

Influenza and children

Influenza Immunisation: use in children

Influenza vaccination recommendations vary between countries. The United States of America recommends annual vaccination for all children aged 6 months to 18 years.¹ Cost-benefit analysis to date identifies in particular vaccinating high-risk children as providing the greatest gains,² hence the current New Zealand strategy is to offer free immunisation to children with medical conditions leading to higher risk of severe outcomes. However, influenza infection rates are generally highest in children^{3,4} and healthy children are the major cause of the spread of influenza viruses in the community.^{5,6} Vaccination of healthy children aged 2-5 years can substantially reduce influenza-like illness and related costs in both the children themselves and their families.⁵

The United Kingdom has just announced a plan to vaccinate all children aged 2 – 17 years annually from 2014 with a live attenuated nasal spray influenza vaccine: this vaccine is expected to be more effective in children but this type of vaccine is not currently licensed or available in New Zealand.

New Zealand Current Strategy

Children aged 6 months to 9 years of age who are receiving the influenza vaccine for the first time should receive two doses four weeks apart, as they are likely to be immunologically naive and hence get better response from a two dose priming regime.⁷ Children who have received a previous influenza vaccine need only a single dose.

Age	Dose	Number of doses
6-35 months	0.25 mL	1 or 2*
3-8 years	0.5 mL	1 or 2*
>9 years	0.5 mL	1

***Two doses separated by at least four weeks if an influenza vaccine is being used for the first time.**

FLUARIX® is approved in New Zealand for use in children from 6 months of age.

FLUVAX® is approved for use in individuals aged 5 years of age and over but should be used with caution in children aged 5-8 years. The Ministry of Health recommends that FLUVAX® should only be given to individuals aged 9 years and over.

FLUVAX® should not be given to any children with a history of febrile convulsions.

Why is FLUVAX® not recommended for use in children under 9 years?

In 2010 there was an increase in reports of fever and febrile convulsions in children vaccinated with FLUVAX®. A comparative study undertaken in 2010-11 showed the rate of fever following FLUVAX® was greater than for other seasonal flu vaccines.⁸ The reasons for this are being intensively investigated, but may be due to a difference in the manufacturing process. As an extra precaution, the Ministry of Health recommends that children under 9 years should be vaccinated with FLUARIX®, although FLUVAX® is approved for use in children aged 5 years and over.

Use of paracetamol following immunisation

The routine prophylactic use of paracetamol to control fever either prior to or following vaccine administration is not recommended. Evidence shows that the immune response to some antigens can be reduced.⁹

The current recommendations are as follows:

- Do not use routine prophylactic paracetamol or other antipyretics pre or post vaccination in the absence of pain or significant discomfort
- Infants who are uncomfortable with fever should first be managed with appropriate removal of clothing and other cooling measures such as cool drinks or tepid sponging