Flu Vaccination Improved Surgical Outcomes for COVID+ Patients

Researchers at UHealth — University of Miami Health System and the University of Miami Miller School of Medicine have found that influenza vaccinations reduced surgical complications for patients with COVID-19. This large, retrospective study showed flu shots reduced the risks of sepsis, infections, deep vein thrombosis (blood clots), heart attacks and other issues. The study was published in the journal *PLOS ONE*.

A study found that flu shots reduced surgical complications for patients with COVID-19.

“SARS-CoV-2-positive surgical patients who received the influenza vaccine, between six months and two weeks before being diagnosed with SARS-CoV-2, experienced significantly decreased risks of sepsis, acute myocardial infarction, surgical site infections and death,” said Devinder Singh, M.D., chief and program director of the Division of Plastic Surgery, professor of clinical surgery and senior author on the study. “This highlights the flu vaccine’s potential protective effects against SARS-CoV-2.”

These results are part of a growing body of evidence showing that flu vaccinations can improve medical and surgical outcomes for patients with COVID-19. In 2021, the research
team published a retrospective study that showed flu vaccinations decreased the risk of sepsis and stroke up to 120 days after a positive SARS-CoV-2 test. Intrigued, the team posed the same question for surgical patients.

Devinder Singh, M.D.

In the study, the investigators examined de-identified medical records from more than 43,000 patients who underwent surgery between January 2020 and January 2021. The active cohort received an influenza vaccine between two weeks and six months before surgery, while patients in the control group were not vaccinated. The team assessed post-operative complications 30, 60, 90 and 120 days after surgery.

The researchers also determined how many surgery patients with COVID would need vaccination to prevent any single complication within 120 days of their procedure. They found 223 vaccinated patients would prevent one sepsis; 250 would prevent an acute heart attack and 883 would prevent a death.

Further Research Will Identify Benefits Mechanisms

While the researchers did not examine the mechanisms by which flu vaccination protects COVID-positive patients from surgical complications, they believe the vaccine stimulates both innate and adaptive immune responses, which may slow viral replication. They expect continuing research to ultimately identify the precise mechanisms associated with these benefits.
The authors note this is a retrospective study and should be validated prospectively. However, given the known safety and potential protective impacts of flu vaccinations on COVID-positive surgical patients, they recommend that surgeons and patients discuss this option before a procedure.

These findings could also support better care in regions that lack easy access to COVID vaccines or for patients who are resistant to novel vaccines.

“Influenza vaccination is a more well-accepted and accessible option for the global community,” said Susan Taghioff, M.D., first author on the study. “Its low cost and predictable side effects make it a valuable option for patients who lack access to COVID-19 vaccines and may also benefit people who are at high-risk for surgical mortality.”