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Patient information

Reducing the risk of venous thrombosis in pregnancy and after birth

What is venous thrombosis?

A 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 back to the heart and lungs whereas 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.

How common is it in pregnancy?

Pregnancy increases your risk of a DVT, with the highest risk being just after you have had your baby. However, venous thrombosis is still uncommon in pregnancy or in the first 6 weeks after birth, occurring in only 1-2 in 1,000 women. A DVT can occur at any time during your pregnancy, including the first 3 months, so it is important to see your midwife early in pregnancy.

Why is a DVT serious?

Venous thrombosis can be serious because the blood clot may break off and travel in the bloodstream until it gets lodged in another part of the body, such as the lung. This is called a pulmonary embolism (PE) and can be life threatening. However, dying from a PE is very rare in women who are pregnant or who have just had a baby. The symptoms of a PE can include:

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

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Putting you first

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

You should seek help immediately if you experience any of these symptoms. Diagnosing and treating a DVT reduces the risk of developing a PE.

Risk factors for DVT and PE

Your risk of venous thrombosis is increased further if any of the following apply to you.

Before pregnancy - if you:

- are over 35 years of age
- are overweight with a body mass index (BMI) over 30
- are a smoker or use intravenous drugs
- 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 that 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 that are painful or above the knee with redness / swelling
- use a wheelchair.

During pregnancy - if you:

- are admitted to hospital
- 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 4 hours or longer (by air, car or train)
- have pre-eclampsia.

After the birth of your baby - if you:

- have a very long labour (more than 24 hours)
- have had a caesarean section

- lose a lot of blood after you have had your baby or receive a blood transfusion.

How can I reduce the risk?

You can reduce your risk of getting of a DVT or PE:

- stay as active as you can
- wear special stockings (graduated elastic compression stockings) to help prevent blood clots
- keep hydrated by drinking normal amounts of fluids
- stop smoking.

When will my risk be assessed?

During pregnancy, your midwife will first assess your risk at your booking appointment. This helps to decide if you would benefit from preventative treatment.

You may be advised to start preventative treatment straight away, or in some cases to start treatment at week 28 in your pregnancy. Your doctor or midwife will talk with you about your risk factors and explain why treatment may be advised in your case.

Your risk will be assessed again if you are admitted to hospital in your pregnancy, at your 36-week appointment and after you have your baby.

What does Heparin treatment involve?

You may be advised to start treatment with injections of heparin, which is an anticoagulant used to thin the blood. There are various types of heparin. The most commonly used in pregnancy is low-molecular weight heparin (LMWH). Heparin is also used to treat venous thrombosis, but the dose of heparin used to prevent a venous thrombosis is usually less.

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 depending on your risk factors and your weight in early pregnancy or before you became pregnant.

You may be on a low-dose or a high-dose regimen. You (or a family member) will be shown how and where in your body to give the injections. You will be provided with the needles and syringes (already made up) and will be given advice on how to store and dispose of these.

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 (1-2%) 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.

If you are prescribed a low-molecular-weight heparin, please advise your health professional if you have a latex allergy or have concerns about receiving a drug that is derived from animal origins.

What should I do when labour starts?

If you have been taking low-molecular-weight heparin during the pregnancy and you think you are going into labour, it is important that you do not have any more injections. Phone your maternity unit and tell them that you are on heparin treatment. They will advise you what to do.

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 12 hours (24 hours if you are on a high dose) after your last injection. You will have the option of alternative pain relief.

If you have been offered an induction of labour and you have been taking anti-clotting injections during the pregnancy, we usually advise that you stop taking these at least 12 hours before your induction is scheduled to take place.

What happens if I have a caesarean section?

If your baby needs to be born by emergency caesarean section within 12 hours (24 hours if you are on a high dose) of your last heparin injection you will not be able to have an epidural or spinal injection and instead will need a general anaesthetic for your operation.

If you are having a planned caesarean section, your last heparin injection should be 12 hours (24 hours if you are on a high dose) before the planned caesarean delivery. Heparin will usually be restarted within 4 hours of the operation.

After the birth

It is important to be as mobile as possible after you have had your baby and to avoid becoming dehydrated.

A risk assessment will be carried out after the birth of your baby. Even if you weren't having injections in pregnancy, you may need to start heparin injections for the first time after birth. This will depend on what risk factors you have for a DVT.

You may be advised to have heparin for 7-10 days after birth or sometimes for 6 weeks after birth. If you were on heparin before the baby's birth, you are likely to be advised to continue this for 6 weeks afterwards.

Heparin is safe to take when breastfeeding.

At your 6-8 week postnatal GP appointment your doctor should:

- discuss future pregnancies – you may be recommended heparin treatment during and after your next pregnancy but if, for example, you stop smoking or lose weight before your next pregnancy, heparin treatment may not be necessary next time
- discuss your options for contraception – you may be advised not to use any contraception that contains oestrogen, such as the 'combined pill', as this can also add to your risk of DVT.

What if I decide not to accept low-molecular-weight heparin?

Your doctor or midwife will discuss with you why you have been recommended this treatment and your individual risks.

If you choose not to start heparin treatment staying active and healthy can help prevent blood clots from forming. Additionally:

- Drink plenty of water to avoid dehydration
- Do not sit for long periods of time without moving. If you are resting, try elevating your ankles if possible and intermittently rotating your ankles to increase circulation.
- Avoid smoking. If you are a smoker, consider using a nicotine replacement therapy to support you in reducing smoking.
- Use compression stockings (flight socks) for periods of long travel, or if standing for long periods of time.

It is important to look for any signs of developing blood clots.

Symptoms may include:

- throbbing or cramping pain, swelling, redness and warmth in a leg or arm
- sudden breathlessness, sharp chest pain (may worsen when you breath in) and a cough or coughing up blood.

You should seek help immediately if you experience any of these symptoms by calling 111. You may be asked to attend the hospital immediately for further investigations and possible treatment.

Where can I find out more information?

If you need information on the diagnosis and treatment of venous thrombosis during pregnancy or after birth, please see the RCOG patient information
Diagnosis and treatment of venous thrombosis in pregnancy and after birth

Deep Vein Thrombosis (DVT): Causes, Symptoms, and Treatment (patient.info)

NHS website: Blood clots - NHS (www.nhs.uk)

Thrombosis UK: Home Page | Thrombosis UK

References

RCOG Green-top Guideline Reducing the Risk of Thrombosis and Embolism during Pregnancy and the Puerperium, April 2015. RCOG, London.
You can find it online at: gtg-37a.pdf (rcog.org.uk)

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