

# THROMBOSIS AND PREGNANCY



When you discover you are pregnant 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 (VTE), or blood clot.

**On average, one to two women in every 1,000 will have a VTE during pregnancy or just after delivery.** Having a blood clot 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 combined contraceptive pill if you have had a thrombosis. It is also important to know that many 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 sometimes call this thrombophilia.

If you have relatives who have also had thrombosis, you may be offered a blood test to see if you have an identifiable thrombophilia on laboratory tests. This is usually only requested after discussion with a blood specialist (haematologist), and it is important to remember that in some families numerous people have had blood clots but no laboratory explanation can be found.



## 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 factors in the circulation while pregnant that can result in a clot in the leg. This condition can be prevented, and if it does happen, it 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.



## LOW MOLECULAR WEIGHT HEPARIN

Treating DVT in pregnancy is similar to the treatment when you are not pregnant. A medication called low molecular weight heparin (LMWH) 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.

LMWH is usually injected under the skin. It cannot be given in tablet form. You may need blood tests to check that you are getting the right dose. LMWH cannot cross the placenta (afterbirth) so it is safe for the developing baby. It 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 bone over many months. Very occasionally intravenous heparin is used around the time of delivery, as the dose can be adjusted more quickly than with LMWH.

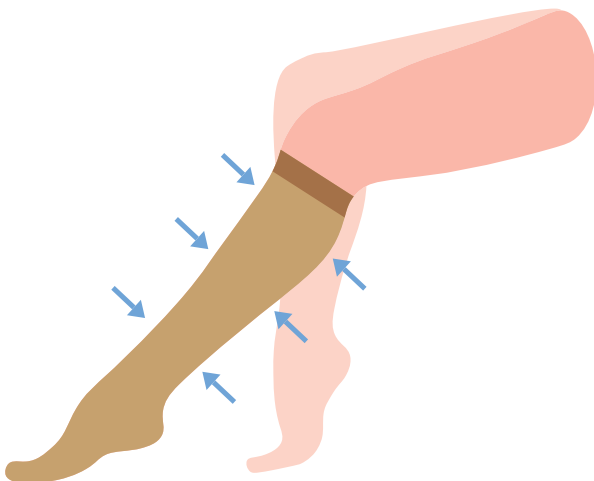
Women with a thrombosis who are not pregnant will usually be given LMWH injections or oral anticoagulants – tablets that continue to thin the blood. Some of these tablets require blood level monitoring (checking the INR blood test whilst on warfarin).

Where possible, doctors will avoid warfarin in pregnancy, as this could, in extreme instances, affect the baby’s development or cause bleeding problems for you and the baby. However, both warfarin and LMWH 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 LMWH or switch to warfarin. Many new mothers prefer to stay on LMWH 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 which help to improve blood flow and reduce swelling of the legs. They are useful in preventing and 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 and some people find them uncomfortable.



## 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
- You have a family history or thrombophilia.

If it is considered that you have a high risk of thrombosis in pregnancy, your doctor may recommend that you take preventative LMWH 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 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 inflammation and infection
- smoking

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

## DOES BEING ON BLOOD THINNERS MEAN I WILL HAVE TO HAVE AN INDUCTION OR CAESAREAN SECTION?

**No** – it is possible to manage LMWH injections around a normal delivery, and your doctor will go through a birth plan with you. If induction or Caesarean section is needed for other reasons then the LMWH injections can be adjusted to support this. It is important to remember that epidural or spinal anaesthetic can not be given within 24 hours of treatment dose LMWH injections, and usually within 12 hours of preventative dose injections.



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