

Heparin Considerations for Use*

Non-FDA Approved Indication: Alternative to Oral Anticoagulation for Stroke Prevention in Atrial Fibrillation

Mechanism of Action	Inhibits thrombin and factor Xa
Dosing [†]	<p><u>Adult</u>: 70 units/kg bolus, then 15 units/kg/hr infusion; adjust dose based on aPTT and hospital's nomogram²</p> <p><u>Elderly</u>: No specific dosage adjustment</p> <p><u>Hepatic Impairment</u>: No specific dosage adjustment</p> <p><u>Renal Impairment</u>: No specific dosage adjustment</p>
Contraindications	Active pathological bleeding, thrombocytopenia, history of heparin-induced thrombocytopenia
Major Side Effects	Hemorrhagic event, heparin-induced thrombocytopenia
Dosage forms and Strengths	IV: solution for injection
Reversal	<p>Discontinue heparin. Anticoagulation effects should be minimized within 3 hours; evaluate aPTT to confirm.</p> <p>Protamine, given as a slow IV infusion (1 % solution), may largely neutralize heparin. Protamine 1 mg neutralizes ~ 100 units of heparin. Do not exceed protamine 50 mg. Monitor aPTT to confirm neutralization.</p>
Conversion to/from other drugs	<p><u>From heparin to warfarin</u>:</p> <ul style="list-style-type: none"> Initiate warfarin when appropriate (usually start on same day as heparin). Continue heparin until INR is within therapeutic range for at least 2 days.
Special Notes	<p>Monitor aPTT, hemoglobin, hematocrit, platelets, stool for occult blood based on hospital's nomogram.</p> <p>May monitor anti-Xa (goal 0.3 to 0.7 IU/mL antifactor Xa activity) as an alternative to aPTT monitoring.</p> <p>May reverse anticoagulation effects with protamine.</p> <p>Discontinue all heparin products when heparin induced thrombocytopenia is suspected or diagnosed.</p>
Counseling	Report signs and symptoms of bleeding (e.g., unexpected bleeding or bleeding that lasts a long time; red or black, tarry stool; pink or brown urine; unusual bruising; coughing up blood; vomiting blood or vomit that looks like coffee grounds; unexplained pain, swelling, or joint pain; unusual headaches, dizziness, or weakness; recurring nose bleeds)

* Refer to prescribing information for more complete information.

†Dosages given in the table may differ from those recommended by the manufacturers.

Sources:

- American College of Cardiology (ACC), American Heart Association (AHA), and Heart Rhythm Society (HRS). *2011 ACCF/AHA/HRS Focused Update on the Management of Patients With Atrial Fibrillation (Update on Dabigatran)*. Washington, DC: American College of Cardiology Foundation. 2011.
- Chest Supplement, Antithrombotic Therapy and Prevention of Thrombosis, 9th edition, American College of Chest Physicians.