

## Chickenpox Contact and Pregnancy

Most adults in the UK have had chickenpox as a child, and so are immune to chickenpox. However, about 3 in 1,000 pregnant women develop chickenpox. If you have chickenpox when pregnant, you are likely to make a full recovery. However, serious complications occur in a small number of cases. If you are pregnant and have not had chickenpox in the past (or are not sure), and come into contact with somebody with chickenpox or shingles, then see a doctor as soon as possible. If you are not immune you can be given treatment which may reduce the risk to you and your baby. If you develop chickenpox whilst pregnant, see a doctor immediately for advice on treatment.

### What are chickenpox and shingles?

Chickenpox and shingles are infections which are caused by the varicella-zoster virus. When you have chickenpox, your immune system makes antibodies. You are then immune from further chickenpox infection for the rest of your life. However, the virus remains dormant in your body. It can, in some people, reappear later in life to cause a localised rash called shingles.

Most people have chickenpox as a child. It occurs in a small number of adults who missed it as a child. If you get chickenpox as an adult, the illness is usually more severe than in children, and complications are more common, particularly if you are pregnant.

There are other separate leaflets called '*Chickenpox in Children under 12*', '*Chickenpox in Adults and Teenagers*' and '*Shingles*' which give details of these diseases. This leaflet is primarily intended for pregnant women who may have come into contact with someone who has chickenpox or shingles.

### What does 'contact with chickenpox or shingles' mean?

#### Chickenpox

A person with chickenpox is very infectious. The virus spreads in the air from person to person. For example, if you have not already had chickenpox, you stand a good chance of catching it if:

- You are in the same room as someone with chickenpox for more than 15 minutes; or
- You have any face-to-face contact with someone with chickenpox, such as a conversation.

Chickenpox is infectious from two days before the rash first appears until all the spots have crusted over (commonly about five days after the onset of the rash). So, for example, if you talked to someone yesterday who developed the chickenpox rash today, you are at risk of developing chickenpox if you are not immune.

#### Shingles

Shingles is caused by the same virus as chickenpox. It is infectious from the onset of the rash until all the scabs have crusted. Unlike chickenpox, a person with shingles does not cough the virus out. The virus is just shed from the rash. Most people with shingles have a rash on their chest or abdomen and it is usually covered by clothes or dressings.

Therefore, you are not likely to catch chickenpox from someone with shingles if their rash is covered. Some people have shingles on exposed skin such as the face which will be more infectious than if the rash is covered. Also, someone who has shingles and has a poor immune system (for example, someone on chemotherapy who has shingles) sheds much more virus than normal. Even if their rash is covered, they can be considered as infectious as someone with uncovered shingles. Therefore, it is difficult to give definite rules about contact with someone with shingles. If in doubt, discuss any contact with your doctor.

### I am pregnant and been in contact with chickenpox or shingles

- If you have had chickenpox in the past, you will be immune. You are not at risk, and you do not need to worry or do anything. About 9 in 10 pregnant women have already had chickenpox as a child and are immune.
- If you have not had chickenpox, or you are not sure, see a doctor urgently. A blood test may be advised which can detect antibodies to see if you are immune. About 1 in 10 pregnant women has

not previously had chickenpox and is not immune.

### What is the blood test?

The blood test checks for antibodies to the chickenpox virus:

- If you have antibodies in your blood, this means you have had chickenpox in the past, or have been immunised. No further action is then needed.
- If you do not have any antibodies then you are at risk of developing chickenpox.

### What can I do if I have no antibodies?

You can be given an injection of immunoglobulin which contains antibodies to the chickenpox virus. This may prevent chickenpox from developing, or make it a much less serious infection if it does develop. It is best to have the immunoglobulin injection within four days of coming into contact with the virus. However, there may be some protection even if you are given immunoglobulin up to 10 days after contact with the virus. (It takes between 7 and 24 days for the chickenpox illness to develop after coming in contact with an infected person. This is the incubation period.)

If you come into contact with chickenpox again, later in your pregnancy, you can have a repeat dose of immunoglobulin so long as it is at least three weeks after the first dose.

### Why is it important to avoid chickenpox during pregnancy?

#### For the mother

- Chickenpox is typically an unpleasant illness when you are pregnant, even without complications. It tends to be much more severe than the illness children get.
- In addition, about 1 in 10 pregnant women with chickenpox develops inflamed lungs (pneumonia). This is sometimes serious. About 1 in 100 pregnant women who develops chickenpox-related pneumonia dies of this serious infection.
- Brain inflammation (encephalitis) is an uncommon but very serious complication.
- Vary rarely, other serious complications develop. For example: myocarditis (inflammation of the heart muscle), glomerulonephritis (kidney inflammation), appendicitis, hepatitis (inflammation of the liver), pancreatitis (inflammation of the pancreas), Henoch-Schönlein purpura (a condition that can affect the kidneys), arthritis, and inflammation of various parts of the eye.

#### For the unborn baby

- There is a small chance of the baby developing a condition called fetal varicella syndrome (FVS). This can cause the baby to be born with serious abnormalities of various parts of the body.
  - If you have chickenpox within the first 12 weeks of pregnancy there is about a 1 in 200 chance of the baby developing FVS.
  - If you have chickenpox between 13 and 20 weeks of pregnancy there is about a 1 in 50 chance of the baby developing FVS.
  - If you have chickenpox after 20 weeks, the risk of the baby developing FVS is very low, with no reported cases in women who developed chickenpox after 28 weeks of pregnancy.
- If you have chickenpox within seven days before or after giving birth, your newborn baby may develop a severe form of chickenpox. Some newborn babies who develop chickenpox die from the infection.

### What if I develop chickenpox when I am pregnant?

Most pregnant women who have chickenpox recover fully and their baby is fine. However, as discussed above, the illness tends to be unpleasant and there is some risk of complications. In short:

- See a doctor urgently if you suspect that you have chickenpox when you are pregnant, or within seven days of giving birth.
- If you do develop chickenpox, you (and your baby if newborn) should be reviewed daily. You may need a hospital assessment if you have lung disease, are a smoker, or are taking treatment which affects your immune system (such as steroids). See a doctor immediately if you have: a severe rash, a bleeding rash, chest/breathing problems, drowsiness, vomiting, or bleeding. You may need treatment in hospital.
- Antiviral medication is an option to treat chickenpox, but to be of benefit, it must be started within 24 hours of the rash first appearing. It does not cure the illness, but tends to make it less severe. It

- may help to prevent complications developing in mother and baby (described above).
- You are likely to be referred for a detailed ultrasound scan at 16-20 weeks of the pregnancy, or five weeks after the infection has cleared if the infection was later on in the pregnancy. The aim of this is to look for signs of fetal varicella syndrome.
- If you develop chickenpox within seven days before or after the birth of your baby, the baby can be given immunoglobulin treatment (described above). This aims to prevent chickenpox developing in the baby.
- Avoid other pregnant women and newborn babies until all the spots have crusted over (commonly about 5-6 days after onset of the rash).

### **Can I be immunised against chickenpox?**

There is an effective vaccine that protects against the virus that causes chickenpox. Immunisation with this vaccine is offered to healthcare workers (doctors, nurses, etc) who have not previously had chickenpox and so are not immune and may catch chickenpox. If you are not sure if you have had chickenpox, a blood test can check if you have previously had it. (About 1 in 10 adults has not had chickenpox as a child.) Non-immune healthcare workers should consider being immunised before getting pregnant.

The Royal College of Obstetricians and Gynaecologists also recommends that immunisation against chickenpox should be considered by all non-immune women before they become pregnant, or soon after they give birth.

### **References**

- Guidance on Viral Rash in Pregnancy, Health Protection Agency (January 2011)
- Chickenpox in pregnancy, Royal College of Obstetricians and Gynaecologists (September 2007)

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