Higher Income Individuals Undertake Intense Physical Activity; More Sedentary

Income Linked to More Efficient, 'Weekend Warrior' Behavior



New research led by American Cancer Society researchers in collaboration with the University of Texas Health Science Center at Houston and Georgia State University used activity monitors to find that higher income individuals are more likely to be "weekend warriors," getting most of their activity on only a few days a week, and also spend more time in sedentary pursuits. The study appears in Preventive Medicine.

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Previous research has shown that higher income individuals are more likely to be physically active at a higher intensity. However, this research has historically relied on self-reporting, which may exaggerate actual activity levels. Information collected via activity monitors has shown less than 5% of U.S. adults meet physical activity guidelines. This is despite ample evidence supporting the link between physical activity and reduced risk for premature death and many diseases, including some cancers.

At the same time, evidence has accumulated showing the harmful effects of prolonged sedentary behavior on health; health effects that remain even when physical activity levels are considered. Income has been shown to be a prominent barrier to engaging in physical activity. Individuals with low incomes face time constraints as well as other barriers, including lack of exercise facilities, parks and open space, as well as an inflexible work environment, and have been shown to be less likely to meet physical activity guidelines. Meanwhile, higher income individuals who often also have limited time, have more resources and places to exercise, which could facilitate their ability to meet activity guidelines. However, they also are more likely to hold sedentary jobs, like office work.

For the new study, investigators Kerem Shuval and Qing Li (American Cancer Society), Kelley Pettee Gabriel (University of Texas Health Science Center at Houston) and Rusty Tchernis (Georgia State University), used accelerometer data to analyze physical activity and sedentary behavior in relation to income levels among 5,206 U.S. adults enrolled in The National Health and Examination Survey from 2003-06, a nationally representative survey.

The study found that compared to those making less than $20,000 per year, those with an annual income of $75,000 or more engaged in 4.6 more daily minutes of moderate to vigorous intensity physical activity as measured by activity monitors. High income individuals also engaged in 9.3 fewer minutes of light intensity activity, spent 11.8 more minutes daily sedentary, were 1.6 times more likely to meet guidelines for a brief 2-day period ('weekend warrior'), and were 1.9 times more likely to meet guidelines during a 7-day period.

"Our findings pertaining to income and the 'weekend warrior' effect underscore the importance of tailoring the physical activity message to reflect the constraints of both low and high income individuals," said Dr. Shuval. "To meet guidelines one can engage in 150 minutes of weekly moderate intensity activity over a 2 or 3-day period rather than 7 days, for example. This can be achieved over a long weekend, a message we may want to convey to those pressed for time. It is important to remember, however, that we should increase the duration and intensity of activity gradually to avoid injury. Also, if inactive consult with a physician before embarking on an exercise program."

Article: Income, physical activity, sedentary behavior, and the 'weekend warrior' among U.S. adults; Shuval K, Li Q, Gabriel KP, Tchernis R; Preventive Medicine; Published online 10 August 2017 https://doi.org/10.1016/j.ypmed.2017.07.033