Compact Food Bar improves cardiopulmonary function in men military athletes: A randomized, placebo-controlled, single -blind clinical trial

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ABSTRACT

Objectives: This study aimed to evaluate the effects of Compact Food Bar (CFB) designed on cardiopulmonary function in men athletes who serve in military service.

Material and methods: In this randomized, single-blind, controlled clinical trial, 46 men of military staff were intervention with 3 packs, 700 kcal each, of CFB with Functional compounds (Caffeine and L-arginine) or regular food in military were used in military training courses each day for 28 days. Maximal oxygen uptake (Vo2Max) in vitro with Cardiopulmonary Exercise Test (CPET), body composition, and physical activity were assessed and recorded at baseline and end of the study period.

Results: Vo2max (P = 0.05) significantly increased in CFB group compared with baseline. Moreover, Vo2max (P = 0.01), Vo2/HR (P = 0.04), oxygen uptake/Heart Rate (Vo2/HR) (P = 0.03), and ventilation per minute/oxygen uptake (VE/Vo2) (P = 0.03) significantly increased in CFB group compared with control group. In comparison, there was no significant difference in mean ventilation per minute/Carbon dioxide production (VE/Vco2) (P = 0.41), ventilation per minute (VE) (P = 0.69), and Breathing Frequency (BF) (P = 0.056). No significant effect of CFB was found on weight, body mass index (BMI) (P = 0.23), lean body mass (LBM) (P = 0.91), and body fat mass (BFM) (P = 0.91).

Conclusion: Our results show that intervention with CFB is more effective than regular diet in improvement cardiopulmonary function in men athletes who serve in military service.

Keywords: Athlete;cardiorespiratory function;Compact Food Bar

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