Insulin Prescription

Choose insulin(s) from one of the columns and then complete the dosing and titration column.

Prescriber's Name: _____
Address: _____
Tel: _____ Fax: _____

Patient's Name: _____
Address: _____
Tel: _____

STEP 1: Choose Insulin Type				STEP 2: Dosing and Titration
BASAL **Long-acting analogues** (Clear)		☐ **Levemir®** ☐ Cartridge ☐ FlexTouch® (prefilled)	☐ **Lantus®** ☐ Cartridge ☐ Vial ☐ SoloSTAR® (prefilled) ☐ **Toujeo™** ☐ SoloSTAR® (prefilled)	**Starting dose:** _____ units at _____ Increase dose by _____ units every _____ until fasting blood glucose has reached the patient's individual target of _____ mmol/L.
Intermediate-acting (Cloudy)	☐ **Humulin® N** ☐ Cartridge ☐ Vial ☐ Kwikpen® (prefilled)	☐ **Novolin® ge NPH** ☐ Cartridge ☐ Vial		
PRANDIAL (BOLUS) **Rapid-acting analogues** (Clear) Give 0-10 minutes before meal.	☐ **Humalog®** ☐ Cartridge ☐ Vial ☐ Kwikpen® (prefilled) ☐ **Humalog® 200 units/mL** ☐ Kwikpen® (prefilled)	☐ **NovoRapid®** ☐ Cartridge ☐ Vial ☐ FlexTouch® (prefilled)	☐ **Apidra®** ☐ Cartridge ☐ Vial ☐ SoloSTAR® (prefilled)	**Starting dose:** _____ units ac breakfast _____ units ac lunch _____ units ac supper
Short-acting (Clear) Give 30 minutes before meal.	☐ **Humulin® R** ☐ Cartridge ☐ Vial	☐ **Novolin® ge Toronto** ☐ Cartridge ☐ Vial		
PREMIXED **Premixed analogues** (Cloudy) Give 0-10 minutes before meal.	☐ **Humalog® Mix25™** ☐ Cartridge ☐ Kwikpen® (prefilled) ☐ **Humalog® Mix50™** ☐ Cartridge ☐ Kwikpen® (prefilled)	☐ **NovoMix® 30** ☐ Cartridge		**Starting doses:** _____ units ac breakfast _____ units ac supper Increase breakfast dose by _____units every day until pre-supper blood glucose has reached the target of _____mmol/L. Increase pre-supper dose by _____units every day until fasting blood glucose has reached the target of _____mmol/L. Beware of hypoglycemia post-breakfast or post-supper. Stop increasing dose if hypoglycemia occurs.
Premixed regular (Cloudy) Give 30 minutes before meal.	☐ **Humulin® 30/70** ☐ Cartridge ☐ Vial	☐ **Novolin® ge 30/70** ☐ Cartridge ☐ Vial ☐ **Novolin® ge 40/60** ☐ Cartridge ☐ **Novolin®ge 50/50** ☐ Cartridge		
PEN DEVICE Required if insulin cartridges selected. Insulin pen should match the insulin brand.	☐ **HumaPen® Savvio™** ☐ **HumaPen LUXURA® HD** ☐ **HumaPen® MEMOIR™**	☐ **NovoPen® 4** ☐ **NovoPen Echo®**	☐ **ClikSTAR™**	
OTHER SUPPLIES	☐ **Pen needles (if using a pen):** Check needle size (refer to back for information): ☐ 4mm ☐ 5mm ☐ 6mm ☐ 8mm **OR** ☐ At discretion of pharmacist ☐ Glucose test strips ☐ Lancets ☐ Insulin Syringe (if using vials) ☐ Glucagon Kit (if applicable) ☐ Ketone Strips (if applicable)			
QUANTITY and REPEATS	**Insulin** Mitte: _____ boxes Repeats x _____		**Supplies** Mitte: _____ boxes Repeats x _____	

Signature: _____ Print Name: _____ Date: _____ License #: _____

This tool was developed by the Ontario College of Family Physicians and the New Brunswick Diabetes Task Group and was re-produced with permission by the Canadian Diabetes Association (CDA). CDA will keep this tool updated and available at guidelines.diabetes.ca.
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guidelines.diabetes.ca
diabetes.ca | 1-800-BANTING (226-8464)

Canadian Diabetes Association

Insulin Initiation and Titration Suggestions for Type 2 Diabetes

People starting insulin should be counseled about the prevention, recognition and treatment of hypoglycemia.

The following are suggestions for insulin initiation and titration. Clinical judgment must always be used as the suggestions may not apply to every patient.

Basal Insulin (only) as an add-on to Antihyperglycemic Agents (Lantus®, Levemir®, Toujeo™, Humulin® N, Novolin® ge NPH)

- Target fasting blood glucose (BG) of 4-7 mmol/L.
- Most patients will need 40-50 units at bedtime to achieve target but there is no maximum dose.
- Start at a low dose of 10 units at bedtime (may start at lower dose [0.1 -0.2 units/kg] for lean patients [<50 kg]).
- Patient should gently self-titrate by increasing the dose by 1 unit every 1 night until fasting BG target of 4-7 mmol/L is achieved.
- If fasting hypoglycemia occurs, the dose of bedtime basal should be reduced.
- Metformin and the secretagogue are usually maintained when basal insulin is added.
- If daytime hypoglycemia occurs, reduce the oral antihyperglycemic agents (especially secretagogues).
- Lantus®, Levemir® or Toujeo™ can be given at bedtime or in the morning.

Dosing and Titration

Starting dose 10 units at bedtime.

Increase dose by 1 unit every 1 night until fasting blood glucose has reached the target of 4-7 mmol/L (usual target).

Basal + Bolus Insulins

- When basal insulin added to antihyperglycemic agents is not enough to achieve glycemic control, bolus (prandial) insulin should be added before meals. The regimens below incorporate bolus (prandial) insulin. There is the option of only adding bolus insulin to the meal with the highest postprandial BG as a starting point for the patient who is not ready for more injections.
- Typically, insulin secretagogues are stopped and only metformin is continued when bolus (prandial) insulin is added.
- For current basal insulin users, maintain the basal dose and add bolus insulin with each meal at a dose equivalent to 10% of the basal dose. For example, if the patient is on 50 units of basal insulin, add 5 units of bolus insulin with each meal.
- For new insulin users starting a full Basal + Bolus regimen, calculate Total Daily Insulin dose (TDI) as 0.3 to 0.5 units/kg, then distribute as follows:
  - 40% of TDI dose as basal insulin (Lantus®, Levemir®, Toujeo™, Humulin® N, Novolin®ge NPH) at bedtime.
  - 20% of TDI dose as prandial (bolus) insulin prior to each meal.
  - Rapid-acting insulin analogues (Apidra®, Humalog®, NovoRapid®) should be given 0-10 minutes before eating.
  - Short-acting insulin (Humulin® R, Novolin® ge Toronto) should be given 30 minutes before eating.
- An alternative distribution is 50% basal insulin (at bedtime) and 50% bolus insulin (distributed among the meals of the day).
- Adjust the dose of the basal insulin to achieve the target fasting BG level (usually 4-7 mmol/L).
- Adjust the dose of the bolus (prandial) insulin to achieve postprandial BG levels (usually 5-10 mmol/L) or pre-prandial BG levels for the subsequent meal (usually 4-7 mmol/L).

Dosing Example (100kg person)

Total daily insulin = 0.5 units/kg:
0.5 x 100kg (TDI)
- TDI = 50 units

Basal insulin = 40% of TDI:
40% x 50 units
- Basal bedtime = 20 units

Bolus insulin = 60% of TDI:
60% x 50 units
- Bolus = 30 units

= 10 units with each meal

Premixed Insulin Before Breakfast and Before Dinner (Humalog® Mix25™, Humalog® Mix50™, NovoMix® 30, Humulin® 30/70, Novolin®ge 30/70)

- Target fasting and pre-supper BG levels of 4-7 mmol/L.
- Most patients with type 2 diabetes will need 40-50 units twice a day to achieve target but there is no maximum dose.
- Start at a low dose of 5 to 10 units twice daily (before breakfast and before supper).
- Patient can gently self-titrate by increasing the breakfast dose by 1 unit every day until the pre-supper BG is at target.
- Patient can gently self-titrate by increasing the supper dose by 1 unit every day until the fasting BG target is at target.
- Beware of hypoglycemia post-breakfast or post-supper. Stop increasing dose if this occurs.
- Premixed analogue insulins (Humalog® Mix25™, Humalog® Mix50™, NovoMix® 30) should be given 0 to 10 minutes before eating.
- Premixed regular insulins (Humulin® 30/70, Novolin® ge 30/70) should be given 30 minutes before eating.
- Continue Metformin and consider stopping secretagogue.

Dosing and Titration

10 units ac breakfast , 10 units ac supper.

Increase breakfast dose by 1 unit every 1 day until pre-supper blood glucose has reached the target of 4-7 mmol/L (usual target).

Increase supper dose by 1 unit every 1 day until fasting blood glucose has reached the target of 4-7 mmol/L (usual target).

Selection of Pen Needle

- Forum for Injection Technique (FIT) Canada recommends that 4, 5, and 6mm needles are suitable for all people with diabetes regardless of BMI. In addition, there is no clinical reason for recommending needles longer than 8mm. Initial insulin therapy should start with the shorter needle length (Berard L, et al. FIT Forum for Injection Technique Canada. Recommendations for Best Practice in Injection Technique. October 2011).