

# RUMINANT FLUIDS

Large Animal

Consulting & Education

## MAINTENANCE

Adult 50 mL/kg/day	100# - 2.25 L/day	94 mL/hour	1 drop/4 sec
Neonate 100 mL/kg/day	100# - 4.5 L/day	188 mL/hour	1 drop/2 sec

## REPLACEMENT

BW (kg) x % dehydration = L to replace

100#, 10% - 4.5 L over 2-4 hours  4 drops/second

Don't forget ongoing losses!



Calcium and bicarbonate are not friends. Don't mix!

## BICARBONATE

Isotonic 1.25%	12.5 g/L	2.5t* NaHCO <sub>3</sub>	per 1 L sterile water
		156 mL 8.4%	per 1 L sterile water

## DEXTROSE

Crisis 50%	1 mL/10#	
Isotonic 5%	100 mL of 50%	per 1 L sterile water
Supplement 1-2.5%	25-50 mL of 50%	per 1 L fluids

## CALCIUM GLUCONATE 23%

25-50 mL/L for 1-2x maintenance rates

## POTASSIUM

20-40 mEq/L for 1-2x maintenance rates

## ADULT ORAL ELECTROLYTES

NaCl	7 g	1t*
KCl	1.5 g	0.25 t*
CaCl <sub>2</sub>	1 g	0.25 t*
per 1 L water		

## ISOTONIC SALINE 0.9%

9 g or 1.25 t\*  
per 1 L sterile water

## HYPERTONIC SALINE 7.2%

4 mL/kg bolus			
180 mL/100#			
NaCl	72 g	3.5 T+	per 1 L sterile water

Always follow immediately with IV or oral fluids!



### Notes:

\*t = teaspoon  
+T = tablespoon

- Rates based on 10 drop/mL set.
- Commercially-available fluids should always be the first option.
- These are standard additive rates and individual cases may need refinement.