

Guidelines for the management of blood glucose for

pregnant women with unstable diabetes:

“Top up” variable rate intravenous insulin infusion (formerly known as ‘sliding scale’)

USED IN ADDITION TO SC INSULIN REGIMEN

Patient details (affix label)

Surname:

First name:

Hospital number:

NHS number:

DOB:

General Principles

This guideline is to be used for pregnant women with diabetes (whether type 1, type 2 or gestational diabetes) who have unstable blood glucose levels despite their usual subcutaneous insulin regimen. This may occur due to intercurrent illness or steroid treatment.

CONTINUE THE PATIENT’S USUAL SUBCUTANEOUS INSULIN REGIMEN AS PRESCRIBED: Short-acting insulin with each meal (typically novorapid) plus once daily (sometimes twice daily) long-acting insulin (e.g Levemir insulin or Insulatard or Humulin I or Lantus at bedtime).

NO INTRAVENOUS FLUID REQUIRED unless indicated for other reasons e.g. dehydration secondary to vomiting

Glucose control

- Monitor blood glucose **1 hourly** and adjust insulin infusion rate (see details over) as required, to maintain the blood glucose between 4 - 7.8 mmol/L
- Inform doctor if capillary blood glucose **> 10 mmol/l for >2 hrs**: IV insulin doses will need increasing
- Test for capillary ketones if blood glucose >10 mmols/l. Notify doctor if above 1.5 mmol/l.
- If capillary glucose <4mmol/l, treat as hypoglycaemia, as per standard Trust guideline.

Preparation

- 50 units of Human Actrapid insulin with 49.5ml of 0.9% Normal Saline (1 unit = 1 ml).
- **Insulin MUST be drawn up using an insulin syringe**
- Infuse using a syringe driver at a rate according to the table overleaf
- Any insulin remaining after 24 hours must be discarded and a fresh solution prepared

Infusion rates

- **Infusion rates vary according to capillary blood glucose level and TIME SINCE LAST MEAL**
- Use table overleaf
- The infusion rates are only a guide; may need adjustment to satisfy the individual requirements
- Obstetric team to review within two hours of starting then every 4-8 hours to ensure blood glucose is to target and if not, doctor to adjust infusion rate.
- For further advice, contact the diabetes antenatal team

Discontinuation of IV insulin infusion

- IV insulin infusion to be stopped as directed by the doctor-in-charge, once blood glucose levels stabilised and SC insulin doses adjusted as needed



Insulin sliding scale prescription

Blood glucose (mmol/L)	Insulin infusion rate LESS THAN 4 HRS SINCE LAST ATE (units / hour)	Blood glucose (mmol/L)	Insulin infusion rate MORE THAN 4 HRS SINCE LAST ATE (units / hour)
< 2	call doctor	<2	Call doctor
2.1 – 7.7	0	2.1 – 5.4	0
7.8 – 8.9	1	5.5 – 6.9	1
9.0 – 9.9	2	7.0 – 8.9	2
10.0 – 10.9	3	9.0 – 11.9	3
11.0 – 12.9	4	12.0 – 13.9	4
13.0 – 14.9	5	14.0 – 16.9	5
15.0 – 17.9	6	17.0 – 19.9	6
18.0 – 20.9	7	20.0 – 23.9	7
21.0 – 27.9	8	24.0 – 27.9	8
>28	9	>28	9

Doctor's signature:

Date:

Insulin Infusion preparation

Date of preparation:		Type of insulin:	Human Actrapid
Time of preparation:		Batch № & expiry date of insulin:	
Time discontinued:		Batch № & expiry date of N/S:	
Nurse signature:		Witness signature:	

Date of preparation:		Type of insulin:	Human Actrapid
Time of preparation:		Batch № & expiry date of insulin:	
Time discontinued:		Batch № & expiry date of N/S:	
Nurse signature:		Witness signature:	

Administration details / blood glucose monitoring

Date:																			
Time:																			
Blood glucose (mmol/L)																			
Insulin infusion rate																			
Total volume of insulin infused (ml)																			
Initials:																			

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