

## Before Surgery

If preoperative international normalized ratio (INR) is 2.0–3.0, stop warfarin 5 days before surgery (ie, hold four doses)

If preoperative INR is 3–4.5, stop warfarin 6 days before surgery (hold five doses)

Start low-molecular-weight heparin 36 hours after last warfarin dose, ie: Enoxaparin 1 mg/kg subcutaneously every 12 hours (adjust for renal failure).

Give last dose of low-molecular-weight heparin approximately 24 hours before procedure

Educate patient on self-injection and provide with written instructions

Discuss plan with surgeon and anesthesiologist

**Check INR in morning of surgery to ensure that it is less than 1.5, or in some cases (eg, neurologic surgery) less than 1.2**

## After Surgery

Restart low-molecular-weight heparin approximately 12-24 hours after procedure or consider thromboprophylactic dose of low-molecular-weight heparin on first postoperative day if patient is at high risk for bleeding

Discuss above with surgeon

Start warfarin at patient's preoperative dose on postoperative day 1

Daily prothrombin time and INR until patient is discharged and periodically thereafter until INR is in the therapeutic range

Daily phone follow-up with patient by the Anticoagulation Clinic to assess for adverse effects such as bleeding

Complete blood cell count with platelets on day 3 and day 7

Discontinue low-molecular-weight heparin when INR is 2–3 for **2 consecutive days**