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

- People with a history of egg allergy who have experienced only hives after exposure to egg should receive influenza vaccine. Because relatively few data are available for use of LAIV in this setting, inactivated influenza vaccine (IIV) or recombinant influenza vaccine (RIV) should be used. RIV is egg-free and may be used for people age 18 through 49 years who have no other contraindications. However, IIV (egg- or cell-culture based) also may be used, with the following additional safety measures (see figure in column to right)
  - a) Vaccine should be administered by a healthcare provider who is familiar with the potential manifestations of egg allergy; and
  - b) Vaccine recipients should be observed for at least 30 minutes for signs of a reaction after administration of each vaccine dose.1
- People 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, may receive RIV, if they are age 18 through 49 years and there are no other contraindications. If RIV is not available or the recipient is not within the indicated age range, IIV should be administered by a physician with experience in the recognition and management of severe allergic conditions (see figure in column to right).
- 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. <sup>2</sup>
- People 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.<sup>3</sup> 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 directed against egg proteins.
- For people who have no known history of exposure to egg, but who are suspected of being egg-allergic on the basis of previously performed allergy testing, consultation with a physician with expertise in the management of allergic conditions should be obtained before vaccination (see figure in column to right). Alternatively, RIV may be administered if the recipient is age 18 through 49 years.
- 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.

## **ABBREVIATIONS**

LAIV = Live Attenuated Influenza Vaccine IIV = Inactivated Influenza Vaccine RIV = Recombinant Influenza Vaccine, Trivalent

Recommendations regarding influenza vaccination of persons who report allergy to eggs: ACIP, United States, 2014-15 influenza season.

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



Administer vaccine per usual protocol.



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



Administer RIV (if patient is age 18 through 49 years); or administer IIV to any patient for whom IIV is indicated and observe for reaction for at least 30 minutes after vaccination.



After eating eggs or eggcontaining foods, does the person experience other symptoms such as

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

Administer RIV (if patient is age 18 through 49 years) or, if RIV is not available, or patient is younger than age 18 years or older than age 49 years, IIV should be administered by a physician with experience in the recognition and management of severe allergic conditions. Observe for reaction for at least 30 minutes after vaccination.

\* People 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. For people who have no known history of exposure to egg, but who are suspected of being egg-allergic on the basis of previously performed allergy testing, consultation with a physician with expertise in the management of allergic conditions should be obtained prior to vaccination. Alternatively, RIV may be administered if the recipient is age 18 through 49 years.

## **REFERENCES**

- 1. Kelso JM, Greenhawt MJ, Li JT, Niclas RA, Bernstein DI, Blessing-Moore J, et al. Adverse reactions to vaccines practice parameter 2012 update. J Clin All Immunol. 2012 Jul;130(1):25-43.
- CDC. General recommendations on immunization: recommendations of the ACIP. MMWR 2011;60(No. RR-2).
- 3. Erlewyn-Lajeunesse M, Brathwaite N, Lucas JS, Warner JO. Recommendations for the administration of influenza vaccine in children allergic to egg. BMJ. 2009;339:b3680.

Adapted from CDC. "Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP)-United States, 2014–2015 Influenza Season" at www.cdc.gov/mmwr/pdf/wk/ mm6332.pdf, pages 691-7.