TheBlood Unit

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Pregnancy and Thrombosis: Patient Information

What is a thrombosis?

Blood flows around your body outwards from your heart via arteries, and then back to your heart via veins. Blood normally flows smoothly, as a liquid. Your blood needs to clot in places where your blood vessel has been damaged, to stop bleeding. Occasionally these clots form where they are not needed. When an unwanted clot happens in a vein it is called venous thrombosis, and this results in different illnesses depending on where the clot forms.

Clots in superficial veins near the surface of your skin are called **superficial venous thrombosis**, or thrombophlebitis. These can sometimes occur in dilated leg veins called varicose veins.

Clots in deep veins of the legs, pelvis or arms are called **Deep Vein Thrombosis** (DVT)

If a deep vein clot breaks off and travels in the blood stream to the lungs, the clot becomes lodged in the lungs and is called a **Pulmonary Embolus** (PE)

Clots in arteries can occur in the arteries that supply blood to the heart muscle, causing a myocardial infarction, or in the brain arteries, causing a stroke. They can also occur in other small arteries around the body.

The most common type of clot in pregnancy is deep vein thrombosis (DVT). DVT often occur in the leg, thigh or pelvic veins.

Why do blood clots happen?

Sometimes blood clots happen for no apparent reason. At other times there are clear risk factors for clotting, and pregnancy is a time of increased risk for the following reasons:

During pregnancy your body is adapting to prevent you from too much blood loss during labour and birth your blood is more likely to clot.

Pregnancy slows down the flow of blood around your body, and blood flow from the legs back to the heart occurs much more slowly. This is because pregnancy hormones dilate (widen) your blood vessels, and your uterus (womb) gets larger, pressing on your pelvic veins. This is one of the reasons you can have swelling or fluid build-up in your lower legs during pregnancy.

During birth, pressure of your baby on the veins in your pelvis can damage the blood vessels, making them more likely to clot. This can make the risk of clotting last until 6 weeks after delivery,

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when your blood vessels have recovered.

Despite this, the actual risk of blood clots in pregnancy is still low. Only one or two women in 1,000 will develop a clot either during pregnancy or during the first six weeks after giving birth.

Other risk factors for developing clots include:

- If you have ever had a DVT or PE in the past
- If a close relative has ever had a DVT or PE
- Immobility or being confined to bed or a chair. If you have to stay in bed for at least three days after giving birth or at any point during your pregnancy your risk of DVT increases.
- If you have a condition called thrombophilia which means your blood is more likely to clot
- If you are expecting twins or more
- Increased age over 35 years old in pregnancy is also a risk for DVT
- If you smoke
- If you are overweight, with a BMI of 30 or higher
- If you travelled on a long-haul flight of more than five hours during your pregnancy
- If you have lost a lot of blood or have had a blood transfusion

What are the symptoms a blood clot? Will I know if I have one?

People with blood clots in their veins may notice any of the following:

- Pain, redness or swelling in one or both of your legs, often in the calf, below the knee.
- Warmth of the skin on the affected leg.
- The leg veins may look larger, wider and more noticeable than normal.
- Calf or leg pain may get worse when you bend your foot up, or walk.

Be reassured that discomfort and swollen legs is common in pregnancy and doesn't always mean there is anything wrong. If you are not sure, consult your GP or midwife. If there is any concern, an ultrasound test of the veins is safe, painless and a quick way to check for clots.

Are Blood Clots Serious?

Yes, they are potentially very serious. Blood clots in the legs can occasionally dislodge and travel to the lungs, causing a pulmonary embolus (PE). Symptoms of PE include

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- Shortness of breath, difficulty breathing
- Chest or back pain, often made worse if you take a deep breath or cough
- coughing up blood

If you have any of these symptoms, dial 000 to call an ambulance or go straight to emergency department of your nearest hospital.

What can I do to prevent a blood clot from forming during my pregnancy?

Here are some things you can do, to reduce your risk of developing a blood clot during your pregnancy:

- If you smoke, stop smoking.
- Eat a healthy diet, particularly if you are overweight.
- Regular and sensible exercise such as walking or swimming, will improve blood flow in your legs
- Consider wearing compression stockings if you are travelling on a long-haul flight or if you need to stay in hospital. These are medical-grade stockings (not exercise compression garments) and need to be professionally fitted at your pharmacy, or by a physiotherapist or nurse. Consult your obstetrician or GP before wearing compression stockings.

If your GP or midwife thinks you have a very high risk of developing a blood clot during your, you should be referred to a consultant obstetrician or a haematologist who specialises in obstetric haematology.

The specialist may prescribe a daily injection of a medication that thins your blood (an anticoagulant). This will reduce the risk of a blood clot. If you have already developed a clot, the anticoagulant will keep your blood thin so that your body can gradually dissolve the clot.

The anticoagulant used in pregnancy is called low-molecular-weight heparin. This is chosen because it is the safest anticoagulant for you and your baby. You may also need to wear compression stockings every day.

Your medical team should discuss with you the risks and benefits of any treatments before they offer them to you.

If I have a clot, how is it treated?

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Blood clots in pregnancy are treated the same way as they are prevented, with injections of low-molecular weight heparin. The medication is started once a clot is diagnosed, and is then continued for the rest of the pregnancy, and for at least 6 weeks after delivery. Depending on the size of the clot and when it occurred, you may need a longer time on anticoagulant medication after delivery. This decision should be made by your specialist haematologist.

After delivery, the anticoagulant medication may be changed to a tablet form, either warfarin if you are breast feeding, or one of the newer tablet anticoagulants if you are not breast feeding. This choice should be made in consultation with your haematologist.

I am at risk of getting a blood clot. Will this affect my labour?

You can do a few things during labour and birth to reduce your risk of blood clots:

- Walk and move around during labour as much as you are able.
- Keep well hydrated with plenty of drinks.
- Wear compression stockings if advised to.

I am on blood thinner medications during pregnancy. What do I do during labour and birth?

If you already have a blood clot and are on blood thinner medications before your labour begins, your doctor will advise you to stop your anticoagulant medication as soon as labour starts. Low molecular weight clexane has a short action in your body and will wear off quickly once you stop taking it.

If your last injection of anticoagulation was less than 24 hours previously, you may be advised not to have an epidural or spinal anaesthetic. If this is the case, your midwife will offer you other forms of pain relief.

If it has been more than 24 hours since your last anticoagulant injection, an epidural or spinal anaesthetic is safe.

I may need a caesarean, what will happen then?

Caesarean deliveries have a higher risk of blood clots than vaginal births, because surgery itself is a risk for clotting. Caesarean deliveries are particularly high risk for clots if:

- your caesarean was performed during labour (emergency caesarean)
- you are over 35

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- you are very overweight
- you were admitted to hospital for bed rest before giving birth
- you have any other condition (such as thrombophilia) that affects the way your blood clots

Occasionally, **emergency caesareans** need to performed under a general anaesthetic rather than a spinal or epidural. This choice is made by your obstetrician, particularly if it has been less than 24 hours since your last anticoagulant injection. This situation is uncommon, but the aim is always to ensure the safest outcome for you and your baby.

If you are having a planned caesarean and you have been taking anticoagulant medication injections during your pregnancy, **your last injection should be 24 hours before**. Your obstetrician, haematologist and anaesthetist should discuss the plan for your medication. You may be asked to have a reduced dose of blood thinner 24 hours before your planned Caesar. Anticoagulant medications are started again after the delivery, but need to be started only when a safe amount of time has passed after your last spinal or epidural injection. This decision is made by your medical team.

Compression stockings are usually worn during the operation and afterwards to improve the blood flow in your legs. If you have a particularly high risk of developing a blood clot, you may be given anticoagulant injections within four hours of your baby being born.

Try to get up and about as soon as possible after your caesarean. This will help your circulation and reduce your risk of a blood clot forming.

I have a planned caesarean, and am on anticoagulant medications but I have gone into labour early– what should I do?

Do not worry. You will have been instructed in advance to call your obstetrician or midwife and inform them that labour has commenced. Take the following steps to ensure that the medical and midwifery team understand the situation:

- Call the number that you have been given. Let them know that you are on anticoagulant medication.
- You should stop anticoagulant injections when labour commences.
- Note the dose and the time of your last injection. Inform the midwife and the medical team when this injection occurred.

In most situations, enough time will have passed between labour commencing and your delivery that there will be no impact on your delivery. Occasionally an antidote medication to reverse the effects of your anticoagulant may need to be given. This decision is made by your obstetrician and haematologist.