

Chlamydia

Chlamydia are immobile, coccal, **intracellular bacteria** . These are parasites because they attack the host cells. Chlamydia are not able to obtain energy on their own and are therefore dependent on their host. Some of them survive in the host without harming him in any way. Others, on the other hand, cause infections in animals and humans, so-called chlamydiosis. Major pathogens include ***Chlamydia trachomatis*** , which causes urogenital infections, lymphogranuloma venereum, trachoma and neonatal infections, ***Chlamydia pneumoniae*** , the cause of pneumonia and other respiratory diseases, and ***Chlamydia psittaci*** , the cause of ornithosis and psittacosis.

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Distribution

Chlamydia have a lipopolysaccharide antigen that is common to the whole genus and protein antigens from the outer membrane. According to them, we distinguish :

- *Chlamydia trachomatis*
- *Chlamydia psittaci*
- *Chlamydia pneumoniae*

Life cycle of chlamydia edit source]

Life cycle of chlamydia The life cycle of chlamydia is unusual in bacteria and is more like viruses. During it, chlamydia occurs **in two forms** - as an elementary and reticular body. The **elementary body** is metabolically inactive, unable to divide, has a dense nucleus and a rigid cell wall that provides protection in the extracellular environment. **The reticular body** is metabolically active with the ability to divide. The infectious elementary body enters the host cell in a process that resembles endocytosis. The body remains in the endosome (phagosome) throughout the cycle because phagolysosomal fusion is blocked. After 8 to 9 hours , it transforms into a non-infectious reticular body. In the next 16-24 hours , the reticular body is divided by **binary division** and then transformed back into an elementary body. The fate of the host cell can be twofold. Either its membrane is lysed, the cell breaks down and the elemental bodies infect the surrounding cells. Or the cell survives and the elemental bodies get out by exocytosis (often in permanently infected cells). The whole cycle lasts **48-72 hours** .

Shortcuts

Chlamydia trachomatis

More detailed information can be found on the Chlamydia trachomatis page .

Causes trachoma and inclusion conjunctivitis. In men, it can cause urethritis , prostatitis and epididymitis . In women, urethritis, endometritis, salpingitis can occur, which can lead to inflammatory disease of the pelvic organs. It is transmitted through sexual intercourse. Inflammation of the cervix in a patient with *Chlamydia trachomatis* infection

***Chlamydia psittaci* _ _ edit source]**

It lives in the respiratory tract of birds. It causes epizootic infections in cats or sheep and **psittacosis** in humans . A person becomes infected by contact with a dead or sick bird. The disease is manifested by fever. It is also presented as an influenzalike disease or as severe pneumonitis with enlargement of the spleen and liver. The disease is treated with tetracyclines for at least two weeks.

Chlamydia *pneumoniae*

It is a parasite living in the respiratory organs. It is the main cause of pneumonia- pneumonia . It spreads by interpersonal contact. The disease is treated with fluorochinolony.

Treatment and examination

Chlamydia trachomatis

Chlamydia can be detected in a patient as early **as seven days** after infection. A cervical swab is taken, in men a urethra. We can also prove the infection from bloodsamples . If an infection is detected, the patient is treated with antibiotics. It is important that **both partners** are treated to avoid re-transmission. Antibiotic treatment may not always be successful for the first time. If the pathogen still persists in the body, the inflammation may recur and progress to a **chronic state** .

Chlamydia *pneumoniae*

We perform testing by blood tests together with testing of urine, swabs and lavages from the throat, nose and mucous membranes.

Laboratory diagnostics

Material suitable for diagnostics

- urogenital infections: urethral swab in men, endocervical swabs in women
- conjunctivitis: smear or scrape of conjunctiva

Direct diagnostics:

- antigen detection by ELISA methods, immunofluorescence
- detection of specific DNA segments by PCR
- tissue culture

Indirect diagnosis is based on serological detection of antibodies.

Links

Related Articles __ edit source]

- [1] (<https://www.wikiskripta.eu/w/Infekce>)Atypical pneumonia
- Chlamydial infections of the genitals

References _ _ _ edit source]

1. ↑ MUDr. Pavel Gebousky, MD Jaroslav Kapla, MD Pavel Kosina, Specialized Society of Infectious Medicine, Czech Medical Society of Jan Evangelista Purkyně, < <http://www.cls.cz/dokumenty2/resitele/t230.rtf> >
2. ↑ BEDNÁŘ, Marek, Andrej SOUČEK and Věra FRAŇKOVÁ, et al. *Medical microbiology: Bacteriology, virology, parasitology*. 1st edition. Prague: Marvil, 1996. 558 pp. ISBN 8594031505280 .

External links _ _ edit source]

- *Chlamydia* [online]. [feeling. 2012-05-14]. < <http://chlamydie.ordinace.biz/> >.

References _ _ _ edit source]

- SCHINDLER, Jiri. *Microbiology for medical students*. 1st edition. Prague: Grada, 2010. 223 pp. ISBN 978-80-247-3170-4 .
- BEDNÁŘ, Marek, V. FRAŇKOVÁ and J. SCHINDLER. *Medical Microbiology* [online] . 1st edition. Praha: Marvil, 1997. Also available from < <http://mikrobiologie.lf3.cuni.cz/mikrobiologie/uvod.htm> >.