

## **Abstract**

**Title:** The influence of physical activity and equipment on the power stroke

**Objectives:** The aim is to identify and compare the influence of the physical activity of the modified motoric Cooper's test 20 minutes (running) and equipment 15 kg bag in a selected group of soldiers and policemen during a direct punch. Set of eight test subjects are students VO at Charles University in Prague and police emergency services.

**Methods:** This empirical work observational nature. We measured the power of direct punch hitting the load cell. To determine heart rate were used to sporttester and stress test W170 bicycle ergometer. For statistical data processing we used the methods of comparison and comparison of averages.

**Results:** The measured data were processed statistically and found that the physical exercise without equipment does not influence the power of stroke. The second measurement found that physical exercise with 15 kg rucksack has a power stroke statistically significant effect. The third measurement found similar data, as for the second measurement. Influence kits (15 kg rucksack) has a significant impact on the power stroke. Furthermore, we found that the greatest influence on the physical stress level aerobic toning individual. The trained persons with impact force after physical exertion proved stronger. For individuals who are principally interested in fitness, the force of the stroke after physical exertion proved weaker.

**Keywords:** close combat, Cooper's run, 15 kg backpack, W170