

# Study challenges concerns on effectiveness of administering pneumococcal, shingles vaccines together

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Administering both the pneumococcal and the herpes zoster vaccines to patients during the same visit is beneficial and does not appear to compromise the protective effect of the zoster vaccine, according to a Kaiser Permanente study published today in the journal *Vaccine*.

The study's findings challenge information in the zoster [vaccine](#) manufacturer's package insert. This new information is important to patients who find it more convenient and less costly to receive both vaccines from their [health care providers](#) during the same visit.

A revision to the zoster vaccine package insert, approved in 2009, stated that the zoster vaccine and the pneumococcal vaccine should not be given together because such concurrent use reduced the ability of the zoster vaccine to generate an immune response.

"Our study found no evidence that receiving the zoster vaccine and pneumococcal vaccine on the same day would compromise the immune response necessary to protect against [herpes](#) zoster, also known as [shingles](#)," noted study lead author Hung Fu Tseng, PhD, MPH, a research scientist with the Kaiser Permanente Department of Research & Evaluation in Pasadena, Calif.

The study was conducted from Jan. 1, 2007, to June 30, 2010, starting from the date of receipt of the zoster vaccine for two groups of Kaiser

Permanente Southern California members, 60 years of age and older. The incidence of herpes zoster after vaccination with a zoster vaccine in the population receiving both vaccines on the same day was compared to that in the population receiving a pneumococcal vaccine from one year to 30 days before the zoster vaccine. Vaccinations and the incidence of herpes zoster cases were identified by electronic health records.

Included in the study were two groups or cohorts: 7,187 people who received both vaccines at the same time and 7,179 people who received the two vaccines at different times (nonconcurrently). There were 114 herpes zoster cases identified in the study: 56 cases in the concurrent group, and 58 cases in the nonconcurrent vaccination group. The study found no statistically significant difference in incidence of shingles between the two groups.

Dr. Tseng adds, "Ideally, when a new vaccine is introduced to the public, one should consider giving it at the same time as other vaccines to increase coverage levels and minimize administration costs, if there are no [immune response](#) issues or safety concerns."

According to the Centers for Disease Control and Prevention, pneumococcal polysaccharide vaccine protects against 23 types of pneumococcal bacteria, including those most likely to cause serious disease. Pneumococcal disease can result in long-term problems such as like brain damage, hearing loss and limb loss, and in some cases can be fatal. Most healthy adults who get the vaccine develop protection to most or all of these types within two to three weeks of getting the shot.

The risk of developing shingles during a lifetime is about 30 percent, and there are more than 1 million episodes of shingles every year in the United States. Shingles is a painful condition that can last months or years and can seriously impact quality of life. Less than 7 percent of the eligible U.S. population was vaccinated for herpes zoster by the end of

2008.

The CDC continues to recommend that the zoster vaccine and pneumococcal vaccine be administered at the same visit if the person is eligible for both vaccines.

The FDA approved the package label change in 2009 based on a research study by Merck that found antibody levels to the herpes zoster virus were lowered if the vaccine was administered concomitantly with pneumonia vaccine. However that study used the antibody level as the marker of protection, but it is the cell-mediated immunity against the herpes virus, instead of the antibody level that protects against the disease explained Dr. Tseng.

"This new study provides even stronger data because it relies on the measurement of the occurrence of disease rather than intermediate markers of immunity," Tseng said.

This study is the latest in a series of published Kaiser Permanente studies undertaken to better understand vaccine effectiveness and safety:

- A study of 300,000 people published in *JAMA* earlier this year by Dr. Tseng found that receiving the herpes zoster vaccine was associated with a 55 percent reduced risk of developing shingles.
- Another Tseng study published in *JAMA* last year found the pneumococcal pneumonia vaccination is not associated with a reduced risk of heart attacks or strokes.
- Another Kaiser Permanente study found the combination vaccine for measles, mumps, rubella and chickenpox (MMRV) is associated with double the risk of febrile seizures for 1- to 2-year-

old children compared to same-day administration of the separate vaccine for MMR (measles, mumps, rubella) and the varicella (V) vaccine for chickenpox.

- Other recent published Kaiser Permanente 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. A study published last year found that herpes zoster, also known as shingles, is very rare among children who have been vaccinated against chickenpox.

Provided by Kaiser Permanente

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