



Public Health  
England



# Immunisations at one year of age

Features the immunisation schedule for babies born on or after the 1 August 2017



**i**mmunisation

the safest way to protect your child

Copies of these booklets are available from your clinic or doctor's surgery. See also [www.nhs.uk/vaccinations](http://www.nhs.uk/vaccinations)

This leaflet features the immunisation schedule for babies born on or after the 1 August 2017.

# Summary

## Which immunisations will my baby have at one year of age?

Your baby will have four injections at their one year vaccination visit including:

- their **MenB** booster immunisation
- a **Hib/MenC** immunisation against:
  - Hib (*Haemophilus influenzae* type b), and
  - meningococcal group C disease (MenC).
- a **PCV13** booster immunisation against:
  - pneumococcal disease caused by some types of pneumococcal bacteria.
- their first **MMR** immunisation against:
  - measles
  - mumps, and
  - rubella.



## **Immunisations at one year of age**

### **Protecting against Hib, meningococcal groups B and C disease, pneumococcal disease, measles, mumps and rubella**

#### **What is Hib?**

Hib is an infection that can lead to a number of major illnesses such as meningitis (inflammation of the lining of the brain), septicaemia (blood poisoning) and pneumonia, especially in young children.

#### **What is meningococcal disease?**

Meningococcal disease is a serious infection that can also cause meningitis and septicaemia in children and young people. Group B meningococcal bacteria (MenB) are currently responsible for most cases of meningococcal disease in the UK, while meningococcal group C (MenC) disease is now uncommon because most young children and teenagers are routinely vaccinated against MenC.

## **Which vaccines will be used?**

Your child will have a dose of a combined Hib/MenC vaccine as well as a booster dose of a MenB vaccine. These vaccines will be given in the muscle of the thigh or upper arm.

## **Why does my child need booster immunisations?**

Booster immunisations are given to increase the protection already given by the immunisations your baby has had earlier. The protection offered by the infant vaccinations can wear off after some time. A booster dose extends the period of protection into later life.

## **Will the Hib/MenC and MenB vaccines have any side effects?**

Your child may have redness, swelling or tenderness where they had the injection. About half the children who have the vaccine may become irritable, and some get a mild fever. You can get more information on this from your GP or health visitor when you take your child to have their vaccines.



## **What is pneumococcal disease?**

Pneumococcal disease is one of the commonest causes of bacterial meningitis in children but it also causes septicaemia, pneumonia, ear infections (otitis media) and other serious illnesses. There are more than 90 different types of pneumococcal bacteria.

## **Which vaccine will be used?**

The vaccine used is a booster dose of PCV13 (pneumococcal conjugate vaccine) which protects against 13 different pneumococcal types that most commonly cause pneumococcal disease in children. This vaccine will be given in the muscle of the thigh or upper arm at the same visit as the Hib/MenC and MenB vaccines.

## **Will the PCV vaccine have any side effects?**

Out of ten babies immunised, one or two may get swelling, redness or tenderness at the injection site or get a mild fever.

## **What is measles?**

Measles is caused by a very infectious virus. Nearly everyone who catches it will have a high fever, a rash and generally be unwell. The complications of measles include chest infections, fits (seizures), encephalitis (infection of the brain), and brain damage. In very serious cases, measles can kill.

## **What is mumps?**

Mumps is caused by a virus which can lead to fever, headache, and painful, swollen glands in the face, neck and jaw. It can result in permanent deafness, viral meningitis and encephalitis (inflammation and swelling of the brain).

## **What is rubella?**

Rubella (German measles) is a disease caused by a virus. In children it is usually mild and can go unnoticed. But, rubella in pregnancy is very serious for unborn babies. It can seriously damage their sight, hearing, heart and brain. This condition is called congenital rubella syndrome (CRS).

## **What is the MMR vaccine?**

It contains weakened versions of live measles, mumps and rubella viruses. Because the viruses are weakened, people who have had the vaccine cannot infect other people. In the UK we have two MMR vaccines. Both work very well, one contains porcine gelatine and the other doesn't. If you want your child to have the porcine gelatine free vaccine, discuss it with your practice nurse or GP.

## **How and when is the vaccine given?**

The vaccine is injected into the muscle of the thigh or upper arm. It is given at one year of age after the immunity the baby got from their mother fades. A second dose of the vaccine should be given again before your child starts school at around three years and four months of age.

## How effective is the MMR vaccine?

MMR vaccine has been responsible for almost wiping out these three diseases in young children since it was introduced in the UK in 1988.

## Will the MMR vaccine have any side effects?

The three different viruses in the vaccine act at different times and may produce the following side effects after the first dose.

- Six to ten days after immunisation, as the measles part of the vaccine starts to work, about one in ten children may develop a fever and some may develop a mild measles-like rash and go off their food.
- About one in every 1000 immunised children may have a fit caused by a fever. This is called a 'febrile convulsion'. However, children who are not immunised and get measles, are five times more likely to have a fit.
- About three weeks after MMR vaccination, as the mumps part of the vaccine starts to work, some children may rarely get mumps-like symptoms (fever and swollen glands).

- Very rarely, children may get a rash of small bruise-like spots in the six weeks after the vaccination. This is usually caused by the measles or rubella parts of the vaccine. If you see spots like these, take your child to the doctor to be checked. He or she will tell you how to deal with the problem and how to protect your child in the future.
- Fewer than one in a million children may develop encephalitis (inflammation and swelling of the brain) after the MMR vaccine. However, if a child catches measles, the chance of developing encephalitis is between one in 200 and one in 5000.

### **What if my baby is allergic to eggs?**

The MMR vaccine can safely be given to children who have had a severe allergy (anaphylactic reaction) to egg. If you have any concerns, talk to your health visitor, practice nurse or doctor.

### **Does the MMR vaccine contain gelatine?**

In the UK, we have two MMR vaccines which work very well. One of them contains gelatine and the other one doesn't. If you would prefer to have the vaccine that does not contain porcine gelatine, talk to your practice nurse or GP.

**MMR is the safest way to protect your child against measles, mumps and rubella.**

## Watch out for meningitis and septicaemia

Both meningitis and septicaemia are very serious. It is important that you recognise the signs and symptoms and know what to do if you see them.

Early symptoms of meningitis and septicaemia may be similar to a cold or flu (fever, vomiting, irritability and restlessness). However, individuals with meningitis or septicaemia can become seriously ill within hours, so it is important to know the signs and symptoms of these conditions.



## What is meningitis?

Meningitis is infection of the lining of the brain. Meningitis can be caused by several types of bacteria or viruses.

Infection with meningococcal bacteria can cause meningitis, septicaemia (blood poisoning), pericarditis (inflammation of the lining of the sac that contains the heart) and arthritis (swelling of the joints).

In babies, the main symptoms of meningitis may include:

- a high-pitched, moaning cry
- irritable when picked up
- a bulging fontanelle
- drowsy and less responsive – being difficult to wake
- floppy and listless
- stiff with jerky movements (convulsions/fits)
- refusing feeds, vomiting
- skin that is pale, blotchy or turning blue, and
- a fever.

## What is septicaemia?

Septicaemia is a very serious condition when the blood stream is infected. The signs of cold hands and feet, pale skin, vomiting and being very sleepy or difficult to wake can come on quickly. If you suspect septicaemia, get help urgently.

In babies, the main symptoms of septicaemia may include:

- rapid or unusual patterns of breathing
- skin that is pale, blotchy or turning blue
- fever with cold hands and feet
- shivering
- vomiting and refusing feeds
- red or purple spots that do not fade under pressure (do the glass test explained below)
- pain or irritability from muscle aches or severe limb or joint pain
- floppiness, and
- severe sleepiness.

It is important to remember that not everyone will develop all the symptoms listed. If an individual develops some of the symptoms, especially red or purple spots, get medical help urgently. If you can't get in touch with your doctor, or are still worried after getting advice, trust your instincts and take your child to the emergency department of your nearest hospital.

## The 'glass test'

Press the side of a clear drinking glass firmly against the rash so you can see if the rash fades and loses colour under pressure. If it doesn't change colour, contact your doctor immediately.



## Where can I get more information?

These charities provide information, advice and support:

### **Meningitis Research Foundation**

Free helpline 080 8800 3344

(9am to 10pm weekdays, 10am to 8pm weekends and holidays)

[www.meningitis.org](http://www.meningitis.org)

### **Meningitis Now**

24 hour helpline 0808 80 10 388

[www.meningitisnow.org](http://www.meningitisnow.org)

You can also ask your doctor, practice nurse or health visitor for advice, or call the **NHS** on **111**.

Parents and carers can report suspected side effects of vaccines and medicines through the Yellow Card Scheme. This can be done on-line by visiting **[www.yellowcard.gov.uk](http://www.yellowcard.gov.uk)** or by calling the Yellow Card hotline on Freephone 0808 1003352 (available Monday to Friday, 10am to 2pm).

# Routine childhood immunisation programme from 1 August 2017

Most vaccines are given as an injection in the thigh or upper arm. Rotavirus vaccine is given as drops to be swallowed and influenza vaccine as a nasal spray.

When	Diseases protected against	Vaccine given
<b>Eight weeks old</b>	Diphtheria, tetanus, pertussis (whooping cough), polio, <i>Haemophilus influenzae</i> type b (Hib) and hepatitis B	DTaP/IPV/Hib/HepB
	Pneumococcal (13 serotypes)	Pneumococcal conjugate vaccination (PCV)
	Meningococcal group B (MenB)	MenB
	Rotavirus gastroenteritis	Rotavirus
<b>Twelve weeks old</b>	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB
	Rotavirus	Rotavirus
<b>Sixteen weeks old</b>	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB
	Pneumococcal (13 serotypes)	PCV
	MenB	MenB
<b>One year old* on or after the child's first birthday</b>	Hib and MenC	Hib/MenC
	Pneumococcal	PCV
	Measles, mumps and rubella (German measles)	MMR <sup>1</sup>
	MenB	MenB booster
<b>Two to eight years of age<sup>2</sup></b> (including children in reception class and school years 1-4)	Influenza (each year from September)	Live influenza vaccine
<b>Three years four months old or soon after</b>	Diphtheria, tetanus, pertussis and polio	DTaP/IPV
	Measles, mumps and rubella	MMR (check first dose given) <sup>1</sup>
<b>Girls aged 12 to 13 years</b>	Cervical cancer caused by human papillomavirus (HPV) types 16 and 18 (and genital warts caused by types 6 and 11)	HPV (two doses 6-24 months apart)
<b>Fourteen years old</b> (school year 9)	Tetanus, diphtheria and polio	Td/IPV (check MMR status)
	Meningococcal groups A, C, W and Y disease	MenACWY

1 Contains porcine gelatine.

2 Age on 31 August 2017

## Additional vaccines for individuals with underlying medical conditions

Medical condition	Diseases protected against	Vaccines required
Asplenia or splenic dysfunction (including sickle cell and coeliac disease)	Meningococcal groups A, B, C, W and Y Pneumococcal <i>Haemophilus influenzae</i> type b (Hib) Influenza	Hib/MenC MenACWY MenB PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine
Cochlear implants	Pneumococcal	PCV13 (up to two years of age) PPV (from two years of age)
Chronic respiratory and heart conditions (such as severe asthma, chronic pulmonary disease, and heart failure)	Pneumococcal Influenza	PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine
Chronic neurological conditions (such as Parkinson's or motor neurone disease, or learning disability)	Pneumococcal Influenza	PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine
Diabetes	Pneumococcal Influenza	PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine
Chronic kidney disease (CKD) (including haemodialysis)	Pneumococcal (stage 3, 4 and 5 CKD) Influenza (stage 3, 4 and 5 CKD) Hepatitis B (stage 4 and 5 CKD)	PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine Hepatitis B
Chronic liver conditions	Pneumococcal Influenza Hepatitis A Hepatitis B	PCV13 (up to two years of age) PPV (from two years of age) Annual flu vaccine Hepatitis A Hepatitis B
Haemophilia	Hepatitis A Hepatitis B	Hepatitis A Hepatitis B
Immunosuppression due to disease or treatment <sup>2</sup>	Pneumococcal Influenza	PCV13 (up to two years of age) <sup>1</sup> PPV (from two years of age) Annual flu vaccine
Complement disorders (including those receiving complement inhibitor therapy)	Meningococcal groups A, B, C, W and Y Pneumococcal <i>Haemophilus influenzae</i> type b (Hib) Influenza	Hib/MenC MenACWY MenB PCV13 (to any age) PPV (from two years of age) Annual flu vaccine

1 To any age in severe immunosuppression

2 Consider annual influenza vaccination for household members and those who care for people with these conditions

## Selective childhood immunisation programmes

Target group	Age and schedule	Disease	Vaccines required
Babies born to hepatitis B infected mothers	At birth, four weeks and 12 months old <sup>1,2</sup>	Hepatitis B	Hepatitis B (Engerix B/ HBvaxPRO)
Infants in areas of the country with TB incidence $\geq 40/100,000$	At birth	Tuberculosis	BCG
Infants with a parent or grandparent born in a high incidence country <sup>3</sup>	At birth	Tuberculosis	BCG
Pregnant women	During flu season At any stage of pregnancy	Influenza	Inactivated flu vaccine
Pregnant women	From 20 weeks gestation <sup>4</sup>	Pertussis	dTaP/IPV (Boostrix-IPV or Repevax)

1 Take blood for HBsAg at 12 months to exclude infection

2 In addition hexavalent vaccine (Infanrix hexa) is given at 8, 12 and 16 weeks

3 Where the annual incidence of TB is  $\geq 40/100,000$  – see <https://www.gov.uk/government/publications/tuberculosis-tb-by-country-rates-per-100000-people>

4 Can be given from 16 weeks but usually offered after the anomaly scan



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