VENOUS THROMBOEMBOLISM (VTE) PROPHYLAXIS FOR GENERAL SURGERY, GYNAECOLOGICAL SURGERY AND UROLOGY PATIENTS

Enoxaparin is the low molecular weight heparin of choice for all indications, in all patient groups:

- Apart from specific patients in whom unfractionated heparin is preferred
- Enoxaparin should be prescribed for 18:00 and commenced the day before surgery if the patient is in hospital. **It may be discontinued when the patient is fully mobile.**
- In the presence of a BMI < 19 or impaired creatinine clearance (< 30ml/min) enoxaparin 20mg is an appropriate dose.
- Consider heparin 5000 units/0.2ml twice daily if eGFR < 20mL/min.

Below knee Graduated Elastic Compression Stockings (GECS, or TEDs) should be used for all patients (except rapidly mobilising Day Surgery patients with no other indications for their use) unless contraindicated prior to, during and after surgery. These may be discontinued when the patient is fully mobile.
Contraindications to anti-embolic stockings include: severe peripheral arterial disease, congestive cardiac failure, peripheral neuropathy, peripheral vascular disease, gross oedema, leg deformity, acute stroke (use IPC devices), active/severe dermatitis.

An individual risk assessment for DVT prophylaxis must be carried out for all patients on admission.

- Risk factors should be regularly reviewed.
- All prophylaxis, including graduated elastic compression stockings (GECS), should be prescribed on the patient's drug chart.
- Hydrate & mobilise all patients as early as possible.
- If thromboprophylaxis is withheld or there is deviation from this guidance, the reasons must be documented in the case notes. ***The presence of risk factors for bleeding should prompt individual consideration of VTE thromboprophylaxis.*** *Pharmacological intervention may be precluded.*
- Refer to "*Prophylaxis and treatment of VTE in NHS Borders*" for further information

Low risk patients

- Minor trauma, minor surgery (< 30 minutes) or medical illness, mobile patient with none or 1 risk factor
- Major surgery (> 30 minutes), age < 40 with no additional risk factors (except gynaecological surgery – count as "moderate risk")

→ Compression stockings + early mobilisation

Moderate risk patients

- Major gynaecological surgery in patients < 40 years, with none or 1 risk factor
- Major surgery (any) in patients > 40 years, major trauma (immobilising fracture), acute illness (> 3 days bed rest)
- Major surgery + 1 risk factor
- Minor surgery (any), trauma, acute illness + 2 risk factors, or 2 points (see chart).

→ compression stockings + early mobilisation + enoxaparin 20mg SC at 18:00

High risk patients

- Major surgery (any) + 2 risk factors or 2 points (see chart below).
- Minor surgery (any) + 3 risk factors or 3 points (see chart below).

→ compression stockings + early mobilisation + enoxaparin 40mg SC at 18:00

VENOUS THROMBOEMBOLISM (VTE) PROPHYLAXIS FOR GENERAL SURGERY AND UROLOGY PATIENTS IN NHS BORDERS

Thrombosis risk factors:

	Points
obesity (BMI > 30), morbid obesity (BMI > 40)	2
pregnancy, or < month postpartum	1
oral contraceptive, HRT, tamoxifen, raloxifene	1
history of recurrent spontaneous abortions (x3)	1
previous DVT or PE	2
thrombophilic status	2
protein C or S deficiency, APC resistance, positive factor V Leiden, elevated serum homocystein, positive lupus anticoagulant, elevated anticardiolipin antibodies, antithrombin III deficiency, etc.	1
family history of DVT or PE	1
congestive cardiac failure, MI within last month	1
sepsis within last month	1
cancer, or chemotherapy within last 6 months	2
abnormal pulmonary function, COPD, serious lung disease	1
lower limb plaster cast or brace	1
hip, pelvis or lower limb fracture within last month	3
immobilisation, current bed rest	1
current swollen legs	1
significant varicose veins	1
nephrotic syndrome	1
stroke (excluding within last month)	3
multiple trauma within last month	3
acute spinal cord injury (paralysis) within last month	3
inflammatory bowel disease	1

Bleeding risk assessment should include review for:

- Presence of active bleeding
- Current use of oral anticoagulants, platelet inhibitors (clopidogrel, aspirin, warfarin, etc.)
- Thrombocytopaenia (platelets < 100 000)
- Presence of or history of heparin-induced thrombocytopaenia
- Haemophilia or other coagulopathy
- Severe liver disease
- *Active* peptic ulcer
- Severe uncontrolled hypertension (systolic > 200 or diastolic > 120)
- Acute stroke within last month
- CNS surgery within last 3 months
- Lumbar puncture, epidural/spinal anaesthesia expected within the next 12 hours. Consider also the timing of removal of epidural/spinal catheter. It is recommended that prophylaxis should be avoided within the 12 hours prior to these events.

BGH SPSP Peri-operative team
BGH Thrombosis Committee
(amended October 2011 by BJF VTE treatment and prophylaxis formulary group)