

Diabetes Medications: Non-Insulin Injectables

Medication Types

1. Amylin Analog
2. Glucagon-like peptide (GLP-1) agonist

1. Amylin Analog

Medication Type: Pramlintide (Symlin) acetate injection

Amylin is a neuroendocrine hormone that is co-secreted by the beta cells of the pancreas in response to food intake. While insulin works to regulate glucose disappearance from the bloodstream, amylin works to help regulate glucose appearance in the bloodstream from the stomach and liver.

Symlin slows down the movement of food through your stomach. This affects how fast sugar enters your blood after eating. Symlin also helps you to feel fuller after meals, causing you to eat less than you normally would. Symlin is always used with insulin to help lower blood sugar during the 3 hours after meals.

Mechanism of Action:

SYMLIN slows gastric emptying, SYMLIN suppresses postprandial glucagon secretion leading to suppression of endogenous glucose output from the liver

SYMLIN modulates appetite by enhancing satiety. This effect is independent of nausea and may lead to weight loss.

Administration:

Taken like an insulin injection whenever you eat a meal or snack that contains at least 250 calories or at least 30 grams of carbohydrate. Eat meal just after taking Symlin. Must not be mixed with insulin and can't be used in an insulin pump.

Side Effects:

Hypoglycemia (need to reduce mealtime insulin dosage)

- Nausea – more likely during the 1st weeks of therapy
- Decreased appetite, vomiting, stomach pain, tiredness, dizziness, indigestion

Dosage:

Dosage 15mcg – 120mcg prior to major meals

2. Glucagon-like peptide (GLP-1) agonist

This class of medication is only given by injection.

Generally GLP-1's help your body produce more insulin when it is needed.

Reduces the amount of sugar being produced by the liver when it is not needed.

Reduces the rate at which your stomach digests food and empties. Therefore, the rate at which glucose from your food is released into your blood is reduced.

Reduces appetite and the amount of food you eat. Because of this you may lose weight.

Medication Types:

Once a day injection:

1. Exenatide (Byetta)
2. Liraglutide (Victoza)

Once a week injection:

3. Bydureon (Exenatide extended-release for injectable suspension)
4. Tanzeum (albiglutide)
5. Trulicity (dulaglutide)

1. Exenatide (Byetta)

Signals the pancreas to make the right amount of insulin at the right time to help lower blood sugar to get it closer to normal levels.

Stops the liver from producing too much sugar when you don't need it.

Slows down the rate in which sugar enters the bloodstream.

Administration:

By injection into fat tissue

[Byetta Pen Tutorial](#)

Dosage:

Start with 5mcg twice a day then after 1 month, Increase to 10mcg2x/day take with 2 largest meals of the day w/in a 30 min window of eating.

Side Effects:

- Mild to moderate nausea
- Hypoglycemia
- Vomiting

- Diarrhea
- Dizziness
- Headache
- Feeling jittery
- Acid stomach

2. Liraglutide (Victoza)

Signals the pancreas to make the right amount of insulin at the right time to help lower blood sugar closer to normal levels.

Stops the liver from producing too much sugar when you don't need it.

Slows down the rate in which sugar enters the bloodstream.

Take only one time per day without relation to the meal

Administration:

By injection into fat tissue

How to give Victoza injection using Victoza Pen

- First Time Use: <https://www.victoapro.com/videos/pen-instructions-for-use-video.html>
- Routine Use: <https://www.victoapro.com/videos/pen-instructions-for-routine-use-video.html>

Dosage:

Start with 0.6mg for 1 week and then increase to 1.2mg for one week, after tolerated then increase to max dose of 1.8mg per day.

Medication:

GLP-1 once a week injections: are to be taken once per week without relation to meal

3. Bydureon (Exenatide extended-release for injectable suspension)

Administration:

By injection into fat tissue

Comes in pre-filled 2mg pen that is disposable after each use.

Each dose of Bydureon is made up of microspheres that contain the medicine. Over time, the microspheres slowly dissolve, continuously releasing the medicine into your body.

<https://www.bydureon.com/using-bydureon/how-to-use-bydureon.html>

Dosage:

2mg every week

4. Tanzeum (albiglutide)

Administration:

By injection into fat tissue

Comes in pre-filled pen that is disposable after each use.

Dosage:

30mg or 50mg per week

5. Trulicity (dulaglutide)

Administration:

By injection into fat tissue

Comes in a pre-filled pen that is disposable after each use.

<https://www.trulicity.com/taking-diabetes-medicine.html>

Dosage:

Trulicity comes in 2 doses—one with a yellow label (0.75 mg), the other with a blue label (1.5 mg). Your healthcare provider will tell you which is right for you.