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Can digital fitness trackers get you moving? <http://www.health.harvard.edu/blog/can-digital-fitness-trackers-get-you-moving-201508278214>



POSTED AUGUST 27, 2015, 9:03 AM

Heidi Godman <http://www.health.harvard.edu/blog/author/hgodman>, Executive Editor, *Harvard Health Letter*
<http://www.health.harvard.edu/health>

Confession: I'm a little obsessed with the pedometer in my smartphone. It's fun to carry it with me and see how many steps I take when exercising or grocery shopping or carrying laundry across my house. I aim for 10,000 steps per day, but I don't always hit the mark, and I've wondered if switching to a digital fitness tracker would push me to go the extra mile. So a small study published in the September *American Journal of Preventive Medicine (AJPM)* caught my attention.



The study's researchers wanted to see if digital fitness trackers would increase physical activity among older women. The trackers are tiny gadgets that come in wearable styles such as wristbands, watches, and pendants, as well as hand-held versions you can clip onto a sleeve or slip into a pocket. In addition to the number of steps you take, a digital fitness tracker can also measure and record how fast you walk and how far, for how long, and at what intensity. In the *AJPM* study, the researchers used a brand of tracker called Fitbit and an accompanying web application that evaluates and even graphs recorded information.

How they did it

The study involved 51 overweight postmenopausal women who had been getting about 33 minutes per week of moderate to vigorous physical activity. The researchers divided them into two groups. The women in the first group each received a standard pedometer. Women in the second group each received a Fitbit, an instructional session, and a follow-up call after four weeks. Both groups were asked to perform at least 150 minutes of moderate or vigorous physical activity each week and to walk 10,000 steps a day. All the women used an additional gadget called an accelerometer to track their movements.

After 16 weeks, neither group had reached its fitness goals. The pedometer-only group did not have a significant increase in their physical activity levels. But the fitness-tracker group increased physical activity by an additional 38 minutes per week.

Accountability, accuracy, and motivation

The study didn't *prove* that the fitness trackers caused the women to exercise more, or that pedometers aren't great tools. (And it may have only shown that 51 older women couldn't reach their fitness goals, even with the help of fitness tools.) But it does beg the question: do fitness trackers get you to do a little more? "I believe they may be helpful," says Linda Arslanian, director of rehabilitation services at Harvard-affiliated Brigham and Women's Hospital. She points to three major factors: accountability, accuracy, and motivation.

"When you can see what your activity levels are, and you know that someone is checking them, there's accountability, and you're motivated to work harder because you want to comply," she explains. In the *AJPM* study, participants knew that researchers were looking at their results. (You can achieve a similar degree of accountability by using a tracker and asking a partner to look at your results.) "We use similar strategies with our patients and clients. We often have them fill out activity journals or log their exercise programs, and we review those logs with them on their follow-up visits. This helps establish a degree of accountability because they know we're checking them."

But an activity journal can't capture what you're doing as accurately as a fitness tracker, points out Arslanian. Unlike logs, journals, or standard pedometers, the trackers accurately record objective data about your workout, including the pace, distance, intensity, and duration of your exercise, and can track your progress on those measures. "When you can see all of those things, especially your progress, it motivates you to keep building on what you've accomplished," says Arslanian.

Another benefit

Some fitness trackers can also record your heart rate, which is important for determining the intensity of your workout. "If you're doing aerobic exercise, you want to exercise at 60% to 80% of your maximum heart rate for at least half an hour, three to five times per week," says Arslanian. "Do that, and your endurance will improve." Having a device that gives you that information, or alerts you if you're below or over your established training heart rate, can make workouts more effective. It can also make them safer, especially if you have heart problems or other medical conditions.

The most accurate way to determine your maximum heart rate is to undergo a stress test. But for healthy individuals, it is possible to estimate your maximum heart rate. To calculate an estimated maximum heart rate, subtract your age from 220. (For example, if you're 60 years old, your maximum heart rate is 160 beats per minute.) You'll want to exercise at 60% to 80% of that number:

- 60% of 160 (0.60 x 160 = 96) is 96 beats per minute.

- 80% of 160 ($0.80 \times 160 = 128$) is 128 beats per minute.

So when exercising, you'd want to keep your heart rate between 96 and 128 beats per minute.

But Arslanian warns that you shouldn't embark on an exercise program without advice. "You need the okay from your doctor first, and you need someone to craft an exercise program that is in your training range and your safety zone, with a range of intensity and duration that will have the greatest chance of being effective," she says. Using a device like the Fitbit can make it easier to stay within that training range.

That's advice that can help us all go the extra mile, whether we're using a fitness tracker, a pedometer, or even a smartphone as an exercise tool.

Related Information: [Starting to Exercise {http://www.health.harvard.edu/special-health-reports/starting-to-exercise?utm_source=HHPBlog&utm_medium=link&utm_content=related-text&utm_campaign=referral}](http://www.health.harvard.edu/special-health-reports/starting-to-exercise?utm_source=HHPBlog&utm_medium=link&utm_content=related-text&utm_campaign=referral)

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POSTED OCTOBER 12TH, 2015 AT 6:00 AM

svfx

thanks for share this article , very helped for us

POSTED SEPTEMBER 25TH, 2015 AT 8:16 AM

Fred

I think that these fitness devices can have a positive effect on your fitness but the main thing to remember is you have to actually do the exercise to make a difference – it is not enough to strap on a wristband and then sit on the couch eating chips. If you are motivated to work out, or walk, then a fitness band can be a powerful tool to keep your motivation and track how well you are doing. I like wearing mine because it shows how much I have progressed week to week.

POSTED SEPTEMBER 4TH, 2015 AT 10:09 PM

Olahraga Yang Aman Untuk Penyakit Jantung

sunny morning may our hearts too bright

POSTED SEPTEMBER 1ST, 2015 AT 3:01 PM

Mark

As you already mentioned, tracking your fitness progress is a important when not the most important motivation factor when using a tracker or pedometer.

But I think the absolute accuracy of a fitness device is not too important.. In my opinion whenever a device is good enough to show any fitness progress it will be beneficial for the wearer!

Regards,
Mark

POSTED AUGUST 31ST, 2015 AT 5:06 AM

beauty tips

I am so pleasure read this articles. it is helpful for everybody. i hope more helpful info publish in this site. thanks for author

POSTED AUGUST 31ST, 2015 AT 2:50 AM

Rufina Tangert

Hi,

I feel fitness cannot be standardized, every individual has different needs and their bodies respond differently during exercising. No two people are the same.

Such gadgets are good to have but I do not trust on their suggested capabilities. I would rather stick to old tried and tested methods.

Rufina Tangert – Manager HR

POSTED AUGUST 30TH, 2015 AT 11:53 AM

Don

All of them count steps, then calculate calories burned with varying levels of success. An increasing number of fitness bands also keep an eye on your resting heart rate, pulse rate during exercise. And it's also help your weight reduction.

POSTED AUGUST 28TH, 2015 AT 12:09 AM

Brett Hulsey

Interesting story on the Fitbit exercise improvements.

The challenges is it does not measure exercise quality by heart rate. You mention the 60-80% maximum goal, but new studies on high intensity interval training show better outcomes in less time at 80-90%.

As you have said, if exercise was a pill, everyone should take it. I try to make it that simples.

Cheers,

Brett Hulsey MNS

POSTED AUGUST 27TH, 2015 AT 3:42 PM

Cher

All pedometers required the user to establish an average of their own stride when walking and then to set the device accordingly. If that is not completed, this could explain the issue for some devices. I used many pedometers and found certain brands to be much more accurate than others. No surprise there. I finally got a FitBit and love it. It does motivate me to keep going. The newer tracker send messages to help encourage the person to give just a bit more.

POSTED AUGUST 27TH, 2015 AT 1:19 PM

Aric

I have used several pedometers over the years, including the fitness tracker on my phone, and have found them to be so inaccurate that they are essentially useless. I walk 6 miles per day, 5-7 days per week. I actually counted my steps during a couple of sessions, and found that it takes 10,800 steps for me to walk 6 miles. When I use the pedometer on my phone, I get anywhere from 12,000 to 14,000 steps even though I'm walking the same route every day. Probably most people who use pedometers are not taking as many steps as they think they are.



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