

Childhood immunisation

Guidance notes for professionals

“It is every child’s right to be protected against infectious diseases. No child should be denied immunisation without serious thought as to the consequences, both for the individual child and for the community.”

*Immunisation
against
infectious
diseases*



immunisation

the safest way to protect our children

Consent

Informed consent – which can be either written or oral – 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 ($>38^{\circ}\text{C}$). Postpone immunisation until recovered. (A cold without the child being acutely ill is not a contraindication).
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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, whether symptomatic or not, should be given all vaccines except BCG and yellow fever.

Consent/General contraindications

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.

<p>dTaP/IPV DtaP/IPV</p>	<p>General contraindications Nos 1 and 2. The diphtheria, tetanus and polio containing vaccines may contain minuscule amounts of neomycin, streptomycin and polymixin B.</p>
<p>Td/IPV</p>	<p>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).</p> <p>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.</p>

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)
Personal or family history of inflammatory bowel disease
Being breastfed
Severe local or general reaction (other than a true anaphylactic reaction) is no longer considered a contraindication.

Epilepsy is not 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).

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	0.05 ml
6 months-6 years	0.12 ml
6-12 years	0.25 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.

Please take particular note of the dosage for under 6 months, which is 0.05 ml not 0.5 ml. An appropriate syringe to measure these small volumes would need to be included in the pack available.

False contraindications/Anaphylaxis

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.
 - Over the age of one, there is an element of choice.
 - For older children and adults, the deltoid muscle is the preferred site.
 - Do not use the gluteal muscle for vaccination, as it is highly unlikely that the vaccine will reach the muscle, and this may result in poor immune response to the vaccine (this has been demonstrated with the hepatitis B vaccine). In addition, there is a risk of damage to underlying structures such as the sciatic nerve.
 - The deltoid muscle is also easier to access in most patients and results in less embarrassment for older children and adults.
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Storage and handling

- Manufacturer's instructions for storage and reconstitution of vaccine must be observed.
- Vaccines should not be mixed in the syringe unless it is clearly indicated that they can be.
- Vaccines must be stored in an appropriate refrigerator between 2° and 4°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.
- Any unused vaccine in multi dose containers must be discarded.
- 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 - *Immunisation Against Infectious Disease* - published by HMSO on behalf of the UK Health Departments. (These are the UK accepted immunisation guidelines). When changes are made, these will initially be updated on the website, so for the most up-to-date information visit www.dh.gov.uk/greenbook

Specialist advice

For local specialist advice please contact:

Consultants in Communicable Disease Control

**Dr M McCartney/
Dr P Donaghy**

Eastern Health and Social
Services Board
12-22 Linenhall Street
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Tel: 028 7186 0086

Consultant Paediatricians

EHSSB

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The Royal Belfast Hospital
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180 Falls Road
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Tel: 028 9063 4766

SHSSB

Dr C Shepherd

Craigavon Area Hospital
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Tel: 028 3861 2105

NHSSB

Dr J Nicholson

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45 Bush Road
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Tel: 028 9442 4504

Dr D Walsh

Causeway Health and
Social Services Trust
Causeway Hospital
4 Newbridge Road
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Tel: 028 7034 6056

WHSSB

Dr G Mackin

Sperrin Lakeland Health and
Social Services Trust
Erne Hospital
Enniskillen BT74 6AY
Tel: 028 6635 2695

Dr N Corrigan

Altnagelvin Health and Social
Services Trust
Altnagelvin Area Hospital
Glenshane Road
Londonderry BT47 6SB
Tel: 028 7134 5171

Other useful sources of information on immunisation include the DHSSPS website on www.dhsspsni.gov.uk/phealth and the national immunisation website on www.immunisation.nhs.uk and www.mmrthefacts.nhs.uk

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	One injection
	Pneumococcal infection	One injection
3 months old	Diphtheria, tetanus, pertussis, polio and Hib	One injection
	Meningitis C	One injection
4 months old	Diphtheria, tetanus, pertussis, polio and Hib	One injection
	Meningitis C	One injection
	Pneumococcal infection	One injection
12 months old	Hib and meningitis C	One injection
15 months old	Measles, mumps and rubella	One injection
	Pneumococcal infection	One injection
3 to 5 years old	Diphtheria, tetanus, pertussis and polio	One injection
	Measles, mumps and rubella	One injection
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.

