HSC Public Health Agency

Immunisation

for children aged 18 months

immunisation

the safest way to protect your child

From 2026

DTaP/IPV/Hib/HepB vaccine (6-in-1)

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

The 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 MMRV).

This will help to extend their protection against these diseases until their next vaccine dose 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 the 6-in-1 vaccine is very effective in protecting your baby against these 6 serious diseases.

Further doses are needed to extend protection into adulthood. The 4-in-1 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, there were up to 1,500 cases of diphtheria a year in Northern Ireland.

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 1 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.

There were over 3,000 confirmed pertussis cases reported in Northern Ireland in 2024. This recent surge in cases highlights how important it is to make sure your child receives all their scheduled vaccines.

Polio

Polio is a virus that attacks the nervous system and can paralyse the muscles. If it affects the chest muscles or the brain, polio can kill.

Before the polio vaccine was introduced, as many as 1,500 cases of polio causing paralysis occurred each year in Northern Ireland.

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 was 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.

Having 4 doses of the 6-in-1 vaccine will provide 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 the 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 6-in-1 vaccine and you are concerned about it, talk to your doctor, practice nurse or health visitor.

MMRV vaccine

If your child follows the current vaccine schedule (born on or after 1 January 2025), they should have their first dose of MMRV just after their first birthday 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.

MMRV protects your child against measles, mumps, rubella (German measles) and varicella. Varicella is the virus that causes chickenpox.

If your child was **born between 1 July 2024 and 31 December 2024**, and they received a dose of MMR vaccine just after their first birthday, they will be offered a dose of MMRV vaccine at each of their 18 month and 3 years 4 month appointments.

This is to provide better protection against varicella (chickenpox). Receiving 3 MMR-containing vaccines does not pose any safety concerns.

Types of MMRV vaccine

The MMRV vaccine contains weakened versions of living measles, mumps, rubella and varicella viruses. Because the viruses are weakened, people who have had the vaccine cannot infect other people.

In Northern Ireland, we have 2 MMRV vaccines. Both of the vaccines work very well. One of the vaccines contains porcine gelatine (gelatine derived from pigs). If you would prefer your child to have the vaccine that does not contain porcine gelatine, talk to your practice nurse or doctor.

How is the vaccine given?

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

Effectiveness of the vaccine

Since MMR vaccine was introduced in 1988, cases of measles, mumps and rubella have all fallen to extremely low levels. It is anticipated that with the new addition of the varicella component, cases of chickenpox will significantly reduce. The programme will reduce cases of severe chickenpox, associated complications and hospitalisation.

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.

Varicella

Varicella (commonly known as chickenpox), is a very infectious disease caused by a virus. Varicella is very common and affects most children during childhood, although it can be caught for the first time at any age. The disease can be more serious in adults, especially pregnant women and those with weakened immune systems. It is transmitted through direct contact between people, or indirectly through airborne droplets.

Most varicella cases in children are relatively mild and the illness resolves without any need for treatment from a medical professional, though most children are unwell for several days and will miss 5 or more days from school or nursery. Parents may have to take time off work to care for them.

Some children will go on to develop complications from varicella including bacterial infection of skin lesions (spots) and, in rare cases, encephalitis (swelling of the brain), pneumonitis (lung infection) and stroke. These complications can result in hospitalisation and very rarely may result in death.

After vaccination with MMRV

MMRV contains 4 separate vaccines in one injection. The vaccines work at different times. Around 5 to 11 days after immunisation, some children become feverish, develop a measles-like rash and go off their food as the measles part of the vaccine starts to work.

Rarely, about 3 weeks after the injection, a child might get mumps-like symptoms (fever and swollen glands) as the mumps part of MMRV starts to work.

Rarely, a rash of small, bruise-like spots may appear within 6 weeks of the vaccine, usually caused by the measles or rubella part. If this appears, take your child to the doctor.

A mild chickenpox-like rash may appear after vaccination near the injection site but can show up elsewhere. This rash does not need treatment and clears up on its own. If your child does get a rash, as a precaution avoid close contact with people who are more vulnerable to chickenpox infection, such as those with weakened immune systems, pregnant women who have never had chickenpox and newborns whose mothers haven't had chickenpox. However, the chance of passing chickenpox from this rash after getting the MMRV vaccine is extremely low.

About 1 in 1,000 will have a fit caused by a high temperature (see page 18 for how to treat a fever). There is no evidence that this causes long-term problems. A child who has measles is five times more likely to have a fit as a result of the illness (5 in 1,000).

Vaccines can also cause allergic reactions. These are very rare, less than 1 in a million immunisations. Although severe allergic (anaphylactic) reactions are worrying when they happen, the people who give immunisations are trained to deal with anaphylactic reactions, and treatment will lead to a rapid and full recovery.

Rarely, children may develop encephalitis (swelling of the brain) after the MMRV vaccine. However, if a child who has not been vaccinated catches measles, the chance of developing encephalitis is much higher.

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

Vaccination is the safest way to protect your child

Egg allergies

The MMRV vaccine may be given to children who have had a severe allergy (anaphylactic reaction) to egg. The MMRV vaccine is grown on chick cells, not the egg white or yolk, therefore, subsequent severe reactions following vaccination have been shown to be very rare. If you have any concerns, talk to your doctor, practice nurse or health visitor.

Concerns about overloading your child's immune system

Giving your child the MMRV 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 MMRV 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 **mhra.yellowcard.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.

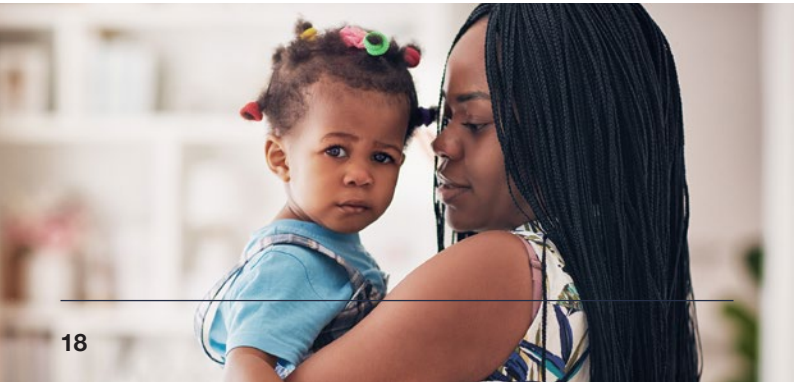
Fevers are quite common in young children, but are usually mild. If your child's face feels hot to the touch and they look red or flushed, they may have a fever.

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.

Remember, never give medicines containing aspirin to children under 16 years of age.

Other conditions and allergies

Asthma, eczema, hay fever, food intolerances and allergies should 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 the diphtheria, tetanus and polio (DTP) containing 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.

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

Routine childhood vaccination schedule

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

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**

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

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

If you would like further information about immunisation, visit

pha.site/vaccinations

or

www.nidirect.gov.uk/childhood-immunisation

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