

7) Hackers will target wearables

As wearable devices become more popular, hackers will target the devices more often, according to Bruce Snell, cybersecurity and privacy director of [Intel Security Group](#). Wearables typically collect a lot of simple data and feed it to mobile applications for processing,

he says. Most of the devices use Bluetooth LE technology, "which has suffered a number of well-documented security flaws and likely will produce more with each new version. Poorly written wearable code will create a back door into your smartphone."

Snell predicts some leading wearable devices will be compromised during the next 12 to 18 months "in a way that will provide valuable data for 'spear-phishing' attacks." Using GPS data collected from a running app tied to a fitness tracker, for example, a spear-phisher could "craft an email that you would be more likely to open. If you stop by a coffee shop after your run, using the GPS data an attacker could write an email saying, 'I think you dropped this at the coffee shop this morning,' and include a link to an infected image file."

Nearly three-quarters of IT professional respondents believe the risk of hackers targeting organizations via IoT devices, such as activity trackers, is medium or high, according to ISACA's [IT Risk/Reward Barometer study](#). In particular, IoT devices are convenient targets for fraudsters who want to use ransomware, according to Christos Dimitriadis, international president of [ISACA](#) and group director of information security at [Intralot](#).

In 2016, enterprises "will need to set network policies that can manage access levels for these devices," says Kurt Roemer, chief security strategist at [Citrix](#). "Employees will be wearing multiple devices to gather more data and improve accuracy for things like health tracking — and all will need to be managed accordingly. For industries like healthcare where the devices are constantly uploading and sending data, it will be critical that this information is encrypted and has multi-factor authentication protocols to avoid any funny business from patients or hackers."

8) Athletes will embrace 'smart clothing'

Fitness wearables will generate more than \$10 billion in revenue by 2020, up for \$3.3 billion in 2015, according to [Juniper Research](#).

The "tripling effect will be largely driven by the sales of wrist-based trackers, while hundreds of thousands of connected garments used by professional sports teams showcase wearable technology's most advanced capabilities," the research firm said in a statement.

"Already used in training to monitor performance, smart clothing will also become an important part of watching sports in the future, with leagues like the NFL partnering with Microsoft and Zebra Technologies to produce live visualizations of data and new ways for fans to understand each game," according to Juniper.

While the value of smart clothing for average consumers is not yet apparent, it's a trend that could have staying power, according to NPD Group's Henderek. "In professional sports, the ability to track the amount of effort athletes are putting in could help coaches redistribute workloads and help avoid injuries," he explains.

"There's a real need for that data."

Some well-known brands already offer "smart clothing" for consumers. [Ralph Lauren's PoloTech shirt](#) (\$300), for example, measures heart rate data, breathing depth, balance and other biometrics, and streams the information from a "Bluetooth-enabled black box" to an iPhone or Apple Watch app, [according to the company](#).

9) A focus on sleep in 2016

Most of today's high-end activity trackers monitor sleep in some fashion, often automatically. However, the data the devices gather and feed back to their accompanying apps or websites is fairly basic, and it mostly tells only much time users slept, how often they were awake, and the levels of deep sleep versus light rest.

As wearable devices gain more sensors and processing power, they'll start to provide more detailed information on sleep patterns, according to Henderek. Metrics on REM sleep coupled with heart rate data during sleep will help connect the dots for users so they can see patterns over time, he says.

A wider variety of technology designed to not only track sleep but also improve it will hit the market. The "first-of-its-kind" [Nuyu Sleep System](#) (\$500), for instance, adjusts the user's body temperature and warms him up as he goes to bed to help relax, then cools him off to increase the quality of sleep, according to the company.

10) Niche wearables will become commonplace

More wearable devices with sensors designed for specific purposes will be released in 2016. One such device, the [Neatamo June bracelet](#) (\$129) for women, which measures

sun exposure and offers advice on sunscreen application to prevent UV damage via a mobile app, is already available. "This is truly a device that could lower melanoma incidences globally," says

Roozbeh Jafari, an [IEEE Member](#) and associate professor at [Texas A&M University](#). "Plus, it looks fashionable,

which is half the battle to market."

11) Activity trackers will remind more people to stand up.

If an Apple Watch owner sits down for 50 minutes straight while wearing the device, the Watch vibrates to remind them to stand up and move around. (The stand reminders can be deactivated or silenced.) Some dedicated activity trackers already have similar features, including Garmin's [vivosmart HR](#) (\$150), and more of 2016's wearable tech and activity trackers will feature stand reminders as well, Henderek says.

12) Traditional watch makers will add 'smart' elements

In 2015, a new category of watch known as "connected timepieces," began to proliferate. These gadgets are traditional watches with some technology added, such as the ability to receive notifications from a smartphone and track steps. Current examples include the [Timex Metropolitan+](#) (\$125 and up) and [Guess Connect](#) (about \$400). In 2016, additional

watch makers will release hybrid devices, according to Henderik.

13) Future wearables will be less ... *wearable*

It may take more than the duration of 2016, but eventually wearable technologies will give way to implanted tech, according to Liz Dickinson, CEO of wearable maker [Mio Global](#). Today's wearables "are a transitional technology, with the ultimate end-goal being complete integration and implantation with and in the human body," she says. "In the future, we'll become ever more connected, and our environment will adjust to our physiological, emotional and physical needs automatically through a new type of system that's embedded in our bodies."

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