

# Regions Hospital Trauma Service Venous Thromboembolism Prophylaxis Guideline

**Trauma Patient Admitted**

**SCDs for every patient unless expected LOS <24h and fully ambulatory.**  
(do not order if child < 40kg)

- Bleeding Risk**
- Ongoing resuscitation and/or coagulopathy
  - Incomplete spinal cord injury
  - Neurosurgical procedure (clarify prior)
  - Nonoperative solid organ injury < 24h
  - Significant eye injury within 7 days
  - Pelvic fracture with significant hemorrhage, transfusion or embolization within 24h
  - Epidural catheter, 24h pre- and post-insertion/removal (d/w anesthesia)

**High Risk Injury**  
(intracranial hemorrhage, spinal, solid organ injury, other bleeding risk, see box below)

Yes ↓  
**Intracranial hemorrhage?**

Yes →

No ↓  
**Spine fracture/SCI?**

Yes →

No ↓  
**Grade 4/5 Solid organ injury**

Yes →

No →

**BIG 1 or 2** - start 24h after stable HCT  
**BIG 3** - defer to neurosurgery team

Start Prophylaxis within 48h, sooner if no EDH, no plans for surgery

Start within 24-48h, document if delay due to ongoing concern for bleeding

**Start prophylaxis immediately**  
(unless fully ambulatory and expected LOS <24h)

**DO NOT hold chemical prophylaxis for orthopedic or plastic surgery. Attending to Attending discussion if prophylaxis is to be held.**

**Special Cases**

Pediatric patients – usually no prophylaxis until puberty

Spine surgery – may start chemical prophylaxis on POD 1 even with drain in place (may be held for removal)

DVT above vein ligation or amputation does not require treatment (however, consider other risk factors)

**Enoxaparin Dosing**

**0.5 mg/kg SQ q12h**  
(MAX initial dose 50mg q12h)

**BMI > 40: 0.4mg/kg SQ q12h**  
(MAX initial dose 50mg q12h)  
(note: epic/pharmacy will round dose as appropriate)

**Intracranial hemorrhage maximal initial dose: 30mg SQ q12h**

**Anti Xa level monitoring and dose adjustment per pharmacy:**  
(age ≥ 90, wt <50kg, wt > 150kg, BMI ≥ 50, pregnancy, intracranial hemorrhage, CrCl <30)

**CrCl < 30mL/min: Unfractionated Heparin 5000mg SQ q8h is preferred agent**

Duration: discontinue on discharge. Continue x 4 weeks post-discharge for patients with lower extremity and pelvic fractures who are non-weightbearing or limited weightbearing. Consider in patients with history of VTE not already on anticoagulation. Additional indications at the discretion of trauma attending.

\*ACS TQIP – Best Practice Guidelines – The Management of Traumatic Brain Injury 2024  
\*AAST/ACS-COT Clinical Protocol for inpatient venous thromboembolism prophylaxis after trauma – J Trauma Acute Care Surg 2022; 92(3):597-604

# Miscellaneous Related Topics

Risk Stratification	*Modified Berne-Norwood Criteria	Initiation of VTE prophylaxis
Low risk	No moderate or high-risk criteria	24h after stable repeat HCT
Moderate risk	SDH or epidural $\geq$ 8mm Contusion or IVH $\geq$ 2cm Subarachnoid hemorrhage with abnormal CT angiogram Evidence of progression at 24h	72h if CT stable
High risk	Evidence of progression in imaging at 72h Craniotomy ICP monitor placement	Defer to neurosurgery; Consider IVC filter if prolonged high risk

## Screening Duplex US

### High risk for VTE ( $\geq$ 2 risk factors)

Order on HD3 (or when patient becomes high risk if  $>$ 3d from admission) and every 7d thereafter during admission

**(independent of chemical prophylaxis)**

### VTE Risk Factors

**Any** Surgical intervention  
Intracranial hemorrhage  
Coma  
Limited mobility  $>$ 24h  
Spine fracture (excludes isolated TP/SP fractures)  
Spinal Cord Injury  
Lower extremity fractures  
Pelvic fractures  
Age  $\geq$  60  
BMI  $\geq$  30  
Hx of DVT/PE  
Active Covid infection

## IVC Filters

In general, we avoid use of IVC filters. The indication for IVC Filter is known VTE in a patient with contraindication for therapeutic anticoagulation.

## Calf Vein Thrombosis

Thrombosis below popliteal veins does not require treatment although treatment can be considered based on risk factors.

If no treatment, follow with weekly duplex US to monitor for progression (including 1<sup>st</sup> outpatient exam)