

## Thrombosis and pregnancy

When you discover you are expecting a baby there are so many things you want to know. What the various stages of pregnancy mean...how your baby is developing...and how your body will react through each stage as it prepares to give birth. One small, but possible risk to your body during pregnancy - and for up to six weeks after birth - is that of a venous thromboembolism, or blood clot. **On average, one to two women in every 1,000 will get a venous thrombosis during pregnancy or just after delivery.** Although only a few women are affected, having a thrombosis can affect your health, not only during the pregnancy but also in later years. For example, problems such as varicose veins are more common after a thrombosis, and you should not use the contraceptive pill if you have had a thrombosis. It is also important to know that most of these clots can be prevented.

This fact sheet explains, in simple question-and-answer format, why, if you are pregnant or have just had a baby, you should be aware of risk factors and symptoms of a thrombosis. It also looks at the types of treatment available if you experience a pregnancy-related thrombosis.

### What is thrombosis?

A blood clot in the vein is called a venous thrombosis, and an example of this is a deep-vein thrombosis (DVT) when a blood clot forms in a deep vein, usually in the leg. In a pregnant woman, a DVT is most often found in the leg or the pelvis.

The body has natural systems to stop the blood from clotting too much. In some people these systems do not work properly. This gives them an increased risk of blood clots. Doctors call this thrombophilia.

Many deep-vein thromboses in young women during pregnancy are the first sign of an underlying thrombophilia. Often there is a family history of thrombosis with relatives like your mother, father, aunts and uncles having been affected. This can then be passed down through the generations. If you have already had a clot, or there is a family history of clotting, you may be offered a blood test to see if you have a thrombophilia.

### Why are there greater risks of blood clots during pregnancy?

Thrombosis can affect anyone, but being pregnant makes your blood more likely to clot. Doctors believe that the changes in clotting of the blood are designed to reduce bleeding when you give birth.

When you are carrying a baby there is a dramatic reduction in the speed of blood flow in your veins which carry the blood from your legs back to your heart. Doctors think that this is due to the effect

of pregnancy hormones on the veins and also because of the womb getting bigger as the pregnancy advances. The reduction in blood flow becomes obvious in pregnancy by 16 weeks and is at its most sluggish closer to full-term as your body gets ready for the actual delivery. The blood flow does not return to normal until six weeks after you have delivered.

This sluggish flow is why many women get some swelling of legs when they are pregnant. It is this reduction in blood flow, combined with the increased clotting tendency while pregnant that can result in a clot in the leg. This condition can be prevented, and if it does happen, can be treated. Also, at the time of delivery, as the baby presses on the veins in the pelvis, these veins may suffer minor damage which can lead to an increased risk of having a clot for up to six weeks after delivery.

### What are the signs of a venous thrombosis, or DVT?

The usual symptoms of deep-vein thrombosis include pain, tenderness and swelling of the leg, and possible discolouration (with the leg turning a pale blue or reddish-purple colour). If the thrombosis is in the thigh veins (as is most common during pregnancy), the whole leg may be swollen. If you experience any of these symptoms, tell your GP, midwife or obstetrician immediately.

### How is a DVT in pregnancy treated?

The diagnosis of DVT in pregnancy is usually confirmed by an ultrasound scan of the leg. This will usually show up the blood clot in the large vein at the top of the leg. This ultrasound is the same type of scan used to check your baby's progress at various stages of your pregnancy, so it is completely safe.

## Heparin

Treating DVT in pregnancy is similar to the treatment when you are not pregnant. A medication called heparin is given - an anticoagulant that 'thins the blood'. Heparin does not break down a clot. It simply prevents it from getting bigger and gives your body time to gradually dissolve the clot.

Heparin can either be injected under the skin or given through the veins by a small pump that carefully controls the rate at which heparin enters the bloodstream. It cannot be given in tablet form. You may need blood tests to check that you are getting the right dose. Heparin cannot cross the afterbirth so it is safe for the developing baby. UK doctors are now mainly using a new form of heparin called low-molecular-weight heparin (LMW heparin). This has a very low risk of side effects for the mother compared with the older form of heparin (called unfractionated heparin), which could cause thinning of the over many months.

Women with a thrombosis who are not pregnant will be given heparin injections followed by a dose of warfarin - a tablet that continues to thin the blood. The dose will be carefully set according to results of tests taken to see how thin your blood is.

Where possible, doctors will avoid warfarin, as this could, in extreme instances, affect the baby's development or cause bleeding problems for you and the baby. However, both warfarin and heparin are safe to take when breastfeeding as hardly any of these medications can get into the breast milk. So after delivery you can either continue the heparin or switch to warfarin. Many new mothers prefer to stay on heparin injections as this avoids the need for the regular blood tests that are needed with warfarin treatment.

## Compression stockings

There are special stockings called graduated compression stockings that help to improve blood flow and reduce swelling of the legs. They are useful in treating a blood clot as they help the swelling to go down and help prevent the risk of problems with varicose veins in the future. However, they must be worn for several months.

What if I am pregnant and have had a previous venous thrombosis?

If you have suffered a venous thrombosis before, your risk of another will be increased during and just after pregnancy.

The risk is particularly increased if:

- no cause was found for the thrombosis;
- you have had more than one clot; or
- you have a thrombophilia.

Testing for thrombophilia involves a simple blood test. Ideally this should be done before you become pregnant. Once pregnant, you must tell your GP, midwife or obstetrician if you have had a thrombosis or if there is any history of thrombosis in your family.

If it is considered that you have a high risk of thrombosis in pregnancy, your doctor may recommend that you take low-molecular-weight heparin injections all through the pregnancy and after delivery. Graduated elastic compression stockings may also be used.

## Are there other risk factors for thrombosis in pregnancy?

Women who have several risk factors for thrombosis will also be at risk even if they have not had a clot before. This risk is particularly high after delivery and especially if the delivery is by Caesarean section. The risk factors for thrombosis after a Caesarean section include:

- if the mother is over 35;
- being overweight;
- having an emergency Caesarean;
- not being able to move around for several days before delivery;
- medical conditions such as infection and paraplegia; and
- smoking.

For some mothers with several risk factors, treatment to prevent thrombosis can be needed after a vaginal delivery or even during the pregnancy. Your doctor can tell you about the need for heparin injections after a Caesarean section, but getting up and about as soon as possible after the Caesarean can also reduce the risk of thrombosis.

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