

# Listeria monocytogenes

Listeria bacteria are gram-positive, aerobic or facultatively anaerobic short rods that are mobile at temperatures up to 25 ° C (they have 1-4 flagella). Cultivation is undemanding, colonies grow even in extreme conditions (higher NaCl concentrations, the presence of bile salts). As a result, they are able to survive for a long time outside the host. Pathogenic species include *L. ivanovii*, *L. seeligeri* and *L. monocytogenes*. All of these species produce hemolysin, they are catalase positive. *L. monocytogenes* is the cause of listeriosis.

## Pathogenicity factors

Pathogenicity factors include MPA (monocytosis producing agent), which increases the number of macrophages, factor E1, which has a pyrogenic effect and interacts in the pathogenesis of edema, listerolysin O, sphingomyelinase C and lipase.

## Epidemiology

Listeria are a common cause of infections in herd animals, and in many belong to the physiological intestinal flora. They are also found in the wild. Contamination with contaminated food is typical for humans. Risks include unpasteurized milk, insufficiently cooked meat and matured cheeses.

## Diseases

The site of infection is most often the mucous membranes of the digestive system, the infection can also occur through the mucous membranes of other organs, and professions that are in contact with animals are also at risk of infecting injured skin. *L. monocytogenes* is an facultatively intracellular parasite, the bacteria penetrating the endothelium of the small intestine, M cells of Peyer's patches and macrophages, in which they further multiply. With early intervention of the immune system, the site of infection is limited, if bacteria are previously released from macrophages, it is a generalized infection.

In subclinical pregnancy, the infection may be transmitted to the fetus, and generalized congenital listeriosis may develop. Immunosuppressed and immunodeficient patients are at risk of activating endogenous infection.

Typical clinical manifestations of the infection are recorded in pregnant women, generalized infections of the newborn are dangerous. These can be manifested by abortion, stillbirth, or postnatal sepsis or meningitis. Listeriosis in adults is characterized as febrile gastroenteritis. Listeria meningoencephalitis is a sub-acute disease, in the group of newborns and seniors this etiology represents up to 20% of cases of bacterial origin.

## Therapy

Penicillin, aminopenicillin or co-trimoxazole are used to treat listeriosis. The recommended prevention is heat treatment of milk and meat products.

## Links

### Related articles

- Listeriόza • Vrozená listeriόza

### Reference

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