

Basal Bolus Insulin Therapy Worksheet (for prescribers; to support ordering and titration of insulin)

Patient Name: _____ Patient Weight: _____ A1C: _____

Calculating Total Daily Dose (TDD) Options:

1. Home Insulin Dose:

Total Basal: [glargine (Lantus® OR Basalgar®), detemir (Levemir®), insulin NPH (HumuLIN®N), or Other _____]

	<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> Breakfast (units)	+	<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> Bedtime (units)	=	<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> Total Basal (units)				
+									
Total Bolus: [lispro (HumaLOG®), aspart (Novorapid®), insulin regular (HumuLIN®R), or Other _____]									
Breakfast	<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <small>meal + correction (units)</small>	+	Lunch	<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <small>meal + correction (units)</small>	+	Supper	<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <small>meal + correction (units)</small>	=	<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> Total Bolus (units)
=									
Total Basal + Total Bolus per day = Total Daily Dose of insulin at home									<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div>

2. New Start in Hospital:

a. Type 1 OR slim Type 2 OR over age 70 OR renal dysfunction

Total Daily Dose (TDD) = weight (kg) x 0.3-0.5 units/kg/day =
units per day

b. Insulin resistance or steroid treatment or overweight Type 2

Total Daily Dose (TDD) = weight (kg) x 0.5-1 units/kg/day =
units per day

How to Divide Total Daily Dose (TDD) into Scheduled Basal, Bolus and Correction Insulin Orders:

1. Determining Basal Insulin:

[glargine (Lantus® OR Basalgar®), detemir (Levemir®), insulin NPH (HumuLIN®N), or Other _____]:

If Well Controlled, use Home Dose: **OR** **AND**
units once daily units at breakfast units at bedtime

Otherwise, estimate Basal Insulin as follows:

glargine (Lantus® OR Basalgar®): Once Daily **OR**
 TDD x 0.5 =
units

glargine (Lantus® OR Basalgar®), detemir (Levemir®), insulin NPH (HumuLIN®N), or Other: Breakfast and bedtime
 TDD X 0.5/2 =
units

2. Determining Bolus Insulin

[lispro (HumaLOG[®]), aspart (Novorapid[®]), insulin regular (Humulin[®]R), or Other _____]:

If NPO: **NO** bolus

If Reliable Diet, Well Controlled: Continue Home Dose:

Breakfast (units)	Lunch (units)	Supper (units)

If unreliable diet, Well Controlled: Reduce Home Dose by 25-50%:

Breakfast (units)	Lunch (units)	Supper (units)

If Poor Control, New Start, or Unknown Home Dose estimate Bolus Insulin:

Total bolus = TDD x 0.5/3 =

Breakfast (units)	Lunch (units)	Supper (units)

3. Determine Insulin Correction (use same insulin as bolus insulin)

Choose one based on current TDD.

May be combined with the scheduled bolus insulin dose and administered as a single subcutaneous injection. If **NPO**, correction dose to be administered at scheduled meal/feed time, in coordination with blood glucose testing. **Use of bedtime Correction dose is not routinely recommended**

<input type="checkbox"/> TDD 15-30 units		<input type="checkbox"/> TDD 31-50 units		<input type="checkbox"/> TDD 51-80 units		<input type="checkbox"/> TDD 81 units or more		<input type="checkbox"/> Custom	
BG	Units	BG	Units	BG	Units	BG	Units	BG	Units
4.1-10	+0	4.1-9	+0	4.1-10	+0	4.1-9	+0		
10.1-14	+1	9.1-12	+1	10.1-12	+2	9.1-11	+2		
14.1-18	+2	12.1-15	+2	12.1-14	+3	11.1-13	+4		
		15.1-18	+3	14.1-16	+4	13.1-15	+6		
				16.1-18	+5	15.1-17	+8		
						17.1-18	+10		

Titration of Insulin Dose Table

The above doses are conservative starting doses; and insulin doses will need titration every 24-72 hours

If Breakfast BG is:		If Lunch BG is:		If Supper BG is:		If Bedtime BG is:		If Overnight BG is:
LOW (below 5.0 mmol/L)	HIGH (above 10.0 mmol/L)	LOW (below 5.0 mmol/L)	HIGH (above 10.0 mmol/L)	LOW (below 5.0 mmol/L)	HIGH (above 10.0 mmol/L)	LOW (below 5.0 mmol/L)	HIGH (above 10.0 mmol/L)	LOW (below 5.0 mmol/L)
Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Bedtime BASAL		Breakfast BOLUS		Lunch BOLUS or Breakfast BASAL		Supper BOLUS		Bedtime BASAL
If ALL BG are HIGH (greater than 10.0 mmol/L), Calculate TDD from last 24 hours, Increase TDD by 10-20% and Recalculate all Basal, Bolus and Correction Doses								
<ul style="list-style-type: none"> If HYPERGLYCEMIA OR HYPOGLYCEMIA: Discuss with patient to determine if change in activity or oral intake was the cause. If yes, monitor carefully. If otherwise unexplained, increase or decrease doses by 10-20% as per Titration Table above. 								

Patient EATING: Type 1 / Insulin Treated Type 2 / New Sustained Hyperglycemia

Date	Breakfast				Lunch			Supper			Bedtime	
	BG	Basal	Bolus	Corr.	BG	Bolus	Corr.	BG	Bolus	Corr.	BG	Basal
<u>Titrate!!</u>												
<p>Basal: If fasting BG <5.0 mmol/L, decrease bedtime Basal Dose by 10-20%. If fasting BG > 10.0 mmol/L, increase bedtime Basal Dose by 10-20% Bolus: If recurrent Insulin Correction required, increase preceding meal Bolus Dose by average Correction Dose</p>												
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Patient NPO: Type 1 / Insulin Treated Type 2 / New Sustained Hyperglycemia

Date	Breakfast			Lunch		Supper		Bedtime		
	BG	Basal	Corr.	BG	Corr.	BG	Corr.	BG	Basal	Corr.
<p><u>Titrate!!</u> Basal: If fasting BG <5.0 mmol/L, decrease bedtime Basal Dose by 10-20%. If fasting BG > 10.0 mmol/L, increase bedtime Basal Dose by 10-20%</p>										
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