

Study examines use of mobile technology to improve diet, physical activity behavior

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A new study, supported in part by the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health, suggests that a combination of mobile technology and remote coaching holds promise in encouraging healthier eating and physical activity behavior in adults. The study focused on the best way to change multiple health behaviors.

The study results will appear Monday, May 28, in the [Archives of Internal Medicine](#), with an accompanying commentary authored by William Riley, Ph.D., a [clinical psychologist](#) and program director for the NHLBI.

Scientists from the Northwestern University Feinberg School of Medicine, Chicago, along with colleagues from other institutions, studied 204 overweight and [obese adults](#). Prior to enrollment, participants had a diet high in saturated fat and low in fruits and vegetables. They also engaged in little daily physical activity and had high amounts of sedentary leisure time.

Each participant was assigned to one of four groups:

- Increase fruit and vegetable intake and increase time in moderate/vigorous physical activity
- Increase fruit and vegetable intake and reduce time in sedentary leisure activities
- Decrease fat intake and increase time in moderate/[vigorous](#)

[physical activity](#)

- Decrease fat intake and decrease time in sedentary leisure activities

All participants received mobile devices and were trained on entering information about their daily activities and eating patterns. Coaches studied the data received and then phoned or emailed participants to encourage and support healthy changes during the three-week study. Participants were also asked to continue to track and submit their data over a 20-week follow-up period. [Financial incentives](#) for reaching study goals during the study and continuing participation during the follow-up period were offered.

All four groups showed improvements in reaching the assigned health goals, with the most striking results occurring in the group asked to increase fruit and [vegetable intake](#) and reduce sedentary leisure activities. The researchers found after 20 weeks of follow up that this group's average daily servings of [fruits and vegetables](#) increased from 1.2 to 2.9; their average minutes per day of sedentary leisure activity dropped from 219.2 to 125.7; and the percentage of saturated fat in their daily calories went from 12 to 9.9.

In his commentary, Riley notes that the use of mobile technology to improve cardiovascular health is worth further study of the effects on health outcomes and costs. Mobile technology offers the chance to deliver key health messages without waiting for intermittent visits with health care providers, he says.

More information: Arch Intern Med. 2012;172[10]:789-796.
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