

# ABSTRACT

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Title: Rotavirus as an agent of diarrheal diseases

Bachelor thesis

Charles University in Prague, Faculty of Pharmacy, Hradec Králové

Field of study: Medical Laboratory

**Background:** This bachelor thesis aims at dealing with rotavirus issues, taxonomically classifying them, describing their structure, properties, origin and course of the diseases they cause. In the experimental part the thesis will deal with the epidemiology of rotavirus infections at the Faculty Hospital in Hradec Králové in the period between 2010-2017 and their evaluation.

**Main findings:** Rotaviruses are very often the cause of serious and dangerous diarrhea in children up to 5 years of age, including infants and toddlers. According to the WHO, more than half a million children worldwide die each year, where children will get ill around 150 million. Therefore, early diagnosis and appropriate therapy are very important. An adult can also become infected, the course of the disease is much milder than children.

**Conclusions:** Important prevention of the origin and spread of rotavirus infections requires careful personal hygiene, especially hand washing. Because infections are the most common in children's groups, disinfection of the environment, toys, furniture and other objects is necessary in case of spread of infection. Prevention is based on early vaccination, which is not part of the mandatory vaccination calendar in the Czech Republic.

**Keywords:** rotavirus, diarrhea, vaccination, statistical processing