Toronto Diabetes Care Connect

Insulin Order & Prescription Form

For Type 2 Diabetes Management

Refer immediately to endocrinology if client is pregnant, planning pregnancy or has T1DM

Patient Name: _____

Patient D.O.B. (m/d/y): _____

	Step 1: Choose Insulin Type to be administered subcutaneously	Step 2: Enter Starting Dose	Step 3: Enter Titration/Adjustment Instructions (Authorization) Amount to adjust dose by[units] and BG target to adjust to [mmol/L]
BASAL	**Long-acting analogues** (clear) ☐ Basaglar™ ☐Prefilled pen ☐Cartridge ☐ Lantus® ☐Prefilled pen ☐Cartridge ☐Vial ☐ Levemir® ☐Prefilled pen ☐Cartridge ☐ Tresiba® ☐U100 ☐ U200 ☐Prefilled pen ☐ Toujeo™ ☐ SoloSTAR ☐DoubleSTAR ☐Prefilled pen **Intermediate acting** (cloudy) ☐ Humulin® N ☐Prefilled pen ☐Cartridge ☐Vial	**Once daily dosing:** ____units at bedtime ____units at: _____ **Twice daily dosing:** ____units at: _____ ____units at: _____	**†Adjust dose:** ☐1 unit every 1 or more days OR ☐up to____units every____or more days **For evening dosing adjust until Fasting BG is between:** ☐4.0–7.0 mmol/L OR ☐ ____–____mmol/L **OR** **For morning dosing adjust until ac Dinner BG is between:** ☐4.0–7.0 mmol/L OR ☐ ____–____mmol/L
BOLUS	**Rapid-acting analogues** (clear) Take 0-10 min before meal ☐ Admelog® ☐Prefilled pen ☐Cartridge ☐Vial ☐ Apidra® ☐Prefilled pen ☐Cartridge ☐Vial ☐ Fiasp® ☐Prefilled pen ☐Cartridge ☐Vial ☐ Humalog® ☐Prefilled pen ☐Cartridge ☐Vial ☐ Humalog® 200 units/ml ☐Prefilled pen ☐ Novorapid® ☐Prefilled pen ☐Cartridge ☐Vial ☐ Trurapi™ ☐Prefilled pen ☐Cartridge **Short-acting** (clear) Take 30 min before meal ☐ Humulin® R ☐Cartridge ☐Vial ☐ Novolin®ge Toronto ☐Cartridge ☐Vial	**ac Breakfast:** ___units **ac Lunch:** ___ units **ac Dinner:** ___units	**†Adjust BREAKFAST dose:** ☐1 unit every 1 or more days OR ☐up to____units every____or more days **Until 2hr pc Breakfast BG is less than:** ☐10.0 mmol/L or ☐ ___mmol/L **OR until ac Lunch BG is between:** ☐4.0–7.0 mmol/L or ☐ ____–____ mmol/L **†Adjust LUNCH dose:** ☐1 unit every 1 or more days OR ☐up to____units every____or more days **Until 2 hr pc Lunch BG is less than:** ☐10.0 mmol/L OR ☐ ___ mmol/L **OR until ac Dinner BG is between:**☐4.0–7.0 mmol/L OR ☐____–____ mmol/L **†Adjust DINNER dose:** ☐1 unit every 1 or more days OR ☐up to____units every____or more days **Until 2hr pc Dinner BG is less than:** ☐10.0 mmol/L or ☐ ___ mmol/L
PREMIXED	**Premixed analogues** (cloudy) Take 0-10 min before meal ☐ Humalog® Mix 25™ ☐Prefilled pen ☐Cartridge ☐ Humalog® Mix 50™ ☐Prefilled pen ☐Cartridge ☐ Novomix® 30 ☐Cartridge **Premixed regular** (cloudy) Take 30 min before meal ☐ Humulin® 30/70 ☐Cartridge ☐Vial ☐ Novolin®ge 30/70 ☐Cartridge ☐Vial ☐ Novolin®ge 40/60 ☐Cartridge ☐ Novolin®ge 50/50 ☐Cartridge	**ac Breakfast:** ___units **ac Dinner:** ___units	**†Adjust BREAKFAST dose:** ☐ 1 unit every 1 or more days OR ☐up to____units every____or more days **Until ac Dinner BG is between:** ☐ 4.0 – 7.0 mmol/L or ☐ –__ ___ mmol/L Without causing hypoglycemia post-breakfast. **†Adjust DINNER dose:** ☐ 1 unit every 1 or more days OR ☐up to____units every____or more days **Until Fasting BG is between:** ☐4.0 – 7.0 mmol/L or ☐ ___ –___mmol/L Without causing hypoglycemia post-dinner.

MITT

Insulin:_____boxes x_____repeats *(Units/box: Cartridges & prefilled pens = 1500, Vials = 1000*

Supplies:_____boxes x_____repeats □ pen □ pen needles □ syringes □ meter strips □ lancets

Notes:

OTHER ANTIHYPERGLYCEMIC AGENT(S) Rx: Upon Insulin Initiation

To Discontinue:	**To continue (new Rx)** *(name, route, dose & frequency)*:

Prescriber Information/Stamp:

Name (printed):

License #:

Address:

Tel:

Fax:

Date (m/d/y):

Signature:

Adapted from: the Ontario College of Family Physicians Insulin Prescription Tool - March 2014 using the 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada (Diabetes Canada) and revised September 2017, April 2018 & December 2022 to include new insulins & titration suggestions

Abbreviations: CBG=capillary blood glucose (mmol/L); ac=before meal; pc=after meal **†Adjustment is made to one insulin dose per day**

Additional forms may be obtained on-line at www.torontodiabetesreferral.com or by calling 416-778-0676 x 2242

Toronto Diabetes Care Connect

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 should always be used as the suggestions may not apply to every patient.

Basal Insulin (only) added to Oral Antihyperglycemic Agents (Basaglar™, Lantus®, Levemir®, Toujeo™, Tresiba®, Humulin® N, Novolin®ge NPH)

- Target fasting blood glucose (BG) of 4-7 mmol/L. Fasting BG target can be changed to 4-5.5 mmol/L if not achieving adequate overall glycemic control.
- Most patients will need 40-50 units a day 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)
- If using Tresiba®, the dose can be increased by 2-4 units every week until fasting BG target is achieved
- If using other basal insulin, patients should self-titrate by increasing the dose by 1 unit every 1 night until fasting BG target achieved
- When fasting BG target is achieved, the patient should remain on that dose until reassessed by their diabetes team
- 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)
- Toujeo™, Tresiba®, Lantus® or Levemir® , can be given at bedtime or in the morning

Basal Insulin Example

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

Basal + Bolus Insulins

- When basal insulin is not enough to achieve glycemic control, bolus insulin should be added before meals. 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 (Basaglar™, Lantus®, Levemir®, Humulin® N, Novolin®ge NPH) at bedtime. If using Toujeo™ or Tresiba®, may give morning or bedtime.
  - 20% of TDI dose as bolus insulin prior to each meal
- Rapid-acting insulin analogues (Apidra®, Fiasp®, Humalog®, Admelog™, NovoRapid®,Trurapi™) 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 distrubution 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 insulin to achieve postprandial BG levels (usually 5-10 mmol/L) or pre-prandial BG levels for the next meal (usually 4-7 mmol/L)

Basal + Bolus 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 = 30units
= 10 units with each meal

Premixed Insulin before breakfast and before dinner (Humalog® Mix25®, Humalog Mix50®, NovoMix® 30, Novolin®ge 30/70, Humulin® 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 is at target
- Beware of hypoglycemia post-breakfast or post-supper. Stop increasing dose if this occurs
- When target BG levels are achieved, the patient should remain on that dose until reassessed by their diabetes team
- Premixed analogue insulins (Humalog® Mix25,® Humalog Mix50®, NovoMix® 30) should be given 0-10 minutes before eating
- Premixed regular insulins (Humulin® 30/70, Novolin®ge 30/70) should be given 30 minutes before eating
- Continue the Meformin and consider stopping the secretagogue

Premixed insulin example

10 units ac breakfast
10 units ac supper

Increase breakfast dose by **1** unit every **1** day until presupper blood glucose has reached the target of **4-7** mmol/L

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

Source: Ontario College of Family Physicians Insulin Prescription Tool - March 2014 (used by TDCC with permission from OCFP)