

Type 2 DM – Insulin

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

HS NPH or Long Acting 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 Pre-Meal 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

Increase Bolus Insulin by 2 units every 3 days

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

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

If Bedtime glucose > 140mg/dl
Start 4 units Bolus Insulin before supper
OR Increase evening NPH

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

Ref: Nathan, Buse, Davidson, et al. Management of Hyperglycemia in Type 2 Diabetes: a Consensus Algorithm for the Initiation and Adjustment of Therapy. (2006). Diabetes Care 28, 1963-1972

Type 2 DM – Insulin

Basal Insulin – intermediate and longer acting insulin

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

Bolus Insulin – rapid and shorter acting insulin

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

Premixed Insulin – longer and shorter acting insulin

Use **ONLY** if the patient cannot mix insulin

Type of Insulin	Onset	Peak	Duration
Humulin, Novolin, Novolog 70/30	30 min	2-4 hours	14-24 hours
<i>Humulin 50/50</i>	30 min	2-5 hours	18-24 hours
<i>Humalog 75/25</i>	15 min	1½-2½ hrs	16-20 hours

Drugs names in italics are not on the National Core Formulary