

# Flu vaccine shows promise for reducing risk of influenza-associated atrial fibrillation

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Influenza is significantly associated with an increased risk of new-onset atrial fibrillation, which could be reduced through influenza vaccination, according to new findings reported *HeartRhythm*.

Atrial fibrillation (AF) is a heart condition that causes an irregular and often abnormally fast heart rate and is the most common cardiac arrhythmia seen in clinical practice, accounting for frequent hospitalizations, hemodynamic abnormalities, and [blood clots](#). It is associated with a five-fold increased risk of stroke.

Researchers in Taiwan investigated whether [influenza infection](#) is a risk factor for AF and whether [influenza vaccination](#) could reduce the risk. "Although the precise mechanisms of AF are not well understood, accumulating evidence indicates that inflammation and the autonomic nervous system are involved in the development of AF," explained lead investigators Tze-Fan Chao, MD, and Su-Jung Chen, MD, of Taipei Veterans General Hospital, Taiwan.

The researchers identified over 11,000 patients with newly diagnosed AF from the Taiwan National Health Insurance Research Database records for 2000 to 2010. Each patient was matched with four control patients without AF who were enrolled on the same date, bringing the total number of patients in the study to approximately 57,000.

Patients who did not get influenza and had not been vaccinated served as a reference group. Data analysis revealed that patients diagnosed with an influenza infection and who had not been vaccinated had an 18% higher risk of AF than patients in the reference group. Patients who had been vaccinated and experienced influenza had a similar risk of AF to patients in the reference group. Influenza vaccination was consistently associated with a lower risk of AF in different groups of patients.

"According to the findings presented here, the possibility of AF should be kept in mind when patients with influenza infection complain of palpitations or experience ischemic stroke," noted the investigators. "Influenza vaccination should be encouraged for [patients](#), especially those who have a high risk of atrial fibrillation, to try to prevent the occurrence of [atrial fibrillation](#) and subsequent stroke. However, a further prospective study is necessary to confirm our findings."

"Although the flu vaccine is already recommended for many patient groups, this study suggests that there are even more potential public health benefits of the vaccine," commented Nishant Verma, MD, MPH, and Bradley P. Knight, MD, FHRS, of the Division of Cardiology, Department of Medicine at Northwestern University, Chicago, in an accompanying editorial. "The results of this study beg the question as to whether the acute treatment of the [influenza](#) infection itself, or addressing the inflammatory response associated with infection, may help prevent secondary episodes of AF. Beyond the prospective trial mentioned by the authors, we look forward to future studies into these and other areas that may help confirm and validate the observed findings."

**More information:** Ting-Yung Chan et al. The Association between Influenza Infection, Vaccination and Atrial Fibrillation: A Nationwide Case-Control Study, *Heart Rhythm* (2016). DOI: [10.1016/j.hrthm.2016.01.026](https://doi.org/10.1016/j.hrthm.2016.01.026)

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