

New needle-free vaccines could mean the end of the flu shot

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Autumn has arrived, leaves are changing colors, and pumpkin spice aromas are sweeping stores. It's also the season for flu shots. The good news is that the annual jab in the arm designed to protect us from the flu might one day be a thing of the past. An article in *Chemical & Engineering News* (C&EN), the weekly newsmagazine of the American Chemical Society, describes advances in injection-free vaccination methods that are showing promise.

As C&EN Contributing Editor Sarah Webb reports, needle-free flu vaccines aren't completely new. In the early 2000s, the inhaled [vaccine](#) FluMist was approved. But after several years, the product lost its punch. So, in the past two years, an advisory committee for the U.S. Centers for Disease Control and Prevention has advised against using FluMist. Creating additional vaccine-delivery options, however, remains an important goal. Taking the needle out of immunizations could help boost vaccination numbers, particularly in places where resources are limited.

Toward this end, researchers continue to seek alternative vaccine-delivery systems. Oral administration—for example, a vaccine in a pill—is one possibility. Another option was approved by the U.S. Food and Drug Administration in 2014 for most adults. It uses a spring-powered injector to shoot a vaccine in a fluid stream through the skin and into the muscle. Other researchers are sticking to needles but on a small scale. For example, one company has developed a way to deliver a flu vaccine with a needle that's 90 percent smaller than conventional syringes. Another promising new method uses a small patch covered

with microneedles, adding to the expanding array of less painful vaccine possibilities.

More information: Giving needle-free flu vaccines a shot,
[cen.acs.org/articles/95/i44/Gi ... ee-flu-vaccines.html](https://cen.acs.org/articles/95/i44/Giving-needle-free-flu-vaccines-a-shot)

Provided by American Chemical Society

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