比較坐式與非坐式工作型態婦女身體活動量及心血管疾病危險因子

The Compareison of Physical Activity Levels and Cardiovascular Disease Risk Factors Between Sedentary and Non-Sedentary Working Women

中文摘要

本研究旨在比較坐式和非坐式工作型態婦女身體活動量及心血管疾病危險因子。以橫段式調查法，針對某有線電視公司女性內勤職員（坐式工作者）32 人與某私立高職教師（非坐式工作者）31 人進行資料收集。以身體活動七日回憶法問卷（7-dPAR）、及三度空間身體活動監控器（RT3）測量個案身體活動量，並收集研究對象之血壓、身體質量指數（BMI）、檢驗空腹血糖、血清總膽固醇（TC）、高密度脂蛋白膽固醇（HDL-C）、低密度脂蛋白膽固醇（LDL-C）與血清三酸甘油脂（TG）濃度。收集之資料以 SPSS 11.5 版統計軟體進行分析，統計方法有：描述性統計、卡方檢定（Chi-square test）、獨立 t 檢定（independent t-test）、費雪爾正確概率考驗（Fisher's exact probability test）和皮爾森相關（Pearson Correlation）。

研究結果發現：（1）坐式工作婦女在靜態收縮壓、空腹血糖和 TG 顯著的高於非坐式工作者。（2）RT3 和 7-dPAR 所紀錄之個案一週的總身體消耗量（TEERT3，TEE7-d PAR）平均分別爲 229.4±18.9 kcal/kg/week 和 230.7±8.2 kcal/kg/week，兩組僅在 TEERT3 達顯著性差異，非坐式工作者在 TEERT3 明顯的比坐式工作者高。（3）婦女的 TEERT3 愈高者，其年齡、BMI、靜態血壓、TC、TG、LDL-C 愈低，HDL-C 愈高。婦女的 TEE7-d PAR 與心血管疾病危險因子無顯著相關。（4）非坐式工作型態婦女工作身體活動量顯著高於坐式工作者，婦女工作身體活動量愈高者，其 BMI、靜態血壓和 TG 值愈低。（5）婦女工作時坐的平均時間愈長者，BMI 和靜態收縮壓愈高，站的平均時間愈長，靜態收縮壓和 TG 愈低，而走動的平均時間愈長，BMI、靜態血壓和 TG 愈低。

研究結果顯示，非坐式工作型態婦女 TEE 與工作活動量比坐式工作者高，坐式工作型態之婦女在靜態收縮壓、空腹血糖和 TG 顯著高於非坐式工作型態之婦女，工作時身體活動量與工作時坐、站和走動的時間，皆與 BMI、靜態血壓和 TG 有顯著相關。婦女 TEE 比工作時身體活動量對心血管危險因子的關係更明顯，故鼓勵婦女多增加總身體活動量。

關鍵字：身體活動量、心血管疾病危險因子、身體活動七日回憶法問卷、三度空間身體活動監控器 RT3

英文摘要

The aim of this study is to see the comparison of women’s physical activity levels and their risk factors of cardiovascular diseases between sedentary and non-sedentary workingwomen. By using cross-sectional survey approach, the data were collected from 32 female employees having office duties (sedentary workingwomen) in a cable TV company and 31 teachers (non-sedentary workingwomen) in a private vocational senior high school. The physical activity levels of a case were measured by the questionnaire of Seven-day Physical Activity Recall (7-d PAR) and RT3 Triaxial accekerometers (RT3). Besides, for a subject of the research, her resting blood pressure and body mass index (BMI) were recorded, and her concentrations of fasting plasma blood sugar, blood total cholesterol (TC), high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C) and triglyceride (TG) were examined. The collected data were analyzed by SPSS statistics software of version 11.5 with the following statistical methods: descriptive statistics, Chi-square test, independent t-test, Fisher's exact probability test and Pearson Correlation. Results of the study showed: (1) Sedentary workingwomen had remarkably higher resting systolic pressure, fasting blood sugar and TG than the one of non-sedentary workingwomen. (2) TEERT3 and TEE7-d PAR for one week of the cases recorded by RT3 and 7-d PAR were averagely 229.4 ± 18.9 kcal/kg/week and 230.7 ± 8.2 kcal/kg/week, whereas the two groups only differed from each other in TEERT3 and TEERT3 of sedentary workingwomen were obviously higher than non-sedentary workingwomen. (3) The woman had higher TEERT3, her age, BMI, resting blood pressure, TC, TG and LDL-C were lower, and her HDL-C was higher. A woman's TEE7-d PAR was not related to her risk factors of cardiovascular diseases. (4) Non-sedentary workingwomen had remarkably more physical activity at work than sedentary workingwomen did. For the woman had more physical activity at work, her BMI, resting blood pressure and TG values were lower. (5) The woman averagely sat longer during her work, her BMI and resting systolic blood pressure were higher; the woman averagely stood longer during her work, her resting systolic blood pressure and TG were lower, whereas the woman averagely walked longer during her work, her BMI, resting systolic blood pressure and TG were lower.

It was shown in the result of this research that TEE and physical activity at work of the non-sedentary workingwomen were higher than those of sedentary workingwomen. The sedentary workingwomen had obviously higher resting systolic blood pressure, fasting blood sugar and TG than non-sedentary workingwomen. When working, the physical activity levels and the time of sitting, standing and walking were notably related to BMI, resting systolic blood pressure and TG. Remarkably, TEE for a woman played a more important role than her physical activity levels did to the risk factors of cardiovascular diseases. Thus, a woman is encouraged to increase her total physical activity levels.

Keywords: physical activity levels, cardiovascular disease risk factors, Seven-day Physical Activity Recall, triaxial accelerometers