

## Abstract:

This bachelor thesis is composed of theoretical and practical part. The first section focuses on characteristics and history of caffeine, its effects on different parts of the body, description of sport activity, and matters of using caffeine as a form of doping in sports. On the basis of the theoretical foundation, I have composed practical part where research project is described. The project consisted of observation of the effects of caffeine during medium-term endurance activity.

The aim of this thesis is to discover how consumption of caffeine before a sport activity can affect performance of an individual. For that purpose, I have used an experiment which should determine if caffeine improves performance in 1,500-metre run. The experiment involved 16 people 25.6 years old on average and with average BMI of 24. The testing included test run without the consumption of caffeine and run with caffeine when 1 hour before the run the participants got caffeine of total dosage of 3 mg/kilogram of their weight. After the comparison, the results showed that 10 people had better performance after consumption of caffeine, and overall there was 3,5-seconds improvement. Nevertheless, the results are not significant according to statistical assessment ( $p=0,306$ ), and therefore caffeine did not support the performance of the individuals.

Key words: run, dietary supplements, caffeine, sport, performace