

Fentanyl test strips prove useful in preventing overdoses

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Among more than 72,000 deaths in the U.S. last year, fentanyl—a highly potent prescription opioid often used to lace other heroin or cocaine, but hard for drug users to detect—factored into many of cases.

In the search for solutions, a team of researchers led by Brandon

Marshall, an associate professor of epidemiology at Brown University's School of Public Health, provided rapid-acting [fentanyl](#) test strips to young adults at risk of [overdose](#) in the state. New research by the team found that most of those young adults used the strips—and many who detected fentanyl reported changing their behavior to reduce overdose risk.

"We found that fentanyl test strips are an effective harm-reduction tool to prevent overdose," Marshall said. "Harm reduction is important because everyone deserves to be able to take care of themselves and make informed decisions about their health, whether they use drugs or not. These tests strips could be a life-saving intervention for many young adults who use drugs."

The findings were published on Thursday, Oct. 18, in the *International Journal of Drug Policy*.

The fentanyl test strips work like an over-the-counter pregnancy test, said Max Krieger, a research assistant in Marshall's lab and the lead author of the study. Each single-use strip is dipped into water containing a bit of drug residue, and after a minute, either one or two red lines appear—one line means the liquid contains fentanyl, and two lines means the test did not detect the drug.

In this pilot study, the researchers provided test strips to 93 [young adults](#) who reported injecting opioids or using heroin, cocaine or prescription pills bought off the streets in the past month, and taught them how to use the strips.

Each participant received 10 strips, which cost about \$1 each but aren't commercially available. The study found that 77 percent of them used at least one test strip. Of the participants who used the strips, 12 percent used all 10 strips, and about half gave strips to friends. All participants

also received overdose prevention education and a naloxone kit—commonly known by the brand name Narcan—to take home.

Half of the participants who used the strips detected fentanyl in their drug supply. Of those, 45 percent reported using smaller amounts, 42 percent proceeded more slowly when using, and 39 percent used with someone else present, who could call 911 or administer naloxone in the case of overdose. Some participants used multiple overdose-reducing strategies, and a few reported discarding fentanyl-laced drugs, Marshall said.

"Our study shows that the fentanyl test strips are effective at preventing overdoses," Krieger said. "A majority of our participants who received a positive result changed their drug-using behavior. The harm reduction concept behind these test strips, adding a cheap but effective layer of protection against known overdose risks, is similar to other health precautions such as using condoms to prevent sexually transmitted diseases."

Almost all of the participants (98 percent)—even those who didn't use a single strip—said they were confident in their ability to use the strips, and 95 percent wanted to continue using them.

The study also found that participants would feel most comfortable obtaining rapid-acting fentanyl test strips at health clinics and other community-based organizations. The authors suggest that "community-based organizations that conduct overdose prevention education and outreach efforts may be ideal venues for rapid fentanyl test strip training and distribution, as these organizations also distribute other harm reduction supplies."

Marshall cautioned that the findings might not apply to older [drug](#) users. The average age of the participants was 27.

The research team is analyzing the results from in-depth interviews with participants to learn more about their overdose risks and how they used the fentanyl test strips to avoid overdose, Marshall said. He hopes to build from this pilot study and conduct a larger efficacy trial to assess the effectiveness of the test strips in reducing overdoses in a larger population.

More information: *International Journal of Drug Policy* (2018). [DOI: 10.1016/j.drugpo.2018.09.009](https://doi.org/10.1016/j.drugpo.2018.09.009)

Provided by Brown University

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