

**Regional Pre-Printed Orders for
VENOUS THROMBOEMBOLISM (VTE) PROPHYLAXIS
PRE-OPERATIVE - Adult Patients Only**

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VTE RISK ASSESSMENT AND THROMBOPROPHYLAXIS RECOMMENDATIONS			
Low Risk Group <ul style="list-style-type: none"> Day surgery without any VTE risk factors (see back) No reduction in mobility compared to usual state Surgical procedure with a total anesthetic and surgical time less than 60 minutes 		Early ambulation, no anticoagulant or mechanical prophylaxis, education.	
Moderate or High Risk Group <ul style="list-style-type: none"> Any surgical patient having or expected to have significantly reduced mobility for 3 days or more. Patients with ongoing reduced mobility (compared to their usual state) <u>AND</u> have one or more risk factors for VTE (see below) Surgical procedure with total anesthetic and surgical time of 60 minutes or longer Acute surgical admission with an inflammatory or intra-abdominal condition Surgical patients with one or more risk factors for VTE (see below) 		LMWH (heparin if eGFR less than 10 mL/min) ⁷	
Obstetrical Patients with Increased Risk <ul style="list-style-type: none"> Having one or more risk factors for VTE (see below) Pregnancy-related risk factors: <ul style="list-style-type: none"> Ovarian hyperstimulation Hyperemesis gravidarum Multiple pregnancy Preeclampsia Emergency caesarean section 		Consider LMWH (heparin if eGFR less than 10 mL/min) ⁷	
RISK FACTORS FOR VTE			
<ul style="list-style-type: none"> Age 60 years or over Active cancer and cancer treatment Previous VTE Critical Care admission Known thrombophilia First degree relative with VTE Varicose veins with phlebitis Estrogen-containing oral contraception Hormone replacement therapy 		One or more significant medical conditions. <ul style="list-style-type: none"> Sepsis or severe acute infection Heart disease Respiratory pathology Inflammatory condition Rheumatological disease Neurologic syndrome Anticardiolipin syndrome Obesity (BMI >30 kg/m²) 	
CONTRAINDICATIONS for ANTI-COAGULANT Prophylaxis			
<ul style="list-style-type: none"> Active bleeding of clinical significance requiring intervention High risk of serious bleeding or bleeding into a critical site (e.g. intracranial, intraspinal, pericardial, intraocular, retroperitoneal, intra-articular) Patient already receiving therapeutic anticoagulation 		Known major bleeding disorder or acquired coagulopathy (consider Hematology consult) <ul style="list-style-type: none"> Platelet count less than 50 x 10⁹/L (consider Hematology consult) History of heparin-induced thrombocytopenia (HIT) 	
CONTRAINDICATIONS for MECHANICAL Prophylaxis			
<ul style="list-style-type: none"> Acute stroke with immobility (unable to walk independently to the toilet) Peripheral vascular disease with absent pedal pulses Severe peripheral neuropathy Skin breakdown, ulcers, gangrene, cellulitis, or dermatitis 		<ul style="list-style-type: none"> Skin grafting within last 3 months Allergy to stocking or compression cuff materials Unable to size or apply properly due to deformity, recent surgery or trauma 	
FOOTNOTES AND PRECAUTIONS			
1. Day surgery includes patients admitted and discharged within 24 hours for an elective surgical or invasive procedure. 2. There is weak evidence for using mechanical thromboprophylaxis alone and weaker evidence for combining anticoagulant and mechanical prophylaxis to improve efficacy. 3. Post-Operative - Consider prophylaxis for up to 30 days after abdominal or pelvic surgery for cancer and in patients with multiple risk factors for VTE. Prophylaxis for up to 30 days after surgery is recommended in those having hip replacement or hip fracture surgery, and up to 14 days after total knee replacement. 4. Post-Operative - First post-op dose of anticoagulant should be given after hemostasis is achieved and as soon as it is safe to do so (usually 12 - 24 hours after surgery). This should take into account the risks of bleeding, thrombosis and timing of subsequent surgery. 5. heparin 5000 units subcutaneous Q12H should be used if patient is awaiting urgent surgery and is a candidate for neuraxial blockade (spinal or epidural anesthesia). Refer to Peri-operative Pain Services or Anesthesia regarding timing of epidural catheter insertion and removal. 6. LMWH and heparin should not be given in patients with HIT. Consider consulting Hematology/Internal Medicine regarding the use of alternative agents (e.g. fondaparinux or argatroban). 7. If eGFR is 10 to 30 mL/min <u>AND</u> expected LOS is longer than 10 days, consider using heparin instead of LMWH .			
Suggested dosing for enoxaparin and heparin in patients with extremes of weight and/or severe renal impairment			
Patient weight	eGFR greater than or equal to 30 mL/min	eGFR 10 to 29 mL/min	eGFR less than 10 mL/min or on dialysis
less than 41 kg	enoxaparin 30 mg subcutaneous daily	enoxaparin 30 mg subcutaneous daily	heparin 2500 units subcutaneous Q12H
41 kg to 100 kg	enoxaparin 40 mg subcutaneous daily		heparin 5000 units subcutaneous Q12H
greater than 100 kg	enoxaparin 60 mg subcutaneous daily	enoxaparin 40 mg subcutaneous daily	heparin 5000 units subcutaneous Q8H