

Electrolytes

Sodium:

* Normal range 135-140mEq/L
  + Supplement <125; <110 risk of neuro
* Na requirement = (Desired Na – patient Na) x 0.6 x bodyweight
  + E.g. 50kg with 110: (125-110 x 0.6 x 50) = 450mEq
* 7.2% hypertonic saline (1232mEq/L) 🡪 IV
* 17mEq/g NaCl 🡪 PO

Potassium

* Normal range 3.5-4.5mEq/L
* KCl 2mEq/L
  + Safe at 0.5mEq/kg/h
  + Commonly 20-40mEq added per litre of fluids
* Oral: 13mEq/g KCl

Calcium

* 55% ionised=free form, 45% protein-bound, 5% anion complexes
* Ionised best gauge for supplementation need
  + <3.6mg/dL = 0.9mmol/L 🡪 supplementation
* Estimation of Ca deficit: [(6.5 – Ca) \* 3 \* bodyweight]/Ca ratio
  + Ca ratio = ionised/total calcium
  + E.g. 450kg horse with 4.5mg/dL ionised and 10mg/dL total: [(6.5-4.5) \* 3 \* 450] / (4.5/10) = 6000mg
* 23% Calcium gluconate: 21.4mg/ml elemental calcium
* Or add 250-500ml 23% calcium gluconate to 10L fluids then recheck
* *May react with bicarbonate*

Magnesium

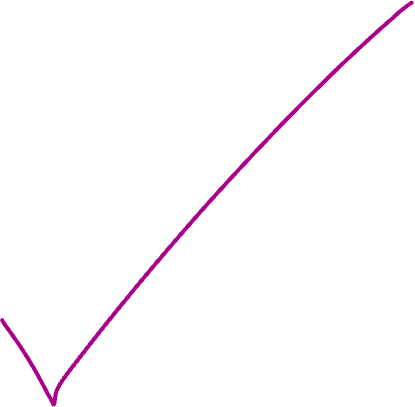
* Rate of 2-8mg/kg(/h?) IV

Phosphorous

* Rate of 0.01-0.03mmol/kg/h IV

Bicarb:

* Supplement when HCO3 <15mEq & pH <7.25
* HCO3 deficit = bodyweight \* base deficit \* 0.4
* 1.3% = 0.156mEq/L; 5% = 0.6mEq/ml; 8.4% = 1mEq/ml
* Oral: 1g baking soda = 12mEq NaHCO3



If select sachets -> suffixId = sachets. Otherwise same. Results to give total sachets.

If select tubs -> suffixId = scoops. Add grams per scoop and grams per tub inputs. Results to give total grams and tubs.

