fluids. Trained personnel (physician, registered nurse, respiratory therapist) whose sole responsibility is to monitor the patient (rather than performing or assisting with the procedure) should be present to monitor for adverse events and complications.

Box 5-7

Procedural Sedation and Analgesia Equipment Needs

- High-flow oxygen and delivery method
- Airway management materials: endotracheal tubes, bag valve masks, and laryngoscopes
- Pulse oximetry, blood pressure monitor, electrocardiography,* capnography*
- Suction and large-bore catheters
- Vascular access supplies
- Resuscitation drugs, intravenous (IV) fluids
- Reversal agents, including flumazenil and naloxone

*May be optional devices.

Postoperative Pain

Surgery and traumatic injuries (fractures, dislocations, strains, sprains, lacerations, burns) generate a catabolic state as a result of increased secretion of catabolic hormones and lead to alterations in blood flow, coagulation, fibrinolysis, substrate metabolism, and water and electrolyte balance and increase the demands on the cardiovascular and respiratory systems. The major endocrine and metabolic changes occur during the first 48 hours after surgery or trauma. Local anesthetics and opioid neural blockade may effectively mitigate the physiologic responses to surgical injury.