

Subcutaneous Insulin Orders

Adult: Eating

(See guideline for use on side 2)

Addressograph

Drug Allergies:

1. GLUCOMETER TESTING (within ½ hour AC)

Breakfast Lunch Supper HS (2200) 0200 ALL

For **BLOOD SUGARS LESS THAN 4mmol/L**: Follow Hypoglycaemia Protocol
Notify MD of Hypoglycaemia (see back for direction)

2. CALCULATION OF TOTAL DAILY DOSE (TDD)

Total Daily Dose (TDD) Pre-admission* _____ units (TDD = sum of ALL insulin)

Weight:

*If new to insulin calculate TDD by Weight:

➤ Type 1 OR Slim Type 2 (BMI equal to or less than 25): $Wt \times (0.5-0.7 \text{ units/kg}) =$ _____ units/24hrs

➤ Type 2 Obese (BMI greater than 25): $Wt \times (0.5-1 \text{ units/kg}) =$ _____ units/24hrs

BASAL INSULIN S.C. Basal Dose: Estimate at ½ TDD

Type of Insulin (check ONE)	Breakfast	Lunch	Supper	HS	Comment
<input type="checkbox"/> NPH					Usually given at HS OR split 50% AC bkfst 50% at HS Preferred Site = outer thigh
<input type="checkbox"/> Glargine (Lantus®)					AC Breakfast or HS OR split AC Breakfast & HS
<input type="checkbox"/> Detemir (Levemir®)					DO NOT MIX with any other insulins

BOLUS INSULIN S.C.

Type of insulin (check ONE)	Breakfast	Lunch	Supper	Comment
<input type="checkbox"/> Aspart (Novorapid®)				WITH meal Preferred sites – arm/abdomen
<input type="checkbox"/> Regular (Toronto®)				½ hr BEFORE meal Preferred sites – arm/abdomen

PREMIX INSULIN S.C.

Type of Insulin (check ONE)	Breakfast	Lunch	Supper	Total daily dose usually split between bkfst and supper
<input type="checkbox"/> Novolin ge® 30/70				Use regular (Toronto) insulin for correction dose ½ hr BEFORE meal
<input type="checkbox"/> Novomix® 30				Use Novorapid® for correction dose WITH meal
<input type="checkbox"/> Other				

3. Additional CORRECTION SCALE DOSE S.C. See reverse for Insulin Sensitivity Factor calculation (ISF)

FOR BLOOD SUGAR ABOVE IDEAL RANGE ADD TO BOLUS DOSE:

Aspart (Novorapid®) WITH meal OR Regular (Toronto®) ½ hr BEFORE meal

<input type="checkbox"/> ISF: 4		<input type="checkbox"/> ISF: 3		<input type="checkbox"/> ISF: 2		<input type="checkbox"/> ISF: 1		<input type="checkbox"/> CUSTOM	
If TDD 30 units or less		If TDD 31 – 49 units		If TDD 50 – 80 units		If TDD 81 units or more			
Blood Sugars	Insulin	Blood Sugars	Insulin	Blood Sugars	Insulin	Blood Sugars	Insulin	Blood Sugars	Insulin
4.1-9	0 Units	4.1-8	0 Units	4.1-8	0 Units	4.1-8	0 Units		Units
9.1-12	+1 Units	8.1-11	+1 Units	8.1-10	+1 Units	8.1-10	+2 Units		Units
12.1-16	+2 Units	11.1-14	+2 Units	10.1-12	+2 Units	10.1-12	+4 Units		Units
16.1-20	+3 Units	14.1-17	+3 Units	12.1-14	+3 Units	12.1-14	+6 Units		Units
20+	Call MD	17.1-20	+4 Units	14.1-16	+4 Units	14.1-16	+8 Units		Units
		20+	Call MD	16.1-18	+5 Units	16.1-18	+10 Units		Units
				18.1-20	+6 Units	18.1-20	+12 Units		Units
				20+	Call MD	20+	Call MD		Units

4. HS CORRECTION

NO CORRECTION (Default Choice)
DOSE

ASPART (NOVORAPID®) at ½ of CORRECTION DOSE

Date Ordered	Physician Signature	Print Name
	Processed By:	

Approved by P&T December 2009

Approved by MAC December 2009

Revised: _____

Guidelines for Completion of the Subcutaneous Insulin Orders – Adult (Eating)

- The doses suggested are intended to be used as a guide and not to replace clinical judgment
- This pre-printed order sheet is to be used for the patient who is eating

If a person has adequate control at home their present doses may be entered on the pre-printed sheet. Dose based on weight is for newly diagnosed patients or to intensify management.

1. GLUCOMETER TESTING (within ½ hour AC) and PHYSICIAN NOTIFICATION

Glucometer Times – Tick the boxes to indicate times blood glucose is to be checked
(note: no correction dose is given at 0200 hrs. This glucose test is to assess the night basal dose)

Notify Physician:

- immediately if severe hypoglycemia requiring use of glucagon or IV dextrose. } Insulin orders may need to be changed
- within 24 hours if mild hypoglycemia requiring oral treatment.

2. CALCULATION OF TOTAL DAILY DOSE (TDD)

Total Daily Dose (TDD): add ALL insulin used in a 24 hour period or calculate by weight as follows:

TDD = Wt X (0.5-0.7 units/kg) for Type 1 or Slim Type 2 patient (BMI equal to or less than 25)

OR

TDD = Wt X (0.5-1 units /kg) for the obese type 2 patient (BMI greater than 25).

Start at 0.5 units/kg.

- May need to **increase** dose for insulin resistant conditions (infection, use of prednisone, etc.)
- May need to **decrease** dose for those with renal impairment (eGFR less than 30ml/min)

Basal Dose: Insulin required to cover rise in blood glucose between meals and overnight. It may be pre-admission basal (NPH, Glargine or Detemir) or may be calculated based on weight. For estimate of basal dose divide TDD by ½.

Bolus Dose: Insulin required to cover rise in blood glucose due to meals. It may be pre-admission meal (bolus) dose or may be a calculated dose (½ of TDD). Divide calculated dose equally amongst three meals.

Pre-mixed Insulin: should ONLY be used in Type 2 diabetics. Novolin 30/70 is commonly used. *Note that Novomix 30 is not interchangeable.* The AC breakfast dose can vary from 50%-70% of TDD dose given.

3 ADDITIONAL CORRECTION SCALE DOSE

Insulin Sensitivity Factor (ISF) = the drop in mmol per unit of insulin.

Calculation of ISF: 100 divided by TDD (units) For example, if TDD is 50 units, the ISF = 100/50 = 2
(1 unit of insulin will decrease blood sugar by 2 mmol/Ls)

Correction Scale Dose

Correction dose is additional insulin **added** to the **meal (bolus) dose** to correct elevated blood sugars. The correction dose is based on how sensitive the patient is to insulin. TICK ONE BOX based on insulin sensitivity. The type of insulin will be the **same as the bolus** insulin selected unless otherwise indicated.

- If bolus insulin is not indicated, correction insulin may be needed on its own.
 - **Note:** No correction is given at 0200 hrs.

If frequent correction is needed, re-calculate the TDD by including the correction dose.

4 HS CORRECTION

HS Correction – as regular insulin may lead to nocturnal hypoglycaemia, only Aspart (Novorapid®) insulin will be used to correct elevated HS sugars. Odd numbered HS doses will be rounded down to whole numbers (i.e. ½ of 5 units will be 2 units).