

Treatment Chart of Electrolyte Disorders

Hypo

Hyper

K	<p>K < 3.5 mmol/L Critical = K ≤ 2.5 mmol/L</p> <p>Causes: GI loss, renal loss, malnutrition S/S: weakness, paralysis, leg cramps, resp. distress, ECG flat T waves, Vent arrhythmia, PEA</p> <p>K ≤ 2.5 mmol/L: K 10-20 mEq/hr Cardiac arrest due to hypoK: K 10 mEq IV over 5 min.</p>	<p>K > 5 mmol/L (Normal 3.5-5 mmol/L)</p> <p>Causes: CRF, DKA, hemolysis, rhabdo S/S: weakness, resp. failure, ECG peaked T, wide QRS K 6-7 mmol/L: 10 u reg insulin in 25 g glucose (50 ml D50) IV over 20 minutes K > 7mmol/L: CaGluconate 1 gm (10 ml 10% sol'n) IV over 10 min. NaHCO3 50 mEq IV over 5 min 10 units reg insulin in 25 g glucose (50 ml D50) IV over 20-30 minutes.</p>
Na	<p>Na < 130 mmol/L, Critical < 120 mmol/L</p> <p>Causes: reduced excretion water by kidneys, diuretics, renal failure, vomiting, SIADH, CHR, cirrhosis S/S nausea, irritable, lethargy, seizures, coma</p> <p>Na 120-130 mmol/L: fluid restrict Na < 120 mmol/L slow infusion 50 ml 3% saline Na < 120 with seizures 100ml bolus 3% saline, then as above</p>	<p>Na > 145-150 mmol/L (Normal 135-145 mmol/L)</p> <p>Causes: Increase Na, Cushing's, Free water loss (GI, renal) S/S: altered mentation, weakness, neuro deficits, seizure</p> <p>Trt: reduce ongoing water loss, N/S or D5 ½ NS</p>
Mg	<p>Mg < 0.65 mmol/L</p> <p>Causes: decreased absorption, loss via GI and renal. Meds – diuretics, Alcohol S/S: tremors, nystagmus, tetany, altered mentation, ataxia, seizures, torsade de pointes.</p> <p>Mg < 0.65 MgSO4 1-2 g IV over 20-60 min Torsade de Pointes: MgSO4 1-2 g IV over 5 min Seizures: MgSO4 2 g IV over 10 minutes.</p> <p>May need to also give Calcium.</p>	<p>Mg > 1.05 mmol/L (Normal 0.7-1 mmol/L)</p> <p>Causes: renal failure S/S muscle weakness, paralysis, ataxia, lowered LOC, hypoventilation, cardiorespiratory arrest.</p> <p>Mg > 1.1mmol/L: CaGluconate 1500-3000mg IV</p>
Ca	<p>Ca < 2.1 mmol/L</p> <p>Causes: toxic shock, Mg abnormalities, tumor lysis S/S: paresthesia, cramps, stridor, seizures, hyperreflexia, heart failure Ca < 2.1 mmol/L with symptoms: Ca gluconate 10 – 20 mls of 10% sol'n IV over 10 minutes</p> <p>Then infuse 60 ml of 10% Ca gluconate in 500-1000 ml of D5W at 1 mg/kg per hour Monitor Mg, K and pH.</p>	<p>Ca > 3 mmol/L (Normal 2.1-2.6 mmol/L)</p> <p>Causes: primary hyperparathyroidism, malignancy S/S: depression, weakness, confusion, hallucinations, seizures, coma, constipation, ECG QT shortening, PR & QRS prolonged, AV block, cardiac arrest</p> <p>Ca > 3 mmol/L: N/S 300-500 mg/h to replace fluid deficit Monitor Mg and K</p>

