

The Symlin Life

New Treatment for Type 1 Diabetes Has Its Benefits, But Takes Some Work

Raise your hand if you think type 1 diabetes means that you don't produce insulin. BUZZZZZ! Put your hands down. Your answer is incomplete.

You see, when the beta cells of the pancreas secrete insulin, they also secrete a second hormone called amylin. People with type 1 diabetes secrete no amylin at all. After 80 years with only medical treatment for type 1 diabetes, we now have a new weapon in our arsenal to combat erratic blood glucose levels. [Symlin](#) (the brand name for amylin) is commercially available for people with type 1 diabetes, as well as those with type 2 who are taking insulin to treat diabetes.

What & Why:

Classified as an "incretin," Symlin is a hormone that influences other hormone-secreting glands. It acts directly on the central nervous system to do the following:

- (1) Slow the emptying of the stomach's contents into the small intestine for absorption
- (2) Blunt the secretion of glucagon by the pancreas (ironically, the pancreas of people with Type-1 diabetes secretes blood glucose-raising glucagon just after meals)
- (3) Enhance satiety and decrease appetite

By slowing digestion, limiting food intake and keeping the body from raising blood glucose levels on its own, Symlin helps to flatten the sharp blood glucose rise that occurs after meals in most people with diabetes. Postprandial spikes, as these are called, can influence a person's energy level, mind function, emotions and physical abilities. There is also growing evidence that they raise A1C levels and contribute to the development of long-term complications.

Studies of some users of Symlin show that one positive effect can be modest [weight loss](#). Over the first 6 months of use patients lost [5-6 pounds](#), mainly by consuming smaller portions at meals and [snacking less often](#). Given that many people with type 1 diabetes have difficulty [controlling their appetite](#) (likely due to lack of the amylin hormone), adding Symlin to one's treatment has obvious lifestyle benefits.

Why Not?

Sure, flatter blood glucose levels and reduced hunger may sound pretty good, but there is a price to pay.

For starters, Symlin requires an extra injection at each meal. It is administered in the same manner as insulin: injected into the subcutaneous fat. It cannot be mixed with insulin because of pH incompatibilities (which, by the way, can cause the Symlin injection to sting a bit).

The most common side effect associated with Symlin is nausea. Once a therapeutic dose is achieved, mild nausea (sometimes called "sour stomach") may occur 30-60 minutes after injection. This nausea tends to last for about 30 minutes, and usually dissipates entirely after a few weeks as the body becomes re-accustomed to having the amylin hormone present.

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Another potential complication when using Symlin is the challenge in overcoming hypoglycemia. During its peak action time (30-60 minutes after injection), Symlin blocks the secretion of glucagon and slows digestion considerably. Attempts to treat hypoglycemia during this time may be unsuccessful. As a result, special efforts must be made to prevent hypoglycemia when taking Symlin. A friend who plays a lot of basketball after meals put it best when he said, "I had to stop taking it (Symlin). The risk is just too great. If I get low while playing, it sometimes takes hours to recover."

It is often necessary to make a number of adjustments to your insulin program once an effective dose of Symlin is established. Because of the reduction in glucagon secretion and slowed digestion, a reduction in mealtime insulin doses may be necessary. For example, someone who normally takes one unit of insulin for every 10 grams of carbohydrate may require 1 unit per 12 or even 15 grams. Someone who takes a flat dose of 5 units to cover a meal may require only 4 or 3. In addition, the mealtime insulin may need to be delayed to prevent a blood glucose *drop* right after the meal, followed by a *rise* a few hours later. This may be accomplished by taking the mealtime insulin after eating, programming a prolonged bolus delivery (for those using insulin pumps), or possibly switching to regular insulin for meal coverage.

Who?

It takes a good deal of effort to get Symlin to work right, but once it does, the benefits can be significant. For starters, use of Symlin requires a serious commitment to intensive diabetes management. Those who have difficulty controlling post-meal blood glucose levels (frequently "spiking" into the 200s or 300s) despite adequate pre-meal control could certainly benefit. And given how important it is to manage food intake properly when managing diabetes, Symlin could be a valuable asset to those who find themselves "grazing" and overeating. However, Symlin is not recommended for those with gastroparesis or hypoglycemic unawareness, and it has not yet received FDA clearance for use in children or during pregnancy.

The decision to use Symlin should be made in conjunction with your health care team. Symlin is a prescription medication and usually requires pre-authorization before being covered by health insurance. The jury is still out on whether it will make a real difference in the majority of people with type 1 diabetes, but at least it's nice to know that there is something – *anything* – new to help us in our daily battle with this disease.

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Editor's note: [Gary Scheiner](#) is a Certified Diabetes Educator with a private practice, [Integrated Diabetes Services](#), based near Philadelphia. He works with individuals and their families on intensive diabetes management via phone and e-mail throughout the world. Gary has had type 1 diabetes for 23 years, and currently uses Symlin, insulin pump therapy and continuous glucose monitoring to manage his diabetes. He can be reached at 877-735-3648, or gary@integrateddiabetes.com.