

## Treatment Chart of Electrolyte Disorders

### Hypo

### Hyper

<b>K</b>	<p><b>K &lt; 3.5 mmol/L Critical = K ≤ 2.5 mmol/L</b></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><b>K ≤ 2.5 mmol/L:</b> K 10-20 mEq/hr <b>Cardiac arrest due to hypoK:</b> K 10 mEq IV over 5 min.</p>	<p><b>K &gt; 5 mmol/L (Normal 3.5-5 mmol/L)</b></p> <p>Causes: CRF, DKA, hemolysis, rhabdo S/S: weakness, resp. failure, ECG peaked T, wide QRS <b>K 6-7 mmol/L:</b> 10 u reg insulin in 25 g glucose (50 ml D50) IV over 20 minutes <b>K &gt; 7mmol/L:</b> 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>
<b>Na</b>	<p><b>Na &lt; 130 mmol/L, Critical &lt; 120 mmol/L</b></p> <p>Causes: reduced excretion water by kidneys, diuretics, renal failure, vomiting, SIADH, CHR, cirrhosis S/S nausea, irritable, lethargy, seizures, coma</p> <p><b>Na 120-130 mmol/L:</b> fluid restrict <b>Na &lt; 120 mmol/L</b> slow infusion 50 ml 3% saline <b>Na &lt; 120 with seizures</b> 100ml bolus 3% saline, then as above</p>	<p><b>Na &gt; 145-150 mmol/L (Normal 135-145 mmol/L)</b></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>
<b>Mg</b>	<p><b>Mg &lt; 0.65 mmol/L</b></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><b>Mg &lt; 0.65</b> MgSO4 1-2 g IV over 20-60 min <b>Torsade de Pointes:</b> MgSO4 1-2 g IV over 5 min <b>Seizures:</b> MgSO4 2 g IV over 10 minutes.</p> <p>May need to also give Calcium.</p>	<p><b>Mg &gt; 1.05 mmol/L (Normal 0.7-1 mmol/L)</b></p> <p>Causes: renal failure S/S muscle weakness, paralysis, ataxia, lowered LOC, hypoventilation, cardiorespiratory arrest.</p> <p><b>Mg &gt; 1.1mmol/L:</b> CaGluconate 1500-3000mg IV</p>
<b>Ca</b>	<p><b>Ca &lt; 2.1 mmol/L</b></p> <p>Causes: toxic shock, Mg abnormalities, tumor lysis S/S: paresthesia, cramps, stridor, seizures, hyperreflexia, heart failure <b>Ca &lt; 2.1 mmol/L</b> 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><b>Ca &gt; 3 mmol/L (Normal 2.1-2.6 mmol/L)</b></p> <p>Causes: primary hyperparathyroidism, malignancy S/S: depression, weakness, confusion, hallucinations, seizures, coma, constipation, ECG QT shortening, PR &amp; QRS prolonged, AV block, cardiac arrest</p> <p><b>Ca &gt; 3 mmol/L:</b> N/S 300-500 mg/h to replace fluid deficit Monitor Mg and K</p>

