

Table 8-1

Orthopedic Blood Management Strategies

Preoperative

- Early identification of patients at high risk of transfusion
- Blood management algorithms
- Selective use of erythropoietic agents and iron therapy
- Discontinuation of drugs and herbal medicines that increase bleeding
- Autologous predonation (not recommended)

Intraoperative

- Minimization of surgical time
- Regional anesthesia
- Temperature maintenance
- Patient positioning
- Controlled “normotension”
- Cautery
- Topical hemostatic agents
- Intraoperative autotransfusion
- Antifibrinolytics (tranexamic acid, epsilon-aminocaproic acid) and serine protease inhibitors (aprotinin)
- Point of care testing
- Evidence-based transfusion decisions

Postoperative

- Evidence-based transfusion decisions
- Postoperative autotransfusion (washed)
- Minimize iatrogenic blood loss

Table 8-2

Blood Management Principles

- Early identification and intervention for patients at high risk for transfusions
- Utilization of current scientific evidence and the promotion of clinical best practices
- Alignment and coordination of all members of the health care team
- Patient advocacy and patient safety
- Stewardship of scarce and expensive hospital resources

trial of transfusion strategies in 838 intensive care unit patients. The authors' conclusion was that a restrictive strategy of red cell transfusions (Hgb 7.0) was at least as effective and possibly superior to a more liberal strategy (Hgb 9.0 to 10.0) with the possible exception of those patients with acute coronary syndromes. A study published in 2004 by cardiologists at Duke even questioned the benefit of transfusions in those high-risk cardiac populations. As with any medical therapy, the decision to transfuse must be made in the context of an informed risk and benefit analysis.