

ORLANDO HEALTH GUIDELINE

CREATING ISOTONIC AND HYPERTONIC ADULT TUBE FEEDING SOLUTIONS

Approved by: Pharmacotherapy Committee

Date: 03/17/2006

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Last modified: 11/22/2009

Isotonic and hypertonic tube feeding solutions are commonly utilized to reduce free water administration, treat hyponatremia, or raise serum osmolarity. The tables below illustrate the amount of salt needed to make various tube feeding solutions either isotonic or hypertonic.

ISOTONIC TUBE FEEDING (0.9% NaCl)

Product	Sodium Content mg (mEq) / L	Sodium needed (to total 3569 mg/L)	Number of teaspoons of sodium chloride to add per LITER	Number of teaspoons of sodium chloride to add per 500 mL
Glucerna 1.2	1110 (48)	2459	1 ¼	¾
Glucerna 1.5	1380 (60)	2189	1	½
Jevity 1.0	930(40)	2639	1 ¼	¾
Jevity 1.2	1350 (59)	2219	1	½
Jevity 1.5	1400 (61)	2169	1	½
Nepro	1060 (46)	2509	1 ½	½
Nutrihep	160 (7)	3409	1 ¾	¾
Optimental	1055 (46)	2514	1 ¼	¾
Osmolite 1.0	930(4)	2639	1 ¼	¾
Osmolite 1.2	1340 (58)	2229	1	½
Osmolite 1.5	1400 (61)	2169	1	½
Oxepa	1310 (57)	2259	1	½
Peptamen 1.5	1020 (44)	2549	1 ¼	¾
Pulmocare	1310 (57)	2259	1	½
Suplena	802 (35)	2767	1 ½	¾
TwoCal HN	1450 (64)	2119	1	½
Vivonex RTF	670 (29)	2899	1 ½	¾

HYPERTONIC TUBE FEEDING (1.5% NaCl)

Product	Sodium Content mg (mEq) / L	Sodium needed (to total 5948 mg/L)	Number of teaspoons of sodium chloride to add per LITER	Number of teaspoons of sodium chloride to add per 500 mL
Glucerna 1.2	1110 (48)	4838	2 ½	1 ¼
Glucerna 1.5	1380 (60)	4560	2 ¼	1
Jevity 1.0	930 (40)	5018	2 ½	1 ¼
Jevity 1.2	1350 (59)	4598	2 ¼	1
Jevity 1.5	1400 (61)	4548	2 ¼	1
Nepro	1060 (46)	4888	2 ½	1 ¼
Nutrihep	160 (7)	5788	3	1 ½
Optimental	1055 (46)	2514	2 ½	1 ¼
OSmolite 1.0	930 (40)	5018	2 ½	1 ¼
Osmolite 1.2	1340 (58)	4608	2 ¼	1
Osmolite 1.5	1400 (61)	4548	2 ¼	1
Oxepa	1310 (57)	2259	2 ½	1
Peptamen 1.5	1020 (44)	4928	2 ½	1 ¼
Pulmocare	1310 (57)	4638	2 ¼	1
Suplena	802 (35)	5146	2 ¾	1 ½
TwoCal HN	1450 (64)	4498	2 ½	1 ¼
Vivonex RTF	670 (29)	5278	2 ¾	1 ½

FORMULAS/CONVERSIONS

Molecular weight Sodium (Na ⁺) = 23 Chloride (Cl ⁻) = 35 Sodium chloride (NaCl) = 58	Isotonic solutions (0.9%) NaCl = 9000 mg/L (154 mEq/L) Na = 3569 mg/L (154 mEq/L)
Converting mEq to mg 1 mEq Na = 23mg 1 mEq Cl = 35mg 1 mEq NaCl = 58 mg	Hypertonic solutions (1.5%) NaCl = 15000 mg/L (257 mEq/L) Na = 5948 mg/L (257 mEq/L)
Teaspoon conversions 1 teaspoon NaCl = 5000 mg NaCl 1 teaspoon NaCl = 1983 mg Na	