Guidelines for VTE prophylaxis – Department of Orthopaedic & Trauma Surgery
Doncaster and Bassetlaw Hospitals NHS Foundation Trust (July 2017)

PRESCRIBING NOTES:

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/ clinic to be completed for all patients

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

Evidence supporting the use of aspirin following orthopaedic surgery is taken from Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines

Reassess risks of VTE and bleeding within 24 hours of admission and whenever clinical situation changes. Review (in terms of has anything changed) the risk assessment at the point the patient is switched from Dalteparin to Aspirin at discharge. This would allow patients who are going to rehabilitation wards or nursing homes etc, with low mobility to stay 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.
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 Axillles 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 intraoperatively.

Dalteparin Dosing Recommendations:

5000units in the EVENING

If e GFR< 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):

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>Dose</th>
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<tbody>
<tr>
<td>&lt;46</td>
<td>2500units in the EVENING</td>
</tr>
<tr>
<td>&gt;120 to &lt;150</td>
<td>7500units in the EVENING</td>
</tr>
<tr>
<td>&gt;150</td>
<td>5000units TWICE DAILY</td>
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</tbody>
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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 150mg daily for those patients taking Clopidogrel and increase the dose of aspirin to 150 mg daily for those prescribed 75 mg daily (for the recommended duration of thromboprophylaxis) but risk of bleeding should be considered for individual patients. For patients admitted on dual antiplatelet therapy, eg aspirin and ticagrelor seek advice from consultant cardiologist.