REGIONAL PEDIATRIC PARENTERAL DRUG MONOGRAPH

GENERIC NAME

mannitol

Effective Date: Sept 16 2020 **Revised Date:**	CLASSIFICATION **Diuretic (Osmotic)**	OTHER NAMES **Osmitrol, Resectisol**	PAGE 1 of 2

ADMINISTRATION POLICY:

IV Intermittent - May be administered by a nurse
IV Continuous - May be administered by a nurse
IV Bolus - May be administered by a nurse
IM Injection - Do NOT administer
Intraosseous - May be administered by a nurse

RECONSTITUTION/DILUTION/ADMINISTRATION:

Available as: 20% (100 grams per 500 mL premixed bag) and 25% (12.5 grams per 50 mL vial)
Concentrations of mannitol greater or equal to 20% require filtration. Use a **0.22 micron** upstream filter.

IV Bolus: Dilute 20% solution at least 1:1 with sterile water for injection or normal saline prior to administration. Administer over at least 3 – 5 minutes. **Caution:** Rapid administration may result in hypotension, hyperosmolality and elevations in intracranial pressure.

IV Intermittent: Administer undiluted (20% solution pre-mix bag). Administer dose over 15-60 minutes

Maximum concentration: IV Intermittent: 200 mg/mL (20%)
IV Bolus: 100 mg/mL (10%)

Maximum rate: Not established

DOSAGE:

Reduction of intracranial pressure: 0.25-1 g/kg/dose IV infused 20-30 minutes

Mannitol Intravenous Dosing Table
(20% = 0.2 g/mL—500 mL premix bag)

Dose (grams)	Volume of 20 % premix solution (mL)
10	50
15	75
20	100
25	125
30	150
35	175
40	200
45	225
50	250
55	275
60	300
65	325
70	350
75	375
80	400
85	425
90	450
95	475
100	500

Maximum single dose: 2 g/ kg/dose (up to 100 g/dose)

REGIONAL PEDIATRIC PARENTERAL DRUG MONOGRAPH

GENERIC NAME
mannitol

Effective Date: Sept 16 2020 **Revised Date:**	CLASSIFICATION **Diuretic (Osmotic)**	OTHER NAMES **Osmitrol, Resectisol**	PAGE 2 of 2

STABILITY/COMPATIBILITY:

Stability of Final Admixture: Store at room temperature. DO NOT REFRIGERATE. (Check all bags for crystal formation before starting infusion, **and** at 4 hour intervals during infusion. Shake bag well prior to checking.)

Compatibility: Compatible with normal saline, D5W, dextrose-saline solutions, Lactated Ringer

POTENTIAL HAZARDS:

Hypersensitivity: fever, chills
CV: circulatory overload, acidosis, hypotension, tachycardia
GI: dry mouth, nausea, vomiting
METAB: electrolyte imbalance (excess amounts can lead to profound diuresis with fluid and electrolyte loss; close medical supervision and dose evaluation are required. Watch for and correct electrolyte disturbances; adjust dose to avoid dehydration.)
NEURO: rebound increase in intracranial pressures, seizures
ENT: increased intraocular pressure
RENAL: fluid imbalance (overload or dehydration depending on dosage and pre-existing renal function); urinary retention (with excess doses) To minimize adverse renal effects, adjust to keep serum osmolality less than 320 mOsm/L.
LOCAL: thrombophlebitis, necrosis with extravasation (vesicant (at concentrations greater than 5%); ensure proper catheter or needle position prior to and during IV infusion. Avoid extravasation of IV infusions.)

ADDITIONAL NOTES:

- ***Dose adjustment required for renal impairment***
- Avoid use in patients with severe pulmonary edema, severe dehydration, severe congestive heart failure, active intracranial bleeding, or severe renal failure.
- Rapid IV injection may result in hypotension, hyperosmolality or increased intracranial pressure
- Crystallization of mannitol may occur at low temperatures. If crystals are apparent, the vial be should be placed in a 60-80 degree C water bath and shaken occasionally. Do not use any other method to heat the vial, as it may result in explosion.