Immunisation

for babies just after their first birthday

immunisation

the safest way to protect your child

Introduction

This leaflet contains the facts about the first MMR vaccine and the PCV, Hib/MenC and MenB booster vaccines, which your child should have just after their first birthday. If you want to talk over this information please contact your GP, health visitor or practice nurse. You may also find it helpful to visit: www.publichealth.hscni.net or www.nhs.uk/vaccinations

Your child should have the MMR, PCV, Hib/MenC and MenB vaccines just after their first birthday (12 to 13 months of age).

What is MMR?

MMR vaccine protects your child against measles (M), mumps (M) and rubella (R; German measles). Your child should receive one dose of MMR just after their first birthday and a second dose at three years and four months old. Since MMR was introduced here in 1988 the number of children catching these diseases has fallen to an all time low.

Measles, mumps and rubella can all have serious complications.

- Measles can cause ear infections, respiratory problems and meningitis/encephalitis (inflammation of the brain). It has a 1 in 2,500–5,000 chance of causing death.

- Mumps can cause deafness, usually with partial or complete recovery, and swollen, painful testicles in older boys and men. It was the biggest cause of viral meningitis in children.

- Rubella can also cause inflammation of the brain and can affect blood clotting. In pregnant women it can cause miscarriage or major health problems for their babies such as blindness, deafness, heart problems or brain damage.

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 across the world including in the UK and Europe. Immunising your child with the MMR vaccine will give them the best protection.

Does MMR have any side effects?

As with all medicines, there are some side effects associated with vaccinations. Most of these are minor and last for only a short time, eg redness and swelling at the injection site.

MMR contains three separate vaccines in one injection. The vaccines work at different times. About a week to 10 days after the MMR immunisation some children become feverish, develop a measles-like rash and go off their food as the measles part of the vaccine starts to work.

Your child may, very rarely, get a rash of small bruise-like spots due to the rubella part of the immunisation about two weeks after MMR. This usually gets better on its own but if you see spots like this, show them to your doctor.

About three weeks after the injection a child might sometimes get a mild form of mumps as the mumps part of MMR kicks in.

Occasionally, children do have a bad reaction to the MMR vaccine. About 1 in 1,000 will have a fit caused by a high temperature due to the measles part of the vaccine (see page 12 for how to treat a fever). There is no evidence that this causes long-term problems. A child who has measles is five times more likely to have a fit as a result of the illness.

Vaccines can also cause allergic reactions. These are very rare, about one case in half a million immunisations. Although they are worrying when they happen, treatment leads to a rapid and full recovery.

Encephalitis (inflammation of the brain) has been reported in about one case in every million immunisations. This is no higher than the chance of any child developing encephalitis without the vaccine. But measles causes encephalitis in 1 in every 1,000 children who get the disease.

Comparisons between the side effects of MMR and the side effects of measles, mumps or rubella show that the vaccine is far safer than the diseases.

Complications	Rate after natural disease	Rate after 1st dose of MMR
Fits (due to high temperature)	1 in 200	1 in 1,000
Meningitis/inflammation of the brain (encephalitis)	1 in 200 to 1 in 1,000	1 in 1,000,000
Conditions affecting blood clotting	1 in 3,000	1 in 24,000
Death (depending on age)	1 in 2,500 to 1 in 5,000	None

Parents and carers can also report suspected side effects of vaccines and medicines through the Yellow Card Scheme. This can be done online by visiting https://www.yellowcard.mhra.gov.uk or by calling the Yellow Card hotline on freephone 0808 731 6789 (available Monday to Friday 10.00am to 2.00pm).

Facts about the MMR vaccine

- MMR vaccine protects children against measles, mumps and rubella.

- In 40 years, more than 500 million doses of MMR have been given in around 100 countries. It has an excellent safety record.

- There is no evidence of any link between MMR and autism.
- Giving the vaccines separately may be harmful. It leaves children open to the risk of catching measles, mumps or rubella.
- Where MMR is available, no countries recommend giving all the vaccines separately.
- In the year before MMR was introduced in the UK, 86,000 children caught measles and 16 died. Due to low vaccine uptake, there have been recent outbreaks in Europe and some children have died.

What about the reports of links between autism and MMR?

Although autism is increasingly recognised now, the increases were going on long before MMR was introduced. Parents often first notice signs of autism in children after their first birthday. MMR is usually given to children at about this age, but this doesn't mean that MMR causes autism.

Extensive research into the possibility of a link between the MMR vaccine and autism, involving hundreds of thousands of children, has been carried out in the UK and many other countries. No link has been found.

Experts from around the world, including the World Health Organization, agree that there is no link between the MMR vaccine and autism.

Have children been followed up long enough after MMR to know it's safe?

MMR has been given for 40 years and over 500 million doses have been used. Its safety has been carefully monitored in many countries and it has been shown to be a highly effective vaccine with an outstanding safety record.

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

What is the Hib/MenC vaccine?

Your child will need a dose of the combined Hib/MenC vaccine to protect them against Haemophilus influenzae type b (Hib) and meningococcal C (MenC) infections. This vaccine provides longer-term protection throughout childhood against two causes of meningitis and septicaemia (blood poisoning).

Does the Hib/MenC vaccine have any side effects?

Your baby may have swelling, redness or tenderness at the injection site. About half of all babies who have the vaccine may become irritable, and about 1 in 20 could get a mild fever. Very rarely, a vaccine may cause an allergic reaction (see page 9).

What is MenB vaccine?

This vaccine protects against MenB disease which is the most common type of meningococcal disease. Babies and young children are most at risk of this disease. This dose is given to boost your child's protection against MenB disease.

Does the MenB vaccine have any side effects?

Some babies may:

- have redness, swelling or tenderness where they had the injection (this will disappear on its own in a few days);
- be a bit irritable and feed poorly;
- have a temperature. Unlike for the doses of MenB vaccine your baby received at 2 and 4 months, it is not essential that you give Paracetamol liquid after this vaccination visit to control temperature development. If however your child does develop a temperature/fever you should treat this as shown on page 12 of this booklet.

MenB vaccine protects against most but not all strains of MenB so it is important that you know what signs and symptoms to look out for - see pages 13 to 15.

What is pneumococcal vaccine (PCV)?

Pneumococcal (pronounced new-mo-cock-al) vaccine protects your child against one of the causes of meningitis, and also against other conditions such as severe ear infections

(otitis media) and pneumonia caused by the most common types of pneumococcal bacteria. This vaccine does not protect against all types of pneumococcal infection and does not protect against meningitis caused by other bacteria or viruses. Before this booster dose of PCV just after the first birthday, your child should already have received two doses of PCV at 2 and 4 months of age.

What is pneumococcal infection?

Pneumococcal infection is one of the most common causes of meningitis but it also causes severe ear infections, pneumonia and some other serious illnesses.

Does PCV have any side effects?

Out of every 10 babies immunised, one or two may get swelling, redness or tenderness at the injection site or get a mild fever (see How to treat a fever section page 12).

Very rarely, a vaccine can cause an allergic reaction, such as a rash or itching affecting some or all of the body. Even more rarely, children may have a severe reaction within a few minutes of the immunisation, causing difficulty breathing and possibly collapse. This is called anaphylaxis. A recent study has shown that one case of anaphylaxis is reported in about half a million immunisations given. Although allergic reactions can be worrying, treatment leads to a rapid and full recovery.

Questions you may have

Are there any reasons why my child should not be immunised with Hib/MenC, MenB, MMR and PCV?

There are very few reasons why your child should not be immunised. You should let your GP or nurse know if your child:

- has a very high temperature or fever;
- has had convulsions or fits;
- has had a bad reaction to any immunisation;
- has had a severe allergy to anything;
- has had a bleeding disorder;
- has had treatment for cancer;
- has any illness that affects the immune system (eg leukaemia, HIV or AIDS);
- is taking any medicine that affects the immune system (eg high dose steroids or treatments given after organ transplant or for cancers);
- has any other serious illness.

These don't always mean that your child can't be immunised but it helps the doctor or nurse decide which are the best immunisations for your child and whether they need to give

you any other advice. A family history of illness is never a reason for a child not to be immunised.

Wouldn't it be better for children to have the vaccines separately?

Combining the vaccines is simpler and there is good evidence that it is perfectly safe to do so. Giving the vaccines separately would mean seven injections instead of four and would leave children exposed to some of the diseases for longer. These diseases can be serious and even fatal.

Giving vaccines together does not overload a child's immune system. From birth, babies' immune systems protect them from thousands of viruses and bacteria that surround them. The World Health Organization advises against using separate vaccines because they would leave children at risk for no benefit.

What happens if my baby gets a high temperature after immunisation?

Side effects from vaccines are unusual, usually mild and disappear quickly. Some babies may get a raised temperature or fever (over 37.5°C). If your baby's face feels hot to the touch and they look red or flushed they probably have a fever. You should check their temperature with a thermometer.

Fevers are fairly common in babies and children. They often get these with infections. Occasionally a fever can cause a baby to have a fit. Any fever can cause this, whether the fever

is due to an infection or a vaccine. So it's important to know what to do if your baby has a fever. Remember, fevers are more likely to be caused by the diseases than by the vaccines.

How to treat a fever

1. Keep your baby cool by making sure:
   - they don't have too many layers of clothes or blankets on;
   - the room they are in isn't too hot (it shouldn't be cold either, just pleasantly cool).
2. Give them plenty of cool drinks.
3. Give them infant paracetamol (ask for sugar-free). Read the instructions on the bottle carefully and give your baby the correct dose for their age. You may need to give a second dose four to six hours later.

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

Call the doctor immediately if your child:

- has a very high temperature (39°C or above);
- has a fit.

If your child has a fit, lay them on their side in a safe place because their body may twitch or jerk.

Recognising meningitis and septicaemia

The MenC, Hib, MenB and the pneumococcal vaccines protect against four types of meningitis and septicaemia (blood poisoning). There are other types for which there are no vaccines so it is important to still watch out for the signs and symptoms.

Meningitis can cause swelling of the lining of the brain. The same germs may also cause blood poisoning (septicaemia). A baby or child with meningitis or septicaemia can become very ill within hours. If untreated, both diseases may be fatal. Early symptoms of meningitis are mild and similar to those you get with colds and flu, such as a raised temperature (37.5°C and above), fretfulness, vomiting and refusal to eat. However, some of the important signs to look out for are listed below.

In babies, the main symptoms of **meningitis** may include:

- a high-pitched, moaning cry
- being irritable when picked up
- a bulging fontanelle (soft spot on head)
- being drowsy and less responsive – difficult to wake

- being floppy and listless or stiff with jerky movements
- refusing feeds, vomiting
- skin that is pale, blotchy or turning blue
- fever
- convulsions or seizures

and the main symptoms of **septicaemia** may include:

- rapid or unusual patterns of breathing
- skin that is pale, blotchy, or turning blue
- fever with cold hands and feet
- shivering
- vomiting, refusing to feed
- red or purple spots that do not fade under pressure (do the glass test explained on page 15)
- pain or irritability from muscle aches or severe limb or joint pain
- floppiness
- severe sleepiness.

Where can I get more information?

The Meningitis Research Foundation and Meningitis Now both provide information on meningitis.

Phone Meningitis Now's free helpline on 0808 80 10 388 (9am-5pm Monday-Friday) or visit the website at www.meningitisnow.org

Phone the Meningitis Research Foundation's free helpline on 080 8800 3344 (9am-5pm Monday-Friday) or visit the website at www.meningitis.org

You can also ask your doctor, practice nurse or health visitor for advice.

If a glass tumbler is pressed firmly against a septicaemic rash, the rash will not fade. You will be able to see the rash through the glass. If this happens, get a doctor's help immediately.

Routine childhood immunisation programme

When to immunise	Diseases vaccine protects against	How it is given
2 months old	Diphtheria, tetanus, pertussis (whooping cough), polio, Hib and hepatitis B (6 in 1)	One injection
	Rotavirus	Orally
	Pneumococcal infection	One injection
	Meningococcal B infection	One injection
3 months old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B (6 in 1)	One injection
	Rotavirus	Orally
4 months old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B (6 in 1)	One injection
	Pneumococcal infection	One injection
	Meningococcal B infection	One injection
Just after the first birthday	Measles, mumps and rubella	One injection
	Pneumococcal infection	One injection
	Hib and meningococcal C infection	One injection
	Meningococcal B infection	One injection
Every year from 2 years old up to P7	Influenza	Nasal spray or injection
3 years and 4 months old	Diphtheria, tetanus, pertussis and polio	One injection
	Measles, mumps and rubella	One injection
Girls and boys 12 to 13 years old	Cancers caused by human papillomavirus types 16 and 18, including cervical cancer (in girls) and cancers of the mouth, throat, anus and genitals (in boys and girls) and genital warts caused by HPV types 6 and 11.	Two or three injections over six months
14 to 18 years old	Tetanus, diphtheria and polio	One injection
	Meningococcal ACWY	One injection

HSC Public Health Agency

Public Health Agency
12-22 Linenhall Street, Belfast BT2 8BS.
Tel: 0300 555 0114 (local rate).
www.publichealth.hscni.net

Find us on:

If your child has missed out on any of these vaccines talk to your GP or health visitor.

If you would like further information about immunisation, visit www.publichealth.hscni.net or www.nhs.uk/vaccinations

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