

Don't Forget to attach label

# DKA Intravenous Fluids Calculations

- Must discuss admission & ongoing care with senior on-call medical staff.

Surname: \_\_\_\_\_  
 Forename: \_\_\_\_\_  
 DOB: \_\_\_\_\_  
 HN: \_\_\_\_\_  
 CHI: \_\_\_\_\_

**Start** ← Click Start before data entry or re-entry.

Date:  **Date**   
 • If needed, use 10 ml/kg resuscitation bolus.   
 • Repeat once, if needed, over 1-2 hrs.

Time:  **Time**   
 Resusc. Fluid Volume:  **Resusc Vol** (ml/kg)

Age:  **Age** (years)   
 Bicarbonate:  **Bicarb** (mmol/l)

A. Current Weight: On arrival in Emergency Department (in kg)

B. % Dehydration:	DKA Severity	Bicarb (mmol/l)	% Dehydration
	Mild	> 10	3
	Moderate	5 - 10	5
	Severe	< 5	8

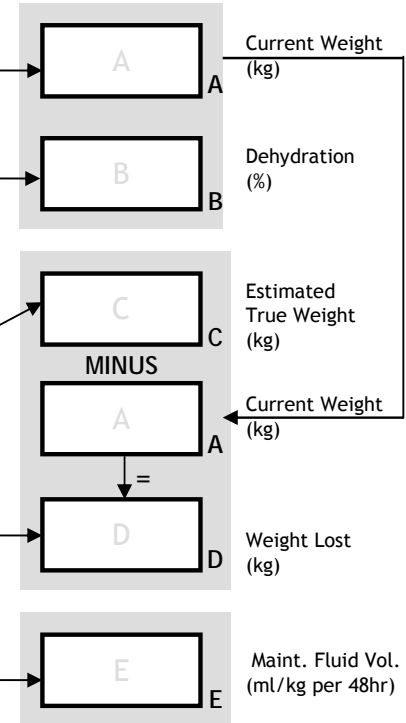
C. Estimated True Weight: Pre-dehydration weight

$$100 \times \frac{A}{100 - B} = \frac{100 \times A}{100 - B}$$

D. Weight Lost: Estimated True Weight *minus* Current Weight

E. Maint. Fluid Volume:	Age (yrs)	ml/kg over 48hrs
Over 48 hours:	0 - 2	→ 160
	3 - 5	→ 140
	6 - 9	→ 120
	10 - 14	→ 100
	> 14.9	→ 60

Select ml/kg per 48 hrs according to age (e.g. 160, 140, 120, 100, or 60)



## Initial IV Fluid Rate Calculation

MAINTENANCE FLUID

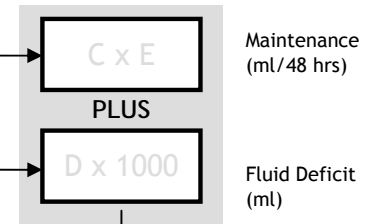
$$C \times E$$

Est. True Weight (kg) (Pre-dehydration) × Maint. Vol over 48 hrs (ml/kg/48 hrs)

FLUID DEFICIT

$$D \times 1000$$

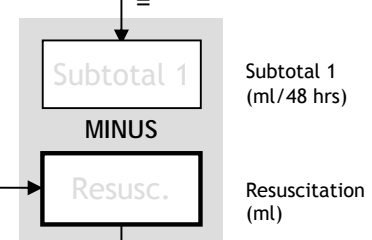
Weight Lost (kg) × (ml/kg)



Initial IV Fluids to use:  $[Na]^+$  corrected for Glucose = Plasma  $[Na]^+$  +  $(([Gluc] - 5.5) \times 0.3)$

- If Glucose  $\geq 14$  mmol/l → NaCl 0.9%
- If Glucose  $< 14$  & Corrected  $[Na]^+ < 150$  mmol/l → NaCl 0.9% + Dext 5%
- If Glucose  $< 14$  & Corrected  $[Na]^+ > 150$  mmol/l → NaCl 0.45% + Dext 5%

RESUSCITATION FLUID   
 Total Resusc. Fluid Volume (ml)



IV Fluids Start Time: \_\_\_\_\_

IV Insulin Start Time: \_\_\_\_\_

◀ Delay IV insulin start 60-90 minutes after IV fluids start. Earlier start increases cerebral oedema risk x 12

Calculated by: \_\_\_\_\_

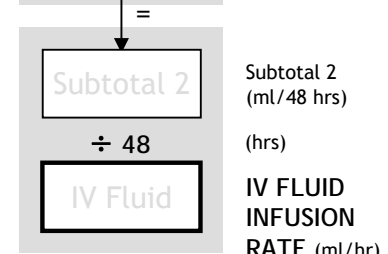
Checked by: \_\_\_\_\_

(Sign) \_\_\_\_\_

(Sign) \_\_\_\_\_

(Print) \_\_\_\_\_

(Print) \_\_\_\_\_



## Initial IV Insulin Rate Calculation

of 1 unit insulin per ml solution using soluble insulin (e.g. Actrapid)

$$0.1 \text{ units per kg per hour} \times C$$

Est. True Weight (kg)

