



# REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME

**mannitol**

**Effective Date:** Dec 2012

**Revised Date:** Sept 12 2018

**Reviewed Date:**

CLASSIFICATION  
**Diuretic (Osmotic)**

OTHER NAMES

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**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 Intermittent:** Dilute 25% solution in 50 mL minibag normal saline. (May be diluted in larger Volumes.) The 20% solution may be infused undiluted. Infuse over 30 to 60 minutes

**IV Continuous:** Administer 20% IV solution undiluted as per physician's orders

**IV Bolus:** Administer undiluted over 3 to 5 minutes. May repeat x 1 if urine flow does not increase in 2 to 3 hours.

**Maximum rate:** IV/Intraosseous bolus: 1 vial (12.5 grams/50 mL) over 3 to 5 minutes  
IV/Intraosseous Intermittent: 2 grams/kg over at least 30 minutes

**Maximum concentration:** 25%

**DOSAGE:**

**Usual:** 0.25 to 2 grams/kg every 4 to 6 hours (20 to 200 grams/24 hours)

**Maximum single dose:** 2 grams/kg

**Maximum daily dose:** 200 grams (1000 mL of a 20% solution)

**Mannitol Dosing Table (20% - 0.2g/mL – 500mL premixed bag)**

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



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**STABILITY/COMPATIBILITY:**  
**Stability of Final Admixture:** 24 hours are room temperature  
  
**Compatibility:** Compatible with normal saline, D5W, dextrose-saline combinations, Lactated Ringer

**PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:**

- Fluid and electrolyte imbalance, thrombophlebitis and skin necrosis on extravasation, circulatory overload.
- Use should be avoided in patients with severe pulmonary edema, severe dehydration, severe congestive heart failure, intracranial bleeding, or severe renal failure.
- Rapid IV Push administration may result in hypotension, hyperosmolality or increased intracranial pressure.

**ADDITIONAL NOTES AND NURSING CONSIDERATIONS:**

- Mannitol may crystallize when exposed to low temperatures; may be re-solubilized by heating in a warm water bath. Cool to body temperature before administration
- Sodium Bicarbonate may be used with mannitol in a trauma cocktail (to be ordered on a patient specific basis).
- Elderly patients: Particular attention should be given to fluid management as they may be more sensitive to the effects of dehydration and reduction in blood volume