

VCMC/SPH Adult Subcutaneous Insulin Order Form

High Alert Medication-MAR documentation requires two RN signatures

1. **Glycohemoglobin:** add HbA1c to next blood draw if not done in last 60 days.
2. **Fingerstick blood glucose:** PO patient: check BG qAC and qHS NPO patient: check BG q 6 hours
 Continuous tube feeds or TPN: check BG q 6 hrs Bolus tube feeds: check BG with each bolus
 Check BG q 3 am Other _____
3. **Notify House Officer:** Blood Glucose <70 mg/dL or >300 mg/dL Other <_____ or >_____
4. **Goal pre-meal blood glucose:** 90-140 mg/dL Other _____
5. **Diet:** Modified Carbohydrate Diet NPO Other _____

		Breakfast	Lunch	Dinner	Bedtime	
		6. Scheduled SQ Insulin	Basal Insulin Orders	Give _____ units of <input type="checkbox"/> Glargine <input type="checkbox"/> NPH		
Prandial Insulin Orders	<input type="checkbox"/> Fixed dosing		Give _____ units of <input type="checkbox"/> Lispro	Give _____ units of <input type="checkbox"/> Lispro	Give _____ units of <input type="checkbox"/> Lispro	
	<input type="checkbox"/> Ratio dosing		Give <input type="checkbox"/> Lispro at a ratio of _____ units for every _____ grams of carbohydrates	Give <input type="checkbox"/> Lispro at a ratio of _____ units for every _____ grams of carbohydrates	Give <input type="checkbox"/> Lispro at a ratio of _____ units for every _____ grams of carbohydrates	

7. **Supplemental correction dose insulin:**
 - Give insulin with meals or bolus tube feeds using **Column A** of selected Algorithm to correct **premeal** hyperglycemia or **Column B** to correct hyperglycemia at **bedtime**. When using Column A, combine with prandial insulin and give **with meal**. Do **not** use supplemental correction dose insulin to correct blood glucoses checked at **3 am** unless instructed by physician.
 - Give insulin every 6 hours using **Column A** in patients who are NPO, receiving TPN, or continuous tube feeds.

8. Supplemental Correction Dose SQ Insulin	<input type="checkbox"/> Lispro			<input type="checkbox"/> Medium-dose Algorithm		
	<input type="checkbox"/> Low-dose Algorithm For pts requiring ≤40 units of insulin/day. For pts with Normal BMI <25.			<input type="checkbox"/> High-dose Algorithm For pts requiring > 80 units of insulin/day For pts with Overweight/Obese BMI ≥25.		
	Premeal BG (mg/dL)	A. Additional insulin (units) with meals or bolus feeds	B. Additional insulin (units) at bedtime	Premeal BG (mg/dL)	A. Additional insulin (units) with meals or bolus feeds	B. Additional insulin (units) at bedtime
	150-199	1	0	150-199	1	1
	200-249	2	1	200-249	3	2
250-299	3	2	250-299	5	3	
300-349	4	2	300-349	7	3	
> 349	5	3	> 349	8	4	
<input type="checkbox"/> High-dose Algorithm For pts requiring > 80 units of insulin/day For pts with Overweight/Obese BMI ≥25.			<input type="checkbox"/> Individualized Algorithm			
Premeal BG (mg/dL)	A. Additional insulin (units) with meals or bolus feeds	B. Additional insulin (units) at bedtime	Premeal BG (mg/dL)	A. Additional insulin (units) with meals or bolus feeds	B. Additional insulin (units) at bedtime	
150-199	2	1	150-199			
200-249	4	2	200-249			
250-299	7	3	250-299			
300-349	10	5	300-349			
> 349	12	6	> 349			

- Treatment of Hypoglycemia (BG < 70 mg/dL):**
- If patient can take PO, give 15 gm of fast-acting carbohydrate, such as 4 oz. fruit juice or 15 gm glucose gel, then recheck BG in 15 minutes ("15-15 Rule").
 - If patient cannot take PO and BG 41-70 mg/dL, give 25 mL Dextrose 50% IV push.
 - If patient cannot take PO and BG ≤ 40 mg/dL, give 50 mL Dextrose 50% IV push.
 - If patient cannot take PO and IV not present, give glucagon 1 mg IM x1. Attempt IV access.
 - Recheck BG every 15 minutes and repeat above if BG is less than 70 mg/dL.

Physician Signature _____ ID# _____ Date _____ Time _____

RN Noted _____ Date _____ Time _____



VENTURA COUNTY MEDICAL CENTER
SANTA PAULA HOSPITAL

ADULT SUBCUTANEOUS INSULIN ORDER FORM

Patient Label
or
Two Patient Identifiers

This Page For Physician Reference Only

ADA/AACE Consensus regarding inpatient blood glucose goals:

- **Critically ill:** insulin infusion with starting threshold BG of 180, goal 140-180. No target <110.
- **Noncritically ill:**
Preprandial 90-140 mg/dL
Postprandial <180 mg/dL
Reassess regimen if BG <100, and modify if any BG <70.

Options for calculating basal (glargine) insulin

1. Weight-Based Dosing

Insulin resistance	BMI	Total Daily Insulin (TDI)
Normal	<25	Weight (kg) x 0.4 = ____ units
Elevated	25-30	Weight (kg) x 0.5 = ____ units
Severe	>30	Weight (kg) x 0.6 = ____ units

2. Dosing Based on Type of Diabetes

Type	Total Daily Insulin (TDI)
1	Weight (kg) x 0.3-0.4 = ____ units
2	Weight (kg) x 0.4-0.6 = ____ units (TDI can exceed 1 unit/kg/day in T2DM patients already on insulin.)

⇒ 50% of the Total Daily Insulin should be given as basal insulin.
(The other 50% can be divided by 3 and given as prandial insulin.)

⇒ Consider reduction in insulin dose for renal insufficiency. For example, if GFR <50 mg/dL, decrease insulin dose by 25%. For GFR < 25 mg/dL, decrease insulin dose by 50%.

3. Continuation of outpatient glargine dose if previously well-controlled at this dose.
4. Convert outpatient NPH or 70/30 to glargine: calculate NPH total per day, then use 80% of this as the glargine dose. The use of NPH or 70/30 is not recommended in the hospital secondary to increased risk of hypoglycemia compared to a basal/bolus regimen.
5. Transition from regular insulin drip to subcutaneous insulin:
Calculate total amount of IV insulin used over the last 24 hours of hospitalization.
 - Use last 8 hours (requirements on admission may be high secondary to acute illness, insulin resistance, etc.)
 - Multiply by 3 to get a 24-hour dose, then give 80% of this as glargine for coverage of basal insulin needs (consider giving less if patient in renal failure, steroid taper, etc).
 Make sure volume resuscitation and pressor support have been discontinued before switching from IV to subcutaneous insulin.

⇒ Adjust basal insulin dose by 10-20% every 1-2 days until at goal.

Options for calculating prandial (lispro) insulin

1. Ratio dosing (best option since PO intake often uncertain in hospital setting):
 - Consider calculating the Insulin-to-Carb ratio:
I:C ratio = 450/TDI → 1 unit covers ____ g carbs
 - Or start with 1 unit of insulin to 15 g of carbohydrates. At VCMC, on a modified carbohydrate diet, each meal (breakfast, lunch, and dinner) is 60 g carbs. Bedtime snacks are not part of the modified carbohydrate diet since they are not necessary when using basal/bolus insulin coverage with glargine and lispro.
2. Fixed dosing:
 - Use 50% of the total daily insulin, divide by 3, and give with each meal.
 - Start with 0.05-0.1 units lispro/kg/meal.
 - Continue home lispro dose.

⇒ Adjust prandial insulin by 1-2 U/dose daily until at goal.

Supplemental Correction Dose insulin

1. Choose based on previous known insulin requirement.
2. In patients not previously on insulin, consider selection based on BMI:
 - For pts with Normal BMI <25, consider low-dose algorithm.
 - For pts with Overweight/Obese BMI ≥25, consider high-dose algorithm.
3. Calculate Insulin Sensitivity Factor (ISF):
 - ISF = 1700/TDI → 1 unit reduces blood glucose ____ mg/dL

Pre-operative patients who are NPO:

1. HOLD all prandial short-acting insulin.
2. Continue to give supplemental correction dose insulin according to algorithm, but generally do not give doses more often than q 4 hours.
3. Give 80-100% of glargine insulin at bedtime.
4. Reduce nighttime NPH dose by 20%
5. Reduce next morning NPH or Glargine dose by 50%.
6. Consider Dextrose 5% in Water IV in patients undergoing prolonged surgery or surgery late in the day (5 g/hour or ~100 ml/hour).

Discharging the patient with diabetes

Consider modification of home medication regimen prior to discharge if HbA1c >8 on admission.

All patients should have the following supplies:

Glucometer
Lancing device (usually included with meter)
Lancets
Alcohol wipes
Test strips

For patient on insulin, also consider these supplies:

Insulin syringes (with needles)
Glucose tablets (or instructions to use juice for hypoglycemia)
Sharps container
Glucagon pen