VTE RISK ASSESSMENT AND THROMBOPROPHYLAXIS RECOMMENDATION

Patient Risk Groups (satisfaction of any one or more of the listed criteria)	Thromboprophylaxis Recommended
Low Risk Group • Day surgery[1] without any VTE risk factors (see below) • No reduction in mobility compared to usual state • Surgical procedure with a total anesthetic and surgical time of less than 60 minutes with no risk factors for VTE (see below)	Early ambulation
Moderate or High Risk Group • Any medical or surgical patient having had or are expected to have significantly reduced mobility for 3 days or more[2,3] • Medical patients with ongoing reduced mobility (compared to their usual state) AND have one or more risk factors for VTE (see below)[2,3] • Surgical procedure with a total anesthetic and surgical time of 60 minutes or longer[3-6] • Acute surgical admission with an inflammatory or intra-abdominal condition[3-6] • Surgical patients with one or more risk factors for VTE (see below)[3-6]	LMWH (heparin if eGFR less than 10 mL/min)[4-9]
Obstetrical Patients with Increased Risk http://shop.healthcarebc.ca/result?id=170&listid=8df5476d-9a1d-46cd-9f06-d4ac2c5fc192 http://shop.healthcarebc.ca/result?id=174&listid=8df5476d-9a1d-46cd-9f06-d4ac2c5fc192	Consider LMWH (heparin if eGFR less than 10 mL/min)[4-9]

RISK FACTORS FOR VTE

- Age 60 years or over
- Active cancer and cancer treatment
- Previous VTE
- Critical Care admission
- Obesity (BMI over 30 kg/m^2)
- Known thrombophilia
- First degree relative with VTE
- Varicose veins with phlebitis
- Estrogen-containing oral contraception
- Hormone replacement therapy

One or more significant medical conditions:

- Sepsis or severe acute infection
- Heart disease
- Respiratory pathology
- Inflammatory condition
- Rheumatological disease
- Nephrotic syndrome
- Antiphospholipid syndrome
- Acute stroke

CONTRAINDICATIONS FOR MECHANICAL PROPHYLAXIS

- Acute stroke with immobility (unable to walk independently to the toilet) should not use graduated compression stockings or calf length Sequential Compression Devices. Thigh length Sequential Compression Device should be used.
- Peripheral vascular disease with absent pedal pulses
- 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
- Severe peripheral neuropathy
- Skin breakdown, ulcers, gangrene, cellulitis, or dermatitis

FOOTNOTES AND PRECAUTIONS

1. Day surgery includes patients admitted and discharged within 24 hours for an elective surgical or invasive procedure.
2. In medical patients receiving anticoagulant prophylaxis, the NNT to prevent symptomatic DVT is 212 and non-fatal PE is 300; the NNH for major bleed is 430. There is no evidence for mechanical thromboprophylaxis in medical patients.
3. In surgical patients receiving anticoagulant prophylaxis, the NNT to prevent symptomatic DVT is 20-106 and non-fatal PE is 110-150; the NNH for major bleed is 70-100. There is weak evidence for using mechanical thromboprophylaxis alone and weaker evidence for combining anticoagulant and mechanical prophylaxis to improve efficacy.
4. 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. 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. Consider prophylaxis for up to 30 days after abdominal or pelvic surgery for cancer and in patients with multiple risk factors for VTE.
6. Heparin 5000 units SUBCUTaneous Q12H should be used if patient is awaiting urgent surgery and is a candidate for neuraxial blockade. Refer to Peri-operative Pain Service or Anesthesiology regarding timing of epidural catheter insertion and removal.
7. 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).
8. If eGFR is 10 to 30 mL/min AND expected LOS is longer than 10 days, consider using heparin instead of enoxaparin.
9. Enoxaparin dosing in obese patients with eGFR less than 30 mL/min is not well studied.

Approved: VCH-PHC Pharmacy &Therapeutics Committee, March 2019