

Thromboprophylaxis in Pregnancy and Puerperium

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Approved by:	Maternity Governance Meeting	
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Key Amendments

Date	Amendments	Approved by

With effect from June 1st 2018 we are adapting RCOG guideline (RCOG Green-top Guideline No. 37a) on Thromboprophylaxis during pregnancy and puerperium.

Please see the link directed to RCOG guideline.

<https://www.rcog.org.uk/globalassets/documents/guidelines/gtg-37a.pdf>

All women should undergo a documented assessment of risk factors for VTE in early pregnancy or pre-pregnancy. Risk assessment should be repeated again intrapartum or immediately postpartum.

Please see the information below to guide the risk assessment process during booking, AN admission and post-delivery. If further information is needed please refer to RCOG Guideline accessed from the above link

VTE Risk assessment at Booking:

See the copy of VTE risk assessment form from Green handheld maternity records. This must be filled in during booking.

Please note that the key documents are not designed to be printed, but to be used on-line. This is to ensure that the correct and most up-to-date version is being used. If, in exceptional circumstances, you need to print a copy, please note that the information will only be valid for 24 hours and should be read in conjunction with the key document supporting information and/or Key Document intranet page, which will provide approval and review information.

Antenatal venous thromboembolism (VTE) assessment - booking and repeat if admitted

Any previous VTE except a single event related to major surgery	Yes <input type="checkbox"/>	<p>High risk Requires antenatal prophylaxis with LMWH Refer to Trust-nominated thrombosis in pregnancy expert team</p>
<p>Hospital Admission</p> <p>Single previous VTE related to major surgery</p> <p>High risk thrombophilia and no VTE</p> <p>Medical Co-morbidities e.g. cancer, heart failure, active SLE, IBD or inflammatory polyarthropathy, nephrotic syndrome, type 1 DM with nephropathy, sickle cell disease, current IVDU</p> <p>Any surgical procedure e.g. appendicectomy</p> <p>OHSS (first trimester only)</p>	<p>Intermediate risk Consider antenatal prophylaxis with LMWH Seek Trust-nominated thrombosis in pregnancy expert team for advice</p>	
<p>Age > 35 years</p> <p>BMI > 30</p> <p>Parity ≥ 3</p> <p>Smoker</p> <p>Gross varicose veins</p> <p>Immobility e.g. paraplegia, PGP</p> <p>Current pre-eclampsia</p> <p>Family history of unprovoked or oestrogen-provoked VTE in first degree relative</p> <p>Low risk thrombophilia</p> <p>Multiple pregnancy</p> <p>IVF/ART</p> <p>Transient risk factors: Dehydration / hyperemesis Current systemic infection Long distance travel</p>		<p>Four or more risk factors: prophylaxis from first trimester</p> <p>Three risk factors: prophylaxis from 28 weeks</p> <p>fewer than three risk factors</p>
<p>Complete risk assessment and update management plan as necessary (page 15)</p>		<p>Lower risk Mobilisation and avoidance of dehydration</p>
<p>Signature* _____</p>		<p>No risks identified <input type="checkbox"/></p> <p>Date _____</p>

Risk Factors	Management Plan
3 current risk factors (other than previous VTE or thrombophilia)	prophylactic LMWH from 28 weeks till 6 weeks postnatally
4 or more current risk factors (other than previous VTE or thrombophilia)	LMWH throughout the antenatal period till 6 weeks postnatally

Previous VTE	Management plan
<ul style="list-style-type: none"> Antithrombin deficiency APS Recurrent VTE 	Higher dose LMWH (either 50%, 75% or full treatment dose) antenatally and for 6 weeks postpartum or until returned to oral anticoagulant therapy after delivery
<ul style="list-style-type: none"> Unprovoked & Idiopathic VTE VTE-Estrogen related 	LMWH throughout the antenatal period till 6 weeks postnatally
<ul style="list-style-type: none"> VTE provoked by major surgery (no other risk factors) 	LMWH from 28 weeks till 6 weeks postnatally

VTE Risk assessment at AN Admission:

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Risk assessment should be repeated if the woman is admitted to hospital for any reason or develops other intercurrent problems.

See the copy of VTE risk assessment form from Green handheld maternity records. This must be filled in during any other hospital admission

	Yes	Yes	Yes
Any previous VTE except a single event related to major surgery Gestation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospital Admission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Single previous VTE related to major surgery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High risk thrombophilia and no VTE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical Co-morbidities e.g. cancer, heart failure, active SLE, IBD or inflammatory polyarthropathy, nephrotic syndrome, type 1 DM with nephropathy, sickle cell disease, current IVDU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any surgical procedure e.g. appendicectomy OHSS (first trimester only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Age > 35 years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BMI > 30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parity ≥ 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smoker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gross varicose veins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Immobility e.g. paraplegia, PGP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Current pre-eclampsia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family history of unprovoked or oestrogen-provoked VTE in first degree relative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low risk thrombophilia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiple pregnancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IVF/ART	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transient risk factors: Dehydration / hyperemesis Current systemic infection Long distance travel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No risks identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Update management plan as necessary			
Signature*	<input type="text"/>	<input type="text"/>	<input type="text"/>
Date	<input type="text"/>	<input type="text"/>	<input type="text"/>

VTE Risk assessment – Post-natal

See the copy of VTE risk assessment form from Green handheld maternity records. Risk assessment should be repeated again intrapartum or immediately postpartum.

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Postnatal venous thromboembolism (VTE) assessment
- to be completed immediately after birth. Complete management plan page 5 as required

Any previous VTE Anyone requiring antenatal LMWH High-risk thrombophilia Low-risk thrombophilia + family history	Yes <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	High risk At least 6 weeks postnatal prophylactic LMWH
Caesarean section in labour BMI ≥ 40 Readmission or prolonged admission (≥ 3 days) in the puerperium Any surgical procedure in the puerperium except immediate repair of the perineum Medical comorbidities e.g. cancer, heart failure, active SLE, IBD or inflammatory polyarthropathy; nephrotic syndrome, type 1 DM with nephropathy; sickle cell disease, current IVDU	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Intermediate risk At least 10 days' postnatal prophylactic LMWH Note: if persisting or > 3 risk factors, consider extending thromboprophylaxis with LMWH
Age > 35 years BMI ≥ 30 Parity ≥ 3 Smoker Elective caesarean section Family history of VTE Low-risk thrombophilia Gross varicose veins Current systemic infection Immobility, e.g. paraplegia, PGR, long distance travel Current pre-eclampsia Multiple pregnancy Preterm delivery in this pregnancy (<37 weeks) Stillbirth in this pregnancy Mid cavity rotational or operative delivery Prolonged labour (>24 hours) PPH > 1 litre or blood transfusion	<input type="checkbox"/> <input type="checkbox"/>	2 or more risk factors ↑ Intermediate risk ↓ Fewer than 2 risk factors ↓ Lower risk Early mobilisation and avoidance of dehydration
Signature* <input type="text"/>		Date <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
		No risks identified <input type="checkbox"/>

Risk Factors	Management Plan
Previous VTE AN LMWH Thrombophilia	6 weeks PN Prophylactic LMWH
BMI greater than or equal to 40 kg/m ²	Prophylactic LMWH in doses appropriate for their weight for 10 days after delivery.
2 or more persisting risk factors	Prophylactic LMWH in doses appropriate for their weight for 10 days after delivery.
Less than 2 risk factors	Early mobilisation and avoid dehydration

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Thromboprophylaxis during labour and delivery and the use of regional analgesia:

- Women receiving antenatal LMWH should be advised that if they have any vaginal bleeding or once labour begins they should not inject any further LMWH. They should be reassessed on admission to hospital and further doses should be prescribed by medical staff.
- Regional techniques should be avoided if possible until at least 12 hours after the previous prophylactic dose of LMWH.
- LMWH should not be given for 4 hours after use of spinal anaesthesia or after the epidural catheter has been removed and the catheter should not be removed within 12 hours of the most recent injection.
- When a woman presents while on a therapeutic regimen of LMWH, regional techniques should be avoided if possible for at least 24 hours after the last dose of LMWH.
- Women receiving antenatal LMWH having an elective caesarean section should receive thromboprophylactic dose of LMWH on the day prior to delivery and, on the day of delivery, any morning dose should be omitted and the operation performed that morning.
- The first thromboprophylactic dose of LMWH should be given as soon as possible after delivery provided there is no postpartum haemorrhage and regional analgesia has not been used.
- Women at high risk of haemorrhage with risk factors including major antepartum haemorrhage, coagulopathy, progressive wound haematoma, suspected intra-abdominal bleeding and postpartum haemorrhage may be managed with anti-embolism stockings (AES), foot impulse devices or intermittent pneumatic compression devices.

If a woman develops a haemorrhagic problem while on LMWH the treatment should be stopped and expert haematological advice sought. Thromboprophylaxis should be started or reinstated as soon as the immediate risk of haemorrhage is reduced.