

Use of influenza vaccines in children with an egg allergy

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ABSTRACT

Children are at increased risk of morbidity from influenza. Influenza vaccines are grown in eggs, leading to a minute amount of egg protein in their composition. Recent research and new practice parameters spurred by the 2009 global influenza pandemic have challenged the need to withhold influenza vaccine from patients with an egg allergy. The available data suggest that anaphylaxis from influenza vaccines is exceptionally rare, even in patients with an egg allergy. Reported allergic reactions to trivalent inactivated influenza vaccine and pH1N1 influenza vaccines have been rare; when reactions occurred, they have not caused anaphylaxis. This position statement reviews the available evidence on influenza vaccine/egg allergy-related anaphylaxis, and recommends protocols to safely administer the trivalent inactivated influenza vaccine in lower- and higher-risk children with an egg allergy.

Key Words: *Anaphylaxis; Egg allergy; Influenza vaccine*

RECOMMENDATIONS

- The diagnosis of egg allergy should be made in consultation with a clinician with knowledge in clinical allergy.
- Influenza vaccine skin testing is NOT routinely recommended because it is not predictive of vaccine tolerance.
- After obtaining informed consent of the risks/benefits of the influenza vaccine, patients with an egg allergy who are at HIGHER RISK (see the full-text version) should:
 - Be given influenza vaccine in a setting where there is the equipment and ability to emergently manage a patient with anaphylaxis or a severe reaction.
 - Be given trivalent inactivated influenza vaccine (TIV), grown in hen's eggs but having the lowest possible ovalbumin content. This content should be less than 1.2 µg/mL.
 - TIV should be given in a two-dose 10%:90% protocol:
 1. 10% of the total dose should be given followed by an observation period of 30 min.
 2. If the patient tolerated the 10% dose, then the remaining 90% of the TIV vaccine should be given, followed by an observation period of 60 min.
 - Children who tolerate the split dose and who require a second dose that season (first time receiving influenza vaccine) can receive the next dose in one injection.
 - Given the potential variability of ovalbumin content in the influenza vaccine from year to year, until there are further data on the risk of anaphylaxis from the subsequent season's influenza vaccine, children with egg allergies who are at HIGHER RISK, but who tolerated the split dose, should receive the next year's influenza vaccine in the same split dose (10%:90%).
- After informed consent of the risks/benefits of the influenza vaccine has been obtained, patients with an egg allergy who are at LOWER RISK (see the full-text version) should:
 - Be given influenza vaccine in a setting equipped to manage anaphylaxis as per the Canadian Immunization Guide.
 - Be given TIV in a one-dose protocol, followed by an observation period of 60 min.
- If a child has had a SERIOUS reaction to an influenza vaccine in the past, the decision to immunize with influenza vaccines should be made in consultation with a clinician with knowledge in clinical allergy.

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