

**TREATMENT OF DVT AND PE**  
(Deep Vein Thrombosis with or without pulmonary embolism)

1. Below knee class II stocking
2. **ENOXAPARIN 1.5mg/kg s/c ONCE DAILY**

WEIGHT	DOSE	SYRINGE TO USE
≤ 40kg	60mg s/c once daily	60mg
41 - 50kg	80mg s/c once daily	80mg
51 - 65 kg	100mg s/c once daily	100mg
66 - 80 kg	120mg s/c once daily	120mg
81 - 100kg	150mg s/c once daily	150mg
> 100kg	180mg s/c once daily	100mg and 80mg

For patients over 120kg or complex cases, advice may be obtained from a consultant haematologist

**CONTINUE ENOXAPARIN FOR AT LEAST 5 DAYS AND UNTIL THE INR IS GREATER THAN 2 FOR TWO CONSECUTIVE DAYS. IN PATIENTS WITH LARGE THROMBOSES A LONGER PERIOD OF HEPARIN OF UP TO 10 DAYS MAY BE GIVEN.**

3. START WARFARIN SCHEME  
(Prescribe on drug chart, baseline INR, complete scheme form).

**MANAGEMENT OF ACUTE CORONARY SYNDROME**

The dose of ENOXAPARIN is 1mg/kg s/c TWICE DAILY (every 12 Hours).  
Give ENOXAPARIN for at least 2 days, stop once the patient has been pain free for 24 hours.  
Usual duration of treatment is 2-8 days.

**DOSE ADJUSTMENT IN RENAL IMPAIRMENT CREATININE CLEARANCE < 30ML/MIN**

Dose adjustments for therapeutic dose ranges

Standard dosing	Renal impairment
1mg/kg twice daily	1mg/kg once daily
1.5mg/kg once daily	1mg/kg once daily

Dose adjustments for prophylaxis

Standard dosing	Renal impairment
40mg once daily	20mg once daily

**GUIDELINES FOR NEURAXIAL PROCEDURES IN THE PRESENCE OF LOW MOLECULAR WEIGHT HEPARIN THROMBOPROPHYLAXIS**

- At least 10 hours should elapse between a dose of Enoxaparin and the siting of an epidural catheter.
- No enoxaparin should be given for at least 2 hours following the resiting of an epidural catheter, epidural injection, attempted epidural procedure or lumbar puncture.
- Catheter removal should be at least 10 hours after most recent dose of Enoxaparin or 2 hours before the next dose is scheduled.
- Awareness of the significance of a change in neurological status should be maintained for three days after catheter removal.  
(see intranet for further information)

**GUIDELINES FOR THE REVERSAL OF LMWH**

**BLEEDING WHILE ANTICOAGULATED (ENOXAPARIN)**

If bleeding is severe, reverse anticoagulation with protamine sulphate (continuous infusion or IV bolus. Max rate 5mg/min)

1mg of enoxaparin is neutralised by 1mg protamine sulphate. eg to reverse 40mg enoxaparin give 40mg protamine sulphate IV over 8 minutes.

If giving by IV bolus- max 50mg/dose. Treatment may need to be repeated as effect of LMWH may persist.

For advice on blood component therapies please discuss with haematologist.

For further advice contact the Anticoagulation Nurse Specialist or Consultant Haematologist

Reference:  
NICE Clinical Guidelines 46  
Venous Thromboembolism:  
Reducing the risk of Venous Thromboembolism (Deep Vein Thrombosis and Pulmonary Embolism) in in-patients undergoing surgery - April 2007  
Statement of responsibility -  
Put together by VTE committee JPUH.

**THROMBOPROPHYLAXIS RISK ASSESSMENT**

- All patients must be risk assessed according to the thromboprophylaxis policy (see over)
- Risk assessment must be reviewed regularly - ideally daily
- If Enoxaparin is not indicated - cross through Enoxaparin on the drug chart
- Reason for non-prescribing must be written on the drug chart.

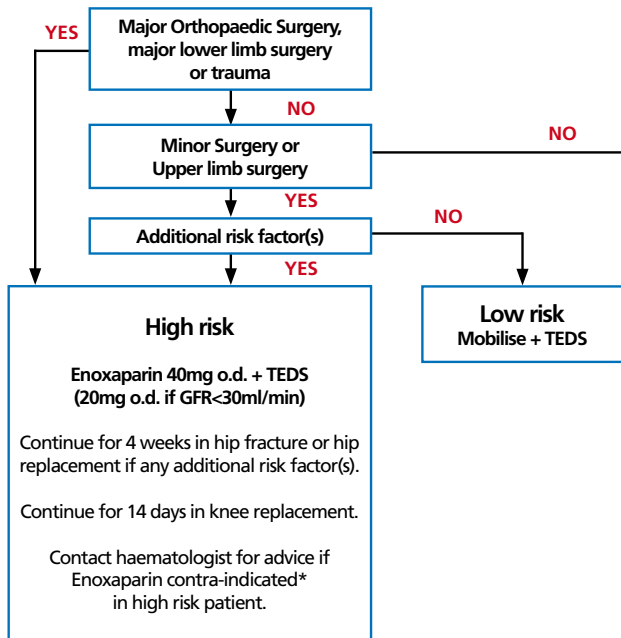
**GUIDELINES FOR THE USE OF ENOXAPARIN LOW MOLECULAR WEIGHT HEPARIN (LMWH)**

This low molecular weight heparin is approved for:

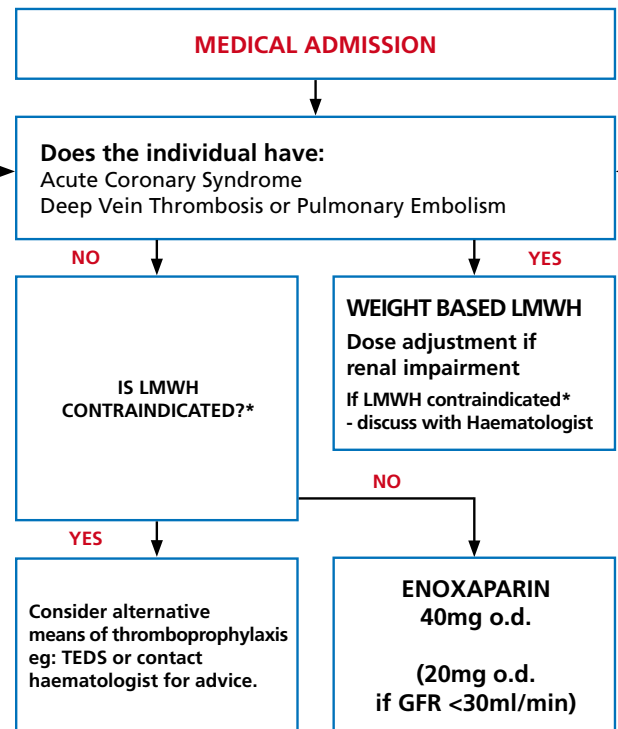
1. Treatment of DVT and PE
2. Management of acute coronary syndromes
3. Prophylaxis of DVT and PE

## GUIDELINES ON THROMBOPROPHYLAXIS FOR ORTHOPAEDIC SURGERY

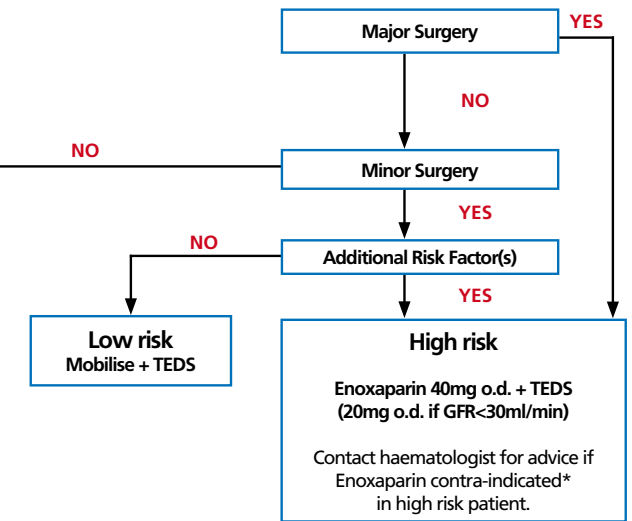
If possible, advise stopping oral or patch contraceptives or HRT 4 weeks prior to elective surgery.



## GUIDELINES ON THROMBOPROPHYLAXIS FOR MEDICAL PATIENTS



## GUIDELINES ON THROMBOPROPHYLAXIS FOR OTHER SURGERY



If possible, advise stopping oral or patch contraceptives or HRT 4 weeks prior to elective surgery.

- General Surgery
- Gynaecological (Excl. caesarean section.)
- Urological
- Neurosurgery (Incl. spinal surgery)
- Vascular

If uncertain whether surgery is major or minor discuss with the consultant in-charge of the case.

### Risk Factors

Age >40  
 Immobility  
 Obesity  
 Prior Hx or FH of VTE  
 Acute medical illness  
 Cancer  
 Heart or Respiratory Failure  
 Serious Infection  
 Recent MI or Stroke (non-haemorrhagic)  
 Pregnancy / puerperium  
 Central Venous Catheter  
 Drugs e.g. HRT, Tamoxifen, Thalidomide, oral contraceptive  
 Inflammatory Bowel Disorder  
 Thrombophilia  
 Paroxysmal nocturnal haemoglobinuria  
 Active Collagen Vascular Disorder  
 Varicose Veins  
 Antiphospholipid syndrome  
 Paraproteinaemia  
 Hyperviscosity (Polycythaemia, etc)  
 Nephrotic syndrome  
 Behcet's disease  
 >3hrs continuous travel within 4 weeks

**THESE RECOMMENDATIONS  
 MUST BE IMPLEMENTED TAKING  
 INTO ACCOUNT THE PATIENT'S  
 INDIVIDUAL CLINICAL SITUATION**

### \* Contraindications to LMWH:

Active or high risk of bleeding  
 Hypersensitivity  
 Heparin induced thrombocytopenia  
 Coagulopathy including Therapeutic Dose Anticoagulants  
 Nerve block, epidural or lumbar puncture  
 Recent intracranial surgery (1 month)  
 Uncontrolled hypertension  
 Acute bacterial endocarditis

### Contraindications to TEDS:

Peripheral arterial disease  
 Diabetic neuropathy  
 Dermatitis  
 Ulceration  
 Gangrene  
 Recent skin graft  
 Severe leg oedema  
 Deformity preventing application  
 Arteriosclerosis  
 Cellulitis