Johns Hopkins Hospital Department of Anesthesiology and Critical Care Medicine

Recommendations for Anticoagulation: Neuraxial and Deep Block/Paravertebral/Lumbar Plexus Interventions (2016)

Note: Clinical judgement is advised in patients with renal and/or hepatic dysfunction, those with extremes of age, or in cases of multiple attempts/traumatic procedure, as risk of hematoma may be increased.

Drug	Common Trade Names	Time between last dose of anticoagulation and catheter	Minimum time to restart anticoagulation after catheter removal
Abciximab	Reopro	48 hours	24 hours
Alteplase (catheter clearance)	Activase	No restrictions	No restrictions
Apixiban	Eliquis	CrCl>50: 3 days; CrCl 30-50: 4 days	24 hours
Argatroban	Acova	At least 6 hours; check for normal PTT or ACT	2 hours
Aspirin**	Ecotrin	No restrictions	No restrictions
Bivalirudin	Angiomax	At least 6 hours; check for normal PTT or ACT	2 hours
Cilostazol	Pletal	No restrictions	No restrictions
Cilostazol + Aspirin	Pletal	48 hours	2 hours
Clopidogrel 75mg	Plavix	7 days (if 5-7 days, check for normal platelets function with P2Y12 assay)	6 hours (24 if traumatic placement)
Clopidogrel 300-600mg	Plavix	7 days	24 hours
Dabigatran	Pradaxa	CrCl>50: 5 days; CrCl<50: 7 days, Consider checking thrombin time	24 hours
Dalteparin *(Therapeutic)* Any dosing > 5,000 Units QD	Fragmin	30 hours, double time for CrCl<30	6 hours (24 hours if traumatic placement)
Dalteparin (Prophylactic) Dosing < 5,000 Units QD	Fragmin	15 hours, double time for CrCl<30	4 hours , double time for CrCl<30 (24 hours if traumatic placement)
Note: LOW MOLECULAR WEIGHT HEPARIN: Prophylactic dosing may be started 6-8 hours postoperatively. Therapeutic dosing or BID dosing should be started at least 24 hours postoperatively. Epidural catheters should be removed prior to initiation of therapy.			
Enoxaparin *(Therapeutic)*	Lovenox	24 hours	4 hours (24 hours if traumatic placement)
Enoxaparin (BID prophylactic) (<=60 mg daily)	Lovenox	12-24 hours	4 hours (24 hours if traumatic placement)
Enoxaparin (Daily Prophylactic)	Lovenox	12 hours	4 hours (24 hours if traumatic placement)
Note: LOW MOLECULAR WEIGHT HEPARIN: Prophylactic dosing may be started 6-8 hours postoperatively. Therapeutic dosing or BID dosing should be started at least 24 hours postoperatively. Epidural catheters should be removed prior to initiation of therapy.			
Eptifibatide	Integrilin	8 hours	24 hours
Fondaparinux 2.5mg	Arixtra	4 days	2 hours
Fondaparinux 5, 7.5, 10mg	Arixtra	7 days	24 hours
Heparin SQ 5000U BID	Heparin	No restrictions	No restrictions
Heparin SQ 5000U TID or greater	Heparin	Unknown risk: Wait 4-6 hours, consider checking PTT	1 hour
Heparin IV	Heparin	2-4 hours and PTT < 35	2 hours
Note: HEPARIN: If patient has been on heparin for >5 days, check platelet count prior to any intervention.			
Herbal Medications**		No restrictions	No restrictions
NSAIDs**	Advil, Celebrex, Excedrin, Mobic, etc	No restrictions	No restrictions
Prasugrel	Effient	7-10 days	24 hours
Rivaroxaban	Xarelto	3 days	24 hours
Ticagrelor	Brilanta	5-7 days	24 hours
Tirofiban	Aggrastat	8 hours	24 hours
Warfarin	Coumadin	3-5 days and INR < 1.5	Same day

**Restarting anticoagulants with catheter in place is not recommended or has unknown risk, with the exception of aspirin/NSAIDs (no restrictions), bid prophylactic heparin (no restrictions), daily prophylactic enoxaparin and IV heparin (2 hour). Indwelling catheters are not recommended for patients on therapeutic or BID lovenox. Catheter should be removed prior to initiating therapy*

***The additive, if not synergistic, effect of multiple hemostasis-altering medications cannot be overstated and clinical judgement is advised when encountering this situation.*