



Type 2 Diabetes and Insulin Secretagogues

WHAT IS TYPE 2 DIABETES?

When you have type 2 diabetes, your blood glucose (sugar) levels are higher than normal. The glucose in your blood comes mainly from the food you eat (and some is made by your liver). After you eat, it's normal for glucose levels to go up. But with diabetes, your glucose level can go too high.

Insulin, a hormone made by your pancreas, helps move glucose from your blood into your cells, where it is used for energy. You can develop type 2 diabetes when your body

- Doesn't make enough insulin
- Doesn't use insulin the way it should

Middle-aged and older people are more likely to develop type 2 diabetes. Having a family history of diabetes or being overweight and inactive can also increase your risk for type 2 diabetes.

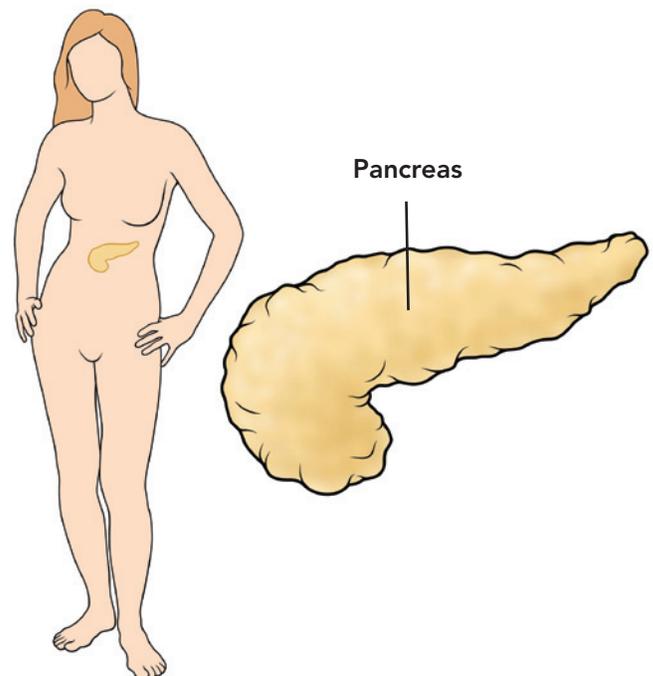
High blood glucose levels over time can lead to serious health problems, such as heart attacks, blindness, nerve damage, and kidney disease. You can prevent or delay health problems by keeping your blood glucose, blood pressure, and cholesterol levels in your target range. Meal planning, exercise, and medicines can help you stay healthy.

DID YOU KNOW?

When you have diabetes, over time you may need changes in the type or amount of medicine that you take. It doesn't mean your diabetes is getting worse. Instead, it means you need different ways to keep your blood glucose under control.

WHAT ARE INSULIN SECRETAGOGUES?

Insulin secretagogues are one type of medicine for type 2 diabetes. Many people with type 2 diabetes don't make enough insulin. Insulin secretagogues help your pancreas make and release (or secrete) insulin. Insulin helps keep your blood glucose from being too high. Once your body gets the insulin it needs, you feel better. Your doctor might prescribe these insulin-releasing pills for you when you can't reach your target blood glucose levels with a healthy diet, exercise, and other diabetes medicines.



TYPES OF INSULIN SECRETAGOGUES (INSULIN-RELEASING MEDICINES)

Sulfonylureas (Generic names)	Meglitinides (Generic names)
Glimepiride	Repaglinide
Glipizide	Nateglinide
Glyburide	

Several other types of diabetes pills are available. Each type works in a different way. Some people take pills that combine two types of diabetes medicines. For example, some pills combine an insulin-releasing medicine with a medicine that helps your insulin work better (like pioglitazone). Another type combines an insulin releaser with a pill that keeps your liver from making too much glucose (like metformin).

Two other types of medicines, called incretin-based medicines, share some features of the insulin-releasing medicines. DPP-4 inhibitors (sitagliptin, saxagliptin, linagliptin) and GLP-1 receptor agonists (exenatide, liraglutide) raise insulin levels for a short time after you eat a meal.

WHAT ARE THE BENEFITS OF INSULIN SECRETAGOGUES?

Both types of these insulin-releasing medicines lower blood glucose levels. Sulfonylureas are low in cost and usually are well tolerated. They are taken once or twice a day. Meglitinides are designed to work with your meals and are taken right before meals (2 to 4 times a day). Meglitinides act for a shorter period of time than sulfonylureas.

WHAT ARE THE SIDE EFFECTS AND DISADVANTAGES OF INSULIN SECRETAGOGUES?

Both types of insulin-releasing medicines can cause blood glucose levels to be too low, a condition called hypoglycemia. Low blood glucose can make you feel hungry, dizzy, nervous, shaky, or confused. It can be especially serious in people with heart conditions and the elderly. You can learn what to eat or drink to bring your blood glucose level back up to normal.

Insulin-releasing medicines can also lead to slight weight gain. Over time, sulfonylureas may lose the ability to work well. Meglitinides need to be taken more often than sulfonylureas because they work for a shorter amount of time.

HOW WILL I KNOW WHICH DIABETES MEDICINES ARE BEST FOR ME?

Talk with your doctor about your diabetes medicines. Ask whether there are other medicines that can help you. Tell your doctor about any side effects you have from your medicines. If the results of your blood glucose tests have been higher or lower than usual, talk with your doctor to help find the cause.

Questions to ask your doctor

- What else can I do to keep my blood glucose levels under control?
- How often should I check my blood glucose?
- How often should I have check-up?
- What side effects can happen with my medicines?
- What should I do if I forget to take my diabetes medicine?
- Should I see an endocrinologist for my diabetes care?

RESOURCES

- Find-an-Endocrinologist: www.hormone.org or call 1-800-HORMONE (1-800-467-6663)
- Hormone Foundation information about diabetes: www.hormone.org/diabetes
- National Institutes of Health:
 - The National Diabetes Information Clearinghouse: www.diabetes.niddk.gov or call 1-800-860-8747
 - The National Diabetes Education Program: ndep.nih.gov
 - MedlinePlus (about diabetes): www.nlm.nih.gov/medlineplus/diabetes.html
 - MedlinePlus (about medicines): www.nlm.nih.gov/medlineplus/druginformation.html
- The American Diabetes Association: www.diabetes.org or call 1-800-DIABETES (800-342-2383)

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The Hormone Health Network offers free, online resources based on the most advanced clinical and scientific knowledge from The Endocrine Society (www.endo-society.org). The Network's goal is to move patients from educated to engaged, from informed to active partners in their health care. This fact sheet is also available in Spanish at www.hormone.org/Spanish.

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