UK Health Security Agency

NHS

A guide to vaccinations for children aged 18 months

for children born on or after 1 July 2024

Features the new immunisation schedule from July 2025

DTaP/IPV/Hib/HepB vaccine

Your baby should be immunised with DTaP/IPV/Hib/HepB vaccine when they are 8, 12 and 16 weeks old.

The DTaP/IPV/Hib/HepB (6 in 1) vaccine protects against 6 different diseases:

- diphtheria
- tetanus
- pertussis (whooping cough)
- polio
- Haemophilus influenzae type b (Hib)
- hepatitis B

Your child should have their fourth dose of 6 in 1 vaccine at 18 months (alongside their second dose of MMR). This will help to extend their protection against these diseases until their next booster due at around 3 years and 4 months of age.

Effectiveness of the DTaP/IPV/Hib/HepB (6 in 1) vaccine

Studies have shown that DTaP/IPV/Hib/HepB vaccine is very effective in protecting your baby against these 6 serious diseases. There are 2 makes of 6 in 1 vaccine, called Vaxelis and Infanrix hexa. Your baby may receive either of these vaccines and you can read more in the patient information leaflets.

Infanrix:
www.medicines.org.uk/emc/product/2586/pil

Vaxelis:
www.medicines.org.uk/emc/product/12264/pil

Further doses are needed to extend protection into adulthood. The vaccine given at 3 years and 4 months will help to extend protection against tetanus, diphtheria, polio and pertussis over their school years. The vaccine given at 14 years of age, will help to protect them against diphtheria, tetanus and polio as adults.

Diphtheria

Diphtheria is a serious disease that usually begins with a sore throat and can quickly cause breathing problems. It can damage the heart and nervous system and, in severe cases, it can kill. Before the diphtheria vaccine was introduced in the UK, there were up to 70,000 cases of diphtheria a year, causing up to 5,000 deaths.

Tetanus

Tetanus is a disease affecting the nervous system which can lead to muscle spasms, cause breathing problems and can kill. It is caused when germs that are found in soil and manure get into the body through open cuts or burns. Tetanus cannot be passed from person to person.

Pertussis (whooping cough)

Whooping cough is a disease that can cause long bouts of coughing and choking, making it hard to breathe. Whooping cough can last for up to 10 weeks. Babies under one year of age are most at risk from whooping cough. For these babies, the disease is very serious and it can kill. It is usually not so serious in older children.

Before the pertussis vaccine was introduced, around 120,000 of cases of whooping cough were reported each year in the UK. In the year before the vaccine was introduced 92 children died of whooping cough.

Polio

Polio is a virus that attacks the nervous system and can cause permanent paralysis of muscles. If the paralysis spreads to the chest muscles it can affect breathing. Some cases will die.

Before the polio vaccine was introduced, there were as many as 8,000 cases of polio in the UK in epidemic years. Because of the continued success of the polio vaccination, there have been no cases of natural polio infection in the UK for over 30 years (the last case was in 1984).

Hib

Hib is an infection caused by Haemophilus influenzae type b bacteria. It can lead to a number of major illnesses such as blood poisoning (septicaemia), pneumonia and meningitis. The Hib vaccine only protects your baby against the type of meningitis caused by the Haemophilus influenzae type b bacteria – it does not protect against any other causes of meningitis.

The illnesses caused by Hib can kill if they are not treated quickly. Before the Hib vaccine was introduced, there were about 800 cases of Hib in young children every year. Since the vaccine has been been introduced, the number of children under 5 years of age with Hib has fallen by 99%.

Hepatitis B

Hepatitis B is an infection of the liver caused by the hepatitis B virus. In children, the infection can persist for many years and can sometimes lead to complications such as scarring of the liver (cirrhosis), and liver cancer.

Although the number of children living with the hepatitis B virus is low in the UK, the vaccine has been offered to children at higher risk since the 1980s. In 2017, hepatitis B vaccine was added to the routine immunisation programme so that all children can benefit from protection against this virus.

3 doses of the 6 in 1 vaccine provides long lasting protection against infection with hepatitis B, but not to other forms of hepatitis.

How is the vaccine given

The vaccine is injected into the muscle of the child's thigh or upper arm.

After immunisation with DTaP/IPV/Hib/HepB or 6 in 1 vaccine

Your child might get some side effects, which are usually mild, including:

- redness, swelling or tenderness where they had the injection
- being a bit miserable for up to 48 hours after having the injection
- developing a mild fever
- a small lump where your child had the injection; this may last for a few weeks but will slowly disappear

If you think your child is having any other reaction to the DTaP/IPV/Hib/HepB vaccine and you are concerned about it, talk to your doctor, practice nurse or health visitor.

MMR vaccine

Your child should be immunised with their first dose of MMR vaccine at one year of age at the same time as their MenB and PCV vaccinations. The second (and final) dose is given at the age of 18 months, alongside the 6 in 1 vaccine.

MMR protects your child against measles, mumps and rubella.

Types of MMR vaccine

The MMR vaccine contains weakened versions of living 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 2 MMR vaccines. Both of the vaccines work very well. One of the vaccines contains porcine gelatine (gelatine derived from pigs) and the other doesn't. If you want your child to have the porcine gelatine free vaccine, talk to your practice nurse or GP.

Further information is available in the patient information leaflets.

Priorix:
www.medicines.org.uk/emc/product/1159/pil

MMRVAXPRO:
www.medicines.org.uk/emc/product/6307/pil

More information on vaccines and porcine gelatine is available on GOV.UK.

How is the vaccine given

The vaccine is injected into the muscle of the child's thigh or upper arm.

Effectiveness of the MMR vaccine

Since MMR vaccine was introduced in 1988, cases of measles, mumps and rubella have all fallen to extremely low levels.

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. Children often have to spend about 5 days in bed and could be off school for 10 days. Adults are likely to be ill for longer. It is not possible to tell who will be seriously affected by measles. Around 1 in every 5 people with measles will go to hospital. The complications include chest infections, fits, encephalitis (infection of the brain) and brain damage. In very serious cases, measles can kill.

Before the introduction of measles vaccine in 1968, around 500,000 cases and a 100 deaths occurred in epidemic years. In 1987 (the year before the MMR vaccine was introduced in the UK), 86,000 children caught measles and 16 died.

Measles is one of the most infectious diseases in the world. A cough or a sneeze, from an infected person, can spread the measles virus over a wide area. If your child is not protected, the chance of catching measles is extremely high if you come near to anyone who has or is developing measles.

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 (infection of the lining of the brain) and encephalitis. Rarely, it causes painful swelling of the testicles in males and the ovaries in females. Mumps lasts about 7 to 10 days. Before the MMR vaccine was introduced, about 1,200 people a year in the UK went into hospital because of mumps. Mumps is spread in the same way as measles and is as infectious as flu.

Rubella

Rubella is also caused by a virus. In children it is usually mild and can go unnoticed. It causes a short-lived rash, swollen glands and a sore throat.

When a pregnant woman catches rubella it can affect their unborn baby, causing serious damage to their sight, hearing, heart and brain. This condition is called congenital rubella syndrome (CRS). When the infection is caught in the first 3 months of pregnancy it causes damage to the unborn baby in 9 out of 10 cases.

In the 5 years before the MMR vaccine was introduced, about 43 babies a year were born in the UK with congenital rubella syndrome.

Rubella is spread in the same way as measles and mumps and is as infectious as flu.

After vaccination with MMR

The 3 viruses in the vaccine act at different times and sometimes produce side effects, mainly after the first dose.

Six to 10 days after the immunisation, as the measles part of the vaccine starts to work, about 1 in 10 children may develop a fever and some develop a measles-like rash (see section below on treating and preventing fever).

About one in every 1,000 immunised children may have a fit caused by a fever. This is called a febrile convulsion. However, if a child who has not been immunised gets measles, they are 5 times more likely to have a fit.

Rarely, children may get mumps-like symptoms (fever and swollen glands) about 3 weeks after their immunisation as the mumps part of the vaccine starts to work.

Very rarely, children may get a rash of small bruise-like spots in the 6 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. The doctor will tell you how to deal with the rash.

Fewer than one child in a million develops encephalitis (swelling of the brain) after the MMR vaccine. However, if a child who has not been vaccinated catches measles, the chance of developing encephalitis is between 1 in 200 and 1 in 5,000.

Side effects after the second dose are even less common and usually milder.

MMR and autism

In the past, there have been stories in the media linking MMR with autism. **It's now acknowledged that there is no such link.**

Egg allergies

The MMR vaccine can safely be given to children who have had a severe allergy (anaphylactic reaction) to egg. This is because MMR vaccine is grown on chick cells, not the egg white or yolk. If you have any concerns, talk to your health visitor, practice nurse or doctor.

Concerns about overloading your child's immune system

Giving your child the MMR vaccine, alongside the other vaccines given at the same age will not overload their immune system.

From birth, babies' immune systems protect them from the germs that surround them. Without this protection, babies would not be able to cope with the tens of thousands of bacteria and viruses that cover their skin, nose, throat and intestines. This protection carries on throughout life.

In theory, a baby could respond effectively to around 10,000 vaccines at any one time. The baby's immune system can and does easily cope with the MMR and the other important vaccines given at the same time.

Parents and carers can report suspected side effects of vaccines and medicines through the Yellow Card Scheme.

This can be done by visiting **yellowcard.mhra.gov.uk** or by calling the Yellow Card hotline on **0800 731 6789**. You can also use the QR code or by downloading the Yellow Card app.

Worries about your child being upset by having two injections

Your child may cry and be upset for a few minutes, but they will usually settle down after a cuddle. It is really important to help build your child's immunity.

Side effects

Some children will have side effects after an injection. They may:

- have redness, swelling or tenderness where they had the injection (this will slowly disappear on its own)
- be a bit irritable and feel unwell
- have a temperature (fever)

Fever

A fever is a temperature over 37.5°C.

Fevers are quite common in young children, but are usually mild. If your child's face feels hot to the touch and they look red or flushed, they may have a fever.

You should check their temperature with a thermometer.

Treating and preventing fever

Keep your child cool by:

- making sure they don't have too many layers of clothes or blankets on
- giving them plenty of cool drinks

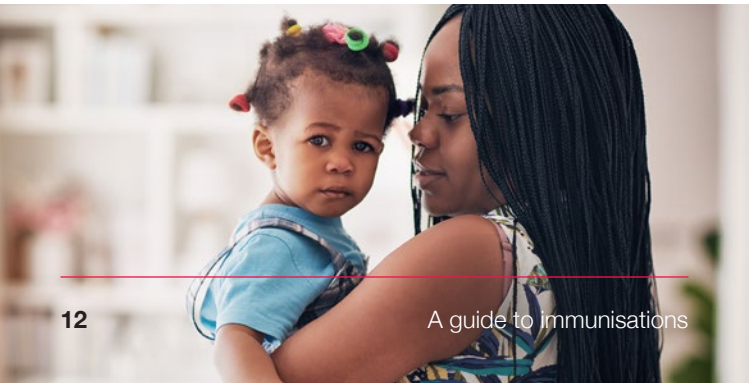
A dose of infant liquid paracetamol may help reduce your child's fever. Read and follow the instructions on the bottle very carefully. You may need to give another dose 4 to 6 hours later.

Allergies

Asthma, eczema, hay fever, food intolerances and allergies do not prevent your child having any vaccine in the childhood immunisation programme. If you have any questions, speak to your doctor, practice nurse or health visitor.

Reasons why your child may not be able to be immunised

There are very few reasons why children cannot be immunised. Vaccines should not be given to children who have had a confirmed anaphylactic reaction to either a previous dose of the vaccine or to an ingredient of the vaccine. For some vaccines this can include neomycin, streptomycin or polymixin B (antibiotics that may be added to vaccines in very tiny amounts).



Immunosuppressed children

In general, children who are 'immunosuppressed' (have a weakened immune system) should not receive live vaccines. This includes children who have conditions that affect their immune system, such as primary immunodeficiency, or those undergoing treatment for serious condition such as cancer or after a transplant. Primary immunodeficiencies are very rare diseases that mean you are more likely to catch infections. They are usually caused by a faulty gene and are diagnosed soon after birth.

If you think this applies to your child, you must tell your doctor, practice nurse or health visitor before the immunisation.

They will need to get specialist advice on using live vaccines such as MMR and Bacillus Calmette-Guérin vaccine (BCG).

There are no other reasons why vaccines should definitely not be given.

Routine childhood immunisation programme

Age due	Diseases protected against		Vaccine given
Eight weeks old	Diphtheria, tetanus, pertussis (whooping cough), polio, Haemophilus influenzae type b (Hib) and hepatitis B		DTaP/IPV/Hib/HepB
	Meningococcal group B (MenB)		MenB
	Rotavirus gastroenteritis		Rotavirus
Twelve weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B		DTaP/IPV/Hib/HepB
	MenB		MenB
	Rotavirus		Rotavirus
Sixteen weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B		DTaP/IPV/Hib/HepB
	Pneumococcal (13 serotypes)		Pneumococcal conjugate vaccine (PCV)
One year old (on or soon after child's first birthday)	Pneumococcal		PCV booster
	Measles, mumps and rubella (German measles)		MMR[1]
	MenB		MenB booster
Eighteen months of age	**Born before 1 July 2024** No appointment	**Born on or after 1 July 2024** DTaP/IPV/Hib/HepB Measles, mumps, rubella	DTaP/IPV/Hib/HepB MMR[1]
Three years four months old or soon after	**Born before 1 July 2024** Diphtheria, tetanus, pertussis and polio Measles, mumps, rubella	**Born on or after 1 July 2024** Diphtheria, tetanus, pertussis and polio	dTaP/IPV MMR[1]

1. In the UK, we have 2 MMR vaccines which work very well. One of them contains porcine 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. You can view the MMR vaccine Patient Information Leaflets at: Priorix: www.medicines.org.uk/emc/product/1159/pil. MMRVAXPRO: www.medicines.org.uk/emc/product/6307/p

Remember to bring your Red book with you to each appointment.

Copies of these booklets are available from your clinic or doctor's surgery. See also **www.nhs.uk/vaccinations**

This leaflet features the immunisation schedule from July 2025

Complete your course

Having your 18 month old child vaccinated is important to build their protection from infectious disease.

Don't forget your pre-school appointment when your child is 3 years 4 months.

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This edition features the July 2025 immunisation schedules.

To order or download more copies of this leaflet please visit, **www.healthpublications.gov.uk** or call 0300 123 1002 (lines are open Monday to Friday 8pm to 6pm)

Please use product code: C2518CC1EN

www.nhs.uk/vaccinations