UPDATED SCHEDULE FOR 2020

A guide to vaccinations from two years old until starting primary school

Pre-school immunisations



immunisation
the safest way to protect your child



Protect yourself, protect others

If you are not sure if your child has had all their routine vaccinations, check their personal health record (Red Book) or contact the GP surgery.

To get the best protection for your child, they need to have had two doses of MMR vaccine. For a checklist of the vaccines and the ages at which they should ideally be given visit **www.nhs.uk/vaccinations**

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Introduction

This guide provides information on the routine immunisations that are given to children before they start school to help protect them from serious childhood diseases. It describes these diseases and explains why young children need protection against them. It also answers some of the most common questions about pre-school immunisation.

If you have more questions or you want more information, talk to your doctor, practice nurse or health visitor.

You can also visit www.nhs.uk/vaccinations or call the free NHS helpline 111



Timetable of pre-school immunisations

The first winter after your child turns two years of age he or she becomes eligible for the nasal flu vaccine, this will be due every winter including once your child starts school. Three immunisations are due at about three years and four months of age. These vaccines update the protection your child should have completed as a baby or at 12 months of age. You will receive an appointment for you to bring your child for their pre-school immunisations.

The table below shows the pre-school immunisations your child will be offered. These immunisations will make sure that your child has the best protection against serious childhood diseases as they grow up.

Vaccine	How and when it is given	Comments
Flu	Nasal spray Each year from September	This vaccine is given at two and three years of age. Children who are in risk groups and cannot have the nasal spray will be offered a vaccination by injection.
Diphtheria, tetanus, pertussis (whooping cough) and polio (dTaP/IPV or DTaP/IPV)	One injection at 3 years and four months of age	This is a booster dose of these vaccines.
Measles, mumps and rubella (MMR)	One injection at 3 years and four months of age	This is a second dose of the MMR vaccine. (If your child has not had the first dose yet, it should be given now and the second dose one month later)

Common questions about pre-school immunisations

Why does my child need to be immunised at this age?

The pre-school immunisations – often called pre-school boosters – will update or top up your child's level of antibodies (which their bodies produce to fight off disease and infection) and help to keep them protected. Protection (immunity) against diphtheria, tetanus, whooping cough and polio from the immunisations given to babies can fade over time. Sometimes, complete immunity to measles, mumps or rubella does not develop after a single dose of the MMR vaccine – so this gives them a second chance.

When you take your child for their pre-school immunisations, it is important to make sure all their other immunisations are up to date.

The flu vaccine will help protect your child against flu during the winter but will need to be given every year because the viruses that cause flu change very frequently.

How do vaccines work?

Vaccines contain a small part of the bacterium or virus that causes a disease, or tiny amounts of the chemicals the bacterium produces. Vaccines work by causing the body's immune system to make antibodies. If your child comes into contact with the infection, the antibodies will recognise it and be ready to protect him or her. Because vaccines have been used so successfully in the UK, diseases such as polio have disappeared from this country.

If your child missed any of their immunisations as a baby or toddler, this is a good time to ask the surgery or clinic about catch-up doses. You don't have to start the course of immunisations from the beginning again but you can catch up to make sure your child is fully protected. It is never too late to have your child immunised.

How do we know that vaccines are safe?

Before a vaccine is allowed to be used, its safety and effectiveness have to be thoroughly tested. After they have been licensed, the safety of vaccines continues to be monitored. Any rare side effects that are discovered can then be assessed further. All medicines can cause side effects, but vaccines are among the very safest.

Research from around the world shows that immunisation is the safest way to protect your child's health.



We don't hear about most of these diseases any more, so are these immunisations really necessary?

Because of the effective immunisation programmes in the UK, the number of children catching these diseases is now very low. But if children do not continue to be immunised, the diseases will come back, as seen recently in some parts of Europe. Many of these diseases are still around in other parts of the world and your child may be at risk if you travel with your family. With more people coming to visit this country, there is always a risk that your child could come into contact the infections.

Will there be any side effects from the vaccines?

Any side effects that occur are usually mild. Your child may get a little redness, swelling or tenderness where the injection was given that will disappear on its own. Some children may get a fever that can be treated with paracetamol liquid. Read the instructions on the bottle carefully and give your child the correct dose for their age. If necessary, give them a second dose four to six hours later. If your child's temperature is still high after they have had a second dose of paracetamol liquid, speak to your doctor or call the free **NHS helpline 111**.

Remember, never give medicines that contain aspirin to children under 16.

I'm worried that my child may have allergies. Can they be vaccinated?

Asthma, eczema, hay fever, food intolerances and allergies should not prevent your child having the vaccines in the routine childhood immunisation programme. If your child has needed intensive care due to asthma or egg allergic anaphylaxis then further advice should be sought. If you have any questions, speak to your doctor, practice nurse or health visitor.

An anaphylactic reaction is a severe and immediate allergic reaction that needs urgent medical attention.

Are some children allergic to vaccines?

Very rarely, children can have an allergic reaction soon after immunisation. This may be a rash or itching affecting part or all of the body. The doctor or nurse giving the vaccine will know how to treat this. It is not a reason to withhold further immunisations.

Even more rarely, children can have a severe reaction, within a few minutes of the immunisation, which causes breathing difficulties and can cause the child to collapse. This is called an anaphylactic reaction and occurs in only about one in a million immunisations. The people who give immunisations are trained to deal with anaphylactic reactions and children recover completely with prompt treatment.

Are there any reasons why my child should not be immunised?

There are very few children who cannot be immunised.

- In general, a vaccine should not be given to children who have had a confirmed anaphylactic reaction to a previous dose of the same vaccine.

There are a very small number of children who may not be able to have one or more of the routine vaccines for health reasons. Your health visitor, practice nurse or doctor will ask you about the relevant conditions. You can also discuss with them if you are worried about a specific vaccine.

What about the MMR and nasal spray flu vaccine? Are there any other reasons why my child should not receive these vaccines?

The MMR and nasal flu vaccines are live attenuated vaccines (that is, they contain viruses that have been weakened). Children who are 'immunosuppressed' may not be able to receive live vaccines.

Children who are immunosuppressed include those:

- whose immune system is suppressed because they are undergoing treatment for a serious condition such as a transplant or cancer, or
- who have any condition which affects the immune system, such as severe primary immunodeficiency.

If this applies to your child, you must tell your doctor, practice nurse or health visitor before the immunisation. They will get specialist advice.

What if my child is ill on the day of the appointment?

If your child has a minor illness without a fever, such as a cold, they should have their immunisations as normal.

If your child is ill with a fever, put off the immunisation until the child has recovered. This is to avoid the fever being associated with the vaccine, or the vaccine increasing the fever your child already has.

If your child:

- has a bleeding disorder, or
- has had a fit not associated with fever

speak to your doctor, practice nurse or health visitor before your child has any immunisation.



What are fits?

Fits are also called seizures or convulsions. Some are associated with fever and some are not.

In the first five years of a child's life, the commonest type of fit is caused by fever (this may be called a febrile seizure or febrile convulsion). Sometimes immunisation is followed by a fever that may cause a febrile seizure. Most children who have febrile seizures recover fully.

When a seizure occurs within a short time after immunisation, it might not have been caused by the vaccine or the fever. It could be due to an underlying medical condition.

If the surgery is closed or if you can't contact your doctor, go straight to the nearest hospital emergency department.



Immunisations for pre-school children

Flu vaccine

What is flu?

Flu is an infectious disease with symptoms that come on very quickly. A bad bout of flu can be much worse than a heavy cold. In children, it causes fever, stuffy nose, dry cough, sore throat, aching muscles and joints, and extreme tiredness that can last several days. Flu can lead to painful ear infection, bronchitis and pneumonia – these may be severe.

What causes flu and how do you catch it?

Flu is caused by influenza viruses that infect the windpipe and lungs. When an infected person coughs or sneezes, they spread the flu virus in tiny drops of saliva over a wide area. These droplets can then be breathed in by other people or they can be picked up by touching surfaces where the droplets have landed.

How is the vaccine given and how does it work?

The vaccine is given as a nasal spray up each nostril. It is quick and painless. The vaccine contains viruses that have been weakened to prevent them from causing flu but will help your child to build up immunity, so that when he or she comes into contact with the flu virus they are unlikely to get ill.

My child had a flu vaccination last year, why do they need another one this year?

The viruses that cause flu change very frequently, so the vaccine has to be changed to match the viruses and may differ from year to year. The vaccine your child gets this year may well be different from the one they had last year, and next year's may be different again.

Which children are eligible for flu vaccination?

Children who are two and three years old are offered flu vaccination at their GP practice (provided they are aged 2 or 3 on the 31 August of the current flu season). Primary school-aged children are also offered flu vaccination at school.

The programme immunises children against flu because, by doing this, we may be able to stop them passing flu to their parents, grandparents and other family members.

In addition, children with certain medical conditions who are aged between two and 18 years are offered flu vaccine.

Does the vaccine cause any side effects?

Serious side effects are uncommon but many children can develop a runny or blocked nose, headache, some tiredness or loss of appetite that last for a short period. The vaccine is absorbed quickly in the nose so, even if your child sneezes immediately after having had the spray, there's no need to worry that it hasn't worked.

The nasal flu vaccine is called Fluenz tetra, you can view the Patient Information Leaflet at www.medicines.org.uk/emc/product/3296/pil

Are there any children who shouldn't have the nasal vaccine?

Children may not be able to have the nasal vaccine if they:

- are currently wheezy or have been wheezy in the past 72 hours, they should be offered a suitable inactivated influenza vaccine to avoid a delay in protection
- have needed intensive care due to
  - asthma
  - egg allergic anaphylaxis
- have a condition that severely weakens their immune system. Children who are at high risk from flu due to some medical conditions or treatments and cannot have the nasal vaccine, will be offered a flu jab instead.

In these circumstances the advice of a specialist should be sought.

I believe the nasal vaccine contains products derived from pigs (porcine gelatine), which means my child can't have it because of our beliefs.

The nasal vaccine contains a highly processed form of gelatine (derived from pigs), which is used in a range of many essential medicines. The nasal vaccine provides good protection against flu, particularly in young children.

This nasal vaccine not only protects your child against disease but, if enough children are vaccinated, the disease won't spread from one person to another, and so their friends and family are also protected.

Some faith groups accept the use of porcine gelatine in medical products, others don't – the decision is, of course, up to you. For further information about porcine gelatine and the nasal flu vaccine see www.gov.uk/government/publications/vaccines-and-porcine-gelatine

dTaP/IPV or DTaP/IPV vaccine

Booster given at 3 years 4 months

This vaccine boosts the immunisations that were given to your child at two, three and four months of age. It protects against diphtheria, tetanus, pertussis (whooping cough) and polio.

What is diphtheria?

Diphtheria is a serious disease that usually begins with a sore throat and can quickly develop to cause breathing problems. It can damage the heart and nervous system and, in severe cases, it can kill.

What is 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.

What is 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 ten weeks. It is not usually so serious in older children, but in babies it is very serious and can kill.

What is polio?

Polio is a virus that attacks the nervous system which can cause permanent paralysis of the muscles. If it affects the chest muscles or the brain, polio can kill.

Are there any side effects from this vaccine?

Your child may have some redness, swelling or tenderness where they had the injection, but this will usually disappear in a few days. A hard lump may appear in the same place but this will also go, usually over a few weeks. Occasionally, children may be unwell and irritable and develop a temperature, headache, sickness and swollen glands.

What is the difference between the vaccines used at this age?

There are two different vaccines used at this age which contain slightly different strengths of some of the ingredients. Both vaccines have been shown to provide good responses, so it doesn't matter which one your child has for their pre-school booster.

There are two types of booster vaccine and you can view both here:

Infanrix IPV: www.medicines.org.uk/emc/product/5535/pil
Repevax: www.medicines.org.uk/emc/product/5580/pil



MMR vaccine

Booster given at 3 years 4 months

The MMR vaccine protects against measles, mumps and rubella. Since 1988, when the MMR vaccine was introduced in the UK, the numbers of cases of measles, mumps and rubella have dramatically reduced.

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. Children often have to spend about five days in bed and could be off school for ten days. Adults are likely to be ill for longer. The complications of measles affect one in every 15 children. The complications include chest infections, fits, encephalitis (infection of the brain), and brain damage. Measles can kill.

How is it spread?

Measles is one of the most infectious diseases known. A cough or a sneeze can spread the measles virus over a wide area. Because it's so infectious, the chances are your child will get measles if he or she is not protected and comes near to someone who has measles. Over 95% of children need to be immunised to prevent measles from circulating and causing outbreaks.

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 (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 seven to ten days. Before the MMR vaccine was introduced, mumps was the most common cause of viral meningitis in children under 15.

How is it spread?

Mumps is spread in the same way as measles. It is about as infectious as flu.

What is rubella?

Rubella (German measles) is a disease 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. Rubella is very serious for unborn babies. It can seriously damage their sight, hearing, heart and brain. This condition is called congenital rubella syndrome (CRS). Rubella infection in the first three months of pregnancy causes damage to the unborn baby in up to nine out of ten cases. In many of the cases, pregnant women caught rubella from their own, or their friends', children.

How is it spread?

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

Why does my child need two doses of MMR vaccine?

Even though measles and mumps are uncommon in the UK, children who are not protected are still at risk of catching the infections. Your child needs a second dose of MMR because the vaccine doesn't always work fully the first time. Some children who have only one dose of the vaccine might not be protected against one or more of the diseases.

Thanks to immunisation, the number of cases of measles, mumps and rubella have been reduced. However these diseases have not gone away and there have been outbreaks of measles in recent years. Two doses of the MMR vaccine are routinely given across Europe as well as in the US, Canada, Australia and New Zealand. Immunising your child with two doses of the MMR vaccine will give them the best protection.

Are there any side effects from the second (pre-school) dose of the MMR vaccine?

It is much less common to have side effects after the second dose than after the first dose. When side effects do happen, they are usually very mild.

- The three different viruses in the vaccine act at different times and produce the following side effects after the first dose of vaccine.
- Six to ten days after the immunisation, about one in ten children may develop a mild fever and some develop a measles-like rash and go off their food. This can happen when the measles part of the vaccine starts to work, and is normal.
- About one in every 1000 immunised children may have a fit caused by a fever. This is called a 'febrile convulsion', and can be caused by any fever. However, if a child who has not been immunised gets measles, they are five times more likely to have a fit.
- Rarely, children may get mumps-like symptoms (fever and swollen glands) about three 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 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 rash. As this rash could be confused with the rash caused by septicaemia you should contact your doctor urgently if your child is also unwell.
- Fewer than one child in a million develops encephalitis (inflammation of the brain) after MMR vaccine. However, if a child catches measles, the chance of developing encephalitis is about one in 1000.

Some years ago, there were stories suggesting a link between the MMR vaccine and autism. Research since then has proved that no such link exists.

MMR is a live vaccine. Does this mean my child can pass the infection to other people?

No, your child will not be infectious. 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.

Does the vaccine contain gelatine?

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.

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/pil

Egg allergies

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 practice nurse, health visitor or doctor.

If your child has not had an MMR vaccination before, they should have the first dose now and the second dose after one month.

Watch out for meningitis and septicaemia

What are meningitis and septicaemia?

Meningitis is infection of the lining of the brain. The same germs that cause meningitis may cause septicaemia (blood poisoning). Both meningitis and septicaemia are very serious in young children and the signs can come on quickly. If you suspect meningitis or septicaemia get help urgently.

Although your child was immunised as an infant against Hib, MenB, MenC and some forms of pneumococcal bacteria, all of which cause meningitis and septicaemia, these vaccines will not protect them against other types of meningitis and septicaemia. So it's important to know the signs and symptoms.

What are the signs and symptoms of meningitis and septicaemia?

Early symptoms of meningitis and septicaemia are mild and are similar to the symptoms of flu (for example, fever, vomiting, being irritable and pain in the back or joints). But the most important signs of **meningitis** to look out for in children are:

- a stiff neck (check that your child can kiss their knee, or touch their forehead with their knees)
- a bad headache (this alone is not a reason to get medical help)
- a dislike of bright lights
- vomiting
- fever
- drowsy, less responsive and confused
- stiff with jerky movements (convulsions/fits), and
- a rash.

The main signs of **septicaemia** are:

- sleepiness, less responsive, vacant or confused (a late sign)
- severe pains and aches in the arms, legs and joints
- very cold hands and feet
- shivering
- rapid breathing
- red or purple spots that don't fade when you press them (do the glass test explained below)*
- vomiting
- a fever, and
- diarrhoea and stomach cramps.

What should I do?

If your child develops one or more of the symptoms described above, 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 nearest hospital with an emergency department.

The 'glass' test

Press the side of a 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.



*On dark skin, check inside the eyelids or roof of the mouth where the spots may be more visible.

Where can I get more information?

These charities provide information, advice and support:

Meningitis Research Foundation
Free helpline 080 8800 3344
(9am–10pm weekdays, 10am–8pm weekends and holidays)
www.meningitis.org

Meningitis Now
24 hour helpline 0808 80 10 388
www.meningitisnow.org

If you would like more information about MMR please visit www.nhs.uk/conditions/vaccinations/pages/mmr-vaccine.asp

If you would like more information on vaccinations including the MMR vaccine please visit: www.nhs.uk/conditions/vaccinations/childhood-vaccines-timeline/



Travel advice for children

If your child is going abroad, make sure their routine immunisations are up to date. Your child may also need extra immunisations and you may also need to take other precautions.

Contact your doctor's surgery or a travel clinic well in advance for up-to-date information on the immunisations your child may need.

For more information

You can get more information on the NHS at www.nhs.uk and the Travel Health pro website: http://travelhealthpro.org.uk

Vaccine Damage Payment Scheme

Current immunisations are extremely safe but, very rarely, an individual may suffer from a problem after vaccination. The Vaccine Damage Payment Scheme is designed to ease the present and future burdens of the person who, on that very rare occasion, may be affected by the vaccination. There are several conditions that need to be met before a payment can be made. If you need more information, please contact:

Vaccine Damage Payments Unit
Department for Work and Pensions
Palatine House, Lancaster Road
Preston PR1 1HB
Phone: 01772 899944
E-mail: CAU-VDPU@dwp.gsi.gov.uk

If you want advice on immunisation, speak to your doctor, practice nurse, health visitor or pharmacist, or call the **NHS helpline 111**.

For more information visit **www.nhs.uk/vaccinations**

Routine childhood immunisation programme

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
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/ HibHepB
	Pneumococcal (13 serotypes)	Pneumococcal conjugate vaccination (PCV)
	Rotavirus	Rotavirus
Sixteen weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/ HepB
	MenB	MenB
One year old on or after the child's first birthday	Hib and MenC	Hib/MenC
	Pneumococcal	PCV
	Measles, mumps and rubella (German measles)	MMR[2]
	MenB	MenB booster
Eligible paediatric age groups[1]	Influenza (each year from September)	LAIV[2,3]
Three years and sixteen weeks old or soon after	Diphtheria, tetanus, pertussis and polio	DTaP/IPV
	Measles, mumps and rubella	MMR (check first dose given)[2]
Boys and girls aged twelve to thirteen years	Cancers 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)
Fourteen years old (school year 9)	Tetanus, diphtheria and polio	Td/IPV (check MMR status)
	Meningococcal groups A, C, W and Y disease	MenACWY

1 See Green book chapter 19 or visit www.gov.uk/government/publications/influenza-the-green-book-chapter-19 or www.nhs.uk/conditions/vaccinations/child-flu-vaccine.
2 Contains porcine gelatine.
3 If LAIV (live attenuated influenza vaccine) is contraindicated and child is in a clinical risk group, use inactivated flu vaccine.

Please talk to your GP or practice nurse for advice.

from January 2020

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 *Haemophilus influenzae* 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[2]	Pneumococcal Influenza	PCV13 (up to two years of age)[1] 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 *Haemophilus influenzae* 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 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[1,2]	Hepatitis B	Hepatitis B (Engerix B/BvaxPRO)
Infants in areas of the country with TB incidence >= 40/100,000	At birth	Tuberculosis	BCG
Infants with a parent or grandparent born in a high incidence country[3]	At birth	Tuberculosis	BCG
Pregnant women	During flu season At any stage of pregnancy	Influenza	Inactivated flu vaccine
Pregnant women	From 20 weeks gestation[4]	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 >= 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

NHS

Produced by
Public Health England

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3197560P 1P 200K DEC 2019 (APS)

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Please use product code: 3197560P

www.nhs.uk/vaccinations