

**\*\* Use Low Sorbing extension sets\*\*\*\*Do NOT use a filter\*\***

### Insulin Infusion for Neonates

Before commencing insulin infusion ensure that ALL the following have been checked

1. Blood glucose >12mmol/L with glycosuria +++ or more
2. 2 blood glucose readings >12mmol/L
- Or** Blood glucose  $\geq$  15 regardless of urine glucose
3. Glucose intake < 10mg/kg/min

$$\frac{\text{Glucose conversion mls/kg/day} \times \% \text{ glucose}}{144} = \text{mg/kg/min}$$

Name \_\_\_\_\_  
 : DoB: \_\_\_\_\_  
 (Affix Patient Label Here)

Hosp No.: NHS \_\_\_\_\_  
 No.: \_\_\_\_\_  
 Consultant: \_\_\_\_\_

Working weight \_\_\_\_\_ kg

If the volume of the insulin infusion represents a substantial proportional of daily fluid intake the concentration of insulin should be increased and volume decreased accordingly

**Single Strength Insulin Infusion**      **0.1 unit in 1 mL**      Add 5 units of insulin to 50ml glucose 5%  
**Double Strength Insulin Infusion**      **0.2 units in 1 mL**      Add 10 units of insulin to 50ml glucose 5%  
**Quadruple Strength Insulin Infusion**      **0.4 units in 1 mL**      Add 20 units of insulin to 50ml glucose 5%

- **Commence infusion at 0.04 units/kg/hour**
- **Check blood glucose within one hour of starting**
- **Increase by 0.02 units/kg/hr until blood glucose decreasing by at least 1mmol/l between blood samples**
- **If blood glucose not falling as expected, and/or an insulin infusion rate of 0.2units/kg/hour is required, ensure appropriate insulin delivery eg. Check pump, check lines and iv site, ensure no filter, ensure compatible with other infusions**
- **Target blood glucose whilst on insulin is 7 to 12 mmol/l**

Date and time	Strength of infusion	Amount of insulin required	Prescriber's Signature & Bleep No.	Batch number and expiry date of glucose 5%	Batch number and expiry date of insulin	Expiry date and time of infusion	Prepared by / Checked by
		units					
		units					
		units					
		units					

To prevent hypoglycaemia if blood glucose is

- 7 to 12 mmol/l and stable**      - maintain infusion rate
- 7 to 12 mmol/l and decreasing**      - reduce infusion rate by 0.02 units/kg/hr
- 4 to 6.9 mmol/l**      - reduce infusion rate by 50% from present rate, or stop if on lowest infusion rate
- <4 mmol/l**      - stop infusion

Recheck blood glucose within 1 to 2 hours of reducing the dose, then check every 2 to 4 hours until stable

