Women who take more steps per day may have a lower risk of diabetes

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Wearable fitness devices offer new insights into the relationship between physical activity and type 2 diabetes, according to a new analysis of the National Institutes of Health's All of Us Research Program data

published in *The Journal of Clinical Endocrinology & Metabolism*.

Type 2 diabetes is the most common form of the disease, affecting 90% to 95% of people with diabetes. In type 2 diabetes, the body is resistant to the action of insulin, meaning it cannot use insulin properly, so it cannot carry sugar into the cells. Type 2 diabetes most often develops in people over age 45, but more and more children, teens and young adults are being diagnosed.

"We investigated the relationship between physical activity and type 2 diabetes with an innovative approach using data from wearable devices linked to electronic health records in a real-world population," said Andrew S. Perry, M.D., of Vanderbilt University Medical Center in Nashville, Tenn.

"We found that people who spent more time in any type of physical activity had a lower risk of developing type 2 diabetes. Our data shows the importance of moving your body every day to lower your risk of diabetes."

The researchers analyzed Fitbit data and type 2 diabetes rates from 5,677 participants included in the NIH's All of Us Research Program between 2010-2021. All of Us is part of an effort to advance individualized health care by enrolling one million or more participants to contribute their health data over many years. About 75% of the participants that the researchers studied were female.

They found 97 new cases of diabetes over a follow-up of 4 years in the data set. People with an average daily step count of 10,700 were 44% less likely to develop type 2 diabetes than those with 6,000 steps.

"We hope to study more diverse populations in future studies to confirm the generalizability of these findings," Perry said.

More information: Andrew S Perry et al, Association of longitudinal activity measures and diabetes risk: an analysis from the NIH All of Us Research Program, *The Journal of Clinical Endocrinology & Metabolism* (2022). DOI: 10.1210/clinem/dgac695