Guidelines for VTE prophylaxis – Department of Orthopaedic & Trauma Surgery
Doncaster and Bassetlaw Hospitals NHS Foundation Trust (March 2021)

PRESCRIBING NOTES:

Any of the patient related risk factors *in combination with* admission related risk factors (as included in the risk assessment tool), increases the risk of VTE and therefore must be considered for prophylaxis

Assess all patients on admission to identify those who are at increased risk of VTE. Assess bleeding risk. Balance risks of VTE and bleeding. Trust approved assessment forms provided on ward/in clinic to be completed for all patients

Offer VTE prophylaxis where appropriate. Do not offer pharmacological VTE prophylaxis if the patient has any risk factor for bleeding and risk of bleeding outweighs risk of VTE.

Reassess the risks of VTE and bleeding within 24 hours of admission and whenever the clinical situation changes. Also review the risk assessment at discharge, when the patient would usually be switched from dalteparin to aspirin. Where low mobility patients are discharged to rehabilitation wards (or nursing homes, etc) this would allow the patient to remain on dalteparin.

If the patient is pregnant discuss with Haematologist before starting treatment after doing the regular assessment.

Discussion with patients to be had after assessment forms analysed on the Department guidelines which reflects current recognised practice for DVT prophylaxis.

Policy applies to all patients 18 years and above as per Trust guidelines.

The Consultants of the Trauma and Orthopaedic Directorate have unanimously agreed the above guideline. Discussions have taken place with the PSRG.

These guidelines have been formulated in line with emerging evidence and the guidelines used by the American Academy of Orthopaedic Surgeons and the American College of Chest Physicians.

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Approved by Drug and Therapeutics Committee/Patient Safety Review Group/Orthopaedic Clinical Governance Group: March 2021
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RECOMMENDATIONS TO BE CONSIDERED FOR SPECIFIC INDICATIONS:

ELECTIVE:

High Risk Hip & Knee Replacement (previous PE/DVT, inherited or acquired thrombophilia, active cancer or treatment for cancer)

- Use regional anaesthesia when possible, consider calf mechanical prophylaxis
- Dalteparin 5000units* s/c in the EVENING to start 6 hours post-op and continued whilst patient in hospital (for those patients prescribed rivaroxaban).
- Then Rivaroxaban 10mg once DAILY for 6 weeks started at discharge. If unable to have Rivaroxaban, Warfarin (target INR 2.5 range 2 to 3) for 6 weeks started the day following surgery (continue dalteparin until INR therapeutic for two consecutive days). In active cancer or treatment for cancer, continue with Dalteparin 5000units* s/c in the EVENING for 6 weeks following surgery.

Standard Risk Hip & Knee Replacement

- Use regional anaesthesia when possible, consider mechanical prophylaxis
- Dalteparin 5000units* s/c in the EVENING to start 6 hours post-op and continued whilst patient in hospital.
- Then Aspirin 150mg once DAILY for 6 weeks to commence on discharge (where aspirin intolerant, consider substituting with dalteparin or rivaroxaban instead: for 10 days for knee replacement and 30 days for hip replacement)

Hip Arthroscopy

- Dalteparin 5000units* s/c in the EVENING to start 6 hours post-op, continued for 3 weeks.

Peri-acetabular Osteotomies

- Dalteparin 5000units* s/c in the EVENING to start 6 hours post-op and continued for 3 weeks post-op.

Spinal Surgery/Fractures

- All patients to receive anti-thromboembolism (TED) stockings before going to theatre and continue with these until fully mobile/additional mechanical prophylaxis can be considered if appropriate
- If high risk (previous PE/DVT, inherited or acquired thrombophilia, active cancer or treatment for cancer), consider Dalteparin 5000units* s/c in the EVENING to start 48 hours after surgery and continued whilst patient in hospital.

Shoulder and Upper Limb Surgery

- No specific prophylaxis required. Consider calf pumps/anti-thromboembolism (TED) stockings.

Foot and Ankle Surgery

- Use regional anaesthesia when possible.
- Hindfoot/Tendo Axhilles reconstruction /Ankle fusion: Dalteparin 5000units* s/c in the EVENING to start 6 hours post-op and until discharge.
  Then Aspirin 150mg once DAILY for 6 weeks to commence on discharge (where aspirin intolerant, consider substituting with Rivaroxaban 10mg once DAILY or Dalteparin 5000units s/c in the EVENING instead for period in plaster).
- FOREFOOT: Dalteparin 5000units* as a single dose post-op.

TRAUMA:

Fractured Neck of Femur

- Dalteparin 5000units* in the EVENING to start 6 hours post-op, continued whilst patient in hospital.
- Then Aspirin 150mg once DAILY for 6 weeks to commence on discharge.
- If aspirin inappropriate, Dalteparin 5000units* in the EVENING for 6 weeks following surgery.

Pelvic Fracture

- Dalteparin 5000units* in the EVENING to start 6 hours post-op, continued whilst patient is still restricted in terms of mobility.

Lower Limb Fractures(Guidance remains the same if foot included or not included in cast)

High Risk patients with Lower Limb Plaster Casts (previous PE/DVT, inherited or acquired thrombophilia, active cancer or treatment for cancer)

- Dalteparin 5000units* in the EVENING to start 6 hours post-op, continued whilst patient in hospital (for those patients prescribed rivaroxaban).
- Then Rivaroxaban 10mg once DAILY for six weeks. If unable to have Rivaroxaban, Warfarin (target INR 2.5 (range 2 - 3) for 6 weeks started the day following surgery (continue dalteparin until INR therapeutic for two consecutive days).

Standard Risk patients with Lower Limb Plaster Casts

- Dalteparin 5000units* in the EVENING to start 6 hours post-op, continued whilst patient in hospital
- Then Aspirin 150mg once DAILY while patient is in a cast. Once plaster is removed provided patient is full weight bearing and ankle is free to mobilise Aspirin can be discontinued. Aspirin can be considered for a longer period of time if patient continues to struggle with mobilisation and is non-weight bearing.

Upper Limb Fractures/Surgery

- No specific prophylaxis required. Consider calf pumps/anti thromboembolism (TED) stockings intra operatively.

Dalteparin Dosing Recommendations:

5000units in the EVENING

If eGFR< 20ml/min*, use 2500units in the EVENING
(* this lower dose should also be used in all those with evidence of acute kidney injury (oliguria over 12 hours or doubling of serum creatinine) – including obese patients

Prophylaxis in Extremes of Body Weight (unlicensed):

Weight (kg)	Dose
<45	2500units in the EVENING
100-149	7500units in the EVENING
>149	5000units TWICE DAILY

All patients with history of acid peptic disease/reflux and or associated symptoms to be provided with GI protection for the duration of Aspirin treatment. This will usually be Lansoprazole 15 mgs od.

Aspirin dosing in patients admitted taking antiplatelets:

General advice is to add Aspirin 75mg daily for those patients taking Clopidogrel alone. This 75mg daily dose can also be used in those already taking aspirin on admission, who are not concomitantly taking Clopidogrel, in order to achieve continuity, e.g. for those patient whose regular medicines are dispensed in a MDS. For patients admitted on dual antiplatelet therapy eg, Aspirin and Ticagrelor, seek advice from a consultant cardiologist.