

Immunisation of egg-allergic children

General Advice

We recommend that all children are fully immunised to protect them from serious infections. Children with egg allergy need to take special precautions with yellow fever vaccine and some influenza vaccines but otherwise they should be immunised (vaccinated) in the normal way. Allergic reactions to vaccines are extremely rare.

Occasionally it is felt to be sensible to have some immunisations in a hospital setting. This is considered if children have had a very severe anaphylactic reaction involving significant breathing problems. These children should already be under the care of the allergy team and their case can be discussed individually. Children who have had an allergic reaction to a previous dose of vaccine will also need immunisation in hospital.

MMR – measles, mumps and rubella

The MMR vaccine has an excellent safety record in egg-allergic children. It can be given to all egg-allergic children as normal in primary care. This is the current advice of specialist medical organisations such as the British Society for Allergy and Clinical Immunology and the American Academy of Pediatrics.

The MMR vaccine is not made with egg (it is grown on cultured-embryo-chick cells) and is essentially free of hen's egg protein. When traces of egg protein are found, the protein is highly processed and the concentrations are too low to represent a risk.

Influenza (Flu)

Many influenza vaccines contain very small amounts of egg protein. Different flu vaccines are produced each year depending on the type of flu virus which is most common that year.

Nasal Influenza Vaccine (Fluenz[®]) can safely be given to children with egg allergy in primary care. The only exception would be children whose reaction to egg was severe enough to require intensive care. Nasal flu vaccine is now being offered routinely to all children age 2-10 and over future years to other age-groups as well. Children aged 2 years up to 18yrs at high risk of flu who have an egg allergy can be given nasal flu vaccine even if they are not in the routine group

Injectable Flu vaccines: For those children between 6 months and 2 years old, children who cannot have nasal flu vaccine for other reasons, and for people over 18yrs there are injectable influenza vaccines. The egg protein content of these varies but vaccines classed as very low egg protein (<0.12micrograms per ml) can be given to those with mild egg allergy safely in general practice even if the person also has mild asthma. Those with severe egg allergy or severe asthma can have the vaccination in hospital.

A list of the vaccines and their egg content is published each year in the online 'Green Book' which is the vaccination handbook used by all doctors in the UK. Some years there are egg-protein free vaccines available, these vaccines can be safely given to egg allergic people irrespective of the type of reaction they have had to egg.

Yellow Fever

Yellow fever vaccine contains egg protein. It can be given if the egg allergy is resolving and cooked egg is tolerated in the diet. Egg allergic people who cannot tolerate any egg should generally not be given yellow fever vaccine. If travelling to countries requiring a yellow fever certificate a letter from your doctor stating the reason for not having the vaccine can be obtained. If the risk from travel to a country with the disease is felt to be high, such as prolonged stays in areas where yellow fever is found, this can be discussed in more detail in the allergy clinic or at a specialist travel clinic.

References

1. BSACI Recommendations for Combined Measles, Mumps and Rubella (MMR) Vaccination in Egg-Allergic children 2007
2. The Red Book: Report of the Committee on Infectious Diseases. American Academy of Pediatrics 2015/ 2018
3. National Travel Health Network and Centre: <http://travelhealthpro.org.uk/> for advice about Yellow fever
4. Immunisation against infectious disease Influenza - 'The Green book' Department of Health 2019 <https://www.gov.uk/government/publications/influenza-the-green-book-chapter-19>

For further support with immunising children with allergies, email the RUH Allergy team on ruh-tr.paediatricallergy@nhs.net

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