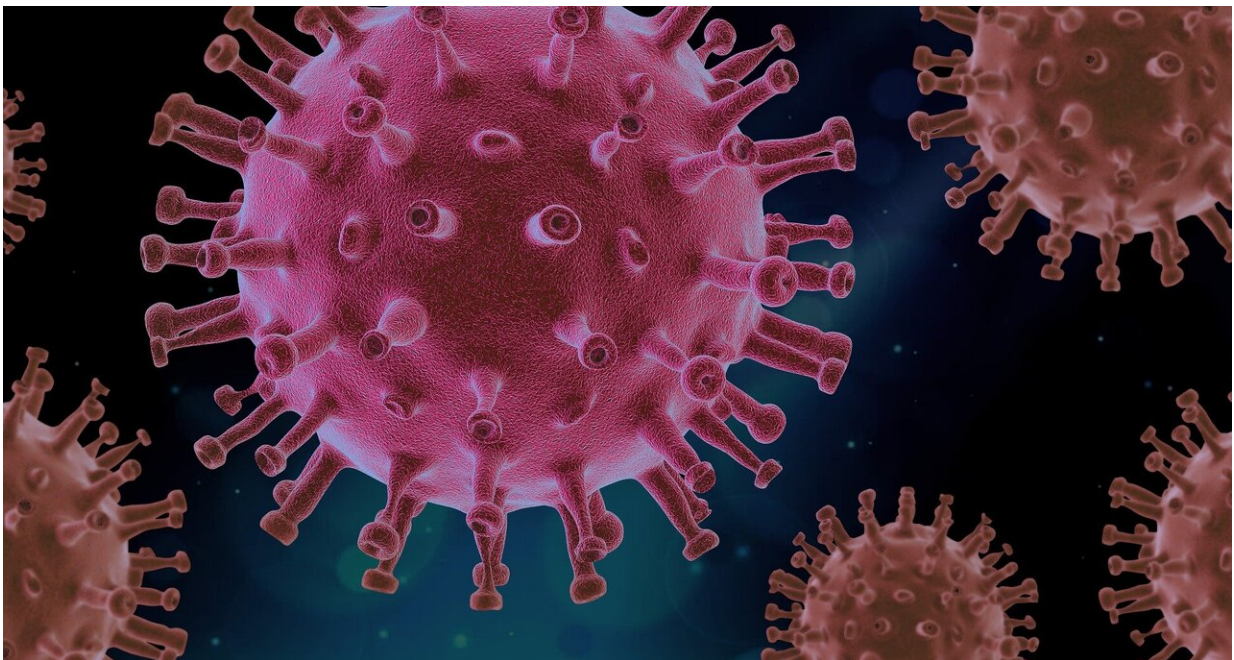


# Flu jab protects against some of the severe effects of COVID-19, including ICU admissions, sepsis and strokes

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The flu vaccine may provide vital protection against COVID-19, new research being presented at the European Congress of Clinical Microbiology & Infectious Diseases (ECCMID), held online this year, concludes.

An analysis of patient data from around the world strongly suggests that the [annual flu shot](#) reduces the risk of stroke, sepsis and DVT in patients with COVID-19. Patients with COVID-19 who had been vaccinated against flu were also less likely to visit the [emergency department](#) and be admitted to the intensive care unit (ICU).

Immunising the world against COVID-19 is a daunting challenge and, although production and distribution of vaccines increases daily, some countries are not expected to vaccinate large numbers of their population until the start of 2023.

Recently, several modestly-sized studies suggested that the flu [vaccine](#) may provide protection against COVID-19—meaning it could be a valuable weapon in the fight to halt the pandemic.

Ms Susan Taghioff, of the University of Miami Miller School of Medicine, Miami, U.S., and colleagues carried out a retrospective analysis of data on tens of thousands of patients from around the world to find out more.

In the largest study of its kind, the team screened de-identified [electronic health records](#) held on the TriNetX research database of more than 70 million patients to identify two groups of 37,377 patients.

The two groups were matched for factors that could affect their risk of severe COVID-19, including age, gender, ethnicity, smoking and health problems such as diabetes, obesity and [chronic obstructive pulmonary disease](#).

Members of the first group had received the flu vaccine between two weeks and six months before being diagnosed with COVID-19. Those in the second group also had COVID-19 but were not vaccinated against flu. The study was conducted using patients from countries including the

US, UK, Germany, Italy, Israel and Singapore.

The incidence of 15 adverse outcomes (sepsis; strokes; deep vein thrombosis or DVT; pulmonary embolism; [acute respiratory failure](#); [acute respiratory distress syndrome](#); arthralgia or joint pain; renal failure; anorexia; heart attack; pneumonia; emergency department visits; hospital admission; ICU admission; and death) within 120 days of testing positive for COVID-19 was then compared between the two groups.

The analysis revealed that those who had not had the flu jab were significantly more likely (up to 20% more likely) to have been admitted to ICU.

They were also significantly more likely to visit the Emergency Department (up to 58% more likely), to develop sepsis (up to 45% more likely), to have a stroke (up to 58% more likely) and a DVT (up to 40% more likely). The risk of death was not reduced.

It isn't known exactly how the flu jab provides protection against COVID-19 but most theories centre around it boosting the innate immune system—"general" defences we are born with that are not tailored to any particular illness.

The study authors say their results strongly suggest that the flu vaccine protects against several severe effects of COVID-19. They add that more research is needed to prove and better understand the possible link but, in the future, the flu shot could be used to help provide increased protection in countries where the COVID-19 vaccine is in short supply.

Dr. Devinder Singh, the study's senior author and a professor of plastic surgery at the University of Miami Miller School of Medicine, says: "Only a small fraction of the world has been fully vaccinated against COVID-19 to date and, with all the devastation that has occurred due to

the pandemic, the [global community](#) still needs to find solutions to reduce morbidity and mortality.

"Having access to real-time data of millions of patients is a powerful research tool. Together with asking important questions it has allowed my team to observe an association between the [flu vaccine](#) and lower morbidity in COVID-19 patients.

"This finding is particularly significant because the pandemic is straining resources in many parts of the world. Therefore, our research—if validated by prospective randomised clinical trials—has the potential to reduce the worldwide burden of disease."

Ms Taghioff adds: "Influenza vaccination may even benefit individuals hesitant to receive a COVID-19 vaccine due to the newness of the technology.

"Despite this, the influenza vaccine is by no means a replacement for the COVID-19 vaccine and we advocate for everyone to receive their COVID-19 vaccine if able to.

"Continued promotion of the influenza vaccine also has the potential help the global population avoid a possible 'twindemic' - a simultaneous outbreak of both influenza and coronavirus.

"Regardless of the degree of protection afforded by the [influenza vaccine](#) against adverse outcomes associated with COVID-19, simply being able to conserve global healthcare resources by keeping the number of influenza cases under control is reason enough to champion continued efforts to promote influenza vaccination."

Provided by European Society of Clinical Microbiology and Infectious

## Diseases

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