

Flu vaccine reduces risk of dying for elderly intensive care patients

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It appears that an influenza vaccine does not just work when it comes to influenza. A new study shows that elderly people who have been admitted to an intensive care units have less risk of dying and of suffering a blood clot or bleeding in the brain if they have been vaccinated. And this is despite the fact that they are typically older, have more chronic diseases and take more medicine than those who have not

been vaccinated.

The study covers almost 90,000 surviving intensive care patients above the age of 65 during an eleven year period in Denmark. Only a few of them were admitted directly due to [influenza](#). However, regardless of the cause of the admission, for those who were vaccinated the risk of suffering a stroke—which is the collective name for bleeding and blood clots in the brain—was 16 percent lower. This group also has an eight percent [lower risk](#) of dying during the first year following their hospitalisation.

"Every year, 30,000 people are admitted to the intensive care units in Danish hospitals and we know that the first year is critical. Approximately three out of four survive the hospitalisation and are discharged from hospital. But even among the patients who are discharged, almost one in five die within the first year while many others suffer complications. Our study shows that there are fewer deaths and serious complications among the patients who have been vaccinated against influenza. So this supports the current recommendation that elderly people should be vaccinated," says Christian Fynbo Christiansen, clinical associate professor at Aarhus University Hospital and consultant at Aarhus University Hospital, Denmark.

Today, less than forty percent of elderly Europeans say yes to the vaccination.

"We can't say with one hundred percent certainty that the risk of a stroke and dying is lower solely because of the vaccine. But we can see that the elderly people who have been vaccinated do better in the event of critical illness. This suggests that it would be good if more [elderly people](#) received the vaccine. Not least because the vaccine is both safe and inexpensive," says Christian Fynbo Christiansen.

This is the first time that researchers have looked into the effect of the vaccine specifically on elderly critically ill patients. Other researchers have previously shown that the [influenza vaccine](#) lessens the risk of bacterial infections and heart attacks. However, the study shows that this is not the case for the elderly [intensive care patients](#).

"Surprisingly, the vaccine didn't reduce the number of pneumonia cases in our study. We had otherwise expect that it would, as some previous studies have shown that the vaccine has this effect on younger and healthy individuals. Neither was there any clear difference in the number of [blood clots](#) in the heart. This raises new research questions about what effect of the [vaccine](#) on the [immune system](#) and whether there were other differences between the patients," says Christian Fynbo Christiansen.

The study is a register-based cohort study that covers 89,818 patients who have survived hospitalisation in intensive care departments in Denmark during the period 2005-2015. Patients have been identified in the Danish Intensive Database along with associated information from other health registers.

More information: Christian Fynbo Christiansen et al, Influenza vaccination and 1-year risk of myocardial infarction, stroke, heart failure, pneumonia, and mortality among intensive care unit survivors aged 65 years or older: a nationwide population-based cohort study, *Intensive Care Medicine* (2019). [DOI: 10.1007/s00134-019-05648-4](https://doi.org/10.1007/s00134-019-05648-4)

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