## Influenza Vaccination of People with a History of Egg Allergy

The entire article is available at www.cdc.gov/mmwr/pdf/wk/mm6132.pdf, pages 613-618.

"Prevention and Control of Influenza with Vaccines: Recommendations of the ACIP-U.S., 2012–13 Influenza Season." *MMWR*, August 17, 2012/Vol. 61/No. 32, pages 613–618.

Severe allergic and anaphylactic reactions can occur in response to a number of influenza vaccine components, but such reactions are rare. All currently available influenza vaccines are prepared by means of inoculation of virus into chicken eggs. The use of influenza vaccines for persons with a history of egg allergy has been reviewed recently by ACIP (16). For the 2011–12 influenza season, ACIP recommended that persons with egg allergy who report only hives after egg exposure should receive TIV, with several additional safety measures, as described in this document. Recent examination of VAERS data indicated no disproportionate reporting of allergy or anaphylaxis after influenza vaccination during the 2011–12 season (21). For the 2012–13 influenza season, ACIP recommends the following:

- 1. Persons with a history of egg allergy who have experienced only hives after exposure to egg should receive influenza vaccine, with the following additional safety measures (Figure 2):
  - a) Because studies published to date involved use of TIV, TIV rather than LAIV should be used (22);
  - b) Vaccine should be administered by a health-care provider who is familiar with the potential manifestations of egg allergy; and
  - c) Vaccine recipients should be observed for at least 30 minutes for signs of a reaction after administration of each vaccine dose (22).

Other measures, such as dividing and administering the vaccine by a two-step approach and skin testing with vaccine, are not necessary (22).

- 2. Persons who report having had reactions to egg involving such symptoms as angioedema, respiratory distress, lightheadedness, or recurrent emesis; or who required epinephrine or another emergency medical intervention, particularly those that occurred immediately or within a short time (minutes to hours) after egg exposure, are more likely to have a serious systemic or anaphylactic reaction upon reexposure to egg proteins. Before receipt of vaccine, such persons should be referred to a physician with expertise in the management of allergic conditions for further risk assessment (Figure 2).
- 3. All vaccines should be administered in settings in which personnel and equipment for rapid recognition and treatment of anaphylaxis are available. ACIP recommends that all vaccination providers should be familiar with the office emergency plan (11).

## FIGURE 2

Recommendations regarding influenza vaccination for persons who report allergy to eggs – ACIP, United States, 2012–13 influenza season

Can the person eat lightly cooked egg (e.g., scrambled egg) without reaction?\*

YES

Administer vaccine per usual protocol.

NO.

After eating eggs or egg-containing foods, does the person experience ONLY hives?

 $\rightarrow$ 

Administer TIV.

Observe for reaction for at least 30 minutes after vaccination.



Does the person experience other symptoms such as

- Cardiovascular changes (e.g., hypotension)?
- Respiratory distress (e.g., wheezing)?
- Gastrointestinal (e.g., nausea/vomiting)?
- Reaction requiring epinephrine?
- Reaction requiring emergency medical attention?

 $\rightarrow$ 

Refer to a physician with expertise in management of allergic conditions for further evaluation.

ABBREVIATION

 $\mathsf{TIV} = \mathsf{trivalent} \; \mathsf{inactivated} \; \mathsf{vaccine}$ 

Persons with egg allergy might tolerate egg in baked products (e.g., bread or cake). Tolerance to egg-containing foods does not exclude the possibility of egg allergy.

- 4. Some persons who report allergy to egg might not be egg-allergic. Those who are able to eat lightly cooked egg (e.g., scrambled egg) without reaction are unlikely to be allergic. Egg-allergic persons might tolerate egg in baked products (e.g., bread or cake). Tolerance to egg-containing foods does not exclude the possibility of egg allergy (23). Egg allergy can be confirmed by a consistent medical history of adverse reactions to eggs and egg-containing foods, plus skin and/or blood testing for immunoglobulin E antibodies to egg proteins.
- 5. A previous severe allergic reaction to influenza vaccine, regardless of the component suspected to be responsible for the reaction, is a contraindication to future receipt of the vaccine.

## REFERENCES

NOTE: Reference numbers on this sheet are taken from the complete article found at www.cdc.gov/mmwr/pdf/wk/mm6132.pdf, pages 613–618.

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Technical content reviewed by the Centers for Disease Control and Prevention