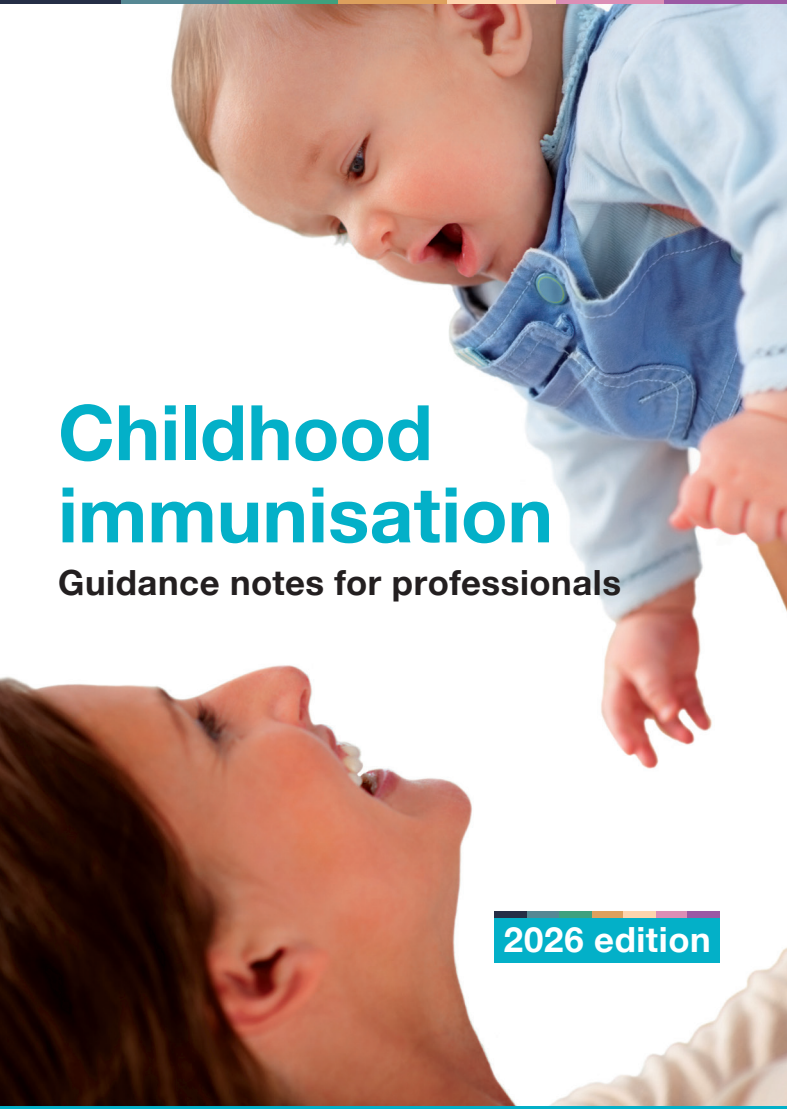


# Childhood immunisation

## Guidance notes for professionals

2026 edition

immunisation
the safest way to protect children

HSC Public Health Agency

# General contraindications

Almost all individuals can be safely vaccinated with all vaccines. In very few individuals, vaccination is contraindicated.

## All vaccines (No 1)

1. All vaccines are contraindicated in those who have had a true anaphylactic reaction to a previous dose or any component of the vaccine or latex if the bung contains latex. Severe local or general reaction to a preceding dose is no longer considered a contraindication.

## Live vaccines may be temporarily contraindicated in (Nos 2–8)

2. Children who are receiving high dose corticosteroids, orally or rectally, (eg prednisolone or its equivalent 2 mg/kg/day for more than a week or 1mg/kg/day for one month). Live vaccines should not be given until at least three months after treatment has ceased.
3. 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. For bone marrow transplant wait at least 12 months after immunosuppressive therapy ceased.
4. Children who are immunosuppressed as a result of disease or who have an impaired immunological mechanism, eg hypogammaglobulinaemia.
5. Children with malignant conditions.
6. Pregnancy – live vaccines should generally be delayed until after delivery, unless the risk from exposure to the disease outweighs the theoretical risk to the fetus.
7. Live vaccines should not be given within three months of receiving immunoglobulin.
8. Any infant who has been exposed to immunosuppressive biological therapy from the mother either in utero during pregnancy or via breastfeeding should not have any live vaccination for at least six months eg BCG and rotavirus cannot be given.

## Deferral of immunisation (No 9)

9. If an individual is acutely unwell, immunisation may be postponed until they have fully recovered. Minor illness without fever or systemic upset are not valid reasons to postpone immunisation.

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

**See Green Book chapter 6 for more details and seek advice from child's specialist clinician if clarification required.**

## Recommendations for giving more than one live vaccine

| Vaccine combinations | Recommendations |
|---|---|
| Yellow fever and MMR/ MMRV | A four week minimum interval period should be observed between the administration of these vaccines. Yellow fever and MMR/MMRV should not be administered on the same day. |
| Varicella (and zoster) vaccine and MMR/MMRV | If these vaccines are **not** administered on the same day, then a four week minimum interval should be observed between vaccines, unless protection against measles is urgently required. |
| Tuberculin skin testing (Mantoux) and MMR/ MMRV | MMR can be administered on the same day as tuberculin skin or IGRA testing. MMR can also be administered at any interval before or after an IGRA test.<br><br>If a tuberculin skin test has already been initiated, then MMR/MMRV should be delayed until the skin test has been read unless protection against measles is required urgently. If a child has had a recent MMR/ MMRV, and requires a tuberculin test, then a four week interval should be observed. |
| All currently used live vaccines (BCG, rotavirus, live attenuated influenza vaccine (LAIV), oral typhoid vaccine, yellow fever, varicella, zoster and MMR/MMRV) and tuberculin (Mantoux) skin testing. | Apart from those combinations listed above, these live vaccines can be administered at any time before or after each other. This includes tuberculin (Mantoux) skin testing. |

# Specific contraindications

| | |
|---|---|
| **DTaP/ IPV/Hib /HepB** | General contraindications Nos 1 and 9. The diphtheria, tetanus and polio containing vaccines may contain minuscule amounts of formaldehyde, neomycin and polymyxin B. |
| **Rotavirus** | General contraindications Nos 1 to 9. Acute vomiting and/or diarrhoea – postpone until recovered. Although the vaccine is a live attenuated virus, with the exception of severe combined immunodeficiency (SCID), the benefit from vaccination may exceed any risk in other forms of immunosuppression.<br>Contraindicated in:<br>• previous history of intussusception;<br>• 15 weeks and over – 1st dose;<br>• 24 weeks and over – 2nd dose;<br>• malformation of gastrointestinal tract that could predispose to intussusception;<br>• infants with severe SCID;<br>• rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency. |
| **MenB** | General contraindications Nos 1 and 9. |
| **PCV** | General contraindications Nos 1 and 9. |
| **MMR** | General contraindications Nos 1 to 9. A true anaphylactic reaction to neomycin, kanamycin or gelatine. All children with egg allergy should receive the MMR vaccination as a routine procedure in primary care. See advice on administration of live vaccines.<br>Under 6 months of age (where measles post-exposure prophylaxis is recommended). |
| **MMRV** | Same as MMR above except **under 9 months of age.** |
| **Hib/ MenC** | General contraindications Nos 1 and 9. The vaccine components include tetanus toxoid. |
| **dTaP/IPV DTaP/IPV** | General contraindications Nos 1 and 9. The diphtheria, tetanus and polio containing vaccines may contain minuscule amounts of formaldehyde, neomycin and polymyxin B. |
| **HPV** | General contraindications Nos 1, 6 and 9. |

| | |
|---|---|
| **Td/IPV** | General contraindications Nos 1 and 9. The diphtheria, tetanus and polio containing vaccines may contain minuscule amounts of formaldehyde, neomycin and polymyixin B. Normally allow a 10 year interval between the first booster (pre-school) and second booster (school leaver). If the first booster has been given late, this interval can be reduced by a few years.<br>The routine childhood schedule gives protection for life unless there is a high risk injury, or travel to a high risk country. |
| **MenACWY** | General contraindications Nos 1 and 9. |
| **Live attenuated flu vaccine (LAIV) nasal spray** | General contraindications Nos 1 to 7, and 9.<br>Children and infants under 2 years or adults aged 18 and over.<br>Severe anaphylaxis to egg requiring intensive care. If in clinical risk group should be referred to specialists for immunisation in hospital.<br>Salicylate therapy.<br>Required intensive care for asthma exacerbation or require regular oral steroids for maintenance of asthma control eg currently taking or have been prescribed oral steroids in the past 14 days unless LAIV is advised by their respiratory specialist.<br>Postpone LAIV administration for individuals:<br>- with heavy nasal congestion until congestion has resolved;<br>- with a history of active wheezing or increased use of bronchodilators in the past 72 hours. If condition has not improved after a further 72 hours, offer inactivated flu vaccine;<br>- who have received flu antiviral agents in the last 48 hours, until 48 hours after finishing the course of the treatment.<br>There is a theoretical risk of transmission of live vaccine virus to very severely immunosuppressed contacts (eg bone marrow transplant recipients requiring isolation) for 1-2 weeks post vaccination. If contact with a very severely immunosuppressed person is unavoidable, consider using appropriate inactivated vaccine.<br>See advice on administration of live vaccines. |

For more detailed information on contraindications, please refer to the SmPC (**www.medicines.org.uk/emc**) for each specific vaccine product.

## 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 |
| Personal history of febrile convulsions or epilepsy* |
| Close family history (parent or sibling) of febrile convulsions or epilepsy |
| 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 |
| Child's mother or someone in the household being pregnant |
| Previous history of pertussis, meningococcal, measles, rubella, varicella 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 Rotavirus vaccine, Hib vaccine, MenB and PCV – see back cover) |
| Being breastfed |
| Severe local or general reaction (other than a true anaphylactic reaction) is no longer considered a contraindication |
| G6PD deficiency |
| Food intolerances |
| Interferons and other non-immunosuppressing immunomodulators |

*The presence of a neurological condition is not a contraindication to immunisation but in a child with evidence of current neurological deterioration, deferral of vaccination may be considered to avoid incorrect attribution of any change in the underlying condition. The risk of such deferral should be balanced against the risk of the preventable infection, and vaccination should be promptly given once the diagnosis and/or the expected course of the condition becomes clear.

# Anaphylaxis

Anaphylactic reaction to vaccination is extremely rare (less than 1 in 1,000,000).

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<br>6 months–6 years<br>6–12 years<br>Over 12 years | 0.15 mL*<br>0.15 mL*<br>0.3 mL*<br>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.

- For the MenB vaccine, either thigh can now be used. If another vaccine needs to be administered in the same limb, then they must be given at least 2.5cm apart.

- The BCG vaccine must be administered strictly intradermal, normally into the lateral aspect of the left upper arm. No further immunisation should be given in the arm used for BCG immunisation for **at least three months** because of the risk of regional lymphadenitis.

- For individuals with a bleeding disorder, vaccines normally given by an IM route should be given by **deep subcutaneous injection** with pressure applied to the site for 10 minutes after the injection, to reduce the risk of bleeding.

  For queries on subcutaneous administration, please contact the RBHSC Children's Haematology Unit on 07808878103 or the RBHSC Haematology secretary office on 028 9615 1631.

- The sites at which each vaccine was given should be noted in the individual's health records.

## Needle size

For IM and SC injections, the needle needs to be sufficiently long to ensure that the vaccine is injected into the muscle or deep into subcutaneous tissue. 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. Vaccine fridge temperatures should be recorded ideally twice daily but at least once daily, preferably in the morning.
- 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 validated cold box.
- The expiry date of all vaccines in the fridge should be checked regularly and the shortest dated vaccines always used first. Ensure any expired vaccines are disposed of immediately using local disposal protocols.
- The above are summary points only. All sites where vaccines are stored should have a detailed cold chain policy.
- The PHA and SPPG have jointly produced regional guidance for General Practices for safe and effective handling and storage of vaccines and is available from:
  **pha.site/vaccinehandling**

# 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*. (These are the UK accepted immunisation guidelines). This is updated quite frequently so it is always best to check the online version at: **www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book**

For information on which immunisations are required for somone with an unknown or incomplete immunisation status refer to: **www.gov.uk/government/publications/vaccination-of-individuals-with-uncertain-or-incomplete-immunisation-status**

Other useful sources of information on immunisation include the Public Health Agency website (where all leaflets and translations can be downloaded) **pha.site/immunisationvaccine** and the national immunisation website **www.nhs.uk/vaccinations**

## Specialist advice

For local specialist advice please contact:

Public Health Agency Duty Room
12–22 Linenhall Street
Belfast BT2 8BS
Tel: 0300 555 0119

Email **pha.immunisation@hscni.net** for enquiries about immunisation leaflets, training and non-urgent immunisation issues.

## 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 Lynne Speirs or Dr Paul Moriarty**
**Belfast Health and Social Care Trust**
The Royal Belfast Hospital for Sick Children
180 Falls Road, Belfast BT12 6BE. Tel: 028 9615 6883 or 028 9504 6297

**Dr Lynne McFetridge**
**Northern Health and Social Care Trust**
Antrim Area Hospital, 45 Bush Road, Antrim BT41 2RL.
Tel: 028 9442 4509

**Dr Julie Lewis**
**Southern Health and Social Care Trust**
Daisy Hill Hospital, 5 Hospital Road, Newry BT35 8DR.
Tel: 028 3083 5000

**Dr Steven Karayiannis**
**Western Health and Social Care Trust**
Altnagelvin Area Hospital, Glenshane Road, Londonderry, BT47 6SB. Tel: 028 7134 5171

**Dr Karen Courtenay**
**South Eastern Health and Social Care Trust**
Ulster Hospital, Upper Newtownards Road, Dundonald BT16 1RH. Tel: 028 9048 4511

# 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. See **www.health-ni.gov.uk/publications/consent-guides-healthcare-professionals**

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.

# Routine childhood immunisation programme

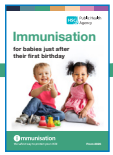
This schedule will be slightly different for babies born before 31 December 2024. Scan the QR code or visit **nidirect.gov.uk/childhood-immunisation** for more information.


**8 weeks old**
- 6-in-1
- Rotavirus
- MenB

**12 weeks old**
- 6-in-1
- Rotavirus
- MenB

**16 weeks old**
- 6-in-1
- Pneumococcal

**1 year old** (just after their first birthday)
- MMRV
- MenB
- Pneumococcal




**18 months**
- 6-in-1
- MMRV



**2+ years**
- Children's flu vaccine (yearly)


**3 years and 4 months**
- 4-in-1

**6-in-1** protects against diphtheria, tetanus, pertussis (whooping cough), polio, Hib and hepatitis B

**4-in-1** protects against diphtheria, tetanus, pertussis (whooping cough) and polio

**If your child has missed out on any of these vaccines, talk to your doctor, practice nurse or health visitor.**
For further information on these vaccinations, visit **pha.site/vaccinations**

## Notes

1. Premature infants should begin immunisation 8 weeks after birth, the same time as full-term infants.
2. Children aged between 14 and 18 years should be offered MMR if they have not had at least two doses of MMR.
3. Teenagers being treated for tetanus-prone wounds, and who have received their first booster (pre-school) 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.
4. Hib is not licensed for use beyond 10 years and PCV is not routinely used for children over 2 years of age. Rotavirus vaccine should not be given at 15 weeks or over for the first dose or 24 weeks or over for the second dose. MenB vaccine should not be given as part of the routine schedule after 2 years old. Apart from these, it is never too late to catch up with any of the other vaccines so ensure they are offered to children of any age that have missed out. However long the gap, children continuing a course only need to complete it not restart it.

HSC Public Health Agency

**Public Health Agency**
12-22 Linenhall Street, Belfast BT2 8BS.
Tel: 0300 555 0114 (local rate).
www.publichealth.hscni.net

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