

Adult Electrolyte Order Standardizations

Potassium				
Medication ordered		Medication Dispensed		Rate
Potassium Chloride	10mEq	10mEq/100mL NS		Peripheral administration: 10mEq/hr Central administration max: 20mEq/hr (max: 40mEq/hr)
	15mEq	15mEq/100mL NS		
	20mEq	20mEq/100mL SWFI (premixed)		
	30mEq	30mEq/150mL NS		
	40mEq	40mEq/250mL NS		
	40mEq	40mEq/100mL SWFI (premixed) (central line only)		

Calcium				
Medication ordered		Medication Dispensed		Recommended Rate
Calcium Gluconate	1gm	1gm/100mL NS		100mL/hr
	2gm	2gm/100mL NS		
	3gm	3gm/100mL NS		
	4gm	4gm/100mL NS		
	5gm	5gm/100mL NS		
<p>Note: Calcium chloride has 3 times the amount of elemental calcium as the gluconate salt. Typically used for emergencies. Must dilute in a large volume to a max concentration of 20mg/mL. Do not exceed rate of 100mg/min, usually given over 1 hour.</p>				

Magnesium				
Medication ordered		Medication Dispensed		Rate
Magnesium sulfate	1gm	1gm/100mL D5W (premixed)		1gm Mg ²⁺ /hr
	2gm	2gm/50mL SWFI (premixed)		
	4gm	4gm/100mL SWFI (premixed)		
	6gm	6gm/150mL D5W		

Phosphate					
(note: each vial of potassium phosphate contains 1.46 mEq K/mmol PO ₄)					
Medication ordered		Medication Dispensed		Minimum infusion time	Maximum infusion rate
Potassium phosphate	10mmol	10mmol/250mL NS		1.5 hours	6.5mmol PO ₄ /hr (based on 10mEq K/hr)
	15mmol	15mmol/250mL NS		2.5 hours	
	20mmol	20mmol/250mL NS		3 hours	
	25mmol	25mmol/250mL NS		4 hours	
	30mmol	30mmol/500mL NS		4.5 hours	
	35mmol	35mmol/500mL NS		5.5 hours	
	40mmol	40mmol/500mL NS		6 hours	
Sodium phosphate	Any dose of phosphate	NaPO ₄ /250mL NS		Infuse over 4 hours	15mmol PO ₄ /hr

References:

- Lacy CF, Armstrong LL, et al. *Drug Information Handbook*. 20th ed. Hudson, Ohio: 2011.
- Osmolarity Calculator. Global RPh. Web site. http://globalrph.com/osmocalc_valid.htm. Accessed October 1, 2012.
- Timmer JG, Schipper HG. Peripheral venous nutrition: the equal relevance of volume load and osmolarity in relation to phlebitis. *Clin Nutr*. 1991 Apr;10(2):71-5.
- Culebras JM, Martin-Pena G, Garcia-de-Lorenzo A, Zarazaga A, Rodriguez-Montes JA. Practical aspects of peripheral parenteral nutrition. *Curr Opin Clin Nutr Metab Care*. 2004;7:303-307.