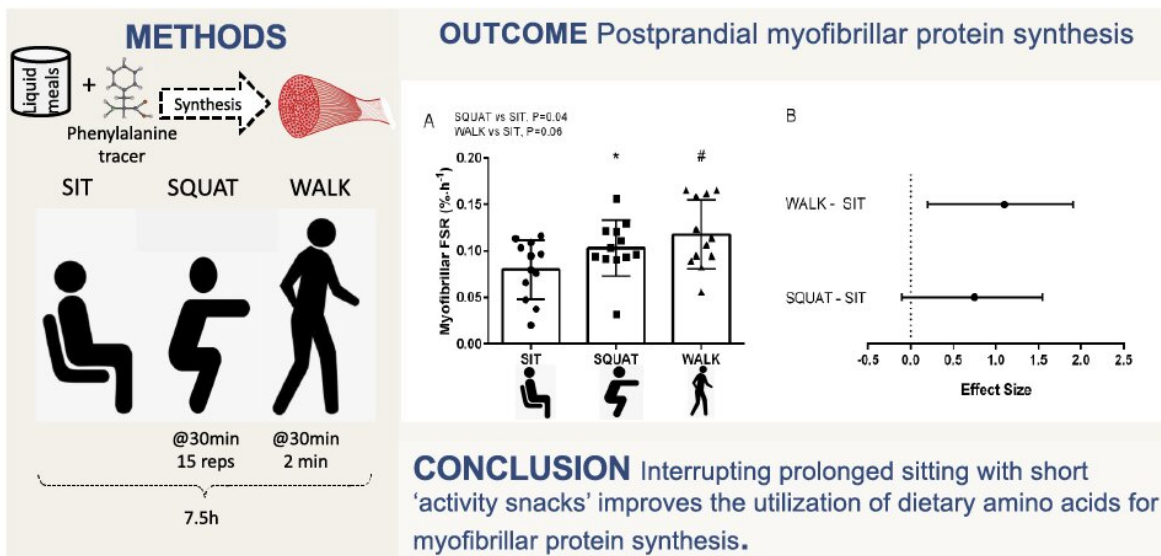


Moderate exercise or 'activity snacks' help maintain muscle mass

October 19 2022

Walking or body weight squat 'activity snacks' increase dietary amino acid utilization for myofibrillar protein synthesis during prolonged sitting



JOURNAL OF APPLIED PHYSIOLOGY © 2022



Graphical abstract. Credit: *Journal of Applied Physiology* (2022). DOI: 10.1152/jappphysiol.00106.2022

Interrupting prolonged sitting with periodic "activity snacks" may help maintain muscle mass and quality, according to researchers at the University of Toronto in Canada. Activity snacks or moderate intensity exercise—such as two minutes of walking or body weight sit-to-stand squats—allow the body to use more amino acids from meals to build muscle proteins. The findings are published ahead of print in the *Journal of Applied Physiology*.

Prolonged sedentary periods have been proven to impair the body's ability to filter sugar from the blood following a meal but has unknown effects on amino acids. In this case, researchers studied 12 people (seven men, five women) across three trials for seven and a half hours each.

Participants were subjected to prolonged sitting interrupted every 30 minutes by short bouts of walking or [body-weight](#) squats. The activity helped improve the efficiency of dietary amino acids used for muscle protein synthesis, the process to repair or replace old or damaged proteins. This is critical to ensure the body has an adequate quantity and quality of muscle.

A [sedentary lifestyle](#) is associated with loss of [muscle mass](#). Therefore, "we believe our results highlight the importance of breaking up prolonged sedentary periods with brief activity snacks," said Daniel Moore, Ph.D., co-author of the study. "We believe our results also highlight that moving after we eat can also make our nutrition better and could allow more dietary [amino acids](#) from smaller meals or lower quality types of protein to be used more efficiently."

More information: Daniel R. Moore et al, Walking or body weight squat "activity snacks" increase dietary amino acid utilization for myofibrillar protein synthesis during prolonged sitting, *Journal of Applied Physiology* (2022). [DOI: 10.1152/jappphysiol.00106.2022](https://doi.org/10.1152/jappphysiol.00106.2022)

Provided by American Physiological Society

Citation: Moderate exercise or 'activity snacks' help maintain muscle mass (2022, October 19)
retrieved 27 June 2024 from <https://medicalxpress.com/news/2022-10-moderate-snacks-muscle-mass.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.