# **INTRAVENOUS INSULIN INFUSION TYPE 1 DIABETES CHART - ADULT** MR-INF-T1D

Affix patient identific	ation label in this box
U.R. Number:	
Surname:	
Given Name:	
Second Given Name:	
D.O.B.:	Sex/Gender:
Visit No. (if applicable):	

Site/Facility:							.  ٧	Visit No. (if applicable):																	
Blood Glucose (BG) Blood Ketone (BK) Frequency Frequency						Dr's Name:								Target BG Range:											
☐ Hourly ☐ 2 Hourly*	□Но	urly	□ 2 H	lourly*									Phone No:												
*(refer to instructi	ons o	n bacl	<)			Review need for IV Insulin In If continuing, rewr					fusion daily before 12:00 pm. ite on a new page.							Obstetric Inpatientmmol/L							
20 Day/Month	1																								
Time																									
BG Record	20																								
(mmol/L)																									
For out of target																									
results, refer to rapid detection and response																									
instructions.																				-					
	10														E										
	10														$\overline{\mathbf{x}}$										
	5																								
	4 3																								
	2																								
BG mmol/L												Z													
Insulin Infusion Rate (Units/	hour)										X														
Column 1, 2, 3																									
Nurse(s) initials										X															
BK mmol/L Hypo intervention	on (🗸)									J															
MO notified (✓)																									
		Int	rave	nous	Ins	lin	H	ırly	Rate	Ale	gorit	hm	T	YPE	1 D	IABE	TES	3							

Colu	mn 1
BG mmol/L	Unit/hour
BG less than 4.0mm	ol/L is hypoglyc emi
less than 5.0	O
5.0 - 6.4	_0
6.5 - 9.9	1.0
10.0 - 11.4	1.5
11.5 - 12.9	200
13.0 - 14.9	3.0
15.0 - 16.4	3.0
16.5 - 17.9	4.0
18.0 - 20.0	5.0
greater than 20.0	6.0

V Column 2							
BG mmol/L Unit/hour							
BG less than 4.0mmol/L is hypoglycaemia							
less than 5.0	Off						
5.0 - 6.4	1.0						
6.5 - 9.9	2.0						
10.0 - 11.4	3.0						
11.5 - 12.9	4.0						
13.0 - 14.9	5.0						
15.0 - 16.4	6.0						
16.5 - 17.9	7.0						
18.0 - 20.0	8.0						
greater than 20.0	12.0						

Coluitiii 3						
BG mmol/L	Unit/hour					
BG less than 4.0mmol/L is hypoglycaemia						
less than 5.0	Off					
5.0 - 6.4	2.0					
6.5 - 9.9	4.0					
10.0 - 11.4	5.0					
11.5 - 12.9	6.0					
13.0 - 14.9	8.0					
15.0 - 16.4	10.0					
16.5 - 17.9	12.0					
18.0 - 20.0	14.0					
greater than 20.0	16.0					

Patients always begin in the green column - Column 1.

Moving up

At each BG measurement ask the following two questions:

• Is the BG 10.0mmol/L or less?

• Did the BG drop by 2.5mmol/L - 4.9mmol/L in the last hour?

If the answer to either question is YES - remains in the current column.

If the answer to both questions is NO - moves up one column.

Call MO if BG falling at a rapid rate of 5.0mmol/L or more in past hour.

**Moving Down** 

If BG less than 4.0mmol/L OR insulin suspended OR BG is 15.0mmol/L or less OR BG falling at a rapid rate of 5.0mmol/L or more in past hour - moves down one column.

NURSING ADMINISTRATION RECORD (IV Insulin Infusion)								
Insulin (units) and Sodium Chloride 0.9% (mL)	Date/time commenced	Nurse 1	Nurse 2	Time stopped	Volume infused (mL)			
50units Insulin Neutral (Actrapid®) + 49.5mL Sodium Chloride 0.9%								
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## Indications for use

- Diabetic ketoacidosis (DKA) in a new diagnosis or in pre-existing type 1 diabetes.
- Euglycaemic DKA in pre-existing type 1 or type 2 diabetes prescribed a sodium-glucose co-transporter 2 inhibitor.
- Surgical management of pre-existing type 1 diabetes.
- Fasting or unable to tolerate food and fluids in pre-existing type 1 diabetes.
- Peripartum management of pre-existing type 1 diabetes.

Site/Facility:

FeSS Sugar Protocol (Stroke management procedure & protocol guideline).

### Not for use in:

Paediatric patients: consultation with the MedSTAR paediatrician or paediatric service is recommended.

### Blood glucose target & frequency

- Blood glucose (BG) target range during an IV Insulin Infusion is 7.0 10.0mmol/L for advanced to pain its
- BG target for obstetric patients is determined by the consulting physician: generally 64 10. mmol/L
- DKA: hourly BG monitoring is required for the duration of the IV Insulin Infusion
- Fasting: hourly BG monitoring is required for the duration of the IV Insulin Ir asion.
- Perioperative: hourly or 2hourly, refer to perioperative instructions.

**Note:** ePOC point of care system will read 'HI' if the BG result is greater than 3. 2mmol/ and bedside Freestyle Optium Neo H blood glucose meter will read 'HI' if the BG is greater than 27.8mmol/L. Reducing a 'HI' BG level when exact BG level is unknown is not recommended without MedSTAR or diabetes specialist advice.

# **Blood ketone monitoring & frequency**

- Hourly blood ketone (BK) monitoring while ketones are present, a herwise monitor QID.
- Do not cease IV Insulin Infusion until BK are less than 0.1 mmol. and acidosis has resolved.

### **Rapid Detection and Response Instructions**

Senior registered nurse (RN) review when:

- BG not returning to target at anticipated rate of 2.5 – 4.9mmol/L in last hour & column escalation is pending.
- BG is greater than 20.0mmol/L in any column.
- BG is less than 4.0mm
- When IV Insulin Infus in har been switched off and when its resur

ly sciplinary to m (MDT) review when:

- BK no decreasing at anticipated rate of 0.5mmol/L per hour.
- is 15.0mmol/L or less, commence IV Glucose Infusion.
- Moving up one column.
- BG not decreasing at anticipated rate of 2.5 4.9mmol/L in last hour despite moving up one column or being in Column 3.
- 12units/hour is being used in Column 3.
- BG decreasing too fast (e.g. 5.0mmol/L or more in last hour).

Consult MedStar as may require transfer to HDU or ICU

Medical emergency response (MER) review when:

- BG is less than 4.0mmol/L and has not responded to the Hypoglycaemia Protocol oral treatment in 45 minutes.
- Drowsy, confused, unsafe to swallow, unresponsive or unconscious.
- Breathing rapidly or having difficulty breathing or complaining of severe abdominal pain.

### Consult MedStar as may require transfer to HDU or ICU

Reviews						
Reco	rd intervention below and note corresponding letter in intervention row on page 1.	Initial	Designation			
Α						
В						
С						
D						
E						