



How to protect you and your baby

Information about vaccinations in pregnancy

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Scan me for more information on pregnancy

During pregnancy, your immune system is naturally weaker than usual. This can mean you are less likely to fight off infections that can be harmful to you and your baby.

Vaccination is the safest and most effective way of protecting pregnant women and their babies against serious diseases, such as whooping cough (pertussis), respiratory syncytial virus (RSV) and flu.

Why are vaccines important for pregnant women?

Vaccination during pregnancy can help prevent disease or make illness less serious, for both you and your baby. This is because antibodies (natural substances your body produces to fight infection) are passed to your unborn baby, helping to protect them in their first few weeks of life.

Before becoming pregnant, check that your vaccinations are up to date to help protect against diseases that can cause illness in you or your unborn baby.

For more information, see **Other vaccines to discuss with your midwife on page 17.**

What vaccines are recommended in pregnancy and when are they offered?

Vaccine	When to have the vaccine
Whooping cough (pertussis)	Offered from 16 weeks. The best time to have the whooping cough vaccine is from 16 to 32 weeks of pregnancy. You can have it up until your baby is born, but it may be less effective later in pregnancy.
RSV (respiratory syncytial virus)	Offered from 28 weeks. The best time to have the RSV vaccine is from 28 to 36 weeks of pregnancy. You can have it up until your baby is born, but it may be less effective later in pregnancy.
Flu (influenza virus)	Offered during the flu season, between September and March (which may be at any time during your pregnancy). You should have the flu vaccine as soon as it is offered to you.

These vaccines are recommended each time you are pregnant.

Each vaccine is usually given as a single injection into the muscle of your upper arm.

It is important to have your vaccines at the right time in pregnancy. The NHS will give you information about when and where to get vaccinated. If you are not sure what is best for you, discuss this with your midwife, who will explain more about the vaccines and how they can help protect you and your baby.

If you are unwell when your appointment is due, it is better to wait until you have recovered to have your vaccines, but you should try to have them as soon as possible.

My vaccination record during pregnancy

Record your pregnancy vaccines below to make sure that you and your baby don't miss out on protection.

Vaccine	When to have it	Received ✓	Date given
Whooping cough	From 16 weeks		
RSV	From 28 weeks		
Flu	During the flu season (autumn and winter months), at any stage of your pregnancy		

For the best protection, make sure you are up to date with all recommended vaccines.

Write down any notes and questions you have and ask the health professional at the vaccination appointment.

Vaccines and pork gelatine

None of the current vaccines offered during pregnancy contain pork gelatine. You can find information about vaccines and pork gelatine at: phw.nhs.wales/PorkGelatine

Vaccines and breastfeeding

The benefits of breastfeeding are well known, and all these vaccines can safely be given to women who are breastfeeding. The antibodies you make after you have been vaccinated can pass into your breast milk. These may give your baby some protection against whooping cough, respiratory syncytial virus (RSV) and flu.

You should not stop breastfeeding before your vaccination, and you can continue breastfeeding as normal afterwards.

Are vaccines safe in pregnancy?

All vaccines meet high UK safety standards and are safe in pregnancy. Before vaccines are introduced, they have to be licensed by the Medicines and Healthcare products Regulatory Agency (MHRA), which assesses their safety and whether they are effective.

Once the vaccines have been introduced into vaccination programmes, their safety continues to be constantly monitored so that any new side effects are quickly noticed and investigated. If you would like more information on the safety of vaccines, go to www.mhra.gov.uk (external site).

Vaccination is one of the most effective ways to prevent illness from diseases that can be harmful. No vaccine is 100% effective, so it is still important to know the signs and symptoms of disease, even if you are vaccinated. More information about vaccines and the diseases they help protect against is available at: phw.nhs.wales/vaccines

Allergies

Most people with allergies can have the vaccines with no problems.

Before you have your vaccination, speak to the person giving you the vaccine if you have had a serious allergic reaction to the vaccine or its ingredients in the past.

The vaccine should not be given to anyone who has had a serious (life-threatening) reaction to:

- a previous dose of the vaccine, or
- any ingredient in the vaccine.

Whooping cough (pertussis) vaccine

What is whooping cough?

Whooping cough (also called pertussis) is a bacterial infection that affects the lungs and airways. Whooping cough is very infectious, which means it passes easily from one person to another. It is easily spread by breathing in tiny droplets that are released into the air when people with the disease cough and sneeze.

The first signs of whooping cough are similar to a cold and include a runny nose and a sore throat.

After about a week, you may notice:

- long bursts of coughing and choking, that make it hard to breathe, and
 - a 'whooping' noise caused by gasping for breath after each period of coughing.
- Young babies don't always do this, which can make it difficult to recognise the disease.

Symptoms of whooping cough usually last for two to three months.

Who is at risk of whooping cough?

Whooping cough can affect people of all ages. Babies who are too young to be vaccinated against whooping cough, especially those whose mothers weren't vaccinated during pregnancy, are at higher risk of serious health problems such as difficulty breathing and severe lung infections (pneumonia). In rare cases, babies can die from whooping cough.

Information about the whooping cough vaccine

There is no vaccine that only prevents against whooping cough. The vaccine you will be given is a combined vaccine that also protects against tetanus and diphtheria. Some combined vaccines may also protect against polio.

The whooping cough vaccine is not a live vaccine and cannot cause whooping cough. All vaccinations that contain the whooping cough vaccine are safe to have in pregnancy.

Having the whooping cough vaccine in pregnancy helps protect your baby in the first few weeks of life. The vaccination programme has been in place since 2012 and is very effective at protecting babies against whooping cough from birth.

The best time to get vaccinated to protect your baby is between weeks 16 and 32 of your pregnancy. This gives your baby the best chance of being protected from birth, as you will transfer your antibodies to them before they are born. The whooping cough vaccine is recommended every time you're pregnant, even if you have had the vaccine before.

You can have the vaccine after 32 weeks of pregnancy up until the time your baby is born. However, it may be less effective if you have it later in your pregnancy.

If you missed your whooping cough vaccination during pregnancy, speak to your midwife as you may still be able to have it in the eight weeks following the birth (until your baby has their first routine dose). This **will not directly protect your baby**, but it may protect you and prevent you from passing whooping cough on to your baby. If you are breastfeeding, there is no evidence of any risk to your baby caused by having the vaccine.

Side effects

The whooping cough vaccine is safe and effective but, like all medicines, it can cause side effects. You may have some common and mild side effects from the vaccine, such as:

- swelling, redness or tenderness at the site of the injection.

Other side effects can include:

- a fever
- irritation at the site of the injection
- general aches and pains
- diarrhoea
- tiredness, and
- a headache.

Serious side effects are extremely rare, especially in adults.

Is the whooping cough vaccine safe in pregnancy?

Studies show no risks to pregnancy are caused by the vaccine. The rates of normal, healthy babies are the same for both vaccinated and unvaccinated women.

There is no evidence that the vaccine offered during pregnancy is a risk to pregnant women, the pregnancy or the baby.

The vaccine is highly effective and has an excellent safety record. Millions of doses are given worldwide.

For more information about whooping cough, including signs and symptoms of the disease, visit:

111.wales.nhs.uk/encyclopaedia/w/article/whoopingcough
(external site).

You can find more information about the whooping cough vaccine at:
phw.nhs.wales/whooping-cough

RSV (respiratory syncytial virus) vaccine

What is RSV?

RSV is a common cause of respiratory tract infections. For most adults and children, RSV infection causes a mild illness, such as a cough or cold, which usually gets better on its own. However, for some, especially babies under one year old and older adults, RSV can be very serious. At least half of all children have an RSV infection in the first year of life and almost all will have had one by the time they are two.

RSV can occur all year round but is more common during the autumn and winter.

More than 1,000 babies in Wales end up in hospital because of the virus. The number of people going to hospital because of RSV has increased in the last 20 years.

RSV is spread through close contact with infected people. When infected people cough or sneeze, they release tiny droplets containing the virus into the air. RSV can also be spread by people touching surfaces or objects that have the virus on them. Most people will have had the virus as a child.

If you have had an RSV infection in the past, it does not mean you cannot get RSV again.

RSV is the most common cause of bronchiolitis in young babies. Bronchiolitis is a lung infection which makes it difficult to breathe and feed. It affects babies and children under two and can usually be treated at home. However, in some cases it can be severe and your child may need intensive care. It can sometimes lead to death.

RSV vaccination reduces the risk of severe bronchiolitis by 70% in the first six months of life.

RSV may also cause pneumonia, which is an infection that affects the small air sacs in the lungs, leading to a cough and breathing problems.

Sometimes, bronchiolitis and pneumonia can be serious and need hospital treatment.

In babies, symptoms of RSV include:

- a runny or blocked nose
- a fever
- rapid or noisy breathing
- a wet-sounding, chesty cough
- tiredness
- being unsettled or difficult to comfort, and
- difficulty feeding.

Babies are also at risk of getting lung infections such as

- bronchiolitis, and
- pneumonia.

RSV may also cause other conditions in young children, for example:

- a barking cough (croup), and
- a painful infection inside the ear (otitis media).

Who is at risk of serious illness from RSV?

Babies under one year old and older adults are at risk of becoming very unwell from RSV. Other people are at increased risk of severe RSV disease, such as babies who are born early, people who have severe lung or heart disease, and those with a weakened immune system.

Some babies at higher risk of RSV may also be offered an antibody injection from birth. This injection will give your baby extra protection on top of any antibodies they might get from you. If your baby is eligible for an antibody injection, your doctor or midwife will discuss this with you.

Information about the RSV vaccine

Help protect your baby against RSV from birth by having the RSV vaccination while you are pregnant.

To give your baby the best protection, you should have your vaccine between 28 and 36 weeks of pregnancy.

You should be offered the vaccine around the time of your 28-week antenatal appointment. If you haven't heard by this time, contact your midwife or your GP to make an appointment.

The vaccine is most effective between 28 and 36 weeks of pregnancy. If you miss your vaccine, you can have it up until you have your baby. However, if you have it later in pregnancy it may not be as effective.

If you missed your RSV vaccination during pregnancy, speak to your midwife as you may still be able to have it after your baby is born. This **will not directly protect your baby**, but it may protect you and prevent you from passing RSV on to your baby. If you are breastfeeding, there is no evidence of any risk to the baby caused by having the vaccine.

The RSV vaccination programme for pregnant women is very effective at protecting young babies against RSV infection from birth through to six months of age and beyond.

! Having the vaccine in every pregnancy will give each baby the best protection against severe RSV illness.

Side effects

The side effects are usually mild. They include:

- a headache
- aching muscles, and
- soreness, redness or swelling at the site of the injection.

No side effects have been reported in babies born to mothers who have had the vaccine.

Is the RSV vaccine safe in pregnancy?

Studies have shown the RSV vaccine is very safe for you and your baby.

In a clinical trial of almost 4,000 women, the RSV vaccine had a good safety record. The vaccine has now been approved by medicines regulators in the UK, Europe and the USA. Many thousands of women have since had the vaccine in national programmes, including more than 100,000 women in the USA.

In the clinical trial, slightly more babies were born early in the vaccine group than in the group who had not had a vaccine. This difference appears to be due to chance, but this is why the vaccine is being given from 28 weeks rather than earlier in your pregnancy.

The RSV vaccine is not a live vaccine, so it cannot cause RSV in you or your baby. It is the safest and most effective way to help protect your unborn baby from RSV.

You can find information about signs and symptoms of illnesses caused by RSV at:

111.wales.nhs.uk/encyclopaedia/p/article/pneumonia (external site)

111.wales.nhs.uk/Bronchiolitis (external site)

111.wales.nhs.uk/encyclopaedia/e/article/earinfection (external site)

111.wales.nhs.uk/Encyclopaedia/c/article/croup (external site)

More information about the RSV vaccine is available at:
phw.nhs.wales/RSV

Flu (influenza) vaccine

What is flu?

Flu can be very serious. Like RSV, it is caused by a virus, which is spread by coughs and sneezes. Symptoms of flu can be mild but can also lead to more serious lung infections, which may need treatment in hospital.

Flu is very infectious, and symptoms can come on very quickly.

Symptoms include:

- a blocked nose
- a sore throat
- a high temperature
- tiredness and weakness
- a headache
- aches and pains, and
- a cough.

Who is at risk of flu?

Flu usually gets better on its own. However, pregnant women have a higher chance of becoming seriously unwell from flu, particularly in the later stages of pregnancy. During pregnancy, your immune system is naturally weaker than usual. This means you are less likely to fight off infections that can be harmful to you and your baby.

Flu can sometimes lead to lung infections such as bronchitis and pneumonia. These infections may need hospital treatment and, in rare cases, some people can die from flu.

If you have flu while you're pregnant, it could cause your baby to be born early or have a low birthweight and may even lead to stillbirth. Flu can be very serious for babies. When you have a flu vaccine while pregnant, it continues to help protect your baby for up to six months after they are born.

Information about the flu vaccine

The flu vaccine is available during the flu season between September and March, and you can have the flu vaccine at any time during your pregnancy. The vaccine is recommended every time you're pregnant, even if you have had the vaccine before.

Getting vaccinated each flu season protects you against new strains of the virus and reduces the risk of spreading flu to your baby. The immunity (protection) you get from the vaccine will pass to your baby through the placenta. The placenta is on the inside of your womb and links your blood supply with your unborn baby.

In winter, thousands of people will die from flu-related illnesses in the UK. Having a flu vaccine every year is one of the best ways to help protect **you and your baby** against flu.

Side effects

The side effects of the flu vaccine are mild compared with the disease itself and can affect everyone, not just pregnant women. They usually last for a day or two after vaccination as the vaccine starts to work.

Common side effects are:

- soreness and redness at the site of the injection
- a headache
- fever
- aching muscles, and
- tiredness.

Is the flu vaccine safe in pregnancy?

Since 2009, a number of countries have offered the flu vaccine routinely to all pregnant women. The vaccine offered to pregnant women is not a live vaccine, so it cannot cause flu.

The flu vaccine is safe for both mother and baby, and can be given during all stages of pregnancy.

You can find more information about flu, including signs and symptoms, at:

111.wales.nhs.uk/flu (external site).

You can find more information about the flu vaccine at:
phw.nhs.wales/flu vaccine

! Whooping cough, RSV and flu vaccinations in pregnancy can help to keep you and your baby safe.

To help stop viruses spreading, remember to:

Catch it

Use a tissue when you sneeze or cough.

Bin it

Put the tissue in the bin as soon as possible.

Kill it

Wash your hands or use hand sanitiser.

Reporting side effects

Like all medicines, vaccines can cause side effects. This is because they work by triggering a response in your immune system. Most side effects are mild and only last a few days, and not everyone gets them.

If your symptoms seem to get worse or if you are concerned, call NHS **111**. If you get advice from a doctor or midwife, make sure you tell them about your vaccinations so that they can assess you properly.

Please read the product information leaflet for more details on your vaccine, including possible side effects.

See the back page of this leaflet for further details on:

- your vaccine, including possible side effects, and
- reporting suspected side effects through the Yellow Card scheme.

Other vaccines to discuss with your midwife

During pregnancy, you may also be eligible for other vaccines if you have an underlying health condition.

For example, if you have a weakened immune system, you may be offered the **COVID-19** vaccine to help reduce your risk of serious illness from COVID-19 infection. For more information, speak to your midwife or your GP.

Vaccines after pregnancy

If you did not receive certain vaccines before or during pregnancy, it's important to get them after your baby is born to help protect both you and your baby.

If you missed your **whooping cough** or **RSV** vaccine during pregnancy, talk to your midwife, as you may still be able to have them after your baby is born.

It's important to have two doses of the **measles, mumps and rubella (MMR)** vaccine for the best protection. The MMR is a live vaccine, so is not recommended during pregnancy. You can have the MMR vaccine up to one month before becoming pregnant, or you can have it after your baby is born.

If you are not sure if you have had two doses of MMR, please speak to your midwife or GP surgery. If you need a vaccine that does not contain pork gelatine, ask your midwife or GP surgery.

For more information about MMR vaccination, visit phw.nhs.wales/MMRvaccine

What vaccines will my baby be offered after they are born?

When your baby is born you will be invited to bring them for their routine vaccinations, usually at your GP surgery or a baby clinic. Your midwife or health visitor will be able to tell you about these.

It's important that your baby has their recommended vaccines at the right age to help protect them from disease. The first routine vaccinations are offered at eight weeks old.

Some babies may need additional vaccines at birth, such as hepatitis B and BCG (which helps protect against tuberculosis). If your baby is eligible for these vaccines your midwife or GP will discuss this with you.

For information about routine vaccines, visit:

phw.nhs.wales/CompleteSchedule

Information correct at the time of publication. For the most up-to-date information, please visit **phw.nhs.wales/vaccines**

Further information

If you have any questions or want more information, you can visit **111.wales.nhs.uk** (external site), talk to your doctor or nurse, or contact NHS 111 Wales by calling **111**.

You can find out more information on vaccines offered in Wales at: **phw.nhs.wales/vaccines**

To find out more about the vaccines, including their contents and possible side effects, go to **medicines.org.uk/emc** (external site). Enter the name of the vaccines in the search box. You can also see the patient leaflets online.

You should report suspected side effects online at **www.mhra.gov.uk/yellowcard** (external site), by downloading the Yellow Card app, or by calling **0800 731 6789** (Monday to Friday, 9am to 5pm).

To find out how the NHS uses your information, go to **111.wales.nhs.uk/AboutUs/Yourinformation** (external site).



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