Editorial

Walking past barriers to physical activity

Lack of regular physical activity is associated with an increased risk of premature death.[1] According to the World Health Organization (WHO), physical inactivity is the fourth leading cause of death and is estimated to be a principal cause of ischaemic heart disease (30%), diabetes (27%) and breast/colon cancer (21-25%).[2] To achieve health benefits, physical activity guidelines recommend that apparently healthy adults of all ages engage in a minimum of 150 minutes of moderate intensity (> 3 METs) activity per week.[3] However, only 31% of the population (n = 1332, 604 men and 727 women) reported high enjoyment with structured physical activity,[4] and 15.1% of adults (n = 3100, 43.4% of individuals were men) reported a dislike of exercise[5]. For individuals who have barriers to participating in structured physical activity (e.g., lack of time, lack of money, dislike of exercising, feeling too tired),[4,5] walking may be a cost-effective strategy for achieving health benefits in apparently healthy adults.[6,7]

In 2020, a study published in JAMA investigated if the number of steps per day and/or the intensity of completing those steps were associated with lower mortality.[8] The study included 4840 adults aged 40 years and older and reported that a greater number of steps per day (accelerometer determined) was associated with lower all-cause mortality as well as mortality from cardiovascular disease and cancer. The authors noted that taking 2000 steps per day was associated with higher all-cause mortality than taking 4000 steps per day. Using 4000 steps per day as the reference, the authors found that taking 8000 steps per day was associated with lower all-cause mortality with a hazard ratio (95% CI) of 0.49 (0.44, 0.55) in the fully adjusted model. In addition, taking 12000 steps per day was also associated with lower all-cause mortality with a hazard ratio of 0.35 (0.28, 0.45). For reference, a hazard ratio is a measure of how often a particular event happens in one group compared to how often it happens in another group, over the course of time. A hazard ratio of one would mean that there is no difference in survival between the two groups. A value less than one, as in this case, would indicate that survival was better in the group taking more steps per day. In contrast, there was no association between higher step intensity (i.e. walking speed) and mortality after adjusting for total step count per day.

These results suggest that taking more steps per day, regardless of step intensity, is associated with lower premature mortality risk in adulthood. Of note, an accelerometer counts all steps including that related to non-structured physical activity. In other words, it also includes walking to a nearby supermarket and shopping. Though shopping may not normally be considered a sufficient stimulus to augment physical function,[7] this behavior in individuals who have barriers to participating in structured physical activity (e.g. exercise) may still lead to a reduced risk of premature death. However, as with all observational studies, no causal inferences can be made.

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