◆ **Primary stage:** small, painless, hard \_\_\_\_\_ (lesion) at site of infection.
  - May go unnoticed (e.g., on \_\_\_\_\_ in females/in urethra in males).
- ◆ **Secondary stage:** weeks later, infectious skin rashes & \_\_\_\_\_ sores.
  - Patient may also experience fever, malaise, patchy hair loss.
- ◆ **Latent stage:** period of \_\_\_\_\_ symptoms; may last \_\_\_\_\_ years.
- ◆ **Tertiary stage:** hyperimmune response; occurs in ~25% of \_\_\_\_\_ cases.
  - Gummas (rubbery lesions) on skin & bones, blindness, paralysis, dementia.

### DIAGNOSIS

Method depends on stage of disease.

- ◆ **Primary stage:** \_\_\_\_\_ observation of *T. pallidum* from sample.
- ◆ **Secondary stage:** \_\_\_\_\_ antibody tests.
  - Non-treponemal antibody tests: antibodies indicative of \_\_\_\_\_ damage.
  - Treponemal antibody tests: antibodies against *T. pallidum*.

### TREATMENT

Penicillin G.

### IMMUNITY

N/A.

## References:

[Photomicrograph of two *Treponema pallidum* spirochetal bacteria]. (n.d). Centers for Disease Control and Prevention. <https://phil.cdc.gov/Details.aspx?pid=29916>

## EXAMPLE

Correctly match the stages of syphilis with their symptoms:

1) Primary stage	_____	a) Period of no symptoms; can last over a decade.
2) Secondary stage	_____	b) Characterized by a painless, highly infectious chancre at site of infection.
3) Latent phase	_____	c) Extremely severe hyperimmune response; can be fatal.
4) Tertiary stage	_____	d) Characterized by skin rash, fever, malaise, patchy hair loss.

## PRACTICE

The MHA-TP test is a type of treponemal antibody test. What exactly is it testing for?

- Presence of human antibodies that target the bacteria that cause syphilis.
- Surface antigens found on the bacteria that cause syphilis.
- Presence of human antibodies that indicate tissue damage that is consistent with a syphilis infection.
- Antigens released from damaged tissue consistent with a syphilis infection.

## PRACTICE

During which stages of syphilis is the disease generally considered highly contagious through sexual contact?

- Primary only.
- Primary and secondary stages.
- Secondary and tertiary stages.
- All four stages are considered highly contagious.