Hens’ egg (HE) allergy is common in infancy and childhood (±2%), but the majority of children become clinically tolerant by the time they start school. Of concern is the whether the recommended immunisation schedule should be followed in children with a possible/proven HE allergy. The overall incidence of anaphylaxis from all vaccines is less than 1 per million doses. Most cases of anaphylaxis occur in HE-allergic children.

In children with a suspected egg allergy, 5 ml of clotted blood can be tested, to assess the risk of an allergic reaction (see Table I). There are potential allergens in vaccines other than egg (see Table II). Vaccines that are of concern for potential allergens in vaccines other than egg risk of allergic reaction (see Table I). There are instances hypersensitivity to the gelatine or neomycin component of the vaccine was responsible for the adverse reactions. The vaccine with the lowest ovalbumin level should be used, although there is no evidence to show that ovalbumin is the antigen responsible for the adverse reactions.

Several studies have reported uneventful MMR immunisation in egg-allergic people and in those with positive MMR skin tests.

Rabies vaccine
Rabies vaccine may contain egg protein. There are 3 types of rabies vaccine: those produced in chick embryo cell culture, which may contain egg protein, and human diploid cell and purified verocell vaccine, both of which do not contain any egg protein. Although the low amount of egg protein in rabies vaccine produced in purified chick embryo culture is very unlikely to cause a reaction, there are no good safety data, thus the recommendation is to use either the human diploid cell or verocell vaccine in patients with egg allergy.

Influenza vaccine
Influenza vaccines contain only very small amounts of egg protein. Amounts vary from manufacturer to manufacturer and from year to year. Most guidelines recommend that egg-allergic individuals not be routinely vaccinated with influenza vaccine. If such a person is at risk of the complications of influenza, they should be seen by an allergy specialist, as vaccination is often possible after careful evaluation.

The vaccine with the lowest ovalbumin level should be used, although there is no evidence to show that ovalbumin is the antigen responsible for the adverse reactions.

The yellow fever vaccine should not be routinely administered and referral to an allergy specialist is recommended, as vaccination might be possible after careful evaluation, skin testing and graded challenge or desensitisation.

Repeat immunisation with any vaccine is contraindicated in an individual with a previous anaphylactic reaction to that vaccine.

General
It is strongly recommended for any provider administering vaccinations, that proper resuscitative equipment is available in the clinic to manage potential anaphylaxis, and that all vaccinated individuals are observed for some time after vaccination.

Repeat immunisation with any vaccine is contraindicated in an individual with a previous anaphylactic reaction to that vaccine. Referral to an allergy specialist is recommended to determine which component of the vaccine was responsible for the allergic reaction.

Further reading available at www.cmej.org.za