

Study finds people who need wearable health devices the most use them the least

October 31 2022



Credit: CC0 Public Domain

People who need wearable health devices, like smart watches and fitness bands, may use them the least. Age, education and income are factors associated with less use of wearable health devices among people with

and at risk for cardiovascular disease, according to preliminary research to be presented at the American Heart Association's Scientific Sessions 2022. The meeting, held in person in Chicago and virtually, Nov. 5-7, 2022, is a premier global exchange of the latest scientific advancements, research and evidence-based clinical practice updates in cardiovascular science.

Wearable devices are [electronic devices](#) worn on or close to the body that monitor and track health or [physical activity](#). Wearables may help to manage cardiovascular health more effectively, with features like physical activity monitoring, heart-rate tracking, heart electrical activity tracing and more.

"We may be able to use artificial intelligence with [health information](#) from wearable devices to help people reduce their risk of [heart disease](#)," said study lead author Lovedeep S. Dhingra, M.B.B.S., a postdoctoral research fellow in the Cardiovascular Data Science (CarDS) Lab at the Yale School of Medicine in New Haven, Connecticut. "Given these benefits, it is crucial to understand who is using these devices. In our study, we evaluated how many adults with heart disease or at risk for heart disease used wearables. We also looked at whether wearables' use was equitable among patients of different age groups, sex, education, income levels and diverse racial and [ethnic groups](#)."

Dhingra and colleagues analyzed the health information of 9,303 adults in the U.S. who responded to the Health Information National Trends Survey (HINTS) in 2019-2020. Focusing on participants with [cardiovascular disease](#) or who were at risk of cardiovascular disease, such as [high blood pressure](#), Type 2 diabetes, smoking or obesity (BMI greater or equal to 30kg/m²), researchers evaluated participants' responses in the survey question that asked if they had used a wearable device to track their physical activity or health in the last 12 months. Estimated wearable device use was cross-referenced by age, gender, race

and ethnicity, education level and income, as well as participants' willingness to share their wearable data with [health care professionals](#).

"Even though the survey did not ask participants about specific types of wearable devices, examples of wearable devices were included to help respondents answer the question about whether or not they had used a wearable device in the previous 12 months. The most common wearable devices included smart watches and fitness bands at the time of the survey, though the category continues to expand to include other devices," Dhingra said.

While only 9,303 adults responded to the HINTS survey, it is a nationally representative sample, and researchers were able to use survey-weighted analyses to estimate nationwide numbers. Their analysis found that people at risk for cardiovascular disease were less likely to use wearable devices. Specifically:

- An estimated 3.6 million people with cardiovascular disease and 34.4 million people at risk of cardiovascular disease in the U.S. used wearables. That translates to only 18% of all people with cardiovascular disease, and 26% of all people at risk for cardiovascular disease.
- In comparison, 29% of the total adult U.S. population used wearable devices.
- Only 12% of people with cardiovascular disease older than 65 years of age used wearable devices, even though it is estimated half of all people with cardiovascular disease are older than age 65.
- In comparison, 17% of people with cardiovascular disease ages 50 to 64 years reported using wearables, and 33% of those in the 18 to 49-year age group with diagnosed cardiovascular disease used wearables.
- While 22% of all people at risk of heart disease are 65 years or

older, only 14% of elderly patients at risk of heart disease used wearable devices.

- People with cardiovascular disease with an annual household income of \$50,000 or more were 4 times more likely to use wearables than those with annual household incomes less than \$20,000.
- Education beyond a [college degree](#) (post baccalaureate degree) was associated with 3.6-fold higher wearable use than those who received a lower education level.
- More than 80% of people at risk for cardiovascular disease responded that they would be willing to share the health information collected by their wearable device to improve their health care. Differences in willingness to share health data across different demographic subgroups were minor (age group, sex, race and ethnicity, [education level](#) and household income).

"We were surprised to find that people with cardiovascular disease were notably less likely than people without cardiovascular disease to use wearable devices, which suggests those who are most likely to benefit from these technologies appear to be less likely to use them," Dhingra said. "We need to ensure that [wearable devices](#) reach the people who need them most, by improving equitable access and promoting wearables as health devices to help improve health and decrease health disparities."

"Wearables are effective tools to help improve cardiovascular health through enhanced self-monitoring. There is good evidence that when people utilize wearables, they may participate in more physical activities. In addition, the emerging ability of providing objective data to be used during patient-clinician interactions is very promising, since prescription of physical activity from a [health](#) care professional often increases follow-through," said Bethany Barone Gibbs, Ph.D., FAHA, chair of the writing group of [AHA's June 2021 scientific statement on physical activity as a critical component of first-line treatment for elevated blood](#)

[pressure or cholesterol](#), and an associate professor and chair in the department of epidemiology and biostatistics at West Virginia University School of Public Health in Morgantown, West Virginia. "This study highlights important disparities in the use of wearables. These inequities in access and use, if addressed, are an opportunity to improve [cardiovascular health](#) particularly among people in high-risk groups or under-resourced communities."

Among the study's limitations are that wearable use was self-reported, and the response rate to the question about wearables was only about one in three of all survey respondents. A higher response rate may more accurately reflect [wearable](#) use in the U.S.

Co-authors are Arya Aminorroaya, M.D., M.P.H.; Evangelos Oikonomou, M.D., D.Phil.; Arash Aghajani Nargesi, M.D., M.P.H.; and Rohan Khera, M.D., M.S.

More information: Abstract: [www.abstractsonline.com/pp8/?& ...
1/presentation/16160](http://www.abstractsonline.com/pp8/?&.../presentation/16160)

Provided by American Heart Association

Citation: Study finds people who need wearable health devices the most use them the least (2022, October 31) retrieved 16 April 2024 from <https://medicalxpress.com/news/2022-10-people-wearable-health-devices.html>

| |
|--|
| <p>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.</p> |
|--|