

**Abstract:**

The present bachelor thesis consists of two sections. The theoretical section focuses on metabolic and biochemical processes related to physical activity and digestion. Further, it considers the physiology of movement, energetic output and the consumption of main energetic substrates during exercise. The last part of the theoretical section considers intake of nutrients, the importance of hydration regime and suitable timing of nutrition intake before, during and after exercise (i.e. nutrient timing).

The research section of the thesis summarized the results acquired in a survey. The survey was conducted among clients of the 'A-fitness' centre in Roudnice nad Labem. The results were generated from 77 completed questionnaires. Responses were collected from the sports centre's clients over eighteen years of age, sex was not considered. Prior to the survey, seven possible hypotheses were defined, which were expected to be confirmed or refuted by the results. The hypotheses involved aspects related to physical activities, eating and hydration regime. Assuming from the results, survey participants attempt to maintain their fitness by combining suitable eating regime and physical activities. This can be inferred from calculating the BMI, where the majority of results conformed to normal levels. The section inquiring about physical activity implies that in spite of the fact that the athletes attempt to monitor the intensity of their exercise, they do not always do this correctly. Although some of them use sport testers, only a small number are familiar with the issue of heart rate figures. Judging from the answers regarding eating regime, there is a clear effort among the participants to maintain a balanced diet and several demonstrate even some theoretical knowledge of the topic. Nevertheless, the participants do not always use it in practice. Some of the results showed principal errors in eating regime. Almost all of the athletes follow proper hydration regime, yet even here appeared mistakes in several examples, namely low liquid intake or high alcohol intake.

**Key words:**

Metabolism, physical activity, intensity, energy output, macronutrients, micronutrients, glucose, nutrition in sports, nutrient timing, hydration regime