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BOOK OF ABSTRACTS

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13:45 - 14:45

Poster presentations

PP-PM62 Health & Fitness: BMI 2

DO BODY MASS INDEX, SEX, TREATMENT AND AGE INFLUENCE THE BODY WEIGHT LOSS?
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Introduction: Most studies have described how the weight loss is when different treatments are compared (1-3), while others have also compared the weight loss by sex (4), or have taken into account psychosocial (5) and lifestyle (6, 7) variables. The aim of this study was to compare the body weight (BW) loss slope between overweight (OW) and obese (OB) people, taking into account the sex, treatment and age influences. Methods: One hundred eighty eight people (84 OW and 96 OB, with BMI 25.29 ± 30.34 kg/m², respectively), aged from 18 to 50 years, participated in the study. 46 and 50 males, and 48 and 50 females, respectively, during 6 months. Four types of treatments were randomly assigned: strength training (S, n=19 and 24), endurance training (E, n=25 and 26), combined S and E training (SE, n=22 and 24), and diet and physical recommendations (C, n=18 and 22). All participants followed a 25% calorie restriction diet. Slopes of the dynamics of weight loss were obtained through a linear equation, when initial and final BW was plotted on a graph. A MANOVA was used to determine significant differences in slopes. Probability level for statistical significance was set at α=0.05. Results: The slope of OB (-0.804±0.041) was higher than OW (-0.553±0.044) (P=0.001). When the slope was compared between groups, only S and E had higher slope in OB (-0.873±0.076 and -0.879±0.077, respectively) than in OW (-0.426±0.094 and -0.366±0.08, respectively) (p<0.05). When the slope was compared between sexes, men and women from OB had higher values (-0.825±0.058 and -0.783±0.057, respectively) than OW (-0.627±0.069 and -0.482±0.057) (p<0.05). When the slope was compared between age ranges, only the ranges 18 to 30 and 41 to 50 of OB (0.491±0.095 and -0.622±0.042, respectively) had higher values than OW (0.491±0.095 and -0.622±0.042, respectively) (p<0.05). Discussion: The slope of BW loss is higher for OB than OW. By groups, S and E in OB have higher slopes than in OW. By age, 18 to 30 and 41 to 50 of OB have higher values than OW. Both sexes have higher slope in OB than in OW. References: 1. Brochu M, et al. J Clin Endocrinol Metab. 2009 Sep;94(9):3226-33. 2. Del Corral P, et al. J Clin Endocrinol Metab. 2009 May;94(5):1602-7. 3. Larson-Meyer DE, et al. Med Sci Sports Exerc. 2010;42(1):152-9. 4. Hagan RD, et al. Med Sci Sports Exerc. 1986;18(1):87-94. 5. Teixeira PJ, et al. Obesity (Silver Spring). 2010 Apr;18(4):725-35. 6. Bautista-Castano I, et al. Int J Obes Relat Metab Disord. 2004 May;28(5):697-705. 7. Worthy SL, et al. Health Education Journal. 2010;69(4):372-80.

ASSOCIATIONS BETWEEN BODY MASS INDEX AND OSTEOARTICULAR SYMPTOMS IN DIFFERENT BODY REGIONS AMONG WORKERS
Silva, I., Santos, R., Mota, J.

Introduction: Obesity rates are high among employed adults and have shown consistent increase over the past few decades. Musculoskeletal disorders, the repetitive work can contribute significantly to the increase of these disorders in obese workers. The aim of this study was to verify the Associations Between Body Mass Index (BMI) and osteoarticular symptoms in different body regions. Results: Baseline results from this worksite intervention show that overweight or obese participants were more likely to have Osteoarticular Symptoms in the shoulders (OR=2.203, p=0.009) and in the hand (OR=1.780, p=0.04). Discussion/Conclusion: Our results emphasise the need of worksite intervention to promote healthy weight as a way to prevent Osteoarticular Symptoms.

THE VERTICAL CHANGE OF THE CENTER OF GRAVITY BROUGHT BY THE INCREASED STEP LENGTH
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Introduction: One of the biggest factors to hinder the expansion of healthy life expectancy is a decline of the walking ability. Studenski have reported that there is a relationship between walking speed and life span. Muranaga et al developed a simple test, which is called “2 steps test”, to measure walking ability easily. In our facility, we conduct the “2 step test” as an enlightenment activity to prevent falls in elderly population. The purpose of this study is to compare the body weight loss slope in vertical direction measured by the “2 steps test” when 18-50 year olds participated in the study (36 and 49 males, and 48 and 50 females, respectively) during 6 months. Four types of treatments were randomly assigned: strength training (S, n=19 and 24), endurance training (E, n=25 and 26), combined S and E training (SE, n=22 and 24), and diet and physical recommendations (C, n=18 and 22). All participants followed a 25% calorie restriction diet. Results: The averaged center of gravity in unstable gait level was 11.4 cm corresponding to 2 steps value 1.5, which is in normal gait level. Furthermore, this