

Isoflurane

Class: General Anesthetic, Inhalation

Indications: Maintenance of general anesthesia

Note: Use of isoflurane for induction of general anesthesia is an FDA-labeled indication; however, it is not recommended clinically due to its irritant properties and unpleasant odor, which causes breath-holding or coughing

Available dosage form in the hospital: Solution, inhalation: 100 mL bottle

Trade Names:

Dosage: Anesthesia: Inhalation: Minimum alveolar concentration (MAC), the concentration at which 50% of patients do not respond to surgical incision, is 1.15% (44 years of age)

Maintenance: With nitrous oxide: 1% to 2.5%; without nitrous oxide: 1.5% to 3.5%

Note: MAC is increased in the young and decreased in the elderly.

Dosing: Renal Impairment

No dosage adjustment provided in manufacturer's labeling.

Dosing: Hepatic Impairment

No dosage adjustment provided in manufacturer's labeling

Common side effects: Cardiovascular: Arrhythmia, hypotension, myocardial depression, tachycardia (transient)

Central nervous system: Mood changes (may persist for ≤ 6 days after administration), cognitive function decreased (may persist for ≤ 3 days after administration)

Endocrine & metabolic: Cholesterol decreased, hyperglycemia, hyperkalemia (perioperative)

Gastrointestinal: Ileus, nausea, vomiting

Hematologic: Leukocytosis (transient)

Hepatic: Hepatic dysfunction (mild to severe; rare), hepatitis (rare), alkaline phosphatase decreased

Renal: BUN decreased, creatinine increased

Respiratory: Respiratory depression/arrest, respiratory irritation (coughing, laryngospasms-related to induction)

Miscellaneous: Malignant hyperthermia, shivering

Postmarketing and/or case reports: Cardiac arrest, hepatic failure (rare), hepatic necrosis (rare)

Pregnancy Risk Factor: C