

Type 2 DM – Insulin

STEP 1: Target Fasting Plasma Glucose with Basal insulin
Fasting Plasma Glucose (FPG) Target = 70-130mg/dl*

HS Basal insulin – start 10 units or 0.2 units/kg



Increase dose 2 units every 3 days until FPG is 70 - 130mg/dl*
May increase by 4 units every 3 days if FPG is > 180mg/dl*

STEP 2: Target Premeal Glucose (target one at a time)
Premeal Glucose Target = 70-130mg/dl*

If Pre-lunch glucose > 130mg/dl*
Start 4 units Bolus Insulin before breakfast

If Pre-supper glucose > 130mg/dl*
Start 4 units Bolus Insulin before lunch
OR Add/Increase morning NPH/levemir

If Bedtime glucose above target (e.g. > 140mg/dl*), Start 4 units Bolus Insulin before supper OR Increase evening NPH/levemir

Increase Bolus insulin by 2 units every 3 days

As insulin doses get larger, (over 10 units), begin to change insulin dose by 10-20%

STEP 3: If A1c not at goal: Target Post-Prandial Glucose with Bolus premeal insulin
2 Hour Post-Prandial Glucose Target <160-180mg/dl*

* Glucose targets should be individualized based on patient comorbidities, needs, and response to blood glucose lowering.

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Basal Insulin – intermediate to long acting insulin

Insulin	Onset	Peak	Duration
NPH (Novolin N®) <i>(Humulin N®)</i>	1-3 hours	6-10 hours	12-20 hours
Levemir (Detemir®) <i>Glargine (Lantus®)</i>	1 hour 1 hour	None None	12-24 hours 24 hours

Bolus Insulin – shorter acting insulin

Insulin	Onset	Peak	Duration
Aspart (Novolog®) <i>Lispro (Humalog®)</i> <i>Glulisine (Apidra®)</i>	15-30 min	30-90 min	3-5 hours
Regular (Novolin R®) <i>(Humulin R®)</i>	30-60 min	1-2 hours	5-8 hours

Premixed Insulin – longer and shorter acting

Consider for people who cannot mix insulin, use an insulin pen, or whose stable dose of insulin is the same as the premix.

Insulin	Onset	Peak	Duration
Novolin, Novolog 70/30	30 min	2-5 hours	18-24 hours
<i>Humulin 50/50</i>	30 min	2-4 hours	14-24 hours
<i>Humalog 75/25</i>	15 min	½-2½ hrs	16-20 hours

Drugs names in *italics* are not on the National Core Formulary

Ref: Nathan, Buse, Davidson, et al. Medical Management of Hyperglycemia in Type 2 Diabetes: a Consensus Algorithm for the Initiation and Adjustment of Therapy. (2009). Diabetes Care 32, 193-203.