Bupivacaine

Class: Local anesthetic

Indications: Local or regional anesthesia; spinal anesthesia; diagnostic and therapeutic procedures; obstetrical procedures (only 0.25% and 0.5% concentrations)

0.25%: Local infiltration, peripheral nerve block, sympathetic block, caudal or epidural block

0.5%: Peripheral nerve block, caudal and epidural block

0.75% **(not for obstetrical anesthesia)**: Retrobulbar block, epidural block. **Note:** Reserve for surgical procedures where a high degree of muscle relaxation and prolonged effect are necessary

Available dosage form in the hospital: Injection: 0.5% 4 ml (heavy), 0.25% 20 ml, 0.5% 20 ml.

Trade Names:

Dosage: **Note:** Dose varies with procedure, depth of anesthesia, vascularity of tissues, duration of anesthesia, and condition of patient. Do not use solutions containing preservatives for caudal or epidural block.

Local anesthesia: Infiltration: 0.25% infiltrated locally; maximum: 175 mg

Caudal block (preservative free): 15-30 mL of 0.25% or 0.5%

Epidural block (other than caudal block; preservative free): Administer in 3-5 mL increments, allowing sufficient time to detect toxic manifestations of inadvertent I.V. or I.T. administration: 10-20 mL of 0.25% or 0.5%

Surgical procedures requiring a high degree of muscle relaxation and prolonged effects **only**: 10-20 mL of 0.75% (**Note:** Not to be used in obstetrical cases)

Peripheral nerve block: 5 mL of 0.25% or 0.5%; maximum: 400 mg/day

Sympathetic nerve block: 20-50 mL of 0.25%

Retrobulbar anesthesia: 2-4 mL of 0.75%

Spinal anesthesia: Preservative free solution of 0.75% bupivacaine in 8.25% dextrose:

Lower extremity and perineal procedures: 1 mL

Lower abdominal procedures: 1.6 mL

Normal vaginal delivery: 0.8 mL (higher doses may be required in some patients)

Cesarean section: 1-1.4 mL

Dosing: Renal Impairment

No dosage adjustments provided in manufacturer's labeling; use with caution.

Dosing: Hepatic Impairment

No dosage adjustments provided in manufacturer's labeling; use with caution.

Common side effects: **Note:** Incidence of adverse reactions is difficult to define. Most effects are dose related, and are often due to accelerated absorption from the injection site, unintentional intravascular injection, or slow metabolic degradation. The development of any central nervous system symptoms may be an early indication of more significant toxicity (seizure).

Cardiovascular: Hypotension, bradycardia, palpitation, heart block, ventricular arrhythmia, cardiac arrest

Central nervous system: Restlessness, anxiety, dizziness, seizure (0.1%); rare symptoms (usually associated with unintentional subarachnoid injection during high spinal anesthesia) include persistent anesthesia, paresthesia, paralysis, headache, septic meningitis, and cranial nerve palsies

Gastrointestinal: Nausea, vomiting; rare symptoms (usually associated with unintentional subarachnoid injection during high spinal anesthesia) include fecal incontinence and loss of sphincter control

Genitourinary: Rare symptoms (usually associated with unintentional subarachnoid injection during high spinal anesthesia) include urinary incontinence, loss of perineal sensation, and loss of sexual function

Neuromuscular & skeletal: Chondrolysis (continuous intra-articular administration), weakness

Ocular: Blurred vision, pupillary constriction

Otic: Tinnitus

Respiratory: Apnea, hypoventilation (usually associated with unintentional subarachnoid injection during high spinal anesthesia)

Miscellaneous: Allergic reactions (urticaria, pruritus, angioedema), anaphylactoid reactions

Pregnancy Risk Factor: C