Insulin initiation guidelines for type 2 diabetes

1. Determine individualized patient targets for pre- and 2 hour post-meal blood glucose (see AACE and ADA goal recommendations.)
2. Continue metformin and lifestyle modifications, all other oral medications usually discontinued due to increased hypoglycemia risk or lack of added benefit to insulin.

**AACE Goal** | **ADA Goal**
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Pre-meal | <110 mg/dL | 70-130 mg/dL
2 hour PP | <140 mg/dL | < 180 mg/dL

Start with once daily long-acting insulin glargine/detemir (preferred option) OR bedtime NPH. Can initiate with 10 units or 0.2 units per kg

Check fasting glucose (finger stick) usually daily and increase dose, typically by 2 units every 3 days, or 1 unit every 1 day, until fasting levels are in target range. Can increase dose in larger increments, e.g. by 4 units every 3 days, if fasting glucose >180 mg/dl

If hypoglycemia occurs or fasting glucose level < 70 mg/dL, reduce dose by ≥ 4 units or 10% if dose > 60 units

A1C ≥7% after 2-3 months?

- **No**
  - Continue regimen; check A1C every 3 months

- **Yes**
  - If fasting glucose in target range, check glucose before and 2 hours post each meal for 3 days. If BG rises over 40 mg/dL or if post-meal BG over target, refer to DSME (Diabetes Self-Management Education) for possible meal-dosed insulin and carbohydrate counting education.

Post-breakfast bg out of range; add rapid-acting insulin at breakfast

Post-lunch bg out of range; add rapid-acting insulin at lunch

Post-dinner bg out of range; add rapid-acting insulin at dinner

A1C ≥7% After 3 months

- **Yes**
  - Recheck pre- and post-meal bg levels and if out of range, adjust corresponding insulin(s)

- **No**

Note:
1. Insulin regimens should be designed to take lifestyle and meal schedule into account. This algorithm can only provide basic guidelines for initiation and adjustment of insulin.
2. Premixed insulins are not recommended during adjustment of doses. However, they can be used conveniently, usually before breakfast and/or dinner if proportion of rapid- and intermediate acting insulins is similar to the fixed proportions available.
3. Long-acting insulin analogs are preferred to NPH because of less hypoglycemia, NPH should be used only when cost would interfere with treatment.
4. Long-acting insulin analogs may be dosed twice daily in patients with poor control on a single daily dose, or those injecting over 100 units per.

Adapted from: Diabetes Care; August 2006; Vol. 29, No. 8; p 1967