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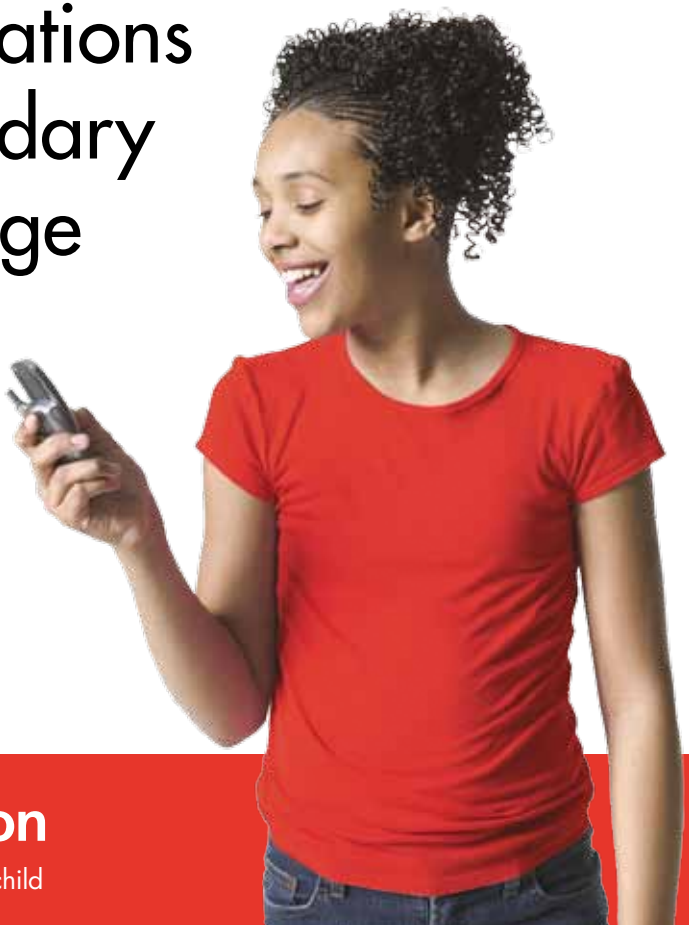
Immunisations at secondary school age



immunisation
the safest way to protect your child

‘The two public health interventions that have had the greatest impact on the world’s health are clean water and vaccines.’

World Health Organization

WAG11- 11560
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This guide describes routine immunisations for secondary school aged children.

Contents

Introduction

This guide is for young people (aged 12 to 18 years of age) and their parents (or guardians) on the routine immunisations due while at secondary school (usually given age 12 -15 years).

It provides information about the vaccines, why they are necessary and what to expect afterwards.

Immunisation is a way of protecting against serious diseases. After immunisation, our bodies are more able to fight those diseases if we come into contact with them.

There are some diseases that can kill or cause lasting damage to health. The national immunisation programme has meant that many serious diseases, such as polio, have disappeared in the UK. But these diseases are still around in many countries throughout the world and could return.

This guide tells you and your parents (or guardians) about the vaccines you will have while you are at secondary school:

- Td/IPV vaccine for **girls and boys** that boosts protection against tetanus (T), diphtheria (d) and polio (IPV-Inactivated Polio Vaccine);
- human papillomavirus (HPV) vaccine for **girls only** aged 12 to 13 years to protect against developing cervical cancer in later life;
- measles, mumps, rubella (MMR) vaccine that some teenagers have missed.

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 (substances to fight infections and diseases). If you come into contact with the infection, the antibodies already made will recognise it and be ready to protect you. You need to be up to date with all vaccinations for some types of work such as for the NHS or the Armed Forces.

Consent for vaccinations to be given

As with all health care, consent must be given before vaccinations can be given. You and your parents will probably want to share and discuss the information in this guide so that you can make decisions together. For the vaccines being offered in school, you may be given a consent form that should be signed by your parent (or guardian) giving permission for you to have the vaccinations. The School Nurse will discuss the vaccine with you at your appointment and will be able to answer any questions you may have.

Td/IPV (tetanus, diphtheria and polio) vaccination for girls and boys

What is tetanus?

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

What is 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, can kill. Before the vaccine was introduced in the UK, there were up to 70,000 cases a year causing up to 5,000 deaths.

What is polio?

Polio is a virus that attacks the nervous system and can cause permanent paralysis of muscles. If it affects the chest muscles or the brain, polio can kill. Before the vaccine was introduced as many as 8,000 cases occurred in the UK in epidemic years. Due to the continued success of polio vaccination, there have been no cases of natural polio infection for over 20 years in the UK (the last case was in 1984).

If I was immunised against tetanus, diphtheria and polio as a young child, am I still protected?

You may still have some protection, but you need this booster to get longer-term protection.

How many boosters do I need to have?

The teenage booster is the last of five doses of tetanus, diphtheria and polio vaccines since childhood to build up and keep your immunity. You should have already had:

- the first three doses as a baby;
- the fourth dose when you were between three and five years old (before you started school, known as the pre-school booster).

The teenage dose is the fifth and final routine dose.

If you think you have missed any of these doses, talk to the School Nurse, Practice Nurse or your GP. It is never too late to be immunised.

Will I need more boosters in the future?

If you have had all five doses you will probably not need further boosters of these vaccines. However, you may need some extra vaccines if you are visiting certain countries. Check with the Practice Nurse at your GP practice, or travel clinic.

When will I get the Td/IPV booster?

In most areas this is given in year 10 at school, and in some areas by your GP practice.

How will I be given the Td/IPV booster?

You will have an injection in your upper arm. Nobody likes injections, but it is very quick. The needles used are small and you should feel only a tiny pinprick. If you are a bit nervous, tell the person who is giving you the injection before you have it.

Are there any reasons why I should not be immunised?

There are very few reasons why you cannot be immunised. The vaccine should not be given if you have had:

- a confirmed anaphylactic reaction to a previous dose of the vaccine, or
- a confirmed anaphylactic reaction to neomycin, streptomycin or polymixin B (these are antibiotics that may be added to vaccines in tiny amounts).

There are no other medical reasons why these vaccines should definitely not be given. If you are worried, talk to the Nurse.

If you:

- have a bleeding disorder (for example, haemophilia where the blood does not clot properly), or
- had convulsions (fits) not associated with fever,

speak to the person giving the vaccine before any immunisation.

Are there any side effects?

There may be side effects but they are usually mild. You may get some redness, swelling or tenderness where the injection was given. Sometimes a small painless lump develops, but this usually disappears in a few weeks. More serious effects are less common but include fever, headache, dizziness, feeling sick and swollen glands.

If you have a fever after the immunisation and feel unwell, take paracetamol or ibuprofen. Read the instructions on the bottle carefully and take the correct dose for your age. If necessary, take a second dose four to six hours later.

If your temperature is still high after the second dose, speak to your GP practice or call NHS Direct Wales on 0845 46 47.

These medicines should only be taken to relieve any pain or fever if you feel unwell following the vaccination.
They should not be given, either before or after the vaccination, as a 'just in case' measure.

Remember, if you are under 16 you should not take medicines that contain aspirin.

Visit www.nhs.uk/vaccinations for more information on side effects.

If you are concerned about suspected side effects following vaccination, please contact your GP practice or NHS Direct Wales.

Individuals can also report suspected side effects of vaccines and medicines through the Yellow Card Scheme. You can do this online by visiting www.yellowcard.gov.uk or by calling the Yellow Card hotline on 0808 100 3352 (Monday to Friday 10.00 to 14.00).

What if I am ill on the day of the appointment?

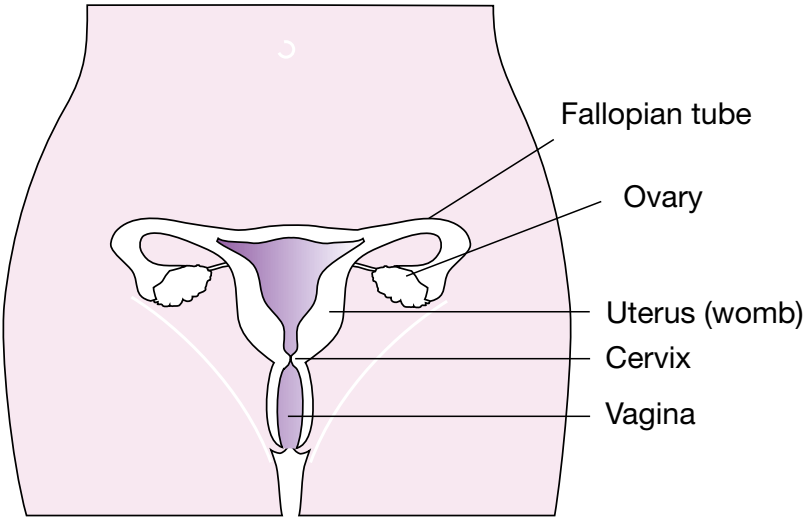
If you have a minor illness without a fever - such as a cold - you should have the immunisation as planned.

If you are ill with a fever, put off the immunisation until you have recovered. This is to avoid the fever being associated with the vaccine, or the vaccine increasing the fever you already have.

HPV vaccination for girls aged 12 to 13 years (Year 8)

Why do we need HPV immunisation?

Cervical cancer occurs in the cervix (the entrance to the womb) which is found at the top of the vagina. It is caused by a virus called the human papillomavirus (HPV). Cervical cancer can be very serious. After breast cancer, it is the most common women's cancer in the world. In the UK, about 3,000 cases are diagnosed every year and about 1,000 women die from it.



How does HPV spread?

HPV infection is very common. The types that can cause cervical cancer are spread by having intimate sexual contact with another person who already has the virus. More than half the sexually active population (both men and women) will get infected with HPV at some time in their lives, so having the vaccine is very important.

The HPV vaccine

There are many types of HPV and the vaccine protects against the types that cause most cases (over 70%) of cervical cancer. Because the vaccine does not protect against all HPV types that cause cancer, it is essential that women still attend cervical screening for a smear test when they are invited (from the age of 20 years). Smear tests check the health of the cervix and can detect early signs of changes or abnormalities.

The UK HPV vaccination programme has been very successful. Millions of doses have been given to girls and young women since the vaccine was introduced in 2008, and they are now less likely to develop cervical cancer later in life.

Most girls who have the vaccination will reduce their risk of getting cervical cancer by over 70%.

How will I have the vaccination?

All girls in year 8 will routinely be offered an appointment for the vaccine that will normally be given at school. The vaccine is given by injection in the upper arm. A full course of three injections spread over about six months is needed to get the best protection. It is important that you get all three doses.

Having the vaccine won't protect against any other sexually transmitted diseases and it won't prevent pregnancy.

Remember the vaccine is recommended for all girls aged 12 to 13 (school year 8). If you missed your vaccinations and are under 18, speak to your GP practice.

Are there any side effects?

The side effects of the HPV vaccination are usually quite mild. Some people may have aching muscles, tiredness, or a headache but often there is nothing more than mild soreness around the injection site that may last a few days or only a few hours. Other reactions which sometimes happen include nausea, vomiting, fever and rash. More serious side effects are extremely rare and the person giving the vaccine will know how to deal with them (see page 9 for more information on side effects).

Now I've had the injections, will I still need to go for smear tests?

Yes. All women should have cervical screening (smear tests) from the age of 20 in Wales. The vaccine protects against the types of HPV that cause most cervical cancer, but not all of them. That is why you still need screening, which can also detect other changes in the cervix.

Please don't forget that cervical screening (the smear test) is essential - even for those who have had a full course of HPV vaccinations.

Why is the vaccine offered in school year 8?

Girls should be vaccinated before they are likely to come into contact with the HPV virus.The chance of infection increases from the age of 14 and therefore giving the vaccine in school year 8 offers the best protection. Girls who have already had sex should still have the vaccine.

I missed my vaccination, can I still have it?

Yes. If you missed any of your vaccinations for whatever reason, you should speak to your School Nurse about making another appointment. It is best to make your appointment as soon as possible after your original one. It's important to have all three doses.

Where can I get more information?

Visit www.beatingcervicalcancer.org.uk where you can download a Question and Answer sheet that gives more detail on the topics covered in this leaflet.

You can also phone the NHS Direct Wales special HPV helpline on 0845 602 3303*

For more information about cervical screening visit www.screeningservices.org.uk/csw/

** calls cost at least 5 pence a minute from a BT landline. Calls from mobiles and other networks may cost more. You may be charged a minimum cost for each call.*

Other immunisations

What about other immunisations such as the MMR vaccine?

When you are having your Td/IPV booster, it's a good idea to check with the person giving the injection that all your other immunisations - such as MMR (measles, mumps and rubella) and MenC (meningitis C) - are up to date. It is particularly important to check that your MMR immunisation is up to date because 1 in 5 teenagers have not had two doses of MMR. If you think this applies to you, you should speak to your School Nurse, Practice Nurse or GP practice to find out how you can get the vaccines and get protected.

MMR vaccine

The MMR vaccine protects you against measles, mumps and rubella (German measles). You should have had the first dose when you were between 12 and 13 months of age and the second dose at about 3 years and 4 months old. The MMR vaccine contains weakened types of live measles, mumps and rubella viruses. Because the viruses are weakened, people who have had the vaccine cannot infect other people.

Are there any reasons why I shouldn't have the MMR?

MMR is a live vaccine, it should not be given to anyone who is pregnant, or who has had a confirmed anaphylactic reaction to neomycin or gelatin or to a previous dose of the vaccine, or anyone who is immunosuppressed. If you are concerned, you should speak to your School Nurse, Practice Nurse or GP practice.

Individuals who are *immunosuppressed* include those:

- whose immune system does not work properly because they are undergoing treatment for a serious condition such as a transplant or cancer;

- who have any condition that affects the immune system such as severe primary immunodeficiency (very rare disease) that means individuals are more likely to catch infections.

The person giving the vaccine may need to get specialist advice.

Why do I need two doses of MMR vaccine?

A full course of MMR is two doses. You need a second dose of the vaccine because it doesn't always work fully the first time. Some who have only one dose might not be protected against one or more of the diseases that the vaccine protects against.

A two dose course of the MMR vaccine is routinely given across Europe as well as in the US, Canada, Australia and New Zealand. By having the full course, you will have the best possible protection.

What if I have never had the MMR vaccine?

If you have not had MMR vaccination before, you should have the first dose now and the second dose after one month.

How effective is the MMR vaccine?

The MMR vaccine is very effective against rubella, provides good protection against measles, and is a little less effective against mumps. A second dose is very important.

What is measles?

Measles is one of the most infectious diseases known and is caused by a 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 10 days. Adults are likely to be ill for longer. It is not possible to tell who will be seriously affected by measles.

It is common for children who catch measles to have complications. The most common complications include ear problems, chest infections, diarrhoea and fits. More rare complications include

encephalitis (swelling of the brain), and brain damage. Measles can kill. In 1987 (the year before the MMR was introduced in the UK), 86,000 children caught measles and 16 died.

How is it spread?

The measles virus is spread by tiny droplets in the air and a cough or a sneeze can spread the virus over a wide area. Because it is so infectious, the chances are you will get measles if you are not protected and are exposed to a case.

What is mumps?

Mumps is caused by a virus and 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. It commonly causes painful swelling of the testicles in adult and adolescent males and can affect the ovaries in females. Mumps lasts about 7 to 10 days.

Before the MMR vaccine was introduced, mumps was the most common cause of viral meningitis in children under 15 years of age with about 1,200 people treated in hospital each year.

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 also caused by a virus. In children it is usually mild, often they have no symptoms at all and it can go unnoticed. It can cause a short-lived rash, swollen glands and a sore throat.

Rubella is very serious for unborn babies and can seriously damage their sight, hearing, heart and brain. This condition is called congenital rubella syndrome (CRS).

The greatest danger from rubella infection is to unborn babies in the first three months of pregnancy. If a woman is infected at that time, in 9 out of 10 cases her baby will be born deaf or blind, with a damaged heart, or with brain damage. Miscarriages are also common among women who are infected in pregnancy. 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.

Are there any side effects from the MMR vaccine?

Side effects can happen after any medicine or vaccination.
The three different viruses in the vaccine act at different times and can produce the following side effects in some people:

- 6 to 11 days after the immunisation, as the measles part of the vaccine starts to work, it is very common to get a fever. Some people develop a measles-like rash and some go off their food;
- rarely, people may get mumps-like symptoms (fever and swollen glands) about 2 to 3 weeks after their immunisation as the mumps part of the vaccine starts to work;
- rarely, a fit may occur with a fever, but is much less common after vaccination than after catching measles;
- very rarely, people may get a rash of small, bruise-like spots in the six weeks after the vaccination. If you see spots like these, make an appointment with the GP to be checked and get advice;
- fewer than one child in a million may develop encephalitis after vaccination but there is very little evidence that it is actually caused by the vaccine. However, if a child who has not been vaccinated catches measles, the chance of them developing encephalitis is about 1 in 1,000 – a thousand times greater.

It is less common to have side effects after the second dose than after the first dose of MMR. Also, when they appear they are usually milder (see page 9 for more information on side effects).

Egg allergies

If you have a history of confirmed severe allergic reaction (anaphylactic reaction) to egg then tell your Practice Nurse, Health Visitor or GP who may seek specialist advice.The MMR vaccine can safely be given to people who have had a severe allergic reaction to egg but it may need to be given in hospital.

If I missed the MMR what can I do now?

In some areas you will be offered the vaccination in school by the School Nurse and in other areas, the vaccination is given in the GP practice. Speak to your School Nurse, Practice Nurse or GP practice to find out how you can get the vaccines and be protected.

Knowing about meningitis and septicaemia (blood poisoning)

Meningitis is infection of the lining of the brain. The same germs that cause meningitis can also cause septicaemia (blood poisoning). Meningitis and septicaemia are both very serious – they can cause permanent disability and death. The signs can come on quickly so you must get treatment straight away. If you haven't been immunised with the MenC vaccine you should get vaccinated now. This vaccine only protects against one type of meningitis and septicaemia, so you still need to know the signs and symptoms.

What do I look for?

Early symptoms of meningitis and septicaemia are mild and they are similar to those you get with flu (such as feeling hot, being sick, and pain in the back or joints). However, for meningitis, the most important signs to look out for are:

- a stiff neck;
- a very bad headache (this alone is not a reason to get medical help);
- wanting to avoid bright lights;
- vomiting;
- a fever;
- tiredness, drowsiness, being less responsive, confusion, and
- red or purple spots that don't fade under pressure (do the glass test explained on page 22).

The main signs of septicaemia are:

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

Remember – symptoms do not appear in order and some may not appear at all.

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 get medical help immediately. If you can't get in touch with your GP practice or you are still worried after getting advice, trust your instincts and go to the emergency department of your nearest hospital or ask a friend to take you.

*

What should I do?

If you get one or more of the symptoms described above, get medical help urgently. Prompt treatment for meningitis and septicaemia gives people the best chance of making a full recovery. If you can't get in touch with your GP practice or are still worried after getting advice, trust your own instincts and go to the emergency department of your nearest hospital or ask a friend to take you.

Where can I get more information about meningitis?

The Meningitis Research Foundation and the Meningitis Trust both provide information about meningitis.

Phone the Meningitis Research Foundation's free 24-hour helpline on 080 8800 3344 or visit the website at: www.meningitis.org

Phone the Meningitis Trust's 24-hour helpline on 0800 028 18 28 or visit the website at www.meningitis-trust.org

* image provided by the Meningitis Trust.

Glossary - describes some of the terms relevant to your immunisations.

Acellular pertussis vaccine	Whooping cough vaccine containing only the parts of the pertussis bacterial cells that can produce immunity in the person receiving the vaccine.
Anaphylactic reaction	An immediate and severe allergic reaction that needs urgent medical attention.
Bacterium	A single germ. Many germs are called bacteria.
Cervix	The entrance to the womb.
Consent	Permission to do something, for example, for a health professional to provide care. Those aged 16 and over can give consent for their own vaccinations. The law recognises that those under the age of 16 who understand fully what is involved may be able to give consent for themselves (although parents will ideally be involved).
Convulsion	Also known as a fit. A medical condition where the muscles contract and relax rapidly resulting in uncontrollable shaking and usually unconsciousness.

DTaP/IPV/Hib vaccine	An injection given to babies at two, three and four months of age to protect against five diseases - diphtheria, tetanus, pertussis, polio and Haemophilus influenzae type b (Hib).
dTaP/IPV & DTaP/IPV vaccine	The pre-school immunisations that protect against four diseases - diphtheria, tetanus, pertussis and polio. They contain acellular pertussis vaccine and inactivated polio vaccine.
Encephalitis	Swelling of the brain.
Fit	Also known as a convulsion (see above).
HPV	Human papillomavirus. It is the most common cause of cervical cancer.
Neomycin, Polymyxin and Streptomycin	Antibiotics that are put into some vaccines to prevent contamination by bacteria.
Td/IPV	An injection given at secondary school to young people aged 13 – 18 years old to provide longer-term protection against three diseases – tetanus, diphtheria and polio.

Vaccine Damage Payment Scheme

Most immunisations are given without any trouble at all, but very rarely there may be problems. The Vaccine Damage Payment Scheme is designed to help with the present and future financial burdens of the person affected by the vaccinations and their family. It covers all the vaccines described in this leaflet but not the hepatitis B vaccine mentioned in the table on page 28.

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

Where can I get more information?

You can also speak to your Practice Nurse, Health Visitor or GP or phone NHS Direct Wales on 0845 46 47.

Visit: www.nhs.uk/

The leaflet is also on the Welsh Government immunisation website:

www.wales.gov.uk/immunisation

Additional copies are available from the Welsh Government Publications Centre by:

e-mail: assembly-publications@wales.gsi.gov.uk
or telephone: 029 2082 3683
(between 08.00 and 17.00 Mon – Fri).

Any queries about this leaflet can be addressed to:

Health Protection Division
Welsh Government
Cathays Park
Cardiff
CF10 3NQ
Tel: 029 2080 1232 or 029 2080 1318

Routine childhood immunisation programme

Each vaccination is given as a single injection into the muscle of the thigh or upper arm.

Age to immunise	Diseases protected against	Vaccines given
Two months old	diphtheria, tetanus, pertussis, polio and *Haemophilus influenzae* type b (Hib) pneumococcal infection	DTaP/IPV/Hib and PCV
Three months old	diphtheria, tetanus, pertussis, polio and *Haemophilus influenzae* type b (Hib) meningitis C (meningococcal group C)	DTaP/IPV/Hib and MenC

Four months old	diphtheria, tetanus, pertussis, polio and *Haemophilus influenzae* type b (Hib) meningitis C pneumococcal infection	DTaP/IPV/Hib and MenC and PCV
Between 12 and 13 months old (within a month of the first birthday)	*Haemophilus influenzae* type b (Hib) and Meningitis C pneumococcal infection measles, mumps and rubella	Hib/MenC and PCV and MMR
Three years four months old	diphtheria, tetanus, pertussis and polio measles, mumps and rubella	DTaP/IPV or dTaP/IPV and MMR
Girls aged 12 – 13 years old	cervical cancer caused by human papillomavirus	HPV
From 13 years old	tetanus, diphtheria and polio	Td/IPV

Non-routine immunisations for children at increased risk of some diseases

Age to immunise	Diseases protected against	Vaccines given
At birth (for babies who are more likely to come into contact with TB than the general population).	tuberculosis	BCG
At birth, 1 month, 2 months and 12 months old (for babies whose mothers have hepatitis B).	hepatitis B	Hep B
Each year between September and November (for children with chronic illness that increases the risk of flu).	influenza (flu)	Flu
From 2 years of age (for children with chronic illness that increases the risk of pneumococcal disease).	pneumococcal disease	PPV
(for the siblings of children susceptible to severe chicken pox).	chicken pox	Varicella