

Information for you

Treatment of venous thrombosis in pregnancy and after birth



Published in September 2011

The patient information review process will commence in 2015 unless otherwise indicated.

What is venous thrombosis?

Thrombosis is a blood clot in a blood vessel (a vein or an artery). Venous thrombosis occurs in a vein. Veins are the blood vessels that take blood towards the heart and lungs; arteries take the blood away.

A deep vein thrombosis (DVT) is a blood clot that forms in a deep vein of the leg, calf or pelvis.

What are the symptoms of a DVT during pregnancy?

The symptoms of a DVT usually occur in only one leg and include:

- a red and hot swollen leg
- swelling in your entire leg or just part of it
- pain and/or tenderness – you may only experience this when standing or walking or it may just feel heavy.

Seek advice immediately from your doctor or midwife if you notice one or more of these symptoms.

During pregnancy, swelling and discomfort in both legs is common and does not always mean there is a problem. Always ask your doctor or midwife if you are worried.

Why is a DVT serious?

A DVT is serious because the blood clot may break off and travel in the blood stream until it gets stuck in another part of the body, such as in the lung (known as pulmonary embolism or PE). This is potentially life threatening, although dying from a PE is very rare in women who are pregnant or who have just had a baby.

- sudden unexplained difficulty in breathing
- tightness in the chest or chest pain

- coughing up blood (haemoptysis)
- feeling very unwell or collapsing.

Seek help immediately if you experience any of these symptoms. Diagnosing and treating a DVT reduces the risk of developing a pulmonary embolus.

Who is at risk of venous thrombosis?

Venous thrombosis in women is more likely to occur during pregnancy and in the first six weeks after the birth of your baby. The risk for this group of women is 1 in 500 which is ten times more likely than for women who are the same age but not pregnant. You are at highest risk of getting a DVT and/or PE just after you have had your baby. However, it can occur at any time during your pregnancy, including the first three months, so it is important to see your midwife early in pregnancy.

You are at increased risk of venous thrombosis if any of the following apply to you.

Before pregnancy/medical conditions

If you:

- are over 35 years of age
- have already had three or more babies
- have had a previous venous thrombosis
- have a mother, father, brother or sister who has had a venous thrombosis
- have a thrombophilia - a condition which makes a blood clot more likely
- have a medical condition such as heart disease, lung disease or arthritis. Your doctor or midwife will be able to tell you whether any medical condition you have increases your risk of a DVT/PE
- have severe varicose veins (if they are painful or above the knee with redness/swelling)
- are a wheelchair user.

Lifestyle

If you:

- are obese and have a body mass index (BMI) over 30
- are a smoker
- use intravenous drugs.

During pregnancy

If you:

- are carrying more than one baby (multiple pregnancy)
- become dehydrated or less mobile in pregnancy due to, for example,

vomiting in early pregnancy, being in hospital with a severe infection such as appendicitis or a kidney infection or if you are unwell from fertility treatment (ovarian hyperstimulation syndrome)

- are immobile for long periods of time, for example, after an operation or when travelling for four hours or longer (by air, car or train)
- are admitted to hospital
- have severe pre-eclampsia - see RCOG Patient Information: Pre-eclampsia: what you need to know.

After the birth of your baby

If you:

- have a prolonged labour (more than 24 hours) or have had a caesarean birth
- lose a lot of blood after you have had your baby
- receive a blood transfusion.

You will have a risk assessment during pregnancy and after you have had your baby, which is when your doctor or midwife asks if you have any of the risk factors above. For further information see the RCOG Patient Information: Reducing the risk of venous thrombosis in pregnancy and after birth - information for you.

How is venous thrombosis diagnosed during pregnancy?

DVT

Your doctor will examine your leg and may recommend an ultrasound scan of your leg to see if you have a thrombosis. If no thrombosis is seen but you are still having symptoms, the ultrasound scan may be repeated after one week.

Pulmonary embolus

The tests may include:

- a chest X-ray (this can also identify common problems which could be the cause of your symptoms, such as a chest infection)
- a CT scan (specialised X-ray) of your lungs
- a VQ scan (ventilation perfusion) of your lungs – this needs a drip into a vein in your arm
- an ultrasound of both your legs to look for any thrombosis.

Are there any risks with having the tests?

The chest X-ray, CT scan and VQ scan use radiation. The chest X-ray uses a very small dose of radiation and your baby will be protected.

There are small risks with CT and VQ scans but these need to be weighed up against the risk to you and your baby of an undiagnosed pulmonary embolism. The risk to your baby of developing childhood cancer after a VQ scan or a CT scan is extremely rare although it is slightly higher with a VQ scan (1/280,000) compared with a CT scan (<1/1,000,000). However a CT scan gives a higher dose of radiation to your breasts than a VQ scan and the lifetime risk of breast cancer may be increased. Your doctor will talk to you about the benefits and risks and which test would be best for you.

What is the treatment for venous thrombosis?

If your doctor suspects you have a venous thrombosis, you will be advised to start on treatment with an injection of a drug called heparin (an anticoagulant) to 'thin the blood'. There are different types of heparin. The most commonly used in pregnancy is 'low-molecular-weight heparin' (LMWH).

For most women, the benefits of heparin are that it:

- works to prevent the clot getting any bigger so your body can gradually dissolve the clot
- reduces the risk of a pulmonary embolus
- reduces the risk of another venous thrombosis developing
- lowers the risk of long-term symptoms developing in the leg.

What does heparin treatment involve?

Heparin is given as an injection under the skin (subcutaneous) at the same time every day (sometimes twice daily). The dose is worked out for you according to your weight in early pregnancy. You (or a family member) will be shown how and where in your body to do the injections. You will be provided with the needles and syringes (already made up) and you will be given advice on how to store and dispose of these. You will have regular check-ups as an outpatient. You will probably not need to stay in hospital.

How long will I need to take heparin?

Treatment is usually recommended for the remainder of your pregnancy and for at least six weeks after the birth. The minimum treatment time is three months.

What else can help?

- Stay as active as you can.
- You will be prescribed a special stocking (graduated elastic compression stocking) to wear, which helps to reduce the swelling in the leg.
- If you need pain relief, ask your doctor or midwife.

Are there any risks to my baby and me from heparin?

Low-molecular-weight heparin does not cross the placenta and therefore cannot harm your baby.

There may be some bruising where you inject – this will usually fade in a few days. One or two women in every 100 (1% to 2%) will have an allergic reaction. If you notice a rash after injecting, you should inform your doctor so that the type of heparin can be changed.

What should I do when labour starts?

Most women with a DVT continue with their pregnancy normally. If you think you are going into labour, do not have any more injections. Phone your maternity unit and tell them you are on heparin treatment. They will advise you what to do.

If the plan is to induce labour, you should stop your injections 24 hours before the planned date. An epidural injection (a regional anaesthetic injection given into the space around the nerves in your back to numb your lower body) cannot be given until 24 hours after your last injection. You will have the option of alternative pain relief.

What if I have a caesarean birth?

If you are having a planned caesarean section your last heparin injection should be 24 hours before the planned caesarean delivery. The heparin will usually be re-started within four hours of the operation.

If your baby needs to be born by emergency caesarean section within 24 hours of your last injection you will not be able to have an epidural or spinal injection and instead will need a general anaesthetic for your operation.

What happens after birth?

Treatment should be continued for at least six weeks after birth. There is a choice of treatment after birth of continuing with injections of heparin or using warfarin tablets. Your doctor will discuss your options with you.

After birth you will usually be given an appointment with your GP, obstetrician or haematologist. At your appointment the doctor will:

- ask about your family history of thrombosis and discuss tests for a condition which makes thrombosis more likely (thrombophilia). These tests should be done ideally before any future pregnancies.

- discuss your options for contraception (you should be advised not to take any contraception that contains oestrogen - for example, the 'combined pill')
- discuss future pregnancies - you will usually be recommended heparin treatment during and after your next pregnancy
- give you information about a compression stocking: it is recommended that you should wear this on the affected leg for two years.

Can I breastfeed?

Yes - both heparin and warfarin are safe to take when breastfeeding.

Sources and acknowledgements

This information has been developed by the RCOG Patient Information Committee. It is based on the RCOG guideline *The Acute Management of Thrombosis and Embolism during Pregnancy and the Puerperium* (February 2007). The guideline contains a full list of the sources of evidence we have used. You can find it online at:

<http://www.rcog.org.uk/womens-health/clinical-guidance/thromboembolic-disease-pregnancy-and-puerperium-acute-management-gre>.

The RCOG produces guidelines as an educational aid to good clinical practice. They present recognised methods and techniques of clinical practice, based on published evidence, for consideration by obstetricians and gynaecologists and other relevant health professionals. The ultimate judgement regarding a particular clinical procedure or treatment plan must be made by the doctor or other attendant in the light of clinical data presented by the patient and the diagnostic and treatment options available.

This means that RCOG Guidelines are unlike protocols or guidelines issued by employers, as they are not intended to be prescriptive directions defining a single course of management. Departure from the local prescriptive protocols or guidelines should be fully documented in the patient's case notes at the time the relevant decision is taken.

This information has been reviewed before publication by women attending clinics in Glasgow, Coleraine and Sunderland.

A glossary of all medical terms is available on the RCOG website at:

<http://www.rcog.org.uk/womens-health/patient-information/medical-terms-explained>.

A final note

The Royal College of Obstetricians and Gynaecologists produces patient information for the public. This information is based on guidelines which present recognised methods and techniques of clinical practice, based on published evidence. The ultimate judgement regarding a particular clinical procedure or treatment plan must be made by the doctor or other attendant in the light of the clinical data presented and the diagnostic and treatment options available.