

Original Paper

# Effect of combined training with different intensities on pulmonary and physical function in addicted men

Seyed Ali Asghar Hosseini (B.Sc)<sup>1</sup>, Amir Hossein Haghghi (Ph.D)<sup>\*2</sup>  
Seyed Alireza Hosseini Kakhk (Ph.D)<sup>2</sup>

<sup>1</sup>M.Sc Student of Exercise Physiology, Faculty of Sport Sciences, Hakim Sabzevari University, Sabzevar, Iran.

<sup>2</sup>Associate Professor of Exercise Physiology, Faculty of Sport Sciences, Hakim Sabzevari University, Sabzevar, Iran.

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## Abstract

**Background and Objective:** Opium consumption and addiction can negatively affect on pulmonary and physical function. This study was done to determine the effect of the combined training with different intensities on pulmonary and physical function in addicted men.

**Methods:** This quasi-experimental study was carried out on 30 addicted men with an average age of  $37.6 \pm 7.1$  years, who were under treatment in Sabzevar city rehabilitation center in north-east of Iran during Fall of 2015. The subjects were non-randomly divided into three equal groups including control, the first intervention group, and the second intervention group. The control group did not participate in any training program. The interventional groups participated in an aerobic and resistance training period for six weeks (four times a week). The training intensities of the first and second intervention groups were 50-65% and 65-80% of HRmax or 1RM, respectively. Preior and after the training period, spirometry tests, maximal oxygen uptake, strength and endurance of upper body muscles and special strength of respiratory muscles were measured from all of the subjects.

**Results:** The both intervention groups improved the peak expiratory flow index compared to control group ( $p < 0.05$ ). Furthermore, the peak expiratory flow index significantly increased in the second intervention group compared to the first intervention group. There was no significant difference in the indices of special strength of respiratory muscles, maximal aerobic power, and maximal voluntary ventilation between the three groups. Upper body muscles' endurance and strength, forced expiratory volume and forced vital capacity parameters significantly increased in the second intervention group compared to the control group. The forced expiratory volume in the first second to forced vital capacity ratio index significantly increased in the two interventional groups compared to control group ( $p < 0.05$ ), but there was no significant difference between the first and second interventional groups.

**Conclusion:** The performance of aerobic and resistance trainings with higher intensity improves indices of the forced vital capacity, the forced expiratory volume in the first second, and upper body muscles' strength and endurance of addicted males.

**Keywords:** Combined training, Pulmonary Function, Physical function, Addicted males

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\* Corresponding Author: Haghghi AH (Ph.D), E-mail: [ah.haghghi292@yahoo.com](mailto:ah.haghghi292@yahoo.com)

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