

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

BASAL Intermediate-acting (Cloudy)	☐ Humulin® N ☐ Cartridge ☐ Vial ☐ KwikPen (prefilled)	☐ Novolin® ge NPH ☐ Cartridge ☐ Vial		
Long-acting analogues (Clear) § Biosimilar of Lantus® insulin	☐ Basaglar®§ ☐ Cartridge ☐ KwikPen (prefilled)	☐ Levemir® ☐ Cartridge ☐ FlexTouch® (prefilled)	☐ Lantus® ☐ Cartridge ☐ Vial ☐ SoloSTAR® (prefilled)	☐ Semglee®§ ☐ prefilled pen
Ultra Long-acting analogues (Clear)		☐ Tresiba® ☐ FlexTouch® 100 U/mL (prefilled) ☐ FlexTouch® 200 U/mL (prefilled)	☐ Toujeo® ☐ SoloSTAR® (prefilled) ☐ DoubleSTAR® (prefilled)	
Once weekly basal insulin analogues (Clear)		☐ Awicli® ☐ FlexTouch® 700 U/mL (prefilled)		
PRANDIAL (BOLUS) Rapid-acting analogues (Clear) † Biosimilar of Humalog® insulin ‡ Biosimilar of NovoRapid® insulin	☐ Humalog® ☐ Cartridge ☐ Vial ☐ KwikPen® (prefilled) ☐ Junior KwikPen® ☐ Humalog® 200 units/mL ☐ KwikPen® (prefilled)	☐ Fiasp® ☐ Cartridge ☐ Vial ☐ FlexTouch® (prefilled) ☐ NovoRapid® ☐ Cartridge ☐ Vial ☐ FlexTouch® (prefilled)	☐ Apidra® ☐ Cartridge ☐ Vial ☐ SoloSTAR® (prefilled) ☐ Admelog®† ☐ Cartridge ☐ Vial ☐ SoloSTAR® (prefilled) ☐ Trurapi®‡ ☐ Cartridge ☐ Vial ☐ SoloSTAR® (prefilled)	☐ Kirsty®† ☐ prefilled pen
Short-acting (Clear) Give 30 minutes before meal.	☐ Humulin® R ☐ Cartridge ☐ Vial ☐ KwikPen®	☐ Novolin® ge Toronto ☐ Cartridge ☐ Vial		
PREMIXED Premixed analogues (Cloudy)	☐ Humalog® Mix25® ☐ Cartridge ☐ KwikPen® (prefilled) ☐ Humalog® Mix50® ☐ Cartridge ☐ KwikPen® (prefilled)	☐ NovoMix® 30 ☐ Cartridge		
Premixed regular (Cloudy) Give 30 minutes before meal.	☐ Humulin® 30/70 ☐ Cartridge ☐ Vial	☐ Novolin® ge 30/70 ☐ Cartridge ☐ Vial		
INJECTION DEVICE Required if insulin cartridges selected.	☐ HumaPen® Savvio® ☐ InsuJet™ (U-100 only)	☐ NovoPen® 4 ☐ InsuJet™ ☐ NovoPen Echo® (U-100 only) ☐ NovoPen® 5	☐ AllSTAR® Pro ☐ JuniorSTAR® ☐ InsuJet™ (U-100 only)	☐ InsuJet™

OTHER SUPPLIES

☐ **Pen needles (if using a pen):** ☐ 4mm ☐ 5mm ☐ 6mm **OR** ☐ At discretion of pharmacist
☐ Glucose test strips and Lancets ☐ Glucose sensors ☐ Insulin Syringe (if using vials) ☐ Ketone Strips ☐ Glucagon ☐ Nasal Glucagon

QUANTITY and REPEATS

Insulin Mitte: _____ boxes Repeats x _____ **Supplies** Mitte: _____ boxes Repeats x _____

STEP 2: Dosing & Titration

Starting dose:

_____ units every _____

Increase dose by _____ units every _____ until fasting blood glucose is at the person's individual target range of _____ mmol/L.

Starting dose:

_____ units ac breakfast
 _____ units ac lunch
 _____ units ac supper

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.

Signature:

Print Name:

Date:

License #:

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 individual.

Basal Insulin (only) as an add-on to Antihyperglycemic Agents

(Awiqli®, Basaglar®, Lantus®, Levemir®, Semglee®, Toujeo®, Tresiba®, Humulin® N, Novolin® ge NPH)

- Target fasting blood glucose (BG) of 4-7 mmol/L. The fasting BG target can be tightened to 4-5.5 mmol/L if not meeting overall glycemic goals.
- Most individuals with type 2 diabetes will need 40-50 units a day to meet and maintain glycemic targets 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 individuals [<50 kg]).
- If using Tresiba®, the dose can be increased by 2-4 units every 3 to 7 days until fasting BG is in target range.
- If using other once daily basal insulin, the dose can be increased by 1 unit every day until fasting BG is in target range.
- If using once weekly insulin, see product specific dose adjustments to treat to glycemic targets
- If fasting hypoglycemia occurs, the dose of basal insulin should be assessed.
- In general, optimize healthy behaviour interventions and antihyperglycemic agents that are not affiliated with hypoglycemia before adding/ increasing basal insulin.
- Awiqli®, Toujeo® or Tresiba® can be given at any time of the day, e.g., at bedtime or in the morning.

Dosing and Titration 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

- Bolus (prandial) insulin should be added when glycemic metrics are not in target despite optimized health behaviour interventions, non-insulin antihyperglycemic agents and basal insulin. 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.
- Typically, insulin secretagogues are stopped 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 person 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®, Semglee®, Humulin® N, Novolin®ge NPH) at bedtime. If using Toujeo® or Tresiba®, may give morning or bedtime.
 - 20% of TDI dose as prandial (bolus) insulin prior to each meal.
 - Rapid-acting insulin analogues (Admelog®, Apidra®, Fiasp®, Humalog®, Kirsty®, 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 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 until the target fasting BG level (usually 4-7 mmol/L) is met.
- Adjust the dose of the bolus (prandial) insulin until postprandial BG levels (usually 5-10 mmol/L) or pre-prandial BG levels for the subsequent meal (usually 4-7 mmol/L) are met.

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 individuals with type 2 diabetes will need 40-50 units twice a day to meet glycemic targets but there is no maximum dose.
- Start at a low dose of 5 to 10 units twice daily (before breakfast and before supper).
- Support the individual to gently self-titrate by increasing the breakfast dose by 1 unit every day until the pre-supper BG is at target.
- Support the individual to 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 the causative dose, e.g., pre-breakfast versus pre-supper, 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 Example

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. 4th edition 2020).