KGH KINGSTON GENERAL HOSPITAL

PATIENT CARE ORDERS
Please use black ink ballpoint pen only and press firmly to make copy

Weight (kg)	Known Adverse Reactions or Intolerances	TRANSCRIPTION
	DRUG ☐ No ☐ Yes (list)	
	FOOD ☐ No ☐ Yes (list)	
	LATEX ☐ No ☐ Yes	

Diabetes Management – Subcutaneous Insulin Therapy Patient Eating Order Set (Adult)

See Suggestions for Management on Reverse
Non-insulin antihyperglycemic agents or corticosteroid therapy may impact glycemic control

Capillary Blood Glucose Monitoring
● Before breakfast, lunch, supper 2200 h and PRN

Scheduled Insulin
● Discontinue all previous insulin orders

	Before Breakfast	Before Lunch	Before Supper	At 2200 h
Nutritional (Bolus) Insulin: Aspart	Give _____ units subcutaneous	Give _____ units subcutaneous	Give _____ units subcutaneous	
	If it is anticipated that the patient will not eat more than 50% of the meal or is NPO, do not give mealtime insulin			
Basal Insulin: ☐ glargine ☐ detemir ☐ NPH	Give _____ units subcutaneous		Give _____ units subcutaneous	Give _____ units subcutaneous
Premixed insulin: ☐ Novomix30 ☐ Other	Give _____ units subcutaneous		Give _____ units subcutaneous	

Correction Dose Insulin Algorithms
*** Use Titratable Medication Administration Record***

● Administer insulin <u>aspart</u> subcutaneously <u>in addition</u> to scheduled insulin dose to correct hyperglycemia: **Pre-meal**
    2200h (2200h correction dose should be 50% of pre-meal correction dose)
*Select **one** of the following algorithms:*
Insulin Sensitive: *for patients requiring 40 units or less of scheduled insulin/day*
Usual: *for patients requiring 40 to 80 units of scheduled insulin/day*
Insulin Resistant: *for patients requiring 80 units or more of scheduled insulin/day*

Capillary Blood Glucose (mmol/L)	☐ Insulin Sensitive (units)		☐ Usual (units)		☐ Insulin resistant (units)		☐ Individual (units)	
	Pre-meal	2200h	Pre-meal	2200h	Pre-meal	2200 h	Pre-meal	2200h
10.1 to 12.0	2	0	4	2	6	3		
12.1 to 14.0	4	2	6	3	8	4		
14.1 to 17.0	6	3	8	4	10	5		
17.1 to 20.0	8	4	10	5	12	6		
20.1 to 22.0	10	5	12	6	14	7		
Over 22	12	6	14	7	16	8		

Prescriber Printed Name	Designation	Signature	Date (YYYY/MM/DD)	Time (HHMM):	**Page 1 of 1**

SUGGESTIONS FOR MANAGEMENT OF HYPERGLYCEMIA IN NON-CRITICALLY ILL HOSPITALIZED PATIENTS

Insulin requirements can be broken down into:

Scheduled Insulin
Doses of insulin given on a consistent basis
There are 2 types:
  Basal insulin:
    • long-acting insulin required in all patients with type 1 diabetes and most patients with type 2 diabetes to maintain euglycemia, even when NPO (hepatic gluconeogenesis can serve as a continuous source of blood glucose).

  Nutritional (or bolus) insulin:
    • rapid-acting insulin given just before a meal in anticipation of the glycemic spike that occurs due to carbohydrate ingestion
    • this dose is given even when the blood glucose is in the normal range

Correction (or Supplemental) Insulin
Rapid-acting insulin that is given in addition to scheduled nutritional insulin (or given at other times of the day) as a response to unusual hyperglycemia.
If correction dose insulin is required, the patient would likely benefit from an increase in the total daily dose the following day.

If the patient is admitted with good control on insulin therapy, continue their usual insulin regimen and adjust as necessary

Selecting a Basal-Bolus Regimen in an Eating Patient Previously not on Insulin

Step 1. Calculate starting total daily dose (TDD) of insulin:

Use 0.3 units/kg/day if patient has "insulin sensitivity" [lean or malnourished patients, elderly, acute or chronic kidney disease (especially dialysis-requiring)]
Use 0.4 units/kg/day in "usual" patients (no features of insulin sensitivity or insulin resistance)
Use 0.5 – 0.6 units/kg/day if patient has "insulin resistance" (obese patients or receiving high doses of glucocorticoids)
Adjust TDD up or down based on:
    Past response to insulin
    Presence of hyperglycemia inducing agents, stress

Step 2. Determine scheduled insulin dose:
Divide TDD to 50% basal, 50% bolus
Divide bolus insulin by 3 and give before each meal
Basal Insulin: use non-peaking, longer-acting insulin as it provides continuous insulin action, even when the patient is fasting.
Glargine or detemir are preferred (but NPH is also possible).
Nutritional (also called bolus, prandial or mealtime) insulin: Rapid-acting insulin (aspart) is preferred.

Step 3. Select an appropriate correction (supplemental) insulin scale AC meals:
Correction (supplemental) insulin: usually rapid-acting insulin (the same as the nutritional insulin). Frequent use suggests a need to modify the basal and/or nutritional insulin doses.

Initially select the Correction Insulin scale that matches the category used to calculate the starting TDD of insulin (i.e., "insulin sensitive", "usual", "insulin resistant")

Adjust the Correction Insulin Scale as needed:
    • Increase from "insulin sensitive" to "usual" or "usual" to "resistant" if fasting and pre-meal BG are persistently greater than 8.0 mmol/L and no hypoglycemia
    • If hypoglycemia, decrease from "insulin resistant" to "usual" or from "usual" to "insulin sensitive"

Example:
80 kg obese woman
Step 1: TDD = 80 kg x 0.5 units/kg/day = 40 units
Step 2: Give 50% basal (20 units), 50% bolus (20 units)
Basal: insulin glargine or detemir 20 units typically given at 2200 h
Bolus: insulin aspart 7 units (20 ÷ 3) before each meal
Step 3: Select "Usual Algorithm" Correction Insulin Scale as total daily dose of scheduled insulin per day is 40 units

For Patients Previously Controlled on Oral Antihyperglycemics

May use correction dose algorithm alone for patient with type 2 diabetes in addition to oral antihyperglycemic agents.