

	(cool room) Infusion of cool fluids or blood	
--	--	--

From Smith DP: *Comprehensive child and family nursing skills*, St Louis, 1991, Mosby.

A change in vital signs that demands immediate attention in the perioperative period is caused by **malignant hyperthermia (MH)**, a potentially fatal pharmacogenetic disorder involving a defective calcium channel in the sarcoplasmic reticulum membrane. In susceptible children, inhaled anesthetics and the muscle relaxant succinylcholine trigger the disorder, producing hypermetabolism. Symptoms of MH include hypercarbia (increasing end-tidal carbon dioxide [ETCO₂]), elevated temperature, tachycardia, tachypnea, acidosis, muscle rigidity, and rhabdomyolysis ([Rosenberg, Davis, and James, 2007](#)). A family or previous history of sudden high fever associated with a surgical procedure and myotonia increase the risk for MH. Children who have successfully undergone prior surgery without adverse effects may still be considered susceptible.

Treatment of MH includes immediate discontinuation of the triggering agent, hyperventilation with 100% oxygen, and IV dantrolene sodium. If the child is hyperthermic, initiate cooling measures, such as ice packs to the groin, axillae, and neck and iced nasogastric (NG) lavage. The surgery may be discontinued or if it is emergent, it may be continued with a different anesthetic agent. The patient should be transferred to an intensive care unit for at least 36 hours and is closely monitored for stabilization of vital signs, metabolic state, and possible recurrence of symptoms.

Managing pain is a major nursing responsibility after surgery. The nurse should assess pain frequently and administers analgesics to provide comfort and facilitate cooperation with postoperative care, such as ambulation and deep breathing. Opioids are the most commonly used analgesics. Routinely scheduled IV analgesics, patient-controlled analgesia, and epidural infusions, rather than as-needed orders, provide excellent analgesia in postoperative pediatric patients.

Because respiratory tract infections are a potential complication of anesthesia, make every effort to aerate the lungs and remove secretions. The lungs are auscultated regularly to identify abnormal sounds or any areas of diminished or absent breath sounds. To