

## **ABSTRACT**

The diploma thesis deals with the problem of muscle imbalances in pre-pubertal children and its relationship with their free time activities. The selected exercises were tested for the muscles involved in the lower and upper cross syndrome. On the basis of the measured results, the frequency of shortened / weakened muscles and muscles in the physiological standard were compared. A questionnaire survey was used to identify preferences of children concerning leisure activities. Based on the data obtained from the comparison of the data found in the questionnaire and the results measured during the testing of the muscles, the following topics were addressed: Whether the muscular condition is influenced by the sex, the frequency of sport activities performed and the type of sport practiced. In addition, the influence of parents' and their lifestyle.