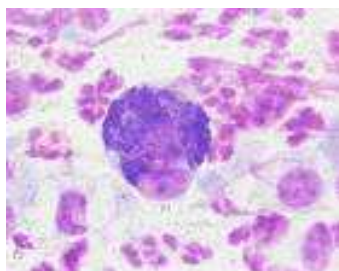


Chlamydia



Chlamydiae are small obligate cell parasites.

The reproductive cycle of the chlamydiae comprises two developmental stages: The elementary bodies are optimally adapted to survival outside of host cells. The initial bodies, also known as reticulate bodies, are the form which the chlamydiae reproduce inside the host cells by means of transverse fission.

Three human pathogen species of chlamydiae are known: *C. psittaci*, *C. trachomatis* and *C. pneumoniae* (see tab.).

Species	Clinical manifestations	Mechanism of infection
<i>C. trachomatis</i>	Lymphogranuloma venereum (LGV) Trachoma, inclusion conjunctivitis, urethritis(nonspecific)	Direct or sexual transmission: Primary infection of ocular or urogenital mucosa.
<i>C. pneumoniae</i>	Infections of the respiratory tract, often subacute. Role in atherosclerosis of coronary arteries still unclear.	Only in humans, aerogenic transmission.
<i>C. psittaci</i>	Ornithosis (Psittacosis)	Reservoir: infected birds. Infection by inhalation of pathogen-containing dust.

Chlamydia trachomatis is a pathogen that infects only humans. It causes the following diseases:

Trachoma: is a follicular keratoconjunctivitis. The disease occurs in all climatic zones, although it is more frequent in warmer, less-developed countries. It is estimated that 400 million people carry this chronic infection and that it has caused blindness in six million. The pathogen is transmitted by direct contact and indirectly via objects in daily use. Left untreated, the initially acute inflammation can develop a chronic course lasting months or years and leading to formation of a corneal scar, which can then cause blindness.

Inclusion conjunctivitis: This is an acute, purulent papillary conjunctivitis that may affect neonates, children and adults (swimming-pool conjunctivitis). Newborn children are infected during birth by pathogens colonizing the birth canal. Left untreated, a pannus may form as in trachoma, followed by corneal scarring.

Urogenital infections: *C. trachomatis* is responsible for 30-60% of cases of non-gonococcal urethritis (NGU) in men. The source of infection is the female sexual partner. Possible complications include prostatitis and epididymitis, in woman *C. trachomatis* can cause urethritis, proctitis, or infections of the genital organs. Massive perinatal infection of a neonate may lead to an interstitial chlamydial pneumonia.

Lymphogranuloma venereum: This venereal disease is frequently observed in the inhabitants of warm climatic zones. A herpetiform primary lesion develops at the site of invasion in the genital area, which then becomes an ulcer with accompanying lymphadenitis.

Chlamydia pneumoniae This species causes infections of the respiratory organs in humans that usually run a mild course: influenza-like infections, sinusitis, pharyngitis, bronchitis, pneumonia (atypical). Clinically silent infections are frequent. *C. pneumoniae* is pathogenic in humans only. The pathogen is transmitted by aerosol droplets. These infections are probably among the most frequent human Chlamydia infections.

Infections may be diagnosed by:

- Microscopy: Determination eg. of initial bodies in conjunctival cells
- Serology: Determination of specific antibodies based on the ELISA-technique

! In the majority of cases the asymptomatic infection by Chlamydiae is a problem: The primary infection can't be diagnosed and therefore damages (poss. chronic disease) are caused.

NovaLisa™ Chlamydia trachomatis IgA/IgG/IgM ELISA, Chlamydia pneumoniae IgA/IgG/IgM:

Both the NovaLisa™ Chlamydia trachomatis IgA/IgG/IgM ELISA and the NovaLisa™ Chlamydia pneumoniae IgA/IgG/IgM ELISA is intended for the qualitative determination of IgA-/IgG-/IgM- class antibodies against Chlamydia trachomatis resp. Chlamydia pneumoniae in serum or plasma (citrate).

Specific performance characteristics:

Chlamydia trachomatis:

	Intraassay			Interassay			Sensitivity %	Specificity %
	n	Mean	CV %	n	Mean	CV %		
IgA	24	0,882	4,7	12	24,3	7,1	> 95	97,3
IgG	24	2,07	3,7	12	61	2,8	> 95	91.3
IgM	24	1,29	3,1	12	78,5	12,1	83.3	>95

Antigens:

Highly purified C. trachomatis LGV Type II strain 434 antigens

Chlamydia pneumoniae:

	Intraassay			Interassay			Sensitivity %	Specificity %
	n	Mean	CV %	n	Mean	CV %		
IgA	20	1,2	4,9	12	22,2	9,7	88.9	> 95
IgG	20	0,41	7,2	12	9	10,6	90.2	91.7
	24	1,37	4,3	12	32	5,2		
IgM	24	1,16	4,01	12	21,6	8,25	83.3	> 95

Antigens:

Highly purified C. pneumoniae TWAR-183 antigens

Order information:

ELISA	Number of determinations	Product number
Chlamydia trachomatis IgA	96	CHLA0070
Chlamydia trachomatis IgG	96	CHLG0070
Chlamydia trachomatis IgM	96	CHLM0070

ELISA	Number of determinations	Product number
Chlamydia pneumoniae IgA	96	CHLA0510
Chlamydia pneumoniae IgG	96	CHLG0510
Chlamydia pneumoniae IgM	96	CHLM0510