

79% of Americans Noticed Positive Changes After Using Health Tracking Technology

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STORY AT-A-GLANCE

- › Half of Americans are actively using health monitoring technology
- › Among those using health tracking devices, 23% said it's a tool to help them stay motivated and accountable to reach their daily activity goals
- › As a result of fitness trackers, 79% said they've noticed positive physical and mental health changes, such as improved eating habits, increased activity and more attention to stress relief
- › As you consider fitness trackers, I would discourage the Fitbit because it was bought by Google, which is siphoning your personal health and fitness data from these devices for their gain
- › The Oura ring is a superior device that doesn't steal your personal data and uses body temperature, blood oxygen levels, heart rate and heart rate variability to track your sleep stages and more

Americans are increasingly taking control of their health via the use of health monitoring technologies, with notable benefits as a result. A Cleveland Clinic survey revealed that 50% of Americans use at least one type of technology to track their health, with most experiencing significant related physical and mental improvements.¹

If you're considering investing in a fitness tracker or other form of wearable, health-tracking technology, however, there are some caveats to consider, including

effectiveness and privacy. Here's what to know about this up-and-coming artificial intelligence (AI) technology, from potential gains to which brand will best protect your personal data.

4 in 5 Users of Health Monitoring Tech Report Notable Benefits

The survey was part of Cleveland Clinic Heart, Vascular and Thoracic Institute's "Love your Heart" consumer education campaign. It focused on the use of AI for heart health, with 3 in 5 respondents stating they believe this technology will lead to better heart care. When it comes to believing health advice from an AI chatbot is trustworthy, 72% of Americans said they'd trust it, but 89% also said they'd ask a doctor before acting on the chatbot's recommendations.²

The survey also looked into health monitoring technology, which half of Americans are actively using. The most commonly monitored metric is daily step count, with heart rate and calorie burn coming in second and third. For 23% of survey respondents, health tracking technology is a tool to help them stay motivated and accountable to reach their daily activity goals.³

For most who are embracing this technology, it seems to be working, as 79% said they've noticed positive physical and mental health changes. Top uses of health monitoring technology, as well as some of its beneficial outcomes, include:⁴

60% of Americans track their daily step count

53% monitor their heart rate/pulse

40% track their burned calories

32% track their blood pressure

53% began exercising more regularly

50% are getting in more steps per day than they used to

34% are improving their eating habits

27% are more intentional about finding time to relax and relieve stress

Which Health Metrics Should You Track?

Walking even 8,000 steps once or twice a week is associated with significantly lower all-cause and cardiovascular mortality risk.⁵ So tracking daily steps – and increasing them when necessary – makes sense.

But fitness trackers also keep tabs on lesser-known health metrics. For instance, many wearable devices are available to track your heart rate variability (HRV), an indicator of your body's capacity to respond to stress. While they may not be as accurate as an electrocardiogram (EKG), they may still provide useful data, especially if you notice your HRV worsening over time.

HRV measures the variations in time between your heartbeats – a function controlled by your autonomic nervous system (ANS). As such, HRV is said to be a “proxy of autonomic activity” that's associated with executive functions, emotional regulation and more, including decision making. Meanwhile, abnormal HRV can signal problems ranging from neurological to psychological conditions.⁶

You can also keep an eye on your VO2 max, a measure of oxygen consumption during exercise that is commonly used as a marker of fitness level. Standing time is another health point to consider tracking. While regular physical exercise is important, so, too, is doing virtually anything other than sitting – including standing. This is why many fitness trackers have goal settings for not only calories burned and steps taken in a day, but also reaching a standing-time goal.⁷

Research published in the American Journal of Preventive Medicine found that sitting for more than three hours a day causes 3.8% of all-cause deaths in the 54 countries surveyed.⁸ More than 60% of people globally spend more than three hours a day sitting.⁹

Incorporating more standing into your day is an easy way to sit less, and it offers additional health gains, including benefits to blood sugar levels.¹⁰ Tracking your sleep cycle is another valuable use for health monitoring technology, which can reveal if you're spending enough time in the appropriate sleep stages.

As for accuracy, keep in mind that the more complex the biological metric, the less accurate your fitness tracker may be. So, while your daily steps may be on point, your stress levels are more difficult to measure. It's a good idea to take any results you get with a grain of salt and always see your health care provider if anything seems off.

Indeed, a narrative systematic review of 82 papers on the subject of wearable devices in health care settings cited data accuracy as one of the products' technological barriers, noting:¹¹

“On one hand, the sensor specificity of current wearable device is low, which may lead to overdetection of benign nonclinical related signals, resulting in misdiagnosis, unnecessary examinations, and patient anxiety. On the other hand, low sensor sensitivity may lead to omission of pathological clinically-relevant parameters, resulting in missed diagnosis and delay in treatment.”

How You Can Use Wearable Technology for Better Sleep

In my interview with Dr. Stasha Gominak, a neurologist and sleep coach, she explains the curious synergy between vitamin D deficiency, microbiome health and poor sleep. Gominak's research suggests vitamin D modulates sleep and metabolism, and lack of vitamin D causes impairment in your brain stem's ability to produce normal sleep.

She's treated more than 7,000 patients with her innovative “sleep repair” approach and has published scientific papers on her theories. Many of her patients use fitness trackers that track sleep, such as Fitbit or the Oura ring, both of which can measure slow-wave deep sleep, one of the sleep phases during which your body is paralyzed.

She explains that the only time we are paralyzed is during restorative deep sleep, slow-wave sleep or REM sleep.¹² “As far as I can tell, the movement measurements used in most of those tracking devices are pretty accurate,” she says.

At the very least, using a wearable fitness tracker at night may help you gain more insight into your sleep patterns, so you can make adjustments, if needed, to optimize

your nightly rest. I recommend the Oura ring – not the Fitbit – for sleep tracking, for reasons explained below.

Are Wearable Devices the Future of Health Care?

The narrative systematic review suggests that, by motivating people to pursue healthier lifestyles and providing a “constant stream of health care data,” “[W]earable medical devices have the potential to become a mainstay of the future mobile medical market.”¹³ While such devices exist that can be used on all parts of the human body, most fall into three categories:¹⁴

- Head wearable devices, which include glasses, helmets, headbands and patches.
- Limb wearable devices, which may be worn on your arms, legs or feet. These primarily include the popular smart watches and bracelets that monitor your body temperature, daily activity, heart rate, ultraviolet light exposure and other physiological parameters.
- Torso wearable devices, such as suits, belts and underwear. These have sensors embedded in the fabric that can be used for a variety of biomedical applications.

There are also wearable devices used in the medical field for health and safety monitoring, chronic disease diagnosis and management, and rehabilitation. For instance, changes in gait may be an early indicator of declining cognitive function.

“By wearing a wearable device, the user’s gait parameters can be collected for early detection of Alzheimer disease,” the review found.¹⁵ Cardiovascular disease, pulmonary diseases, diabetes and high blood pressure are examples of conditions that can also be monitored using wearable devices.¹⁶

“Chronic disease management involves changing passive disease treatment into active health monitoring. Wearable products facilitate data collection and monitoring throughout the user’s entire day, as well as providing dynamic, intelligent, and comprehensive analysis of various indicators to enable medical treatment of chronically ill patients.

This technology also facilitates remote monitoring of diseases, adjustment of remote treatment plans, lifestyle management, and other functions through cloud services, which is of great significance in disease control."

Be Aware of Bluetooth Dangers

Many health-tracking wearable devices rely on Bluetooth to transmit information wirelessly. I recommend avoiding ALL tracking devices unless you can turn Bluetooth off and only use it when you are uploading data to your app or cloud. Oura and Apple Watch are examples of devices that allow you to turn Bluetooth off.

A primary concern is that **Bluetooth devices** emit nonionizing electromagnetic fields (EMFs). While industry has long claimed nonionizing radiation is harmless, a petition to the United Nations (U.N.), led by the International Electromagnetic Field Alliance, states:¹⁷

"Based upon peer-reviewed, published research, we have serious concerns regarding the ubiquitous and increasing exposure to EMF generated by electric and wireless devices.

These include – but are not limited to – radiofrequency radiation (RFR) emitting devices, such as cellular and cordless phones and their base stations, Wi-Fi, broadcast antennas, smart meters and baby monitors as well as electric devices and infrastructures used in the delivery of electricity that generate extremely low frequency electromagnetic field (ELF EMF)."

According to the petition, scientific publications show EMF affects living organisms at levels "well below" most international and national guidelines. Potential health effects include:¹⁸

Increased cancer risk

Cellular stress

Increase in harmful free radicals

Genetic damages

Structural and functional changes of the reproductive system

Learning and memory deficits

Neurological disorders

Negative impacts on general well-being

Which Fitness Tracker Raises Privacy Concerns – And Which Appears Safer?

Many people have embraced the convenience of “smart” devices in their homes and wearable devices for their bodies, but, in addition to the health risks posed by Bluetooth, there are dangers in intertwining mass surveillance systems with daily living. Security, privacy and data collection are top concerns.¹⁹

“Through sensor technology, wearable health devices can collect all kinds of user information, such as health information, geographical location, and living habits. The various formats, large scale, and numerous mobile links of these data may increase the risk of leakage and tampering. Strategies to ensure the security of the data and improve the public trust are required.”

As you consider fitness trackers, I would discourage the Fitbit for two primary reasons. First, it emits a green light that can interfere with sleep quality. Second, the company was bought by Google, which is siphoning your personal health and fitness data from these devices for their gain. Overall, I think the Oura ring is a superior device and it doesn't steal your personal data.

It's especially impressive for sleep tracking, as it uses body temperature, blood oxygen levels, heart rate and HRV to determine which sleep stage you're in and for how long. In addition to tracking nonrapid eye movement (NREM) sleep – including NREM 1 (the first stage), NREM 2 (light sleep) and NREM 3 (deep sleep or slow-wave sleep) – it tracks rapid eye movement (REM) sleep, when most dreams occur.²⁰

The Oura ring also monitors how much time you spend sleeping, known as sleep efficiency, along with how long it takes you to fall asleep once in bed, or sleep latency. It

even measures restfulness, according to how much time you're awake while lying in bed. The device then gives you a sleep score ranging from optimal to in need of improvement, allowing you to keep close tabs on your sleep routine and make changes as needed.²¹

One study that analyzed the accuracy of the Oura ring when worn overnight found it accurately measured nocturnal heart rate and provided acceptable results for various HRV parameters.²² With readings for more than 20 biometrics, including blood oxygen tracking, period predictions and restorative time, it even offers meditation sessions and tracks how they impact your heart rate, HRV and skin temperature.²³

As mentioned, fitness trackers like these should be considered just one tool to measure your health status. But assuming you choose a device that protects your privacy and security, tracking your daily and weekly health metrics can offer powerful motivation to lead a healthier lifestyle.

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