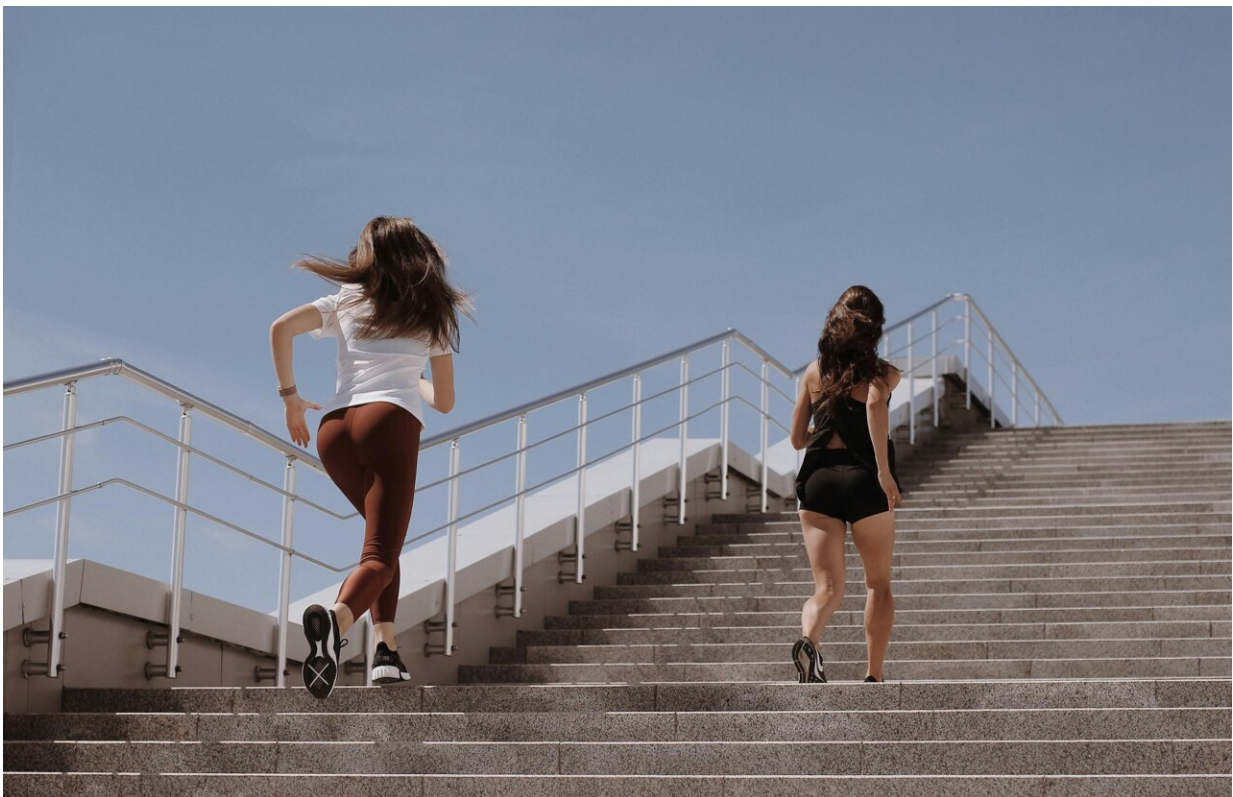


Short-term incentives for exercise can lead to sustained increases in activity

April 7 2024



Credit: Maksim Goncharenok from Pexels

Adults with heart disease risks who received daily reminders or

incentives to become more active increased their daily steps by more than 1,500 after a year, and many were still sticking with their new habit six months later, according to a study supported by the National Institutes of Health that published in [Circulation](#). The findings were simultaneously presented as [late-breaking research](#) at the American College of Cardiology's Annual Session.

The improvements, which also resulted in an extra 40 minutes of moderate exercise each week, correlated with a 6% reduced risk of premature death and a 10% reduced risk of cardiovascular-related deaths, compared to data from prior studies. The Department of Health and Human Services [recommends](#) that most adults should get at least 150 minutes of moderate aerobic exercise per week, such as brisk walking, or 75 minutes of vigorous exercise, like fast cycling, or a combination of the two, paired with twice-weekly strength sessions.

Researchers found that while a simple daily reminder was effective in helping people move more, offering [financial incentives](#) or point-based rewards, such as in a game, was even more effective. However, combining the two incentives proved most effective. Participants who got both were still logging improvements in activity levels six months after the rewards stopped.

"Even moderate exercise can drastically reduce cardiovascular risk, so finding low-cost ways to get people moving and stay in a [fitness program](#) that they can do at home is a huge win for [public health](#)," said Alison Brown, Ph.D., R.D., a program officer at the National Heart, Lung, and Blood Institute (NHLBI), part of NIH.

The [study](#) took place between 2019 and 2024. Researchers followed more than 1,000 adults at elevated risk for major cardiovascular events.

All participants received a wearable fitness tracker, which connected to an online health portal and enabled researchers to count their baseline daily step count. Participants then set a goal to increase their daily steps by 33%, 40%, 50%, or any amount greater than 1,500 steps from their starting point. After they set their goals, participants were randomized into one of four groups.

Three groups offered incentives, including game-like rewards, financial rewards, or a combination of the two. In the game group, each participant received points every week and kept them by meeting their daily step goals. On days they failed to meet their goals they lost points. Participants with enough points moved up a level and participants who failed to meet goals moved down a level. A family member or friend could act as a participant's "support crew" and receive weekly updates about their progress. At the end of the study, adults who reached the highest levels by meeting their daily step goals received trophies. In the financial group, each participant received \$14 each week, but lost \$2 a day if they did not meet their step targets. The third group received game-like and financial incentives.

The fourth group—a control group—received no incentives but got the fitness tracker, along with daily messages that noted their step count. Each intervention lasted for 12 months followed by a six-month follow-up period where all participants received the same information as controls.

Before the study began, participants in all groups logged an average of about 5,000 daily steps or 2.4 miles. After 12 months, they increased their daily step count by more than 1,500, or three-fourths of a mile.

Compared to the control group, the game-incentive group walked an extra 538 steps from their baseline amount, while those who received financial incentives walked an extra 492. The group who received both

incentives averaged 868 extra steps and maintained an average 576 more daily steps six months later. Adults in the single interventions kept their physical activity increases, but the gains didn't differ significantly from the average 1,200 extra steps people in the control group took 18 months after the start of the study.

Still, "The interventions created immediate benefits for participants—and they worked," said Alexander C. Fanaroff, M.D., a study author, an expert in [behavior change](#), and an interventional cardiologist and assistant professor of medicine in the Division of Cardiology at the University of Pennsylvania, Philadelphia. "Research shows it's easier to think about today instead of the future, whether it's exercising more to support long-term heart health or saving for a future goal, like college or retirement."

Researchers said people wanting to change their behavior, especially around exercise, can focus on the same principles used in the study, which created immediate benefits or rewards for movement. For example, there are exercise apps that provide daily reminders and rewards for meeting personal health goals, people could enlist family and friends for support, and even create scenarios where they lose money by giving it away if they don't meet their targets. Healthcare systems and organizations could also use tactics in the study to help patients increase [physical activity levels](#).

More information: Fanaroff AC, Effects of gamification, financial incentives, or both to increase physical activity among patients at high risk of cardiovascular events: The BE ACTIVE randomized controlled trial, *Circulation* (2024). [DOI: 10.1161/CIRCULATIONAHA.124.069531](#)

Provided by NIH/National Heart, Lung and Blood Institute

Citation: Short-term incentives for exercise can lead to sustained increases in activity (2024, April 7) retrieved 21 May 2024 from <https://medicalxpress.com/news/2024-04-short-term-incentives-sustained.html>

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