

venous thromboembolism

VTE Prevention

VTE Prophylaxis A Mini-Guide for Medical Conditions and General Surgery

Reference:

Adapted from: Geerts WH, Pineo GF, et al., Prevention of Venous Thromboembolism, *Chest*. 2004; 126: 338S-400S and the work of the Anticoagulation Order Set Content Development Team, Chaired by Dr. G. Pineo, Calgary Health Region, 2005.

Major Risk Factors (1 Major RF = Prophylaxis)

- Major Surgery
- Trauma
- Ischemic stroke or paralysis
- Spinal cord injury
- Previous VTE
- Congenital and/or acquired thrombophilia states
- Mechanical ventilation
- Active cancer and its treatment

Minor Risk Factors

(2 or more Minor RF = Prophylaxis)

- Age > 40 years
- Estrogen therapy
- Nephrotic Syndrome
- Pregnancy/post-partum
- Prolonged immobility > 24hours
- General anesthesia > 1 hour
- Severe respiratory disease
- Collagen vascular disease
- Inflammatory bowel disease
- Congestive heart failure
- Obesity
- Sepsis
- Varicose veins

Contraindications (If Contraindications then S.C. Device or G.C. Stockings)

- Uncontrolled Hypertension
- Avoid LMWH if CrCl < 20 mL/min
- Bleeding Disorders (platelets < 50)
- Recent intracranial or intraocular hemorrhage
- Lumbar puncture within 24hrs
- Active Bleeding
- HIT(T)

For patients on UFH or LMWH, bleeding tendency with: aspirin (ASA), NSAIDS (particularly ketorolac, Toradol), clopidogrel or ticlopidine. For patients with intrathecal catheters for analgesia UFH or LMWH must NOT be used in conjunction with antiplatelet agents.

VTE Prophylaxis Guidelines for **Medical Conditions**

Risk Level	Indicator	Prophylaxis
Low Risk	No risk factors	• No medical prophylaxis required; early ambulation only
Moderate Risk	1 or 2 minor risk factors	• Heparin, 5000 units, sc, q8h • Heparin, 5000 units, sc, q12h
High Risk	1 major risk factor, or 3-4 minor risk factors	• Heparin, 5000 units, sc, q8h • Enoxaparin, 40 mg, sc, daily* • Dalteparin, 5000 units, sc, daily
Highest Risk	Trauma, > 1 Major risk factor +/- multiple minor risk factors	• Enoxaparin, 30 mg, sc, q12h** • Dalteparin, 5000 units, sc, daily

*If CrCl < 20 mL/min or SCr > 175 umol/L, then Enoxaparin, 20 mg, sc, daily

**If CrCl < 20 mL/min or SCr > 175 umol/L, then Enoxaparin, 30 mg, sc, daily

VTE Prophylaxis Guidelines for **General Surgery**

Risk Level	Indicator	Prophylaxis
Low Risk	Non-major surgery in pts <40yrs w/ no risk factors	• No medical prophylaxis required; early ambulation only
Moderate Risk	Non-major surgery with additional risk factors or age 40-60	• Heparin, 5000 units, sc, q12h • Dalteparin, 2500 units, sc, daily
High Risk	Age > 60 years, or age 40-60 years with additional major risk factors	• Heparin, 5000 units, sc, q8h • Enoxaparin, 40 mg, sc, daily • Dalteparin, 5000 units, sc, daily
Highest Risk	Trauma, > 1 Major risk factor +/- multiple minor risk factors	• Enoxaparin, 30 mg, sc, q12h* • Warfarin po, daily at 1700, adjust to INR of 2.0-3.0 • Dalteparin, 5000 units, sc, daily

*If CrCl < 20 mL/min or SCr > 175 umol/L then Enoxaparin, 30 mg, sc, daily