

ABSTRACT

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Title: *Listeria* spp.

Bachelor thesis

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Field of study: Medical Laboratory

Background: The bachelor thesis aims to describe *Listeria* spp. Describe the division of genus, morphology and laboratory diagnostics. More attention is paid to *Listeria monocytogenes* as it is a major source of infection in humans. Another aim is to describe the occurrence of *L. monocytogenes* in food, its antigenic structure, pathogenesis and the disease it causes.

Main findings: *Listeria monocytogenes* is a bacterium present everywhere. It was found in fresh water, clay, plant material and waste water. The main source of infection for humans is contaminated food. They are most often found in unpasteurized milk, matured cheeses or poorly cooked meat or vegetables. Bacteria causes a disease called listeriosis, which is especially dangerous for newborns, elderly people, pregnant women and immunocompromised individuals. The disease occurs rather sporadically. There was confirmed from 30 to 37 cases per year in the Czech Republic between years 2008–2017. There was also an epidemic in Africa in 2017-2018, it was the largest epidemic in the world. In the event of infection, both the laboratory and the physician are obliged to report the positivity of the finding and carry out further examinations to find the source of the infection in order to prevent any further infection and epidemic.

Conclusion: Effective prevention of bacterial infection is the correct cooking of food and avoid any food that has an increased incidence of bladder disease. Currently, there is no problem in time to confirm the presence of bacteria and to deploy appropriate treatment or to withdraw the product from the store counters. The therapy consists of administering penicillin antibiotics, ampicillin in combination with gentamicin. In case of penicillin antibiotic allergy, trimethoprim-sulfamethoxazole is administered.

Key words: *Listeria monocytogenes*, listeriosis, alimentary disease, listeria