Insulin Infusion for Neonates

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

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 ≥ 15 regardless of urine glucose
3	Glucose intake <10mg/kg/min

Glucose Conversion

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

Name:

DOB:

(Affix Patient Label Here)

Hosp No:

Consultant:

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.

Working weight: **kg**

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

- **When drawing up use a dedicated insulin syringe showing units not mls, Do Not use a filter, use a low sorbing set or prime set (see below)**
- **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 e.g. 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

Priming the giving set

Prime the administration line with diluted insulin solution (as per prescription) and leave for 10 minutes then flush the line through with 5-20mL insulin solution before connecting to the patient. Repeat procedure when lines are changed.

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<4 mmol/l - stop infusion

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Blood Glucose Monitoring

Date	Time	Blood Glucose (mmol/L)	Current Insulin Dose (units/kg/hr)	Updated Insulin dose (units/kg/hr)	Insulin rate prescription (signature and bleep)	Checked by