

# Flu vaccine may not protect against main flu strain: study

December 17 2021

---



(HealthDay)—This season's flu vaccine may do little to prevent infection

with the main circulating virus strain because the strain has changed since the vaccine was developed, a new study suggests.

However, the vaccine is still likely to protect against severe illness and death, according to the U.S. researchers. They assessed the vaccine's effectiveness against the [H3N2 strain](#). The vaccine is also meant to protect against H1N1 and two [strains of influenza B](#).

Lab tests suggest a "major mismatch" between the vaccine and the new, mutated version of H3N2, study leader Scott Hensley, a professor of microbiology at the University of Pennsylvania in Philadelphia, told *CNN*.

That finding may help explain a [flu outbreak](#) at the University of Michigan last month that affected more than 700 people. More than 26% of those who tested positive had been vaccinated—the same percentage as those who tested negative. That suggests the vaccine was not effective in preventing infection, *CNN* reported.

He said [flu viruses](#) constantly mutate and different variants can circulate at the same time. Changes in this mutated version of H3N2 help it dodge the antibodies the body makes in response to flu vaccines.

"Population immunity against [influenza viruses](#) is likely low since these viruses have not circulated widely during the COVID-19 pandemic," Hensley's team wrote. "Social distancing, mask-wearing, and decreases in international travel have likely contributed to reduced global circulation of influenza viruses. Once COVID-19-related restrictions are eased or lifted, it is possible that influenza viruses will circulate widely due to lack of infection-induced population immunity over the past two years."

However, Hensley said the changes in the virus probably won't protect it

against immune system T-cells, so this season's flu [vaccine](#) is still likely to prevent severe disease and death.

"Studies have clearly shown that seasonal influenza vaccines consistently prevent hospitalizations and deaths, even in years where there are large antigenic mismatches," Hensley and colleagues wrote in their report.

The study was posted on a preprint server online and has not been published in a peer-reviewed journal.

The flu kills anywhere between 12,000 and 52,000 people a year, depending on the flu season, and puts as many as 700,000 people into the hospital, according to the [CDC](#).

**More information:** Visit the U.S. Centers for Disease Control and Prevention for more on the [flu](#).

Marcus J. Bolton et al, Antigenic and virological properties of an H3N2 variant that will likely dominate the 2021-2022 Northern Hemisphere influenza season, (2021). [DOI: 10.1101/2021.12.15.21267857](https://doi.org/10.1101/2021.12.15.21267857)

Copyright © 2021 [HealthDay](#). All rights reserved.

Citation: Flu vaccine may not protect against main flu strain: study (2021, December 17) retrieved 3 May 2024 from <https://medicalxpress.com/news/2021-12-flu-vaccine-main-strain.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.