

Anti-diabetics - What You Need to Know

Background — CDC 2019 data shows that 34 million Americans—just over 1 in 10—have diabetes (age group 65-74 representing 19.5% and age group of 75+ representing 20.7%) and identifies about 1 in 6 people with disabilities (16.7%) in the United States in 2018 had been diagnosed with diabetes. The CDC also states that if you have diabetes, your body either does not make enough insulin or cannot use the insulin it makes as well as it should. When there is not enough insulin or cells stop responding to insulin, too much blood sugar stays in your bloodstream.

Types of Diabetes

- **Type 1 diabetes** is thought to be caused by an autoimmune reaction (the body attacks itself by mistake) that stops your body from making insulin.
- In **Type 2 diabetes**, your body does not use insulin well and cannot keep blood sugar at normal levels. About 90-95% of people with diabetes have type 2. This type of diabetes is preventable through lifestyle changes.

Treatment Options

Non-Pharmacologic

- Diet
- Physical Activity
- Monitoring Blood Glucose
 - Patients with diabetes should monitor their blood sugar on a daily basis, if not multiple times a day.
 - A general rule of thumb is to measure your blood glucose according to how many times you take your diabetes medications.
 - Another approach to measuring blood glucose is to measure before and after meals to see how the treatment is working to maintain the way your body processes sugars.

Pharmacologic

Some diabetes medications stimulate your pancreas to produce and release more insulin. Others inhibit the production and release of glucose from your liver, which means you need less insulin to transport sugar into your cells. Still others block the action of stomach or intestinal enzymes that break down carbohydrates or make your tissues more sensitive to insulin.

- Insulin
 - The mainstay of therapy in patients with Type I diabetes, and may also be used in patients with Type II diabetes who have failed other therapeutic options.
 - Many types of insulin are available, including short-acting (regular insulin), rapid-acting insulin, long-acting insulin and intermediate options. Depending on your needs, your doctor may prescribe a mixture of insulin types to use throughout the day and night.
- Oral medications
 - Metformin is generally the first line therapy for patients with Type II Diabetes.
 - Other Oral Medications:
 - Alpha-glucosidase inhibitor
 - Biguanide
 - Bile Acid Sequestrant
 - Dopamine-2 Agonist
 - DPP-4 inhibitors
 - Meglitinide
 - SLGT2 Inhibitors
 - Sulfonylureas
 - TZD
 - Oral combination therapy