

PHYSICIAN'S ORDERS

Standard Subcutaneous Insulin Orders for Non-pregnant Patients

DATE	≣:	YYY	Y / MM / DD	_ TIME (h):		PATIENT I	DENTIFICATION			
										SIGNATURE OF NURSE
YES	YES NO Doctor Must Check Off Appropriate Orders A new insulin order form should be completed for subsequent changes									
				n order form shou ype of insulin and		•	•		_	
		1. Ch	eck ☑ times for po	<u> </u>	<u>.</u>					
✓			□Pre-Breakfast □		•		J	-Dir	iner	
			□Post-Dinner □	Bedtime □0300	Ohrs □/	All 🗆	Other (specify	/): _		
✓		2. Ins	sulin Regimen: Se	elect type of insul	in and inc	dicate d	ose (See rev	erse	e for guidelines)	
		Ва	sal Insulin	Breakfast	Lun (no recomm	ot	Dinner		Bedtime	
		La	ntus® (glargine)	units		units	uı	nits	units	
		Le	vemir® (detemir)	units		units	uı	nits	units	
		Hu	ımulin N® (NPH)	units		units	uı	nits	units	
		No	volin ge NPH®	units		units	uı	nits	units	
		Me	ealtime Insulin	Breakfast	Lun	ch	Dinner		Bedtime (not recommended)	
		Hu	ımalog® (lispro)	units		units	u	nits	units	
		No	voRapid® (aspart)	units		units	uı	nits	units	
		Ар	idra® (glulisine)	units		units	uı	nits	units	
		Hu	ımulin R® (regular)	units		units	uı	nits	units	
			ovolin ge Toronto® gular)	units		units	u	nits	units	
		(M	emixed Insulin ealtime+Basal)	Breakfast	Lun (no recomm	ot	Dinner		Bedtime (not recommended)	
		(lis	ımalog Mix 25® spro mix)	units		units	uı	nits	units	
		(as	ovoMix 30® spart mix)	units		units	u	nits	units	
		(re	mulin 30/70® gular/NPH)	units		units	u	nits	units	
			ovolin ge 30/70® gular/NPH)	units		units	uı	nits	units	
Door	40-20 6	Sianotu	.va.	DDI	NT NAME				Pogo	,_

DPR15010A

DISTRIBUTION: White Original - Chart Yellow Copy - Pharmacy

Guidelines for Use of the Standard Subcutaneous Insulin Orders For Non-pregnant Patients

"SLIDING SCALE INSULIN" refers to a treatment regimen that provides NO basal insulin and provides ONLY short acting insulin if needed according to blood glucose test results. This is a reactive way of managing hyperglycemia and should NOT be used as the sole means of controlling blood glucose unless absolutely necessary.

How to use this form:

A <u>new</u> insulin order form should be completed for major changes to insulin orders (eg. type of insulin and/or frequency of administration). Exceptions include:

- (a) ONE-time insulin orders (e.g., give 5 units immediately) can be ordered on blank doctor's orders sheet
- (b) To discontinue insulin or make minor dose adjustments to a single insulin, use blank doctor's orders sheet
- 1. Tick the boxes to indicate times blood glucose is to be tested.

(Note: correction doses should not be given at 0300hrs. This test is only to assess night time basal doses).

Target values are 5.0 mmol/L - 11.0 mmol/L. Notify MD if blood glucose is below 4.0 mmol/L or above 20.0 mmol/L.

2. Basal Insulin: Insulin required to cover a rise in blood glucose between meals and overnight.

To estimate the initial empiric dose to be administered at breakfast, dinner, or bedtime (lunchtime not recommended):

- (a) Type 1 Diabetes start at 0.25 units/kg/day (Lantus or Levemir once daily) (NPH twice daily)
- (b) Type 2 Diabetes in patients on oral antidiabetic agents start at 0.15 units/kg/day at bedtime (any basal insulin)

Adjust dose to reach target blood glucose based primarily on fasting blood glucose results (pre-breakfast)

Mealtime Insulin: Insulin required to cover a rise in blood glucose due to meals.

To estimate the initial empiric dose, start at 0.1 units/kg tid (for Type 1 or 2 Diabetes).

Adjust dose to reach target blood glucose according to post-meal blood glucose results.

Bedtime administration of short acting insulin is not recommended.

For continuous enteral feeds or TPN, mealtime insulin may not be necessary; however **correction dose insulin** (as per algorithm) may be used to control blood glucose.

Premixed Insulin (Mealtime + Basal): Used in patients with type 2 diabetes not requiring intensive therapy or patients on enteral feeds/TPN.

May be administered either once or twice daily pre-breakfast, or pre-dinner, or at both times, as follows:

- (a) Once daily regimen: Start with an initial empiric dose of 0.15 units/kg at dinner or at breakfast
- (b) Twice daily regimen: Start with an initial empiric dose, of 0.1 units/kg at breakfast and 0.1 units/kg at dinner

Adjust dose to reach target blood glucose according to fasting (pre-breakfast) and/or pre-dinner blood glucose results.

Administration is not recommended at lunch or bedtime.

Mealtime Correction Dose Algorithm

Used to determine if any **extra** rapid or short-acting insulin is to be given **in addition** to the scheduled dose in order to treat ("correct for") hyperglycemia (blood glucose 8.0 mmol/L or greater).

- 3. Physician to select times for correction doses and type of insulin to be given.
- 4. Physician to select one algorithm: low-dose, medium-dose, high-dose, or individualized (indicate doses).

Administration:

- 1. Before meals (or qid if on enteral feeds or TPN) test blood glucose by point of care meter and determine the correction dose using the *Mealtime Correction Dose Algorithm* selected by physician.
- 2. Add the correction dose to any existing routine mealtime dose.

DO NOT DRAW CORRECTION DOSE INTO SAME SYRINGE AS PREMIXED INSULIN.

Hypoglycemia Treatment Orders for Non-pregnant patients

- Monitor for hypoglycemia: (1) test blood glucose by point of care meter; and (2) observe for/inquire about symptoms (see below). Trembling Hunger Anxiety Weakness Difficulty speaking Difficulty concentrating **Palpitations** Nausea **Drowsiness** Headache Dizziness Sweating Tingling Confusion Vision changes
 - (b) Determine treatment route for patient and follow treatment orders.
- 6. Determine if patient requires an Endocrinology consult. The Endocrinology Division welcomes all consults for patients with **DIABETES MELLITUS**, especially the following:
 - 1. Admission for Diabetic ketoacidosis (DKA) or Hyperosmolar Hyperglycemic State
 - 2. Patient with Type 1 Diabetes or genetic cause of diabetes
 - 3. Using insulin pump
 - Pregnant or planning pregnancy
 - 5. Hemoglobin A1C greater than 8%
 - 6. On 3 or more oral anti-hyperglycemia agents
 - 7. 2 or more episodes of hypoglycemia in hospital
 - 8. Glucose greater than 14 mmol/L on 3 or more occasions in hospital
 - 9. Perioperative patients with difficult to control diabetes
 - 10. Consider if patient has diabetes and is on corticosteroids or enteral feeds
 - 11. Consider if patient does not have endocrinologist and is on insulin
- The Sunnybrook Diabetes Education (SUNDEC) program, offers group sessions and individual appointments with a Dietitian and a Nurse Educator. Referrals are available on the intranet. Fax referrals to 416-480-5774 or call 416-480-4805.



PR 15010



PHYSICIAN'S ORDERS

Standard Subcutaneous Insulin Orders for Non-pregnant Patients

DATE	::	YYYY / MM / E	TIME (h):	PA	ATIENT IDENTIFICATION				
YES	NO		Doctor Mus	t Check Off Ap	propriate Orders	SIGNATURE OF NURSE			
	Extra Mealtime Insulin if needed as per blood glucose Algorithm (Correction Dose Insulin)								
		3. Check ☑ times	and insulin to be gi	ven.					
		a. □ac meals I	⊐qid – for enteral fe	eds or TPN onl	у				
			b. □Humalog® (lispro) □NovoRapid® (aspart) □Apidra® (glulisine) □Humulin R® (regular) □Novolin ge Toronto® (regular)						
		4. Check ☑ and ir	nitial <u>one</u> algorithm	to be followed.	Test blood glucose to	decide on dose.			
		Measured Premeal	Low-Dose Algorithm	Medium-Dose	Algorithm	Individualized Algorithm			
		blood glucose (mmol/L)	(MD initials) Total 40 units/d or less OR Body weight 70 kg or less	(MD initials) Total 41-99 units OR Body weight 71-99 kg	(MD initials) s/d Total 100 units/d or greater OR Body weight 100 kg or greater	(MD initials)			
		3.9 or less	Follow Hypoglyce to reassess insuli		Orders on page 3 and	contact physician			
		4.0 to 7.9	+ 0 units	+ 0 units	+ 0 units	+ 0 units			
		8.0 to 10.9	+ 1 units	+ 1 units	+ 2 units	+units			
		11.0 to 13.9	+ 2 units	+ 3 units	+ 4 units	+units			
		14.0 to 16.9	+ 3 units	+ 5 units	+ 7 units	+units			
		17.0 to 19.9	+ 4 units	+ 7 units	+ 10 units	+units			
		20 or greater	+ 5 units and call physician	+ 8 units and call physiciar	+ 12 units and call physician	+units and call physician			
Doct	or's S	Signature:		PRINT NAME:		Pager	:		

DPR15010B

DISTRIBUTION: White Original - Chart Yellow Copy - Pharmacy



PHYSICIAN'S ORDERS

Standard Subcutaneous Insulin Orders for Non-pregnant Patients

DATE:	YYYY / MM	DD	TIME (h):	PATIENT IDENTIFICATION
			- \ /	I TATILLIA IDEIATII IOTATIOIA

YES	NO		SIGNATURE OF NURSE						
Hypoglycemia Treatment Orders for Non-pregnant Patients									
		5.	For patients with or Test blood glucose If blood glucose is 3. follow table below a						
			Patient Attribute	Treatment for Hypoglycemia					
			Can chew tablets	 glucose (dextrose) tablets – 4 g each Patient to chew 4 tablets, then swallow with water (available in Hypoglycemia Kit) 					
			Cannot chew tablets Can swallow liquids	 Fruit juice – apple preferred; orange acceptable 2 mini-cartons or 2 Dixie Cups (approximately 200 mL) 					
			Dysphagic (requires thickened liquids)	• glucose gel (Insta-Glucose®) Contents of 1 tube (24 g glucose) squeezed into mouth and swallowed (available in Hypoglycemia Kit)					
✓			Enteral Feeding Tube	 Fruit juice – apple preferred; orange acceptable 2 mini-cartons or 2 Dixie Cups (approximately 200 mL) Flush tube before and after juice with 30 mL of water to reduce risk of clogging due to interaction of juice with feeds 					
		'		e NPO without enteral access:					
		Test blood glucose by point of care meter. If blood glucose is 3.4 mmol/L or less on two consecutive tests (over 10 minutes), follow table below according to patient needs.							
			Patient Attribute	Treatment for Hypoglycemia					
			NPO No Enteral Feeding Tube No IV Access	glucagon injection 1 mg (1 unit) subcutaneously (available in Hypoglycemia Kit)					
			NPO No Enteral Feeding Tube IV Access	 IV dextrose 12.5 g given by either of these methods: Hang a bag of D10W (dextrose 10%) and infuse 125 mL as fast as possible (over 5-10 min). <u>OR</u> Using a pre-filled syringe of dextrose 50%, add 25 mL to 100 mL minibag of D5W and infuse over 5 min. 					
✓		6.	Re-test blood glucose	lood glucose by point of care meter 15 min after treatment.					
√		7.	If blood glucose is 4.0 not due within 1 hr.						
√		8.							
✓		9.	If blood glucose remain						
✓		10.	Document hypoglycer						
√		11.							
✓		12. Refer to Diabetes Education Centre upon discharge: ☐ Sunnybrook Diabetes Education (SUNDEC) ☐ Other:							
Doc	tor's	Sigi	nature:	PRINT NAME: Pager	:				

DISTRIBUTION:

White Original - Chart

Yellow Copy - Pharmacy



PR 15010 (2010/08/26)

Guidelines for Use of the Standard Subcutaneous Insulin Orders For Non-pregnant Patients

"SLIDING SCALE INSULIN" refers to a treatment regimen that provides NO basal insulin and provides ONLY short acting insulin if needed according to blood glucose test results. This is a reactive way of managing hyperglycemia and should NOT be used as the sole means of controlling blood glucose unless absolutely necessary.

How to use this form:

A <u>new</u> insulin order form should be completed for major changes to insulin orders (eg. type of insulin and/or frequency of administration). Exceptions include:

- (a) ONE-time insulin orders (e.g., give 5 units immediately) can be ordered on blank doctor's orders sheet
- (b) To discontinue insulin or make minor dose adjustments to a single insulin, use blank doctor's orders sheet
- 1. Tick the boxes to indicate times blood glucose is to be tested.

(Note: correction doses should not be given at 0300hrs. This test is only to assess night time basal doses).

Target values are 5.0 mmol/L - 11.0 mmol/L. Notify MD if blood glucose is below 4.0 mmol/L or above 20.0 mmol/L.

2. Basal Insulin: Insulin required to cover a rise in blood glucose between meals and overnight.

To estimate the initial empiric dose to be administered at breakfast, dinner, or bedtime (lunchtime not recommended):

- (a) Type 1 Diabetes start at 0.25 units/kg/day (Lantus or Levemir once daily) (NPH twice daily)
- (b) Type 2 Diabetes in patients on oral antidiabetic agents start at 0.15 units/kg/day at bedtime (any basal insulin)

Adjust dose to reach target blood glucose based primarily on fasting blood glucose results (pre-breakfast)

Mealtime Insulin: Insulin required to cover a rise in blood glucose due to meals.

To estimate the initial empiric dose, start at 0.1 units/kg tid (for Type 1 or 2 Diabetes).

Adjust dose to reach target blood glucose according to post-meal blood glucose results.

Bedtime administration of short acting insulin is not recommended.

For continuous enteral feeds or TPN, mealtime insulin may not be necessary; however **correction dose insulin** (as per algorithm) may be used to control blood glucose.

Premixed Insulin (Mealtime + Basal): Used in patients with type 2 diabetes not requiring intensive therapy or patients on enteral feeds/TPN.

May be administered either once or twice daily pre-breakfast, or pre-dinner, or at both times, as follows:

- (a) Once daily regimen: Start with an initial empiric dose of 0.15 units/kg at dinner or at breakfast
- (b) Twice daily regimen: Start with an initial empiric dose, of 0.1 units/kg at breakfast and 0.1 units/kg at dinner

Adjust dose to reach target blood glucose according to fasting (pre-breakfast) and/or pre-dinner blood glucose results.

Administration is not recommended at lunch or bedtime.

Mealtime Correction Dose Algorithm

Used to determine if any **extra** rapid or short-acting insulin is to be given **in addition** to the scheduled dose in order to treat ("correct for") hyperglycemia (blood glucose 8.0 mmol/L or greater).

- 3. Physician to select times for correction doses and type of insulin to be given.
- 4. Physician to select one algorithm: low-dose, medium-dose, high-dose, or individualized (indicate doses).

Administration:

- 1. Before meals (or qid if on enteral feeds or TPN) test blood glucose by point of care meter and determine the correction dose using the *Mealtime Correction Dose Algorithm* selected by physician.
- 2. Add the correction dose to any existing routine mealtime dose.

DO NOT DRAW CORRECTION DOSE INTO SAME SYRINGE AS PREMIXED INSULIN.

Hypoglycemia Treatment Orders for Non-pregnant patients

- Monitor for hypoglycemia: (1) test blood glucose by point of care meter; and (2) observe for/inquire about symptoms (see below). Trembling Hunger Anxiety Weakness Difficulty speaking Difficulty concentrating **Palpitations** Nausea **Drowsiness** Headache Dizziness Sweating Tingling Confusion Vision changes
 - (b) Determine treatment route for patient and follow treatment orders.
- 6. Determine if patient requires an Endocrinology consult. The Endocrinology Division welcomes all consults for patients with **DIABETES MELLITUS**, especially the following:
 - 1. Admission for Diabetic ketoacidosis (DKA) or Hyperosmolar Hyperglycemic State
 - 2. Patient with Type 1 Diabetes or genetic cause of diabetes
 - 3. Using insulin pump
 - Pregnant or planning pregnancy
 - 5. Hemoglobin A1C greater than 8%
 - 6. On 3 or more oral anti-hyperglycemia agents
 - 7. 2 or more episodes of hypoglycemia in hospital
 - 8. Glucose greater than 14 mmol/L on 3 or more occasions in hospital
 - 9. Perioperative patients with difficult to control diabetes
 - 10. Consider if patient has diabetes and is on corticosteroids or enteral feeds
 - 11. Consider if patient does not have endocrinologist and is on insulin
- The Sunnybrook Diabetes Education (SUNDEC) program, offers group sessions and individual appointments with a Dietitian and a Nurse Educator. Referrals are available on the intranet. Fax referrals to 416-480-5774 or call 416-480-4805.



PR 15010