

Antenatal and postnatal prophylactic doses and monitoring of LMWH

BMI (kg/m²)	LMWH	Anti Xa monitoring required? Yes/No	Required Anti-Factor Xa levels Post dose (0.2-0.4)
<35	Dalteparin prescribed using weight based dose: Weight <50kg = 2500 units Weight 50-90kg 5000 units Weight 91-130kg 7500 units	No	n/a
35-40	Tinzaparin 8000 units	Yes	2-4 hours post dose weekly until correct dose established
41-50	Tinzaparin 10000 units	Yes	2-4 hours post dose weekly until correct dose established
>50	Tinzaparin 12000 units	Yes	2-4 hours post dose weekly until correct dose established

Once women are on the correct thromboprophylactic dose, a three month prescription can be provided by the hospital pharmacy. After this point the patient needs a further prescription provided by the hospital.

Postnatal prophylactic Dalteparin dosing

Weight (kg)	Dalteparin dose daily
<50	2500units
50-90	5000units
91-130	7500units
131-170	10000units
>170	75units/kg/day

Contraindications to LMWH

Potential contraindications include:

- Active Bleeding
- Acquired bleeding disorders (such as acute liver failure)
- Previous HIT
- Concurrent use of anticoagulants known to increase the risk of bleeding (such as warfarin with INR higher than 2)
- Lumbar puncture/epidural/spinal anaesthesia expected within the next 12 hours
- Lumbar puncture/epidural/spinal anaesthesia within the previous 4 hours
- Acute stroke and/or other CNS bleeding risk.
- Thrombocytopenia (platelets less than $50 \times 10^9/L$ or falling)
- Uncontrolled systolic hypertension (230/120 mmHg or higher)
- Impaired renal function (may require reduced dose and close monitoring)
- Untreated inherited bleeding disorders (such as haemophilia and von Willebrand's disease)

Antenatal risk assessment for venous thromboembolism

Major risk factors for thrombosis (score as indicated)

- * Previous VTE (equivalent to **4** minor risk factors)
- * Previous VTE provoked by major surgery (equivalent to **3** minor risk factors)
- * Medical comorbidities (equivalent to **3** minor risk factors)
 - heart failure
 - cancer,
 - active SLE,
 - Active IBD or inflammatory polyarthropathy,
 - nephrotic syndrome,
 - type 1 DM with nephropathy,
 - sickle cell disease, current IVDU.
- * High risk thrombophilia (equivalent to **3** minor risk factors): Antithrombin 3, Protein S and C deficiency, compound or homozygous for low-risk thrombophilias.
- * BMI ≥ 50 (= **3** minor risk factors)
- * BMI 40-49 (= **2** minor risk factors)

Minor risk factors for thrombosis (score 1 for each risk factor).

- * Age >35
- * BMI 30-39
- * Parity 3 or more
- * Family history of unprovoked or oestrogen related VTE in first degree relative at age <50 .
- * Low risk thrombophilia: heterozygous for FVL or PGV
- * Multiple pregnancy or assisted reproductive techniques (ART)
- * Gross Varicose Veins
- * Current systemic infection
- * Pre-eclampsia
- * Smoker > 30 per day
- * Immobility/reduced mobility (e.g. inpatient stay)

Score ≥ 4 – offer LMWH prophylaxis from the first trimester

Score = 3 – offer LMWH prophylaxis from 28 weeks

Score = 2 – mobilization and avoidance of dehydration; offer LMWH prophylaxis during hospital admission

Postnatal risk assessment for venous thromboembolism

Only offer BKAS postnatally to women delivered by C-section who **also** have any of the additional risks as below:

* is on treatment dose LMWH

* has 3 or more postnatal risk factors

* has been on antenatal prophylaxis from the first trimester

* has a cardiac careplan

Major risk factors

1. Previous VTE
2. Antenatal LMWH
3. High risk thrombophilia
4. Low risk thrombophilia and family history of VTE

Offer LMWH prophylaxis for at least 6 weeks.

Intermediate risk factors

1. Caesarean section in labour
2. BMI > 40
3. Readmission or prolonged admission ≥3 days.
4. Any surgical procedure in puerperium except immediate repair of perineum
5. Medical co-morbidities: heart failure, cancer, active SLE, active or inflammatory polyarthropathy, nephrotic syndrome, type 1 DM with nephropathy, sickle cell disease,

Offer LMWH prophylaxis for at least 7 days

Minor risk factors

1. Age > 35
2. Parity ≥ 3
3. BMI ≥ 30
4. Smoker
5. Elective CS
6. Family history of VTE
7. Low risk thrombophilia
8. Gross varicose veins
9. Current systemic infection
10. Immobility (ie HDU admission)
11. Pre-eclampsia
12. Multiple pregnancy
13. Preterm delivery (<37 weeks)
14. Stillbirth
15. Prolonged labour (>24 hrs)
16. PPH >1 L or blood transfusion
17. Mid cavity rotational or operative delivery

≥ 2 risk factors offer LMWH prophylaxis for at least 7 days

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* has a cardiac careplan