

TOPIC: CHLAMYDIA

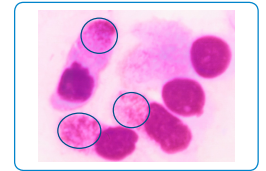


Chlamydia

Bacterial

GRAM ____

SHAPE: Spherical (coccus)



(Reese, 1965)

CAUSE

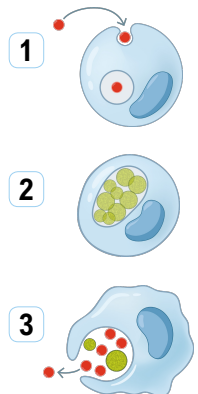
Chlamydia trachomatis (*C. trachomatis*).

- ◆ Most common _____ STI.
- ◆ Intracellular pathogen; can only replicate _____ host cell vesicles.
- ◆ **Nongonococcal urethritis (NGU)**: inflammation of urethra _____ caused by *N. gonorrhoeae*.
 - ▶ Usually caused by *C. trachomatis*.
- ◆ **Chlamydia**: term for _____ infections caused by *C. trachomatis*.
 - ▶ Other types of *C. trachomatis* can infect different parts of the body.

SPREAD

Sexually transmitted; infects urethra in males, _____/uterus in females.

- ◆ Two life stages:
 - ▶ **Elementary bodies**: smaller, inactive form alive _____ of cells.
 - ▶ **Reticulate bodies**: _____, metabolically active, reproductive form.
 - Intracellular _____; convert to elementary bodies to spread.
- May pass to baby during _____, causing conjunctivitis & pneumonia.



SYMPTOMS

- ◆ Most/many cases (~75% of females, ~50% of males) asymptomatic.
- ◆ Infects same _____ cells as gonorrhea; very similar symptoms.
- ◆ **In males**: _____, burning/itch at opening of urethra, discharge.
 - ▶ Swelling of testicles (orchitis) & epididymis (epididymitis).
- ◆ **In females**: bleeding/spotting, discharge w/ odor, itching around vagina, pain.
 - ▶ _____ cases may lead to Pelvic Inflammatory Disease (PID).

DIAGNOSIS

PCR amplification of swab from vagina/urethra (females)/urine sample (males).

TREATMENT

Doxycycline or azithromycin. Little to _____ known antibiotic resistance.

IMMUNITY

N/A. Condoms can significantly reduce spread.

References:

Reese, D. (1965). [Photomicrograph of a conjunctival smear taken from an Ethiopian missionary]. Centers for Disease Control and Prevention. <https://phil.cdc.gov/Details.aspx?pid=20873>

EXAMPLE

Imagine that you are a physician. A 23-year-old sexually active man visits your office complaining that it burns when he urinates. There has also been occasional discharge of pus from his urethra. Finally, he is complaining of soreness in his left epididymis.

What two STIs could these symptoms point to? _____

For each STI you named above,
what test would confirm that diagnosis?

For one STI the correct treatment involves a combination of ceftriaxone & azithromycin. The other STI calls for doxycycline or azithromycin. Mark the STI that you would treat with ceftriaxone & azithromycin with a star. Circle the STI that you would treat with doxycycline or azithromycin.

PRACTICE

Identify which statement below correctly describes a difference between chlamydia and gonorrhea infections.

- Gonorrhea causes pus-filled discharge from the penis; chlamydia does not.
- Chlamydia is usually asymptomatic in women; gonorrhea is usually symptomatic in women.
- Gonorrhea has widespread resistance to antibiotics; chlamydia does not.
- C. trachomatis* can reproduce both intracellularly and extracellularly; *N. gonorrhoeae* can only replicate inside host cells.

PRACTICE

Untreated chlamydia may result in which of the following?

- Cervical cancer in females.
- Recurrent UTIs in females.
- Enlarged prostate in males.
- Pelvic inflammatory disease in females.