New Options for Diabetes

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This summer, a new concept for the treatment of diabetes will be released consisting of synthetic hormones to treat Type 1 and Type 2 diabetes — “helper hormones” known as Byetta® and Symlin®, designed to lower blood sugar.

Byetta is a synthetic gut hormone that acts like GLP-1 (Glucagon-like peptide-1), a hormone that is produced in the digestive tract to signal the pancreas to make insulin. Byetta stimulates the pancreas to secrete the right amount of insulin needed to lower the blood sugar close to normal levels after a meal. Blood sugars before meals (fasting) are also lowered. In addition, Byetta helps to stop the liver from producing too much sugar when it’s not needed. It also slows digestion, and thus, slows down the rate by which blood sugar enters the blood stream. This effect causes a reduction in appetite and increased satiety, helping people to lose weight slowly. The weight loss is sustained and appears not to reach the plateaus that are associated with weight loss drug regimens. Symlin functions like amylin...to improve the wide fluctuations in blood sugar in people with Type 1 diabetes.

As a hormone, Byetta must be injected twice daily before meals. On the plus side, Byetta comes in easy-to-use, pre-filled pens with simple fixed dosing. Some people experience nausea about two hours after injection, which usually subsides after a few weeks. Byetta only works if the blood sugar is elevated; it does not lower the blood sugar beyond the normal range. It is recommended for use when other anti-diabetic medications fail to lower the blood sugar. Byetta is only for people with Type 2 diabetes who are still able to produce insulin.

In contrast, Symlin is primarily for people with Type 1 diabetes — people who are unable to produce their own insulin and must inject insulin to keep their blood sugar under control. Symlin is the synthetic version of amylin, a natural hormone that is secreted by the beta cells of the pancreas in response to food intake.

Generally, people who do not produce enough insulin also do not produce enough amylin.Without enough amylin, sugar enters the blood too rapidly after meals, producing peaks in blood sugar levels and making it harder for insulin to lower these peaks, or to keep blood sugar at a normal level.

Symlin is the first in a new class of medications that improves blood sugar control by working with amylin. Symlin functions like amylin to control blood sugar by: Slowing down the passage of food, which helps control the rate at which sugar enters the blood Reducing the amount of sugar that the liver sends into the bloodstream after meals Helping to reduce food intake by decreasing appetite which leads to weight loss

These three functions help to improve the wide fluctuations in blood sugar in people with Type 1 diabetes.

Symlin is injected at a fixed dose together with insulin before each meal. When starting Symlin, the dose of insulin may have to be reduced by 30 to 50 percent to avoid potential hypoglycemia. Like Byetta, Symlin may cause nausea initially.

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