

## VTE Prophylaxis in Neurosurgery:

- Mechanical Prophylaxis: Sequential Compression Devices (SCDs)
- Contraindications pharmacologic prophylaxis:
  - Uncontrolled hemorrhage
  - Uncorrected coagulopathy (INR > 2 or plt < 50)
  - Unsecured ruptured aneurysm
  - Therapeutic anticoagulation

Neurosurgical procedure	Suggested Time to Initiation of Pharmacologic Prophylaxis	Drug recommendation
<b>Brain Neoplasm</b>		
Glioblastoma multiforme (GBM) Meningioma	24 hrs post-op with stable head CT  <i>* Hemorrhagic tumors or multiple metastasis from known hemorrhagic primary tumors should not receive pharmacologic prophylaxis</i>	Enoxaparin 40mg SQ Q 24h or Heparin 5000 units SQ Q 8h
<b>Subarachnoid Hemorrhage (SAH)</b>		
After aneurysm secure  Angio-negative	24 hrs post-procedure  24 hrs post-angio	Heparin 5000 units SQ Q 8h
<b>Arteriovenous Malformation (AVM)</b>		
Resection or embolization	24 hrs post-procedure	Heparin 5000 units SQ Q 8h
<b>Subdural Hemorrhage (SDH)</b>		
Craniotomy/Burr holes	24 hrs post-procedure with stable head CT	Heparin 5000 units SQ Q 8h
<b>Intraparenchymal Hemorrhage (IPH) / Intraventricular Hemorrhage (IVH)</b>		
Craniotomy/Evacuation	24 hrs post-procedure with stable head CT	Heparin 5000 units SQ Q 8h
<b>Ischemic Stroke - Hemorrhagic Conversion</b>		
Hemorrhagic conversion	24 hrs post stable head CT	Heparin 5000 units SQ Q 8h or Enoxaparin 40 mg SQ Q 24h
<b>Minor Cranial Procedure</b>		
VP Shunt Biopsy External ventriculostomy Lumbar drain/Hemovac	24 hours post-procedure  <i>*Hold dose around drain removal</i>	Enoxaparin 40mg SQ Q 24h or Heparin 5000 units SQ Q 8h
<b>Elective spine</b>		
Degenerative spine surgery Tumor resection	POD #1 s/p drain removal	Enoxaparin 30mg SQ Q 12

### †Enoxaparin Dosing Recommendations:

Chronic Renal Insufficiency (CrCl < 30 mL/min): Enoxaparin 30mg SQ Q 24h

Hemodialysis (HD) or acute renal failure: Heparin 5000 units SQ Q 8h

Obese patients (Wt > 120 kg): Consider anti-Xa level monitoring or enoxaparin 40mg SQ Q 12h

### ‡Heparin Dosing Recommendations:

Obese patients (Wt > 120 kg): Consider Heparin 7500 units SQ Q 8h

\*Heparin allergy/history of heparin-induced thrombocytopenia: Fondaparinux 2.5 mg SQ Q 24h  
(Contraindicated if CrCl < 30 mL/min)