

of weekly sessions of progressively increasing duration. During the 7-hour experimental trials blood samples were collected and appetite scores were measured before and after consumption of standardised breakfast and lunch. Commercially available ELISA kits were used to measure PYY concentrations. Results: The 4-week exercise programme had no impact on body weight (Before, 78.8±2.9kg; After, 78.0±3.1kg) and body fat percentage (Before, 37.8±1.3%; After, 37.2±1.2%) but significantly reduced the waist circumference (Before, 84.0±2.2 cm; After, 82.4±2.1cm,  $P<0.05$ ). Exercise programme did not have an impact on post-breakfast hunger (Before, 32±4mm; After, 33±4mm), post-breakfast satiety (Before, 59±3mm; After, 55±4mm), post-lunch hunger (Before, 24±3mm; After, 25±4mm), post-lunch satiety (Before, 68±5mm; After, 67±5mm), post-breakfast PYY concentration (Before, 94.1±12pg/ml; After, 78.3±9.2.9pg/ml) but significantly reduced the post-lunch concentration of PYY (Before, 102.0 ±18.6pg/ml; After, 86.4±17.1pg/ml,  $P<0.05$ ). Relationships between appetite score responses and PYY responses showed significant correlation during before and after the exercise intervention and these relationships were not modified by training status (Table 1). Table 1. Means (±SE), 95 CIs for the means of observed slopes and R2 values for within-subject relations between appetite scores and PYY before and after training programme Slope 95% CI R2 Before Satiety vs PYY 0.92 ± 0.18\* ( 0.52, 1.32) 0.37 ± 0.07 Hunger vs PYY -1.01 ± 0.27\* (-1.71, -0.32) 0.37 ± 0.07 After Satiety vs PYY 0.92 ± 0.19\* ( 0.48, 1.35) 0.41 ± 0.07 Hunger vs PYY -0.81 ± 0.27\* (-1.42, -0.20) 0.30 ± 0.08 \*Mean of the regression slopes significantly different from zero,  $P<0.05$  (Student's one sample t-test) Conclusion: Exercise programmes applied to overweight women result in changes in the peripheral hormones which would be expected to increase appetite. However, these hormonal changes do not modify subjective appetite and thus should not be considered to be responsible for the prevention of body weight loss commonly seen during exercise interventions.

## EFFECT OF HIGH INTENSITY INTERVAL TRAINING ON LEFT VENTRICULAR EJECTION FRACTION IN OBESE MEN

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EFFECT OF HIGH INTENSITY INTERVAL TRAINING ON LEFT VENTRICULAR EJECTION FRACTION IN OBESE MEN Obesity and overweight are epidemic and has substantially increased in recent years. Overweight and obesity are associated with the prevalence heart structural and functional impairments. Physical exercise improves diastolic function in obese/ overweight subjects and decrease end diastolic Left Ventricular Ejection Fraction (LVEF) in them( Kivisto et al., 2006) and reduced risk of cardiomyopathy in longer term (Schrauwen- Hinderling VB. et al., 2010). High intensity interval training (HIIT) is a proper exercise method to weight loss. Therefore the aim of this study was evaluation the effect of HIIT and caloric restriction as a predictor for heart function. Methods Participants included 24 healthy obese/ overweight males (280.229). EF was increased significantly only in DH group ( $P<0.02$ ). Discussion We demonstrated that due to 12 weeks of supervised HIIT, LVEF is improved in obese/ overweight male subjects. It seems that decreased cardiac lipid content with weight loss can improve heart function. On the other hand, increasing EF post training may be caused by improving contractibility of cardiac as a result of the elimination of cardiac ischemia, because increase of the pre-load improves the blood supply and decreases cardiac ischemia. The beneficial effect of training on systolic and diastolic function has been linked to alteration of Ca<sup>2+</sup> regulatory system involved in excitation-contraction couple and relaxation process (Kemi et al., 2008) and thus decreased after load. Kivisto S., Perhonen M., Holmstrom M., Lauerma K.(2006). Med Sci Sports. 16:321-328. Schauwen-Hinderling VB., et al.(2010) J Clin Endocrinol Metab. 95(4): 1932-8. Kemi OJ., Ellingsen O., Smith GL., Wisloff U. (2008). Front Bioscience. 13: 356-68. \* lida\_moradi@hotmail.com

## RELATIONSHIP BETWEEN PHYSICAL SELF-DESCRIPTION AND ACTUAL HEALTH-RELATED FITNESS AMONG YOUNG QATARI WOMEN

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INTRODUCTION Health-related fitness (HRF) explains the capacity to perform physical activities without tiring and include specific components that are objectively measured with standardized physical tests. The physical self-description (PSD) is a subjective judgment of the body and physical abilities that could diverge according for example to cultural backgrounds. Most studies on women's perception of their bodies and physical abilities have been done on western cultures, while limited exist data on Arab ones. The purpose of this study is to analyze the links between actual HRF and the estimated PSD among young Qatari women. METHODS 85 women (18-25 years) were recruited on campus to perform a standardized battery of HRF tests (ALPHA-FIT for adults, Suni et al., 2009). To estimate the physical self-concept the short version of Physical Self-Description Questionnaire (PSDQ) was used (Marsh et al., 2010). The collected data were imported to Statistica v.12 software and correlations were analyzed using Pearson coefficient. RESULTS 69.4% of the participants were classified as overweight (45.8%) or obese (23.6%). Significant correlations were found between: BMI on one hand and self-estimated appearance, body fat and global physical esteem on the other ( $r=-0.27$  and  $r=-0.29$ , respectively), between the 2km-walk performances on one hand and perceived endurance ( $r=0.4$ ) and global physical esteem ( $r=0.34$ ) on the other. Although, the jump-and-reach and modified push-up tests correlated significantly with the self-estimated strength ( $r=0.26$ ,  $r=0.31$ , respectively), this was not evidenced between the latter and the strength-related tests (handgrip,  $r=0.18$ ; dynamic sit-up,  $r=0.11$ ). Shoulder-neck mobility results were also significantly correlated to perceived flexibility ( $r=0.35$ ). The lowest fitness scores manifested in handgrip, modified push-up and 2km-walk tests. DISCUSSION Overweight and obesity are still primary issues among young Qatari female. The established correlations between BMI and estimated appearance scores indicated a rational image. However, in some strength related fitness scores (handgrip, dynamic sit-up) participants overestimated their abilities. The low performance in strength and endurance tests could be linked to the awareness concerning muscularity as well as participation in regular physical activity (Youssef et al., 2013). REFERENCES Suni J, Husu P, Rinne M. (2009). Tampere, Finland: Published by European Union DS, and the UKK Institute for Health Promotion Research. Marsh HW, Martin AJ, Jackson S. (2010). JSPE, 32, 438-482. Youssef RM, A-Shafie K, Al-Mukhaini M, Al-Balush H. (2013). Eastern Mediterranean Health Journal, 19, 759-68. Email: zs.kneffel@qu.edu.qa This study was made possible by UREP grant # UREP 17-044-3-011 from the Qatar national research fund (a member of Qatar foundation). The statements made herein are solely the responsibility of the authors.

## ANGLE FOR POSTURE ESTIMATION

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Introduction Sedentary behavior (SB) is a risk factor for health, regardless of the level of concurrent physical activity (PA). Accurate measurement of SB would provide relevant data on total sedentary time and specific patterns in sedentariness. Waist-worn accelerometers are widely used to estimate habitual PA, but they are compromised by low accuracy in classifying the body posture into lying, sitting or