Isle of Man Government
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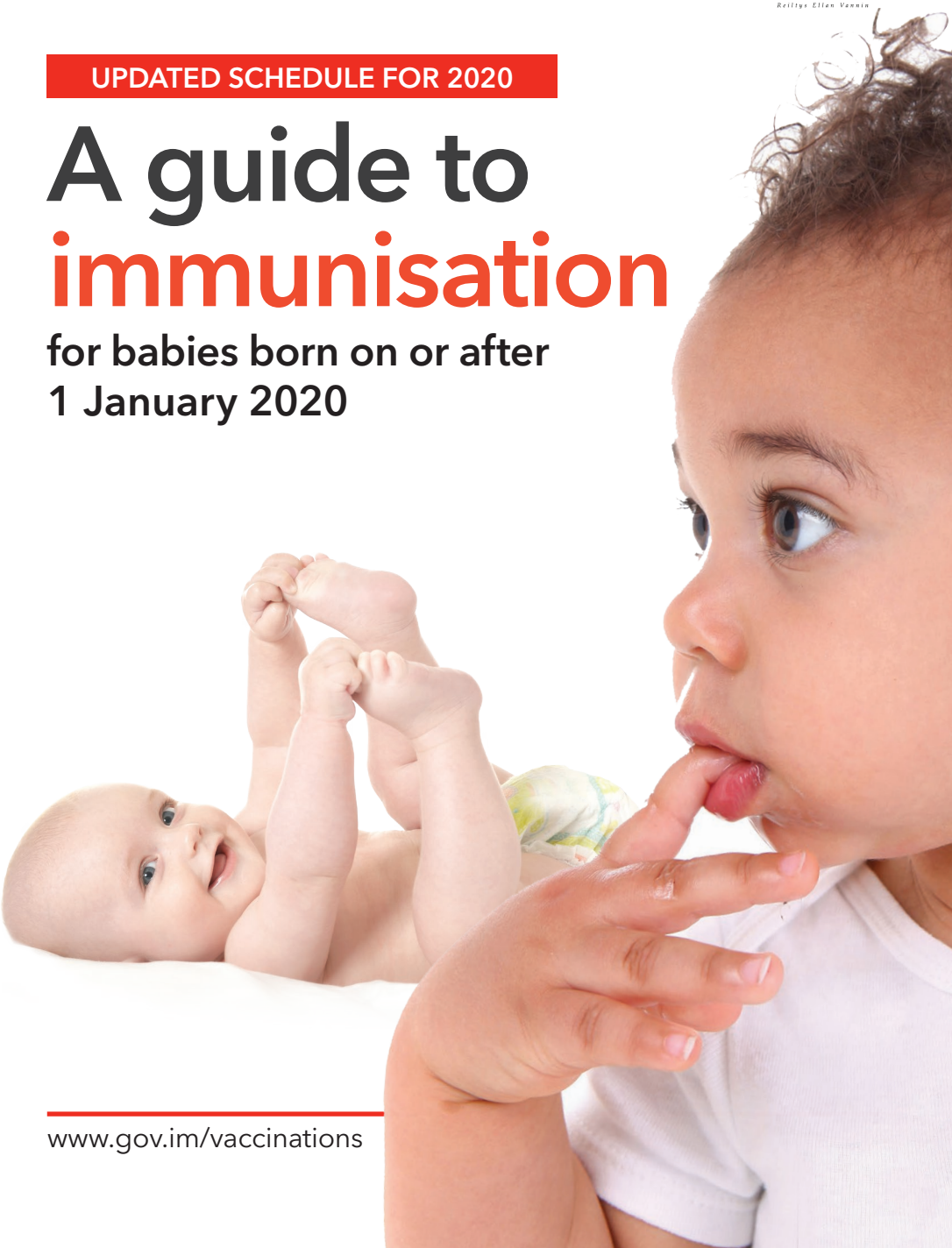
UPDATED SCHEDULE FOR 2020

A guide to immunisation

for babies born on or after 1 January 2020



www.gov.im/vaccinations

Keeping up to date with **vaccinations helps to protect your baby** when they need it most.

Keep this leaflet in a handy place for your baby's first year of life.

The complete immunisation programme from January 2020 for babies born on or after 1 January 2020 is shown in detail in the back pages of this leaflet.

Copies of these booklets are available at www.gov.im/vaccinations

Contents

4 Summary of immunisations up to one year of age

6 Common questions about immunisation

17 The childhood immunisation programme

19 Immunisations at eight, twelve and sixteen weeks of age

19 DTaP/IPV/Hib/HepB vaccine

22 MenB vaccine

24 Pneumococcal vaccine (PCV)

25 Rotavirus vaccine

27 Immunisations at one year of age

28 Hib/MenC vaccine

29 MenB booster vaccine

30 Pneumococcal booster vaccine (PCV)

31 MMR vaccine

36 Other immunisations

37 BCG (TB) vaccine

38 Hepatitis B vaccine

40 Meningitis and septicaemia

45 Routine childhood immunisation programme from January 2020

48 Travel advice for children

Summary of immunisations up to one year of age

Which immunisations will my baby have at 8, 12 and 16 weeks?

At eight weeks, your baby will have immunisations against:

- diphtheria, tetanus, pertussis (whooping cough), polio, Haemophilus influenzae type b (Hib), hepatitis B, rotavirus and meningococcal group B disease (MenB). These will be given as two injections and drops into the mouth

At twelve weeks, your baby will have immunisations against:

- diphtheria, tetanus, pertussis (whooping cough), polio, Haemophilus influenzae type b (Hib), hepatitis B, pneumococcal disease and rotavirus. These will be given as two injections and drops into the mouth

At sixteen weeks, your baby will have immunisations against:

- diphtheria, tetanus, pertussis (whooping cough), polio, Haemophilus influenzae type b (Hib), hepatitis B and meningococcal group B disease (MenB). These will be given as two injections

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

Your baby will have immunisations against:

- Haemophilus influenzae type b (Hib)/ Meningococcal group C (MenC)
- MenB
- measles, mumps, rubella and
- pneumococcal disease

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

World Health Organization

Common questions about immunisation

What is immunisation?

Immunisation is a way of protecting against serious infectious diseases. Once we have been immunised, our bodies are better able to fight those diseases if we come into contact with them.

How do vaccines work?

Vaccines contain a small part of the bacterium or virus that causes a disease, or tiny amounts of the chemicals that the bacterium produces. Vaccines work by causing the body's immune system to make antibodies (substances that fight off infection and disease). 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 diphtheria have almost disappeared from this country.

There are some diseases that can kill children or cause lasting damage to their health. Immunisations are given to prepare your child's immune system to fight off those diseases if they come into contact with them.

When should my baby be immunised?

It is important that your baby has their immunisations at the right age – the first ones are given at eight weeks old. They will be given further doses of these immunisations when they are twelve weeks old and sixteen weeks old. Other immunisations are given at one year of age. Other immunisations are given later, see the table on the back cover of this leaflet.

Why are babies vaccinated so early?

Many of these diseases can be particularly serious in young babies. It is important to make sure babies are protected as early as possible to prevent them catching the diseases.

Why does my baby need more than one dose of vaccine?

Most immunisations have to be given more than once to prepare your child's immunity. For example, three doses of DTaP/IPV/Hib/HepB vaccine are needed to provide protection in babies. Booster doses are then given later in life to provide longer-term protection.

How will I know when my baby's immunisations are due?

Your doctor's surgery or clinic will send you an appointment for you to bring your baby for their immunisations. Most surgeries and health centres run special immunisation or baby clinics. If you can't get to the clinic, contact the surgery to make another appointment. All childhood immunisations are free.

What happens at the appointment?

The doctor or nurse will explain the immunisation process to you, and answer any questions you have. Most vaccines are injected into the muscle of the child's thigh or the upper arm. Rotavirus vaccine is given as drops by mouth.

What if I miss the appointment?

If you miss the appointment or need to delay the immunisation, make a new appointment. You can pick up the immunisation schedule where it stopped without having to start again. Rotavirus vaccine can only be started in babies up to 15 weeks of age and no dose of the vaccine can be given over 24 weeks of age.

Remember, it's never too late to have your child immunised. Even if your child has missed an immunisation and is older than the recommended ages, talk to your doctor, practice nurse or health visitor to arrange for your child to be immunised.

If some diseases have disappeared from this country, why do we need to immunise against them?

In the UK and Isle of Man, these diseases are kept at bay by high immunisation rates. Around the world, millions of people a year die from infectious diseases with more than 5 million of these being children under the age of five. Many of these deaths could be prevented by immunisation. As more people travel abroad and more people come to visit this country, there is a risk that they will bring these diseases into the UK and Isle of Man. The diseases may spread to people who haven't been immunised so your baby is at greater risk if he or she has not been immunised. Immunisation doesn't just protect your child; it also helps to protect your family and the whole community, especially those children who, for medical reasons, can't be immunised. (See page 13 for details).

How do we know that vaccines are safe?

Before they are allowed to be used, all medicines (including vaccines) are thoroughly tested to assess how safe and effective they are. 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.

I am worried that my baby will be upset by having an injection.

Your baby may cry and be upset for a few minutes, but they will usually settle down after a cuddle.

Will my baby have any side effects from the vaccine?

Some babies will have side effects. 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, or
- have a temperature (fever)
- babies having the rotavirus vaccine may get mild diarrhoea

What is 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, he or she may have a fever.

You should check their temperature with a thermometer.

How to treat and prevent fever

Keep your child cool by:

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

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

Fever is more common when babies have the MenB vaccine alongside their other vaccines (see page 22).

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

If you are worried about your child, trust your instincts. Speak to your doctor or practice nurse.

Call the doctor **immediately** if, at any time, your child:

- has a temperature of 39°C or above, or
- has a fit

If the surgery is closed and you can't contact your doctor, trust your instincts and go to the emergency department of your nearest hospital.

I'm worried that my baby may have allergies. Can he or she have vaccines?

Yes. 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.

Are some babies allergic to vaccines?

Very rarely, children can have an allergic reaction soon after immunisation. This reaction 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 does not mean that your child should stop having 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. A recent study has shown that there is only one anaphylactic reaction in about a million immunisations.

The people who give immunisations are trained to deal with anaphylactic reactions and children recover completely with treatment.

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

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

There are very few reasons why babies cannot be immunised. Vaccines should not be given to babies who have had:

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

In general, children who are 'immunosuppressed' should not receive live vaccines. Children 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, or
- who have any condition which affects the immune system, such as severe primary immunodeficiency. (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 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, rotavirus vaccine and BCG. There are no other reasons why vaccines should definitely not be given.

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

If your baby has a minor illness without a fever, such as a cold, they should have their immunisations as normal. If your baby is ill with a fever, put off the immunisation until they have recovered. This is to avoid the fever being associated with the vaccine, or the vaccine increasing the fever your child already has. If your baby:

- has a bleeding disorder (for example haemophilia, in which the patient's blood does not clot properly), 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. Seizures associated with fever (which may be called a febrile seizure or febrile convulsion) are rare in the first six months of life and are most common in the second year of life. After this age, they become less frequent and are rare after the age of five years. Most children who have febrile seizures recover fully. When a child has a seizure 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 your baby has a fit after an immunisation, contact your doctor. He or she may refer you to a specialist for advice about further investigations and future immunisations. If the surgery is closed or if you can't contact your doctor, go straight to the emergency department of your nearest hospital.

My baby was born early. When should premature babies have their first immunisation?

Premature babies may be at greater risk of infection. They should be immunised in line with the recommended schedule from eight weeks after birth, no matter how premature they were.

Does my baby have to be immunised?

In the UK and Isle of Man, parents can decide whether or not to have their children immunised. Vaccination is recommended because it gives your baby protection against serious diseases, most of which can kill. Around the world, many children are now routinely protected with vaccines. Because of this, some of the world's most serious diseases may soon disappear.

How long do I have to wait before I can take my baby swimming?

You can take your baby swimming at any time before and after their immunisations.

Is it safe to have several vaccinations in one go?

Yes; 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.

Studies have shown that it is safe to have several vaccinations at the same time and your baby will be

protected from some very serious infections.

Are there other ways to immunise my baby?

There is no other proven, effective way to immunise your child.

Why is the immunisation programme changed from time to time?

Immunisation programmes are regularly reviewed to make sure that all children are offered the best protection against preventable diseases. As new vaccines become available, or research shows that giving existing vaccines at different times improves protection, the programme will be changed.

Recent changes to the UK programme have been:

- giving hepatitis B vaccine at 8 weeks, 12 weeks and 16 weeks of age
- giving rotavirus vaccine at 8 weeks and 12 weeks of age
- giving MenB vaccine to babies at 8 weeks,16 weeks and one year of age
- giving flu vaccine to all eligible primary school aged children
- giving MenACWY to young people around 14 years old
- giving HPV vaccine to boys as well as girls from September 2019
- giving a single priming dose of pneumococcal vaccine at 12 weeks of age instead of two doses at 8 and 16 weeks

The childhood immunisation programme

Remember to bring your Red Book of immunisation with you to each appointment.

The childhood immunisation programme

Immunisations are given to babies at eight, twelve and sixteen weeks of age, with further immunisations given at one year of age.

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/Hib/HepB
	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

Immunisations at eight, twelve and sixteen weeks of age

You will be offered DTaP/IPV/Hib/HepB, MenB, PCV and rotavirus for your baby during the first four months of their life – see the table on page 18. The vaccines are described below, together with the diseases they protect against.

DTaP/IPV/Hib/HepB vaccine

Your baby should be immunised with DTaP/IPV/Hib/HepB vaccine when they are eight, twelve and sixteen weeks old.

The DTaP/IPV/Hib/HepB vaccine protects against six different diseases – diphtheria, tetanus, pertussis (whooping cough), polio, Haemophilus influenzae type b (Hib) and hepatitis B. Your child should have a Hib booster (in combination with MenC) at one year of age; boosters against diphtheria, tetanus, pertussis and polio before they start school; and a further tetanus, diphtheria and polio booster around 14 years.

How effective is the DTaP/IPV/Hib/HepB vaccine?

Studies have shown that DTaP/IPV/Hib/HepB vaccine is very effective in protecting your baby against these six serious diseases. Further doses are needed to extend this protection as your child grows up.

The DTaP/IPV/Hib/HepB vaccine is called Infanrix hexa. To read the patient information leaflet, visit www.medicines.org.uk/emc/product/2586/pil

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, 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 5000 deaths.

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. 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 not usually so serious in older children. Before the pertussis vaccine was introduced, the average number of cases of whooping cough reported each year in the UK was 120,000, and 92 children died in the year before the vaccine was introduced.

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 polio vaccine was introduced, there were as many as 8000 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).

What is 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 it's been introduced, the number of children under five years of age with Hib has fallen by 99%.

What is 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), which prevents it from working properly, or liver cancer.

Although the number of children infected with the hepatitis B virus is low in the UK and Isle of Man, hepatitis B immunisation has been provided to infants at a high risk of developing the infection from infected mothers 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.

The hepatitis B vaccine only protects against the B type of the virus and three doses will provide long lasting protection for those children without additional risk factors.

After immunisation with DTaP/IPV/Hib/HepB

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

- redness, swelling or tenderness where they had the injection
- your baby may be miserable for up to 48 hours after having the injection
- your baby could develop a mild fever (see page 11)
- you might notice a small lump where your baby had the injection. This may last for a few weeks but will slowly disappear

If you think your baby has had 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.

MenB vaccine

Your baby should be immunised with MenB vaccine when they are eight weeks, sixteen weeks and twelve months old.

This vaccine protects against meningitis and septicaemia (blood poisoning) caused by 'meningococcal group B' bacteria. The MenB vaccine does not protect against meningitis and septicaemia caused by other bacteria or by viruses (see page 40).

What are meningococcal B bacteria?

There are several types of meningococcal bacteria (A, B, C, W, Y and Z) and most cases of meningitis and septicaemia in the UK and Isle of Man are caused by the B strains, especially in young children. A vaccine that helps to protect against MenB disease was introduced into the UK/Isle of Man programme in September 2015.

How common is MenB disease?

In England and Wales, in 2013, there were over 500 confirmed MenB cases, with more than half of the cases in children under five years of age. Without vaccination, around one in 3500 infants under one year and one in 8000 toddlers aged one to four years will develop meningococcal disease every year.

After immunisation with MenB vaccine

Some babies may:

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

Why do I need to give my baby paracetamol following the eight and sixteen week vaccinations?

Fever can be expected after any vaccination, but is very common when the MenB vaccine is given with the other routine vaccines at eight and 16 weeks. The fever shows the baby's body is responding to the vaccine, although the level of fever depends on the individual child and does not indicate how well the vaccine has worked. Giving infant paracetamol will reduce the risk of fever, irritability and general discomfort (including pain at the site of the injection) after vaccination.

How much paracetamol should I give my baby and when?

You will need to give your baby a total of three doses of paracetamol (2.5ml of infant paracetamol 120mg/5ml suspension) to prevent and treat any potential fever after

both the eight and 16 week vaccination visits.

You should give the first dose of paracetamol as soon as possible after your baby's 8 week vaccination visit. You should then give the second dose four to six hours later and the third dose four to six hours after that.

You will need to follow the same steps after their 16 week vaccinations. No paracetamol is required at the 12 month dose (see page 29). If you do not have any infant paracetamol liquid at home you should get some in time for your first vaccination visit. It is widely available from pharmacies and supermarkets.

The Meningitis B vaccine is called Bexsero. To read the patient information leaflet, visit www.medicines.org.uk/emc/product/5168/pil

Pneumococcal vaccine (PCV)

Your baby should be immunised with PCV when they are twelve weeks and twelve months old.

PCV provides some protection against one of the most common causes of meningitis, and also against other conditions such as severe ear infections (otitis media), and pneumonia caused by pneumococcal bacteria. This vaccine only protects against 13 types of pneumococcal bacteria and does not protect against meningitis caused by other bacteria or viruses (see the meningitis and septicaemia section on page 40).

What are pneumococcal bacteria?

There are more than 90 different pneumococcal types (serotypes) that can cause disease in humans, but the 13 types in the vaccine were the most common. The infection causes serious (invasive) disease such as meningitis and septicaemia (blood poisoning) and less serious infections such as ear infections (otitis media), sinusitis, pneumonia and bronchitis.

How common is invasive pneumococcal infection?

More than 5000 cases are diagnosed each year in England. The number of cases peaks in December and January.

It particularly affects:

- the very young
- the elderly
- people with certain medical conditions

Invasive infections due to the strains covered by the vaccine have declined dramatically since the vaccine was introduced.

After immunisation with PCV

Some babies may get swelling, redness or tenderness at the injection site or a mild fever (see also pages 10 and 11).

The pneumococcal vaccine for infants is called Prevenar 13. To read the patient information leaflet, visit www.medicines.org.uk/emc/product/453/pil

Rotavirus vaccine

The vaccine will be given with your baby's other routine vaccinations at eight and twelve weeks of age.

Rotavirus is an infection that causes vomiting and diarrhoea. In England, before the vaccine was introduced, almost all babies got rotavirus at sometime in their first five years of life and about one in every five required medical attention. About one in ten of these (roughly 13,000) were admitted to hospital because of rotavirus.

How is rotavirus spread?

The virus can be spread through hand to mouth contact and be picked up from surfaces such as toys, hands or dirty nappies. It can also be spread through the air by sneezing and coughing.

When will my baby have the vaccination?

The vaccine will be given with the other routine vaccinations at eight and twelve weeks of age. Your baby needs two rotavirus vaccinations at least four weeks apart to get the best protection.

If he or she misses one of the vaccinations, the first dose can be given up to 15 weeks of age. No dose of the vaccine will be given to babies over 24 weeks of age.

How is the vaccine given?

Rotavirus vaccine is given as a liquid from a dropper to make it easy for your baby to swallow.

Does the vaccine have any side effects?

Many millions of doses of the vaccine have been used and it has a good safety record. Babies who have had the vaccine can sometimes become restless and irritable, and some may even develop mild diarrhoea.

In very rare cases (about two in every hundred thousand babies vaccinated), the vaccine can affect the baby's lower gut and they may develop abdominal pain, vomiting, and sometimes they may pass what looks like redcurrant jelly in their nappies. If this happens, you should contact your doctor immediately.

The rotavirus vaccine is called Rotarix. To read the patient information leaflet, visit www.medicines.org.uk/emc/product/201/pil

Immunisations at one year of age

Your child will need the combined Hib/MenC vaccine, PCV, and the MenB vaccine at one year of age to boost their protection against Haemophilus influenzae type b (Hib), meningococcal B and pneumococcal infections. These vaccines will help to protect your child through early childhood.

Your child will also have their first dose of MMR and MenC vaccine (in the combined Hib/MenC vaccine) at this time to protect against measles, mumps and rubella and meningococcal C. Your child will need a second dose of MMR vaccine before starting school.

The routine primary immunisations for babies at one year of age

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

When	Diseases protected against	Vaccine given
One year old on or after the child's first birthday	Hib and MenC	Hib/MenC
	Pneumococcal booster	PCV
	Measles, mumps and rubella (German measles)	MMR*
	MenB	MenB booster

*One of the two MMR vaccines available contains porcine gelatine

Hib/MenC vaccine

Your child should be immunised with their dose of Hib/MenC vaccine when they are one year of age at the same time as their MMR and booster PCV and MenB vaccinations.

This vaccine protects against Hib (see page 21 for information on Hib) and meningitis and septicaemia (blood poisoning) caused by 'meningococcal group C' bacteria. This vaccine does not protect against meningitis or septicaemia caused by other bacteria or by viruses (see page 40).

How common is MenC disease?

Prior to the introduction of the vaccine there were around 800 to 900 MenC cases a year, mainly affecting babies and teenagers. Since the vaccine was introduced, the number of babies under the age of one with group C disease has fallen by about 99%.

A booster dose of MenC is contained in the MenACWY vaccine given to young teenagers, and is needed to provide longer-term protection against four of the causes of meningitis and septicaemia.

After immunisation with Hib/MenC vaccine

Your child may have redness, swelling or tenderness where they had the injection. About half of all babies who have the vaccine may become irritable, and about one in 20 could get a mild fever (see also pages 10 and 11).

The Hib/MenC vaccine is called Mentorix. To read the patient information leaflet, visit www.medicines.org.uk/emc/product/167

MenB booster vaccine

Your child should be immunised with their booster dose of MenB vaccine when they are one year of age at the same time as their Hib/MenC and PCV vaccinations and their first MMR vaccination.

This booster dose provides longer-term protection against meningitis and septicaemia caused by 'meningococcal group B' bacteria.

After immunisation with MenB vaccine

Some babies may:

- have redness, swelling or tenderness where they had the injection (this will slowly disappear on its own within a few days) and/or
- be a bit irritable and go off their food

The risk of fever, which is common after the vaccinations at eight and 16 weeks of age (see page 23), is much less common after this vaccination because babies at this age can tolerate the vaccine better. There is no need, therefore, for paracetamol to be given as a precautionary measure, although it should be given if a fever does occur.

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Both meningitis and septicaemia are very serious. See page 40 for descriptions of the diseases, their signs and symptoms, and what to do about them.

Pneumococcal booster vaccine (PCV)

Your child should be immunised with their booster dose of PCV at one year of age at the same time as their Hib/MenC, MenB booster and MMR vaccinations.

This booster vaccination provides longer-term protection against pneumococcal infection.

After immunisation with the PCV booster

Out of ten babies immunised, one or two may get swelling, redness or tenderness where they had the injection, or they may have a mild fever (see also pages 10 and 11).

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 booster Hib/MenC, MenB and PCV vaccinations.

MMR protects your child against measles, mumps and rubella (German measles).

What is the MMR vaccine?

The MMR vaccine contains weakened versions of live measles, mumps and rubella viruses. Because the viruses are weakened, people who have had the vaccine cannot infect other people. In the UK we have two MMR vaccines. Both of the vaccines work very well, one 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.

How and when is the vaccine given?

The vaccine is injected into the muscle of the child's thigh or upper arm. It is given to a child at one year of age after the immunity they got from their mother wears off. It should be given again when children are three years and four months of age or soon after.

How effective is the MMR vaccine?

Since it was introduced in the UK in 1988, the MMR vaccine has dramatically reduced the three diseases (measles, mumps, rubella) in young children.

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. It is not possible to tell who will be seriously affected by measles. Around one in every five 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 measles vaccine around 500,000 cases and 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.

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.

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, about 1200 people a year in the UK went into hospital because of mumps.

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 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 nine out of ten cases. In many of the cases, pregnant women caught rubella from their own, or their friends' children. In the five years before the MMR vaccine was introduced, about 43 babies a year were born in the UK with congenital rubella syndrome.

How is it spread?

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

After vaccination with MMR

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

- six to ten days after the immunisation, as the measles part of the vaccine starts to work, about one in ten children may develop a fever and some develop a measles-like rash and go off their food (for advice on treating a fever, see page 11)
- about one in every 1000 immunised children may have a fit caused by a fever. This is called a 'febrile convulsion' (see page 14). 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
- 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 one in 200 and one in 5000.

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

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.

Does the MMR vaccine contain gelatine?

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

MMRVAXPRO: www.medicines.org.uk/emc/product/6307/pil
Priorix: www.medicines.org.uk/emc/product/1159/pil

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.

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

Won't giving my baby MMR vaccine, with boosters of MenB, PCV and Hib/MenC at the same time overload their immune system?

No. 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, MenB, pneumococcal and Hib/MenC vaccines at the same time.

Parents and carers 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 Freephone 0808 100 3352 (available Monday to Friday from 10am to 2pm).

Other immunisations

BCG vaccine

Protecting babies against tuberculosis (TB)

In the UK, like many other countries, BCG is only offered to babies who are more likely than the general population to come into contact with someone with TB. This is because they either live in an area with high rates of TB or their parents or grandparents came from a country with high rates of TB.

The vaccination is usually offered after the birth while your baby is still in hospital, but it can be given at any time.

What is TB?

TB is an infection that usually affects the lungs. It can also affect other parts of the body, such as the lymph glands, bones, joints and kidneys. Most cases can be cured with treatment. TB can also cause a very serious form of meningitis.

> Although TB is no longer as common in the UK, worldwide it kills around two million people a year.

After immunisation

A blister or sore may appear where the injection is given. If it does appear, it will heal gradually, and it is best if you do not cover it up. The sore may leave a small scar. If you are worried or think the sore has become infected, see your doctor.

The BCG vaccine is called BCG Vaccine AJV. To read the patient information leaflet, visit www.medicines.org.uk/emc/product/9890/pil

Hepatitis B vaccine

Protecting babies against hepatitis B

Although the hepatitis B vaccine is part of the routine childhood immunisation programme, it is also given to babies whose mothers have hepatitis B to prevent the babies getting the infection from their mothers at birth. If the immunisations are given on time they will reduce the risk of the baby developing hepatitis B by over 90%.

Babies at high risk of developing hepatitis B infection are given six doses of hepatitis B containing vaccine.

- the first dose of hepatitis B containing vaccine is given immediately after birth
- a second dose of hepatitis B containing vaccine is given when the baby is four weeks old
- the baby will then transfer to the routine immunisation schedule and will get their first dose of DTaP/IPV/Hib/HepB at eight weeks of age
- a second dose of DTaP/IPV/Hib/HepB is given at twelve weeks of age
- a third dose of DTaP/IPV/Hib/HepB is given when the baby is sixteen weeks of age
- at twelve months of age the baby will be given their final dose of hepatitis B containing vaccine which is necessary to provide longer-term protection

A blood test is taken at 12 months to check that the baby has not developed hepatitis B.

There are two hepatitis B vaccines used called Engerix and HBVAXPRO. To read the patient information leaflets, visit:

Engerix: www.medicines.org.uk/emc/product/8404/pil
HBVAXPRO: www.medicines.org.uk/emc/product/1684/pil

What is hepatitis?

Hepatitis is an infection of the liver caused by hepatitis viruses. Hepatitis B vaccine protects against the B type of the virus, but it does not protect against hepatitis caused by other types of the virus.

The hepatitis B virus is passed through infected blood from mothers to their babies at birth. If you are pregnant and have hepatitis B, or if you get the disease during your pregnancy, you could pass it on to your baby. Your baby may not be ill immediately after birth but they have a high chance of developing serious liver disease later in life. Some people carry the virus in their blood without knowing it.

Pregnant women in the UK are offered a hepatitis B test during their antenatal care. If you have hepatitis B, you should have your baby vaccinated after birth to prevent them from becoming infected. It is safe to breastfeed your baby as long as they receive their vaccines on time.

After immunisation

The side effects of the hepatitis B vaccine are usually quite mild. There could be some redness, soreness or tenderness where the injection is given. This lasts for a few days (see also pages 10 and 11).

For more information, visit www.gov.im/vaccinations

Watch out for meningitis and septicaemia

Both meningitis and septicaemia are very serious. It is important that you recognise the signs and symptoms and know what to do if you see them. Early symptoms of meningitis and septicaemia may be similar to a cold or flu (fever, vomiting, irritability and restlessness).

However, people with meningitis or septicaemia can become seriously ill within hours, so it is important to act fast.

What is meningitis?

Meningitis is an infection of the lining of the brain. Meningitis can be caused by several types of bacteria including pneumococcus, meningococcus and Haemophilus influenzae or by viruses.

What is septicaemia?

Septicaemia is a very serious condition when the bloodstream is infected. Septicaemia can be can be caused by several types of bacteria including pneumococcus, meningococcus and Haemophilus influenzae. The signs are cold hands and feet, pale skin, vomiting and being very sleepy or finding it difficult to wake up, and these signs can come on quickly. If you suspect you or someone else has septicaemia, get help urgently.

The bacteria that cause meningitis and septicaemia (blood poisoning), can also cause pericarditis (inflammation of the lining of the sac that contains the heart) and arthritis (swelling of the joints) and other serious infections.

In babies, the main symptoms of meningitis may include:

- a high-pitched, moaning cry
- being irritable when picked up
- a bulging fontanelle
- feeling drowsy and not responding to you, or being difficult to wake
- being floppy and having no energy
- stiff with jerky movements (convulsions/fits)
- refusing feeds and vomiting
- having skin that is pale, blotchy or turning blue, and
- a fever.

In babies, the main symptoms of septicaemia may include:

- fever and shivering
- vomiting
- severe pains and aches in limbs and joints
- very cold hands and feet
- pale or mottled skin
- rapid breathing
- diarrhoea and stomach cramps
- red or purple 'bruised' or blotchy rash on skin* that does not fade under pressure – do the glass test shown overleaf
- difficulty walking or standing, and
- severe sleepiness, losing consciousness.

The main signs and symptoms

Not everyone will develop all these symptoms – they can appear in any order and be mixed between the two illnesses. It is important to seek early medical advice if you or a friend have symptoms of concern or a condition that is getting rapidly worse.

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

In older children, adolescents and adults, the main symptoms of meningitis may include:

- a stiff neck (check that they can kiss their knees or touch their forehead with their knees)
- a very bad headache (although this on its own is not a reason to get medical help)
- wanting to avoid bright lights
- vomiting
- a fever
- tiredness, being less responsive and confused, and
- a rash.

In older children, adolescents and adults, the main symptoms of septicaemia may include:

- sleepiness, being less responsive, uninterested or confused (a late sign in septicaemia)
- severe pains and aches in the arms, legs and joints
- very cold hands and feet
- shivering
- rapid breathing
- red or purple spots that do not fade under pressure* (do the 'glass test' explained next page)
- vomiting
- a fever, and
- diarrhoea and stomach cramps.

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

The signs and symptoms of meningitis and septicaemia are listed on the previous pages. Symptoms can occur in any order and some may not appear at all – trust your instincts. Some of the symptoms are very similar to those of flu, so, if you're in any doubt about the health of your baby, trust your instincts and get advice urgently by contacting your doctor or practice nurse.

The 'glass test'

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

Where can I get more information?

The following charities provide information, advice and support:

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

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

You can also ask your doctor, practice nurse or health visitor for advice, or visit: www.gov.im/vaccinations where you can find out more about vaccination and create your own vaccination wall planner for your child.

Routine childhood immunisation programme from January 2020

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.

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.

For more information visit www.gov.im/vaccinations

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/Hib/HepB
	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 booster	PCV
	Measles, mumps and rubella (German measles)	MMR[2]
	MenB	MenB booster
Eligible paediatric age group[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 at www.gov.uk/government/publications/influenza-the-green-book-chapter-19 or www.gov.im/vaccinations.
2 The live attenuated influenza vaccine (LAIV) and one of the two brands of MMR vaccine contains porcine gelatine.
3 If LAIV (live attenuated influenza vaccine) is contraindicated and child is in a clinical risk group, use inactivated flu vaccine.

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 Influenza	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 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 Influenza	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 16 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

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 at www.gov.im/vaccinations and the Travel Health pro website: http://travelhealthpro.org.uk

Isle of Man Government
Reiltys Ellan Vannin

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