Meta-analysis showed that heparin (UH or LMWH) reduced the relative risk of DVT by 69% compared with placebo. However, important issues such as the effect of variations in the type (UH or LMWH), dosage, or timing of heparin remain unresolved. Mechanical pumping devices reduced the incidence of DVT and PE compared with placebo (table). The heparin control or placebo groups did not differ for PE or mortality. No trials evaluated compression stockings. Mechanical pumping devices reduced the incidence of DVT and PE compared with control (table), but not mortality.

LMWH reduced any DVT compared with UH; however, analysis of the 3 studies with methodological scores ≥ 10 showed no such difference. UH and LMWH did not differ for PE or mortality. 2 studies each found no difference between heparin and mechanical methods for any outcome.

Conclusions
Unfractionated and low molecular weight heparins reduce deep venous thrombosis, but not pulmonary embolism or death, after surgery for hip fracture. Mechanical pumping devices such as arteriovenous foot pumps reduce deep venous thrombosis and pulmonary embolism.

Michael Perlow, RN, DNS
Professor of Nursing
Murray State University
Murray, Kentucky, USA