Massachusetts General Hospital

Neuro ICU Mannitol Guideline for Mannitol Rx of Increased ICP

- **MD order for patient with ICP monitoring**: Mannitol 1g/kg q6 hours p.r.n. ICP \( \geq XX \). **Hold for osm gap >10 or Na >160 or osm >340** and call HO/fellow.

- **MD order for patient **without ICP monitoring**: Mannitol 1g/kg. q6 hours. **Hold for osm gap >10 or Na >160 or osm >340** and call HO/fellow

- **Check Na, BUN, Cr, glu, osm q6 hours.**
  - **Must be drawn one hour prior to any mannitol dosing**
  - **Calculate osm gap with each draw**

**RN Procedure**

Administer first dose

5 hours

Important that all lab work values are drawn one hour before administration as gap is influenced by time.

Check Na, BUN, glucose, osm

Is osm gap >10 or Na >160 or Serum Osm >340?

- **Yes**
  - Hold mannitol & notify HO/Fellow

- **No**
  - Administer next dose of mannitol
  - If indicated by ICP

**Important points:**

- Osm gap = measured osm - calculated osm.
- Calculated osm = 2(Na) + BUN/2.8 + Glu/18
- If osm gap is less than zero, this may be due to minor variation in lab values or miscalculation. Mannitol may be given if calculation is correct.
- MD may order 23.4% saline or 3% NaCl in the presence of a gap
- Unexpected gaps may be caused by alcohol or propylene glycol carrier (lorazepam, diazepam, midazolam, pentobarbital or phenobarbital)