

## 2. ABSTRACT

Title of Bachelor thesis: Meningococcal infections

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Background: The aim of this bachelor thesis was to summarize the findings about meningococcal infections and their originator – *Neisseria meningitidis*. Further this bachelor thesis should provide information about progression in meningococcal vaccines development, treatment and diagnostics.

Main findings: *N. meningitidis* spreads into the human body from nasopharynx, through the epithelium it travels into the bloodstream. Severity of meningococcal infection depends on a strain of meningococcus and on strength of immune system on the side of a host. Meningococcus has got effective tools for invading human body, they are called virulence factors. Quick recognition of clinical signs and rapid confirmation of infection originator are important when the infection breaks out. Nowadays we can prevent meningococcal infection by effective vaccination – combining meningococcal tetravalent conjugate vaccine and meningococcal serogroup B vaccine.

Conclusions: Infections caused by *N. meningitidis* varies from ordinary nasopharyngitis to bacteremia and severe acute meningitis. *N. meningitidis* adapted itself for human host like no other bacteria. Currently the occurrence of meningococcal infection decreases, but the course and consequences of meningococcal infections are very dangerous and serious.