Safety Issues Applicable to Influenza Vaccines

1. Egg Allergic Individuals

Since the 2013/14 influenza season, British Columbia guidelines have allowed for the immunization of egg allergic individuals (including those who have experienced anaphylaxis following egg ingestion) with inactivated influenza vaccine, in any setting, following standard vaccine administration practices. These changes were based on recommendations issued by the US Joint Task Force on Practice Parameters (2013) and were reflected in the SPECIAL CONSIDERATIONS section of each of the inactivated influenza vaccine product pages for the 2013/14 season.[A] As of the 2014/15 statement, NACI indicated that egg allergic individuals, including those who have experienced anaphylaxis following egg ingestion, can be immunized with a full dose of inactivated influenza vaccine (trivalent and quadrivalent) according to standard practices. This recommendation is supported by accumulating data on the safe immunization of these individuals using inactivated influenza vaccines.[B, C]

As per the NACI Statement on Seasonal Influenza Vaccine for 2016-2017: Addendum-LAIV Use in Egg Allergic Individuals, LAIV can be safely administered to egg allergic individuals, including those who have experienced anaphylaxis following egg ingestion, according to standard practices. This recommendation is supported by recent studies that assessed the safety of LAIV in egg allergic individuals.[D, E, F]

2. Oculo-Respiratory Syndrome (ORS)

ORS, defined as the onset of bilateral red eyes and/or respiratory symptoms (cough, wheeze, chest tightness, difficulty breathing, difficulty swallowing, hoarseness, or sore throat) and/or facial swelling occurring within 24 hours of influenza immunization, was reported following receipt of trivalent inactivated influenza vaccine (TIIV) during the 2000/01 influenza season. Since this time, fewer cases have been reported. Although the pathophysiologic mechanism underlying ORS remains unknown, it is considered distinct from an IgE-mediated allergic response.

Those who have experienced ORS (including manifestations such as bilateral red eyes, cough, sore throat, hoarseness and facial swelling) but without lower respiratory tract symptoms, may be safely immunized with influenza vaccine. Those who experienced lower respiratory symptoms (severe ORS) or those unsure if the prior episode was ORS or an IgE-mediated hypersensitivity reaction, should be referred for an expert consultation prior to immunization with influenza vaccine.

Persons who have a recurrence of ORS upon revaccination do not necessarily experience further episodes with future vaccinations. When revaccinating those who have previously experienced ORS, available data do not suggest a preference for one product over another. For further details on ORS, consult the Canadian Immunization Guide and CCDR Volume 31 at http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/05vol31/dr3121a-eng.php.

[A] Kelso JM, Greenhawt MJ, Li JT. Joint Task Force on Practice Parameters. Update on influenza vaccination of egg allergic patients. Ann Allergy Asthma Immunol. 2013 Oct;111(4):301-302. This updates the earlier published guideline: Kelso JM, Greenhawt MJ, et al. Adverse reactions to vaccines practice parameter 2012 update. J Allergy Clin Immunol. 2012;130:25-43.

[B] Des Roches A, Paradis L, Gagnon R, et al. Egg-allergic patients can be safely vaccinated against influenza. J Allergy Clin Immunol. 2012;130(5):1213-6.

[C] Greenhawt MJ, Spergel JM, Rank MA, et al. Safe administration of the seasonal trivalent influenza vaccine to children with severe egg allergy. Annals of Allergy, Asthma and Immunology. 2012;109(6):426-30.

[D] Des Roches A, Saaman K, Graham F, et al. Safe vaccination of patients with egg allergy by using live attenuated influenza vaccine. J Allergy Clin Immunol Pract. 2015;3(1):138-9.

[E] Turner PJ, Southern J, Andrews NJ, et al. Safety of live attenuated influenza vaccine in atopic children with egg allergy. J Allergy Clin Immunol. 2015;136(2):376-81.

[F] Turner PJ, Southern J, Andrews NJ, et al. Safety of live attenuated influenza vaccine in young people with egg allergy. BMJ. 2015;351:h6291