

Online-only:

Flu shots may be safe for kids with egg allergies, study shows

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Once considered off-limits to children with severe egg allergies, the egg-based flu vaccine can be safe for kids to receive, according to a recent University of Michigan study.

The study, published in the December issue of *Annals of Allergy, Asthma and Immunology*, found that children with severe egg allergies can safely receive a single dose of the flu vaccine. The study evaluated whether it was safe to administer the vaccine in a single or split dose, finding that none of the children in the study had an allergic reaction from the single dose.

The study was important because it was the first to focus solely on the severely allergic and to determine if there is a difference between taking a single dose or one dose in two steps, said study author Matthew Greenhawt, MD, MBA, MSc, FAAP, an assistant professor at the University of Michigan Medical School's Division of Allergy and Clinical Immunology.

"Though single dose administration had been recommended, there was no evidence (until now) in this group that this was safe," Greenhawt told *The Nation's Health*.

The study is one wave of a changing tide in vaccinating patients allergic to eggs.

Doctors have historically warned against the vaccination for people with egg allergies. But in 2011, a Centers for Disease Control and Prevention advisory committee said that some people with allergies could receive the flu vaccine. People who have only had a mild reaction to eggs may be able to receive the shot, the committee said, but they should be carefully monitored. The new study offers insights for those with severe allergies.

The flu hospitalizes about 20,000 children in the U.S. annually, according to CDC. Approximately 1.5 percent of U.S. children have some allergy to the egg protein ovalbumin but many outgrow it, said William Schaffner, MD, immediate past president of the National Foundation for Infectious Diseases and an APHA member.

The recent University of Michigan study, which tested 143 children from October 2010 through March 2012, could lead to more revised recommendations for vaccinating people with egg allergies, Schaffner said.

Schaffner said the study was unique in its approach in splitting the vaccine doses.

"That's never been recommended, but that is a practice we heard that's been going on, so they looked at that and said 'That's not necessary,'" Schaffner told *The Nation's Health*.

The study and others will be presented in February to CDC's Advisory Committee on Immunization Practices for its input, said Schaffner, a member of the committee's Influenza Work Group. He said he anticipates any

new positions about the vaccine could come in June and would make it easier for people with “even serious and documented histories of egg allergies” to receive the vaccine.

“This doesn’t affect a lot of people, but those people it affects, it affects a lot,” Schaffner said. “This should be wonderfully reassuring.”

As studies continue on the safety of receiving egg-based vaccines, alternatives have cropped up that take less time to mass-produce.

The Food and Drug Administration in November approved Flucelvax, a flu vaccine created from growing the flu virus in mammal cell lines instead of eggs. Whereas egg-based vaccines can take between six and nine months to produce, cell line-based flu vaccines could be frozen and produced in days or weeks in the event of a pandemic, according to an August 2010 report from a presidential advisory group.

In January, FDA approved Flublok, a vaccine created from an insect virus called baculovirus that uses hemagglutinin, the protein in the flu virus that attaches to healthy cells and makes people sick.

Schaffner said he has not seen any comparisons with the insect cell-based vaccine, but said mammal cell line-based vaccines are just as effective as egg-based ones.

Despite the new findings, people with egg allergies should still consult with their doctors before receiving an egg-based flu shot. Schaffner said he would not anticipate that every doctor would change her or his approach immediately when it comes to giving flu shots to patients with egg allergies.

“It takes a while for this to sink in,” Schaffner said.

For more information on the study, visit www.annallergy.org/article/S1081-1206%2812%2900681-3/fulltext.