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Impact of a Single Bout of High-Intensity Arm Ergometer Exercise on Ventilatory Function

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Background: Although a large body of evidence exists on the effect of long-term exercise training program on pulmonary function, much less attention has been dedicated to investigating the acute effect of short-term exercise program on improving the ventilatory function.

Objective: The present study was carried out to investigate the effect of short term high intensity aerobic exercise on lung function in adults to start first step in establishing an evidence based exercise program designed for chest patients who can only be supervised in short term hospitalization phase.

Methods: A pre-post test study design was carried out on thirty healthy men students with their mean age 21.7 ± 1.26 who were enrolled in this study. Every student performed a 20-minute high-intensity monitored stationary arm Ergometer exercise and ventilatory function tests was performed in order to measure forced vital capacity (FVC), forced expiratory volume at the end of the first second (FEV1), FEV1/FVC ratio and peak expiratory flow rate PEFR before and after the exercise.

Results: The result showed significant increase in the mean value of FEV1, and a non-significant difference in the mean values of (FVC), FEV1/FVC and PEFR.

Conclusion: A single high intensity arm Ergometer exercise sitting has a significant effect on improving forced expiratory volume in the normal adult.

Biography

Omar Farouk Helal completed his PhD from Cairo University. He is an Assistant Professor in the Department of Physical Therapy, College of Applied Medical Sciences, Umm Al-Qura University and now is the director of Graduates and Academic Accreditation Committees. He has served on roughly thirty conference and workshop. He has published more than 10 papers in Cardiopulmonary and Geriatrics Rehabilitation and directs multiple research programs focused on the exercise intensity and geriatrics care. He has been serving as an Editorial Board Member in *Pediatric Physical Therapy Journal*.

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