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### The effectiveness of a ten-week exercise intervention to reduce cardiovascular risk factors amongst young male Qatari adults

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Rapid development in Qatar in the recent years has led to numerous changes, particularly the increased prevalence of lifestyle related health risks, with almost 50% obesity rates amongst Qataris of all ages. We investigated the effects of a ten-week exercise training program aimed at young Qatari male adults, on a number of cardiovascular risk factors (CVR). With institutional approval, we screened 89 Qatari young adult male volunteers from Qatar University for CVR factors of hypertension indicated by systolic (SBP) and diastolic (DBP) blood pressure, overweight and obesity indicated by body fat percentage (%BF), body weight (BW) and body mass index (BMI). 20 participants (23% of total number) were identified with one or more risk factors (hypertension and overweight), and were enrolled to follow a ten-week recreational-type exercise training program. The training involved 30-40 min of either walking, cycling, jogging and swimming at an exercise intensity corresponding to 50-85% of each participant's maximum heart rate, on 3-5 times/week. The intervention significantly reduced BW ( $93.4 \pm 14.1$  vs.  $86.7 \pm 14.5$ ,  $p < 0.05$ ), BMI ( $31.0 \pm 3.6$  vs.  $28.8 \pm 3.9$ ,  $p < 0.05$ ) and BF% ( $31.2 \pm 9.0$  vs.  $21.2 \pm 4.4$ ,  $p < 0.05$ ). Furthermore, there was a significant reduction in diastolic blood pressure ( $83.4 \pm 5.3$  vs.  $76.0 \pm 9.2$  mmHg,  $p < 0.05$ ), and a non-significant reduction in ( $133.8 \pm 10.7$  vs.  $130.5 \pm 9.1$  mmHg,  $p = 0.516$ ). This recreational-type exercise intervention was effective in substantially reducing the CVR indices. However, the alarmingly high prevalence of sedentary-related CVR amongst Qatari young adult males, especially those related to obesity, overweight and hypertension necessitate further public health interventions in this age-group as an early prevention strategy.

#### Biography

Zsuzsanna Kneffel received her PhD in Educational and Sport Sciences from Semmelweis University, Faculty of P.E. and Sport Sciences (2008), her Master degrees are in PE and Adapted PE (1998). She is an Assistant Professor at Qatar University Sport Science Program since, 2011. Her research interest focused on cardiovascular adaptation to training while her current research focuses on screening cardiovascular risk factors among Qataris. She has 23 articles in peer-reviewed journals, 6 book chapters and several presentations on international conferences. She is a qualified ISAK measurer, and certified Kinesiology taper.

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