Childhood immunisation

Guidance notes for professionals
2011/12 edition

immunisation

the safest way to protect our children

Consent

Informed consent – which can be either written or oral (depending on local Trust policy) – must be obtained and recorded in the notes at the time of each immunisation, after the child's fitness and suitability have been established.

It is important that the person giving consent is fully informed about the vaccine at the time they give consent. Written material is available to assist in this, but is not a substitute for an opportunity to discuss the issues with a health professional.

Consent is given by the person with parental responsibility; however, this person does not necessarily need to be present at the time the immunisation is given. Although the decision to immunise must be taken by the person with parental responsibility, they can arrange for someone else (eg grandparent or childminder) to bring the child to be immunised. You do not need consent in writing – if they have received all the relevant information and arranged for another person to bring the child, the circumstances indicate they have consented.

A child under 16 years may give consent provided he or she understands fully the benefits and risks involved. If a competent child consents to treatment, a parent cannot override that consent. Obviously they should be encouraged to involve the person with parental responsibility in the decision. Legally, a parent can consent if a competent child refuses.

General contraindications

All vaccines (Nos 1–2)

1. Acute illness, especially fever (>38°C). Postpone immunisation until recovered. (Minor illness without fever or systemic upset is not a contraindication).

2. A true anaphylactic reaction to a previous dose or any component of the vaccine. Severe local or general reaction to a preceding dose is no longer considered a contraindication.

Live vaccines only (Nos 3–8)

3. Children who are receiving high dose corticosteroids, orally or rectally, (eg prednisolone 2 mg/kg/day for more than a week). Live vaccines should not be given until at least three months after treatment has ceased.

4. Children who are receiving immunosuppressive treatment, including chemotherapy or radiotherapy. Live vaccines should not be given until at least six months after treatment has ceased.

5. Children who are immunosuppressed as a result of disease or who have an impaired immunological mechanism, eg hypogammaglobulinaemia.

6. Children with malignant conditions.

7. Pregnancy – live vaccines should not be given in pregnancy because of the theoretical possibility of harming the fetus, unless the risk from exposure to the disease outweighs this theoretical risk.

8. An interval of four weeks should normally be allowed between the administration of two live vaccines. If this is not possible, they should be given simultaneously in two different sites. Live vaccines should not be given within three months of receiving immunoglobulin.

Children with HIV infection, unless they have severe immunosupression, should be given all vaccines except BCG and yellow fever. Those with severe immunosupression should not receive any live vaccines.

Specific contraindications

DTaP/IPV/Hib	General contraindications Nos 1 and 2. The diphtheria, tetanus and polio containing vaccines may contain minuscule amounts of neomycin, streptomycin and polymixin B.
PCV	General contraindications Nos 1 and 2.
MenC	General contraindications Nos 1 and 2. A true anaphylactic reaction to a preceding dose would include tetanus, diphtheria, meningitis A and C, and Hib vaccine as they can contain the same component.
Hib/MenC	General contraindications Nos 1 and 2. The vaccine components include tetanus toxoid.
MMR	General contraindications Nos 1 to 8. A true anaphylactic reaction to neomycin or kanamycin. There is evidence that MMR can be given safely to children even when they have had an anaphylactic reaction to eggs. If there is concern, specialist advice should be sought – see inside back cover.

dTaP/IPV **DTaP/IPV**	General contraindications Nos 1 and 2. The diphtheria, tetanus and polio containing vaccines may contain minuscule amounts of neomycin, streptomycin and polymixin B.
HPV	General contraindications Nos 1 and 2.
Td/IPV	General contraindications Nos 1 and 2. The diphtheria, tetanus and polio containing vaccines may contain minuscule amounts of neomycin, streptomycin and polymixin B. Normally allow a 10 year interval between the fourth and fifth dose (if the fourth dose has been given late, this interval can be reduced by a few years). DO NOT OVER-BOOST – the five doses give protection for life unless there is a high risk injury, or travel to a high risk country.

Specific contraindications

False contraindications

THE FOLLOWING ARE NOT CONTRAINDICATIONS TO VACCINATION.
These children **SHOULD** be immunised.

Prematurity, low birth weight or low attained weight
Neonatal jaundice
Asthma, eczema or hay fever, either personally or in the family
Stable neurological conditions, eg cerebral palsy, Down’s syndrome
Family history of convulsions
Recent surgery, including tonsillectomy (nor is recent immunisation a contraindication to surgery)
Family history of adverse reactions following immunisation
Treatment with antibiotics or locally acting (topical or inhaled) steroids
Personal or family history of inflammatory bowel disease
‘Snuffly’ or ‘chesty’ children without pyrexia
Mother pregnant
Previous history of pertussis, meningococcal, measles, rubella or mumps infection
Chronic disease – immunisation is especially important in these children
Contact with an infectious disease
Over the age given in immunisation schedules (with the exception of the Hib vaccine and PCV – see point 5 on back cover)
Being breastfed
Severe local or general reaction (other than a true anaphylactic reaction) is no longer considered a contraindication.

Epilepsy is <u>not</u> a contraindication to any vaccination. In particular, children whose epilepsy is well controlled may receive pertussis vaccination. If in doubt, specialist advice may be obtained – see inside back cover.

Anaphylaxis

Anaphylactic reaction to vaccination is extremely rare (1:500,000 approximately).

A protocol for the management of anaphylaxis and an anaphylaxis pack must always be available whenever vaccines are given. This brief summary is not a substitute for a proper protocol.

Treatment

- Treat shock
- Maintain airway
- Adrenaline BP 1/1,000 (1mg/ml) by intramuscular injection

Age	Volume of adrenaline 1 in 1000
Under 6 months	0.15 ml*
6 months–6 years	0.15 ml*
6–12 years	0.3 ml*
Over 12 years	0.5 ml
These doses may be repeated several times if necessary, at 5 minute intervals according to blood pressure, pulse and respiratory function.	

*An appropriate syringe to measure these small volumes would need to be included in the pack available.

Site of administration

- There is general agreement that infants under one year should receive all vaccines in the anterolateral aspect of the thigh, since the deltoid muscle is not sufficiently developed. Where it is necessary to give more than one injection in the same limb, the sites should be at least 2.5cm apart and it should be recorded in the notes which vaccine was given at which site.

- Around the age of one, there is an element of choice between the thigh and the deltoid muscle.

- For older children and adults, the deltoid muscle is the preferred site.

- It is now firmly recommended that the buttock is NOT used for vaccinations at any age.

Needle size

For babies, infants and children, a 25mm, 23G(blue) or 25G(orange) needle is recommended. Only in pre-term or very small babies is a 16mm needle suitable for intramuscular injection.

Storage and handling

- Manufacturer's instructions for storage and reconstitution of vaccine must be observed.
- Different vaccines should not be mixed in the same syringe unless it is clearly indicated that they can be.
- Vaccines must be stored in an appropriate refrigerator between 2° and 8°C, not frozen. A fridge maximum/minimum thermometer should be used. Vaccines should not be stored in the fridge door.
- It is essential that reconstituted vaccines are used within the recommended period following reconstitution.
- Do not remove vaccines from a refrigerator until you are ready to use them.
- Do not expose vaccines to direct sunlight or place them near heat sources, eg radiators.
- Vaccines should be transported in an appropriate cold box.

Specialist advice

Further information

Immunisation is a vast subject. These notes are not comprehensive. Further information is available in the 'green book' – I*mmunisation Against Infectious Disease* – published by HMSO on behalf of the UK Health Departments. (These are the UK accepted immunisation guidelines). This is updated quite frequently so it is always best to check the online version at: www.dh.gov.uk/greenbook

Other useful sources of information on immunisation include the Public Health Agency website
www.publichealth.hscni.net
and the national immunisation website
www.dh.gov.uk/en/Publichealth/Immunisation

Specialist advice

For local specialist advice please contact:

Public Health Agency Duty Room
Public Health Agency
12–22 Linenhall Street
Belfast BT2 8BS
Tel: 028 9055 3994/7

Consultant Paediatricians

The following paediatricians can also provide expert advice and, for example, arrange immunisation in a hospital setting in the rare instances where this is required.

Dr P Jackson Belfast Health and Social Care Trust The Royal Belfast Hospital for Sick Children 180 Falls Road Belfast BT12 6BE Tel: 028 9063 4766	**Dr C Shepherd** Southern Health and Social Care Trust Craigavon Area Hospital 68 Lurgan Road Portadown BT63 5QQ Tel: 028 3861 2105
Dr J Nicholson Northern Health and Social Care Trust United Hospitals Trust Antrim Hospital 45 Bush Road Antrim BT41 2RL Tel: 028 9442 4504	**Dr G Mackin** Western Health and Social Care Trust Erne Hospital Enniskillen BT74 6AY Tel: 028 6635 2695
Dr D Walsh Northern Health and Social Care Trust Causeway Hospital 4 Newbridge Road Coleraine BT52 1TP Tel: 028 7034 6056	**Dr N Corrigan** Western Health and Social Care Trust Altnagelvin Area Hospital Glenshane Road Londonderry BT47 6SB Tel: 028 7134 5171

Recommended routine immunisation schedule for infants and children

When to immunise	Disease vaccine protects against	How it is given
2 months old	Diphtheria, tetanus, pertussis (whooping cough), polio and Hib Pneumococcal infection	One injection One injection
3 months old	Diphtheria, tetanus, pertussis, polio and Hib Meningitis C	One injection One injection
4 months old	Diphtheria, tetanus, pertussis, polio and Hib Meningitis C Pneumococcal infection	One injection One injection One injection
Just after their first birthday	Measles, mumps and rubella Pneumococcal infection Hib and meningitis C	One injection One injection One injection
3 years and 4 months old	Diphtheria, tetanus, pertussis and polio Measles, mumps and rubella	One injection One injection
Girls 12 to 13 years old	Cervical cancer caused by human papillomavirus	Three injections over six months
14 to 18 years old	Tetanus, diphtheria and polio	One injection

Note

1. Premature infants should begin immunisation two months after birth, the same time as full term infants.
2. No other booster doses are required during infancy, childhood or adolescence.
3. Children aged between 14 and 18 years should be offered MMR if they have not had at least two doses of MMR.
4. Teenagers being treated for tetanus-prone wounds, and who have received their fourth dose of tetanus vaccine approximately 10 years earlier, should be given the Td/IPV vaccine and the dose normally offered between 14 and 18 years omitted.
5. Hib is not licensed for use beyond 10 years of age and PCV is not routinely used for children over two years of age. Apart from these two, it is never too late to catch up with any of the other vaccines. Therefore, a child of any age should be offered all vaccines required to bring them up to date with the vaccine schedule. Children recommencing a course only need to complete it; they do not need to restart it, however long the gap has been.

HSC Public Health Agency

Department of Health, Social Services and Public Safety
www.dhsspsni.gov.uk

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