Scenario 3: Converting Sliding Scale Insulin (SSI) to Basal-Bolus Insulin Regimens

> ***"Although sliding-scale insulin (SSI) is widely used in hospital and LTC facilities, its routine and prolonged use is generally not recommended."***[3]
>
> —American Medical Directors Association (AMDA)

According to American Diabetes Association (ADA) guidelines, traditional SSI regimens (using regular insulin without intermediate or long-acting insulins) are ineffective as monotherapy and generally not recommended.[2]

- SSI therapy is "reactive" and treats hyperglycemia after it occurs, instead of preventing hyperglycemia in the first place[2]
- SSI regimens tend to be unchanged throughout the hospital stay, even when control remains poor[2]
- SSI can result in fluctuating glucose levels that lead to recurrent hypoglycemia and diabetic ketoacidosis[4]
- An ADA-cited study found that basal-bolus "treatment with insulin glargine and glulisine results in a significant improvement in glycemic control" over SSI alone[2,5]
  - Basal insulin was given as glargine once daily, and bolus insulin was given as glulisine in 3 equal doses before each meal[5]

> ***"A basal-bolus insulin regimen is preferred over SSI alone in the management of noncritically ill patients with type 2 diabetes."***[5]
>
> —Umpierrez GE, et al.

References:

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3. American Medical Directors Association. *Diabetes Management in the Long-Term Care Setting: Clinical Practice Guideline.* Columbia, MD: AMDA 2008.
4. Pandya N, Thompson S, Sambamoorthi U. Prevalence and persistence of sliding scale insulin use among newly admitted elderly nursing home residents with diabetes mellitus [published online ahead of print September 25, 2008]. *JAMDA*. doi:10.1016/j.jamda.2008.06.003.
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healthFORWARD™

Empowerment for the Future

Take Steps for Your Diabetes Patients:

Opportunities for Treatment With Basal Insulin

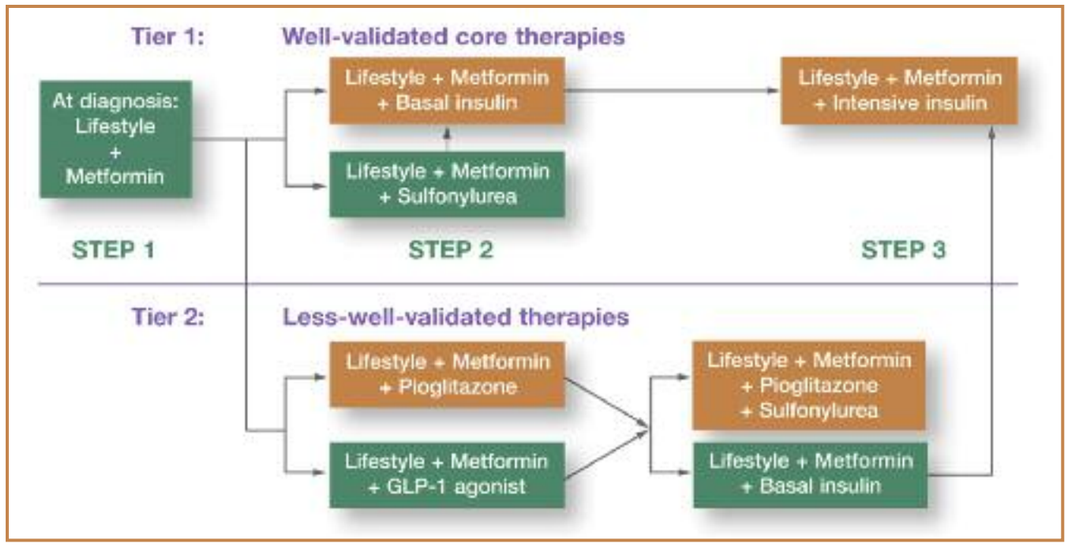
Diabetes

This brochure will help you gain a better understanding of selected scenarios for using basal insulin for control of hyperglycemia in patients with type 2 diabetes.

Scenario 1: Early Addition of Insulin Therapy

The early addition of basal insulin in patients not meeting target glycemic goals is recommended in a consensus statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD)[1]:

- Early addition of insulin therapy, as one approach, is recommended in patients who do not meet glycemic goals after 2 to 3 months with lifestyle intervention and metformin alone[1]
- As part of the ADA/EASD-recommended algorithm for management of type 2 diabetes, insulin can be initiated with a basal insulin[1]



Selected ADA Goals for Glycemic Control[2]

A1C (primary target)	<7%
Preprandial capillary plasma glucose	70 mg/dL-130 mg/dL
Peak postprandial capillary plasma glucose*	<180 mg/dL

*Measurements should be made 1 to 2 hours after the beginning of the meal.

Insulin Glargine Initiation Dosing Options* for Type 2 Diabetes

Current Therapy	Insulin Glargine Once-Daily Dose
Insulin naïve	Add 10 units of insulin glargine to oral antidiabetes treatment
Switch from NPH insulin once daily	1 unit NPH: 1 unit insulin glargine
Switch from NPH insulin twice daily	Insulin glargine at approximately 80% of total NPH daily dose
Switch from premix insulin	Insulin glargine at approximately 80% of the intermediate-acting portion of premix

*In clinical trials, insulin glargine was used with other antidiabetes treatments. Dose adjustment of insulin glargine, other insulins, or oral antidiabetes agents may be required.
Adapted from: Lantus [package insert]. Bridgewater, NJ: sanofi-aventis U.S. LLC; March 2007.

The American Diabetes Association guidelines recommend that in general the glycemic goal for nonpregnant adults is an A1C of <7%.[2]

- A1C is the primary target for glycemic control[2]
- Goals should be individualized based on[2]:
  - Duration of diabetes
  - Age/life expectancy
  - Comorbid conditions
  - Known cardiovascular disease or advanced microvascular complications
  - Hypoglycemia unawareness
  - Individual patient considerations
- More or less stringent glycemic goals may be appropriate for individual patients[2]

Scenario 2: Correction Insulin for Therapies Associated With Hyperglycemia

The ADA guidelines recommend that glucose monitoring with orders for correction insulin (basal-bolus insulin therapy) be initiated for patients not known to have diabetes who receive therapy with high risk for hyperglycemia, including: high-dose glucocorticoids therapy; initiation of enteral or parenteral nutrition; or initiation of medications such as octreotide or immunosuppressive medications.[2]

- Glycemic treatment goals should be the same for such patients as for patients with known diabetes[2]