

Is there clinical benefit to activity trackers?

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EXPERT ANALYSIS AT ACP INTERNAL MEDICINE

SAN DIEGO – In the opinion of Ann R. Garment, MD, wearable activity trackers such as the Fitbit may have a role in improving the physical fitness of patients, but alone they do not promote moderate to vigorous physical activity or improve other health outcomes.

An estimated one in five Americans owns some type of wearable technology independent of their smartphones.

“However, these devices come with some challenges,” Dr. Garment, of New York University–Langone Medical Center’s division of general internal medicine, said at the annual meeting of the American College of Physicians. “First, you need to know how to use them. You have to power them up regularly. They can be expensive. And for those that interface with the Internet, there are privacy concerns.”

A 2014 PricewaterhouseCoopers survey of 1,000 U.S. consumers found that 56% believe that their life expectancy will grow an additional 10 years by wearing a device that tracks vital signs, 46% believe that it will help them lose weight, and 42% believe that it will help them dramatically improve their athletic ability.

General guidelines call for 30-60 minutes per day of moderate to vigorous physical activity (MVPA)

at a pace of 100 steps per minute, in at least 10-minute bouts of activity. However, many studies set a goal of 10,000 steps per day, which does not necessarily need to be done as MVPA.

To assess the impact of wearable technology on helping patients to achieve weight loss, researchers studied 471 patients who were placed on a low-calorie diet, prescribed increases in physical activity, and had group counseling sessions (JAMA. 2016 Sep 20;316[11]:1161-71).

At 6 months, the researchers randomized patients into either the standard intervention arm, which had access to materials on a website, telephone counseling sessions, and text message prompts; or to the enhanced intervention arm, which included all of those interventions plus the addition of a wearable device and accompanying web interface to monitor diet and physical activity.

All patients lost weight in the first 6 months. However, in the following 18 months, the enhanced intervention arm gained back weight faster, to the point where they averaged 2.4 kg more weight, compared with the standard intervention arm.

In a separate, larger study, researchers randomly assigned 800 employees from 13 organizations in Singapore to one of four arms: control (no activity tracker or incentives), Fitbit Zip activity tracker without additional incentives, tracker plus charity incentives (money went to charity based on how

much they exercised), or tracker plus cash incentives (money went to participants based on how much they exercised) (Lancet Diabetes Endocrinol. 2016 Dec;4[12]:983-95).

The researchers tied incentives to weekly steps, and the primary outcome was minutes of MVPA per week, measured via a sealed accelerometer and assessed on an intention-to-treat basis at 6 months (end of intervention) and 12 months (after a 6-month postintervention follow-up period).

They found that the cash incentive was most effective at increasing MVPA at 6 months, but this effect was not sustained 6 months after the incentives were discontinued. At 12 months, the researchers “identified no evidence of improvements in health outcomes, either with or without incentives, calling into question the value of these devices for health promotion,” they wrote.

For her part, Dr. Garment concluded that activity trackers alone are not sufficient for increasing MVPA or improving health outcomes.

“Though it’s possible it would do better if it were coupled with other modalities or sustained incentives, we need more research before we can recommend it to our patients,” she said. “Perhaps one of the best things we can be doing for our health and recommending for our patients is to, in the words of food author Michael Pollan, ‘eat food, not too much, mostly plants.’”

Dr. Garment reported having no disclosures.

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DR. GARMENT