

# Pneumonia vaccine does not protect against heart attacks or strokes

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The pneumococcal pneumonia vaccination is not associated with a reduced risk of heart attacks or strokes, according to a Kaiser Permanente study published in the *Journal of the American Medical Association* that followed 84,170 men aged 45 to 69.

The five-year prospective cohort study provides new insights about the association between pneumococcal vaccination and heart attacks and strokes. While previous studies have shown that preventing influenza by vaccination reduces the risk of vascular events, the effect of pneumococcal polysaccharide vaccine on vascular events remains controversial, researchers said.

The [Centers for Disease Control and Prevention](#) recommends the pneumonia vaccine for people older than 65 years, for all adults with decreased disease-fighting ability, chronic illness, sickle cell disease, spleen problems, heart disease, lung disease, asthma, diabetes, alcoholism, [liver disease](#), or [kidney disease](#), and for people who smoke cigarettes.

In this study, researchers used electronic health records to link immunization records, health records and detailed lifestyle surveys from 84,170 ethnically diverse California men as part of the California Men's Health Study and followed them for an average of five years.

"Based on previous research findings, the general public and some clinicians may perceive that the pneumococcal vaccine might have the

effect of protecting against heart attack and stroke, but our study showed no such effect," said study lead author HungFu Tseng, PhD, MPH, a research scientist and epidemiologist with the Kaiser Permanente Department of Research and Evaluation in Pasadena. "People should continuously pursue other strategies to reduce their risk of heart attack and stroke."

Tseng suggested two methodological distinctions that may explain the difference between this study and the previous study that had suggested a heart-protective effect of the vaccine: The Kaiser Permanente study ascertained and adjusted in the analysis for confounding factors such as diet, disease history, and lifestyle patterns like cigarette smoking and physical activity level. The cohort design and the prospective ascertainment of relevant exposure factors from questionnaire data and electronic clinical records protected against selection bias and biases related to recall.

"While this study indicates the pneumococcal vaccine may not offer protection against [heart attack](#) or stroke, individuals who think this [vaccine](#) might be appropriate for them should discuss it with their health provider," said study co-author Stephen Van Den Eeden, PhD, a senior investigator with the Kaiser Permanente Division of Research in Oakland.

This is the latest in a series of Kaiser Permanente studies undertaken to better understand the protective effects of vaccines. Recent published studies found children of parents who refuse vaccines are nine times more likely to get chickenpox and 23 times more likely to get whooping cough compared to fully immunized children. An additional study published last year by Dr. Tseng found that herpes zoster, also known as shingles, is very rare among children who have been vaccinated against chicken pox.

**More information:** *JAMA*. 2010;303[17]:1699-1706.

Provided by Kaiser Permanente

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