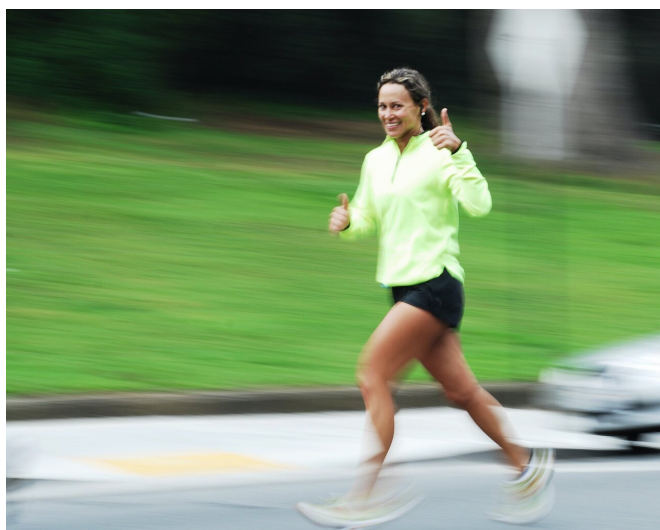


Moderate-to-vigorous physical activity and less sitting reduce the risk of diabetes in older adults

26 February 2021



Credit: Unsplash/CC0 Public Domain

According to a recent study, moderate-to-vigorous physical activity and less sedentary time improve glucose metabolism and reduce the risk of type 2 diabetes in older adults. Based on the results, it is important to encourage older adults to avoid sedentary time and increase moderate-to-vigorous physical activity to improve their glucose metabolism.

The study is part of the population-based Oulu1945 survey conducted in 2013–2015 by the University of Oulu and Oulu Deaconess Institute's Department of Sports and Exercise Medicine, Finland. The survey involved a total of 660 Oulu residents born in 1945 and between the ages of 67 and 69, at that time. Physical activity and sedentary time were measured with a wrist-worn accelerometer for a period of two weeks, and the [glucose metabolism](#) was examined using an oral glucose tolerance test. The subjects were divided

into the following four profiles based on the amount of moderate-to-vigorous physical activity and sedentary time: "couch potatoes," "light movers," "sedentary actives" and "actives."

"Active" [older adults](#) had a lower incidence of type 2 diabetes and prediabetes than older adults in the 'couch potatoes' profile, one in two of whom were found to have a glucose metabolism disorder. The [blood glucose](#) and insulin concentrations in the 'active' profile were lower throughout the glucose tolerance test compared to those in the less physically active groups. Older adults in the 'active' profile had a better glucose tolerance and muscle insulin sensitivity than those in the '[couch potatoes](#)' profile, both clear signs of a reduced risk of diabetes.

"Previous surveys have suggested a link between older adults' physical activity and glucose metabolism, but the use of the accelerometer in studies involving older adults has been negligible. In this study, we were able to make a distinction between moderate-to-vigorous physical activity and sedentary time through accelerometry and to then profile the subjects on that basis in different activity profiles. We analyzed the association between the physical activity profile and glucose metabolism, which is a new perspective. By the activity profiles, we can see that, from the point of view of glucose metabolism, physical activity alone is not enough: you should be active and potter about throughout the day," says researcher Miia Länsitie.

The risk of glucose metabolism disorders increases significantly in older age, making it essential to find ways to prevent diabetes in older adults. Based on this study, an [active lifestyle](#), including moderate-to-[vigorous physical activity](#) and limited [sedentary time](#), also promotes older adults' glucose metabolism and can play a significant role in

preventing diabetes in older people.

"Older adults with long-term illnesses or functional limitations, who may find it impossible to achieve the recommended level of [physical activity](#), should spend less time sitting down and more pottering about every day to enhance their glucose metabolism," Länsitie says.

More information: Miia Länsitie et al. Physical activity profiles and glucose metabolism—A population-based cross-sectional study in older adults, *Translational Sports Medicine* (2021). [DOI: 10.1002/tsm2.237](#)

Provided by University of Oulu

APA citation: Moderate-to-vigorous physical activity and less sitting reduce the risk of diabetes in older adults (2021, February 26) retrieved 27 July 2022 from <https://medicalxpress.com/news/2021-02-moderate-to-vigorous-physical-diabetes-older-adults.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.