Reducing the risk of venous thromboembolism (VTE) in pregnancy and the postnatal period
This leaflet is about reducing the risk of blood clots in pregnant women and women following birth. This condition is known as ‘venous thromboembolism’ or ‘VTE’.

Treatment may differ but we aim to treat all women as individuals, respecting your personal wishes and preferences.

What is venous thromboembolism (VTE)?

Deep vein thrombosis (DVT) and pulmonary embolism (PE) together are known as VTE. DVT and PE are two major causes of maternal death in the UK.

Whenever we cut ourselves, our blood hardens and a clot forms. This process is called blood clotting or coagulation. Sometimes a clot of blood can occur within a vein, forming a ‘plug’ that can interrupt the normal flow of blood through the blood vessels. A DVT is a blood clot in one of the deep veins, usually in the vein that runs through the muscles of the calf and thigh.

PE occurs if a clot from a deep vein (usually in the leg) detaches itself and travels to the lungs. Sudden death will occur if the clot is large enough to stop blood flow through the heart and lungs.

VTE is a serious condition which may cause severe pain, swelling, skin changes, shortness of breath and sudden collapse.

Other recommended treatments

- Wearing anticoagulation compression stockings, also known as TEDS (thrombo-embolic deterrent stockings). These are made of elastic fibres that squeeze the legs and promote healthy blood flow.
- Hydration – drink plenty of water.
- Stop or reduce smoking.
- Lose weight – keep active during pregnancy and after birth.

Dalteparin (Fragmin®) and breastfeeding

Dalteparin (Fragmin®) does not cross the placenta and a published review of the evidence suggests that these agents are safe for the fetus. Dalteparin is considered safe to use during breastfeeding as it is not secreted in the breast milk.

The RCOG and other sources indicate that the use of the medicine during pregnancy is safe and therefore we are able to endorse the use of dalteparin whilst breastfeeding.

Any questions?

If you have any questions regarding the use of dalteparin, your GP or midwife would be happy to answer these for you. If they have any concerns, they can discuss this with a member of the obstetric/obstetric haematology team.

References

- Royal College of Obstetricians and Gynaecologists (RCOG).
- National Institute of Clinical Excellence (NICE).
- Hospital Guidelines, Policies and Procedures.
- Bothamely (2002).
How to give yourself an injection of dalteparin (Fragmin®)

You will be shown how to inject yourself with dalteparin by your midwife/practice nurse.

Dalteparin should be kept in a cool, dry and safe place (not a fridge) out of the reach of children. You will be supplied with a sharps box which is a special yellow plastic box to put the used needles in.

How safe is dalteparin (Fragmin®)

Dalteparin is considered safe to use during pregnancy. It does not cross the placenta so your baby is ‘isolated’ from the medicine. Older types of heparin that we no longer use in pregnancy had significant side-effects associated with them but dalteparin does not. The medicine might sting a little when you inject it but this only lasts a few seconds. Some bruising around the injection site is common and can be minimised by pressing on the injection site for three-four minutes after you inject.

Very occasionally a skin rash may appear around the injection site. Often by changing you to a different but similar heparin this disappears.

After you have administered the final dose of dalteparin (Fragmin®)

When you have administered the final dose of dalteparin, lock the sharps box by closing the lid tightly. The box can then be taken to your GP for safe disposal or your community midwife may be able to take it for you.

Who is at risk?

Anyone can develop a blood clot. However, women are more at risk during and following birth. This is due to an increase in blood volume, an increase in clotting factors in the blood, the effect of pregnancy hormones and the weight of a heavy uterus on the veins that drain the blood out the legs. Other risk factors include:

- smoking
- women with medical problems like lupus (SLE)
- age over 35
- obesity – body mass index (BMI) over 30kg/m²
- previous history of venous thromboembolism
- three or more babies (also known as parity)
- IVF pregnancy
- hospital admission longer than three days
- antenatal administration of dalteparin (Fragmin®)
- blood loss over one litre
- emergency caesarean section (C-section)
- family history or genetic tendency to form clots (‘thrombophilia’)  

We use a scoring system, developed by the Royal College of Obstetrics and gynaecology (RCOG), to score the risk of clots in pregnancy and determine the need for dalteparin (a low molecular weight heparin [LMWH]).

Why are we assessing you?

It is a recommendation from the National Institute of Clinical Excellence (NICE) and the Royal College of Obstetricians and Gynaecologists (RCOG) that all women in pregnancy have a risk assessment performed in early pregnancy to establish their risk of developing a DVT or PE. This is because prevention of a DVT is crucial in reducing deaths from PE in pregnancy.
Antenatal assessment at booking

This assessment will be carried out in early pregnancy at your first booking visit and is based on a scoring system developed by RCOG. If your score is 3 or more, you will require thromboprophylaxis - a preventative medicine with an anticoagulant (anti-clotting) medicine called a low-molecular weight heparin e.g. dalteparin (Fragmin®).

If your score is 3, you will need to start taking this medicine from 28 weeks of pregnancy until delivery. If your score is more than 3, you will need to start from when you book the pregnancy. You will need some blood test to check your blood count and kidney function before starting the medication. This will be organised via your midwife with your booking bloods. If you live in the Cambridgeshire area your GP will be informed and will issue and continue your prescription throughout pregnancy. If you have a high risk factor, live outside of the Cambridgeshire area or may not be suitable to take dalteparin, you will be referred for an appointment at the obstetric haematology clinic to discuss your care with a specialist doctor.

Antenatal assessment during any inpatient admission

If you need to be admitted to hospital during your pregnancy a further VTE assessment will be carried out by a midwife and if necessary dalteparin will be prescribed for you on the ward by a doctor.

Will being on dalteparin affect how I will deliver?

Taking prophylactic dalteparin during pregnancy should make no difference as to how you deliver your baby.

Can I have an epidural or spinal anaesthetic whilst taking prophylactic dalteparin (Fragmin®)?

There must be a 12 hour gap between the last dose of prophylactic dalteparin and either a spinal or epidural anaesthetic to minimise any bleeding risk. This errs on the side of extreme caution and follows both national and international recommendations. In practice, more than 95% of women who request one, or who for other reasons need an epidural, can safely have one.

**Once labour starts you should stop dalteparin. If you are due an elective delivery (caesarean section or induction of labour) the last dose will be the day before admission (latest 20:00 that day).**

For patients on treatment doses (higher doses) of dalteparin there must be a gap of 24 hours between the last dose and a spinal or epidural anaesthetic; patients on this are seen to offer an individual care plan for delivery.

Postnatal assessment

You will be assessed again postnatally for your risk of VTE after delivery. Following assessment, if required, you will be given special leg stockings to wear and VTE prophylaxis (e.g. dalteparin) will be started and continued for 10 days (or longer if required for some women.)

While in hospital the midwife (or nurse) will give you the dalteparin by injection into your abdomen (tummy).

When you are discharged home you will need to continue to use dalteparin and administer it to yourself (or your partner may do this for you).