

Examination of Sedentary Time and Physical Activity in University Office Workers

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Regular exercise and physical activity (PA) reduce the risk of chronic disease and premature mortality. Emerging evidence links sedentary behaviors, independent of exercise and PA, with increased risk of disease and premature mortality. Sedentary behaviors include sitting or lying during waking hours. Many adults spend the majority of time in sedentary occupations. **PURPOSE:** To determine, in sedentary office workers: 1) time spent in PA and sedentary behaviors and 2) whether the workers who were most active also spent the least time sitting during a typical 5 day work week. **METHODS:** Participants (n = 44) were women who had a sedentary, office-based job. The activPAL3 activity monitor was placed on the thigh and participants were asked to maintain normal daily activities while wearing it continuously for seven days. Objective measures of PA and sedentary behavior during a 8.5 hour work day were obtained. Participants were divided into tertials based on average daily step count. A comparison of PA and sedentary time during work hours was made between participants in the lowest (n=15) and highest (n=15) tertiles. **RESULTS:** Participants were predominantly Caucasian (95%), middle-aged (48 ± 9 y), with a BMI of (30.5 ± 8.2). During the workday, participants spent 5.7 ± 1.1 hrs sitting, 2.0 ± 1.1 hrs standing, and 0.7 ± 0.2 stepping. Participants in the lowest step tertile spent 5.6 ± 1.6 hrs sitting, 2.4 ± 1.6 hrs standing, and 0.5 ± 0.2 stepping. Those in the highest step tertile spent 6.1 ± 0.7 hrs sitting, 1.5 ± 0.7 hrs standing, and 0.9 ± 0.3 stepping. A significant difference was observed in time spent stepping between those in the lowest and highest step count tertiles ($p < 0.001$). No significant difference in time spent sitting ($p = 0.3$) or standing ($p = 0.07$) was found between those in the lowest and highest step count tertiles. **CONCLUSION:** Employees with the most time stepping did not sit less than employees with the least time stepping. This may suggest that employees classified as active might also be classified as sedentary. Therefore, to have the greatest value, interventions intended to improve employee health must target both physical activity and time spent sitting.

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