

Nutrition and Sedentariness Associations in the Kuwaiti Population:
A Paradox of Health Risks?

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Abstract

Introduction: The association between poor nutrition and health risks is known. However, no data are available in Kuwait. This study describes associations of nutrition intake with sedentariness and health risk factors in the Kuwaiti population.

Methods: A national cross-sectional survey analysis involved 3915 Kuwaitis aged 18-69 years. Sedentary lifestyle, defined as daily sitting hours (SIT) was classified (0-3, 3-7 and >7 h/day). Total daily fruit and vegetables (TFV) was categorized (0-2, 2-3, 3-5 and >5 serving/day). Diabetes indicators [glycated hemoglobin (HbA_{1c}) and fasting plasma glucose (FPG)], body mass index (BMI), resting heart rate (RHR), systolic and diastolic blood pressure (SBP, DBP), total cholesterol (TChol), low and high-density lipoprotein (LDL, HDL), triglycerides (TG), were analyzed for TFV and SIT effects and correlations with all measured health risks, and adjusted for age, gender and BMI.

Results: TFV negatively correlated with RHR ($r = -0.04$, $p < 0.05$), but positively with SIT ($r = 0.06$ $p = 0.001$). No correlation was found between TFV and the remaining health risks. TFV (> 2 portions) also explained higher HbA_{1c}, and SIT ($p < 0.05$) irrespective of age and BMI. Between genders, Men's TFV correlated negatively with SBP and DBP ($r = -0.07$, $p < 0.01$), but positively with SIT ($r = 0.06$, $p < 0.05$). In women, TFV also correlated positively with SIT ($r = 0.06$, $p < 0.05$).

Conclusions: TFV association with SIT, HbA_{1c} and RHR, and gender-dependent effects on SBP and DBP suggest a paradox in health risk associations. This may be explained by an overconsumption of both health and unhealthy dietary components, and further research is needed in high-risk Kuwaiti populations.

Keywords: Sedentary lifestyle, Nutrition intake, Diabetes, Risk factors