

**EFFECTS OF SMOKING ON VITAL CAPACITY IN HEALTHY STUDENTS**

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ABSTRACT

**INTRODUCTION:** Although the tobacco consumption has been reported to obstruct the effects of physical culture in young adults, there are few reports that include physical and laboratory evidence of this. Health education appears not to prevent impairment of the vital capacity associated with tobacco consumption.

**PURPOSE:** The purpose of this study was estimate the effect of tobacco consumption on vital capacity after four months of participation in a theoretical-practical program on movement fundamentals.**METHODS:** Preexperimental design of two measurements. Lung function and a physical test were performed on seventeen healthy students. Course-Navette test was carried out to estimate vital capacity (heart rate at rest, maximum heart rate, physical level, VO<sub>2</sub> max, distance and average speed). Forced expiratory volume in one second (FEV<sub>1</sub>) was measured by Welch Allyn Schiller spirometer. The sample was divided on the consumption of cigarettes (12 consumers vs. 5 abstainers). T-tests were used to evaluate the differences between groups. **RESULTS:** Participants were men of 20.94 years (*SD* = 2.69, 18-19 years) with normal body complexion (Body mass index = 24.51 kg/m<sup>2</sup> (*SD* = 1.69). There were no baseline differences between groups regarding age or body composition (*p* > .05). Differences in all parameters related to vital capacity were observed in the abstainers group (*p* < .01), except for maximal heart rate and resting heart rate (*p* > .05). The smokers group decreased their results in both tests but without significant differences. **CONCLUSION:** Tobacco consumption affected the vital capacity of young adults despite the participation in theoretical-practical program of fundamentals of the movement. Tobacco abstinence coupled with participation in an educational program increased vital capacity measured with a physical and a laboratory test.