

## Podcast: Unreliable COVID tests; Amazon's creepy Halo health band; Celebrate pesticides?

**H**ow do COVID-19 tests work, and are their results reliable? Recent media reports have raised some concerning questions. Amazon's Halo band, one of the latest personal health trackers to hit the market, has received harsh reviews and created privacy concerns about how the company uses its customers' personal health information. One farmer says her colleagues need to "celebrate pesticides" as a means of assuaging the public's food safety fears

**Join geneticist Kevin Folta and GLP editor Cameron English on this episode of Science Facts and Fallacies as they break down these latest news stories:**

- [COVID tests often yield false results, underscoring the limits of testing to control pandemics](#)

PCR-based COVID tests have been advertised as a crucial tool to help bring the pandemic to an end. But recent revelations of many false positive and false negative results have raised questions about the reliability of the tests so far deployed. In August 2020, the New York Times published an analysis [showing that the](#) "standard [COVID] tests are diagnosing huge numbers of people who may be carrying relatively insignificant amounts of the virus." And a recent Washington Post report underscored these concerns:

National coronavirus test shortages have emphasized testing's critical role in containing and mitigating the pandemic, but these inconvenient truths remain: A test result is rarely a definitive answer... The result itself may be falsely positive or negative, or may show an abnormality that doesn't matter. And even an accurate, meaningful test result is useless (or worse) unless it's acted on appropriately.

How do these tests work, and how confident can we be in their ability to accurately detect COVID-19 infection? Understanding the limitations of coronavirus testing, and disease diagnosis more generally, could help us better mitigate future pandemics before they become pandemics.

- [Viewpoint: Halo Band not ready for primetime – Amazon's invasive wearable health tracker gets a poor review](#)

Personal [fitness trackers](#) like the Apple Watch and Fitbit have grown popular as consumers turn to technology to help develop good exercise and eating habits and monitor health markers like body fat and sleep time. Amazon recently entered the market with its Halo band, but it appears the tech giant, so good at producing Kindles and Fire Sticks, may have missed the mark this time around.

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The device offers similar functionality to its popular competitors, but has a few unhelpful or, dare we say, even downright creepy features. To help watch your weight, the Halo takes naked pictures of your body and uploads them to the cloud, which invites all sorts of privacy concerns. The device also monitors your

tone of voice to help identify what state of mind you may be in—though it apparently badly misinterprets the data it analyzes. As the Post put it in a recent review, “the Halo collects the most intimate information we’ve seen from a consumer health gadget — and makes the absolute least use of it. This wearable is much better at helping Amazon gather data than at helping you get healthy and happy.”

- [Viewpoint: ‘Celebrate pesticides!’ Why farmers should defend technology that produces our abundant food supply](#)

With so many consumers confused and misinformed about agriculture, scientists have sometimes struggled to convince the public that their food is safe to consume. Farmers can help solve the problem by engaging on social media and, crucially, taking on the tough questions that people need answered, for example questions about the safety of GMOs and pesticides. Advocating for the use of important technologies farmers use to grow our food is perhaps the best way to do this, says farmer Michelle Miller:

Let’s be transparent and celebrate advances; celebrate pesticides! Wait, that sounds totally weird right? But it’s true! Because it’s no different than spraying ourselves with chemicals like bug spray and sunblock, plants are just as living as we are and also need to be protected.

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