

## **Abstract**

**Title:** Changes of FVC among cerebral-palsy-diagnosed para swimmers in various types of training

**Objectives :** The aim of the thesis was to find out how significant is the VC value's change after various types of training among six para swimmers diagnosed with cerebral palsy.

**Methods:** Six PARA PLAVÁNÍ PRAHA swimmers participated in the study with the age ranging from 22 to 37 years old. The personal spirometer was used to obtain all the data during athlete's training. We measured the data in three different training types' subgroups. Each swimmer was measured six times, two times during each phase of the training which in total lasted 30 minutes.

**Results:** We measured the values of FVC and FEV1 of all the probands during different types of training. The values in technical training ranged from 3,13 to 7,51 litres in the FVC and 3,13 to 4,68 litres in FEV1. Furthermore we can clearly see the increase of the average FVC value by 16,1% and decrease of the FEV1 value by 3,4%. During the aerobic training the values of 2,66 to 6,11 litres FVC and 2.63 to 4,6 litres FEV1 were achieved. After the training the decrease by 1,1 % and the increase by 3,7 % in average can be seen respectively. During anaerobic training we measured the FVC values from 3,04 to 7,25 litres and only the 0,02 % increase and the FEV1 values ranging from 2.85 to 4,83 litres and decrease by 3,3 %.

**Key words:** Cerebral palsy, vital capacity, swimming influence, swimming training