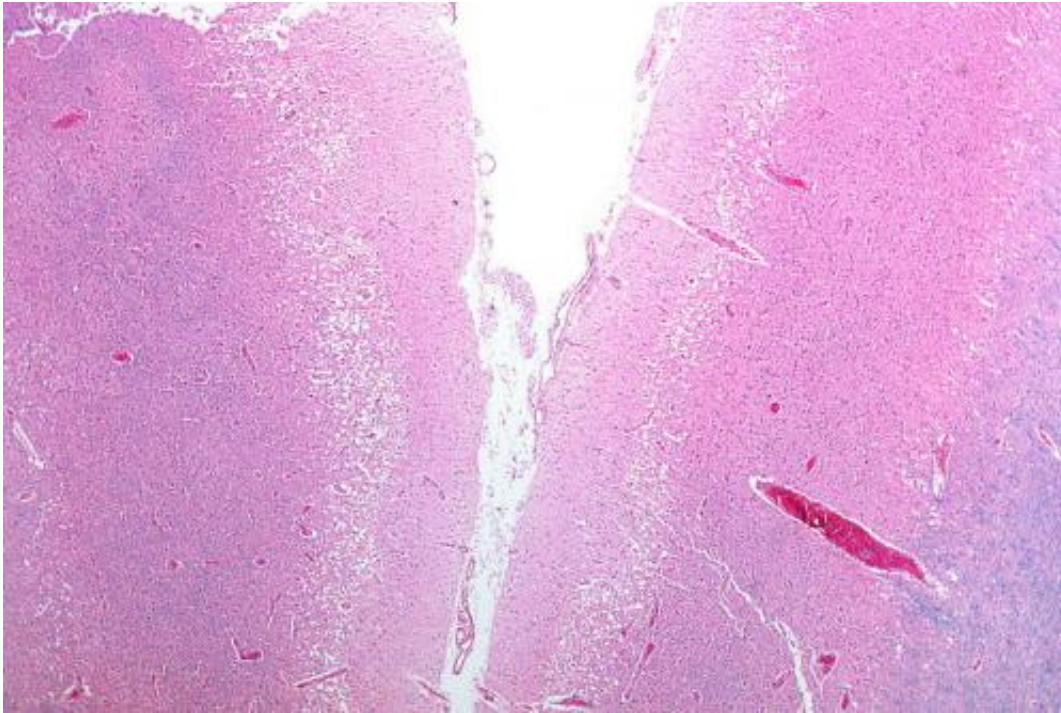


Flu jab reduces risk of stroke

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Micrograph showing cortical pseudolaminar necrosis, a finding seen in strokes on medical imaging and at autopsy. H&E-LFB stain. Credit: Nephron/Wikipedia

The risk of suffering a stroke is significantly reduced for up to two months after receiving a flu vaccine, a major new study has shown.

The research by the University of Lincoln, UK, funded by the National Institute of Health Research and published in the journal *Vaccine*, showed the chances of having a first [stroke](#) fell by around a fifth in the first 59 days after receiving the [flu jab](#).

Vaccines administered earlier in the [flu season](#) offered greater protection. In the first week after the jab, there were 36 per cent fewer cases of stroke than would be otherwise expected among a 'baseline' population, while the second week showed a 30 per cent reduction. The third and fourth weeks saw 24 per cent fewer stroke cases, dropping to 17 per cent between 29 days and 59 days after the jab.

It is thought that some cardiovascular diseases may be triggered by flu and that protection provided by the flu vaccine against the seasonal influenza virus could therefore also protect against these conditions, which include stroke. The antibody response against influenza lasts four to six months.

Researchers used a method known as a self-controlled case series to assess how having the flu vaccine affected the risk of stroke over time in almost 18,000 cases. Each case involved a patient aged 18 or over who had suffered a first stroke between 2001 and 2009, with just over half the cases being women. They compared how many strokes occurred up to 180 days after exposure to the effects of the flu vaccine with other times when the person would not have been protected by the vaccine.

Professor of Primary and Pre-Hospital Health Care, Niro Siriwardena, carried out the research with statisticians, Dr Zahid Asghar of Lincoln's Community and Health Research Unit and Dr Carol Coupland of The University of Nottingham.

"This is a significant finding, and if confirmed in a clinical trial could be one that can change lives," said Professor Siriwardena, who is also a GP.

"Our findings support current recommendations for the [flu vaccination](#) in people at high risk, but with the added effect of stroke prevention. Our study demonstrated that the earlier the vaccination is delivered the greater the linked reduction in stroke risk, so this should also encourage

early vaccination.

"We are now at the point of developing further studies into whether it could be recommended to extend vaccination to younger adults at risk of stroke. If a causative link between influenza vaccination and reduction in [stroke risk](#) is confirmed by experimental studies and if this leads to higher vaccinations rates, there would be significant benefits for patient and population health."

This latest study builds on previous results which linked the flu vaccine to a reduction in risk of stroke – as well as a reduced risk of suffering a first heart attack. The new self-controlled case study method allowed researchers to reduce the chances that the link arose for reasons other than the flu vaccine.

More information: "Influenza vaccination and risk of stroke: Self-controlled case-series study," Zahid Asghar, Carol Coupland, Niroshan Siriwardena [DOI: 10.1016/j.vaccine.2015.08.013](https://doi.org/10.1016/j.vaccine.2015.08.013)

Provided by University of Lincoln

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