



Type 2 diabetes

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Diabetes treatment: Medications for type 2 diabetes

By Mayo Clinic staff

Healthy lifestyle choices — including diet, exercise and weight control — are an important part of diabetes treatment. If you have type 2 diabetes, sometimes medication to control blood sugar is needed, too. Sometimes a single medication is effective. In other cases, a combination of medications works better.

The list of medications for type 2 diabetes is long and potentially confusing. So how do you know which diabetes treatment is best for you? Here's help in comparing your options.

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Diabetes treatment: Many choices

Medications for type 2 diabetes come in various classes — alpha-glucosidase inhibitors, amylin agonists, dipeptidyl-peptidase 4 (DPP-4) inhibitors, meglitinides, sulfonylureas and thiazolidinediones. Each class contains one or more specific drugs. Some of these drugs are taken orally. Others must be injected.

Various diabetes drugs work in different ways to lower blood sugar. A drug may work by:

- Stimulating the pancreas to produce and release more insulin
- Inhibiting the production and release of glucose from the liver, which means you need less insulin to transport sugar into your cells
- Blocking the action of stomach enzymes that break down carbohydrates or make tissues more sensitive to insulin.

Compare diabetes medications

Here's an at-a-glance comparison of common diabetes medications. More medications are available depending on your needs and situation. Ask your doctor about your options and the pros and cons of each.

Medications (examples)	How they're taken	Advantages	Disadvantages
Medications that increase insulin production			
Dipeptidyl-peptidase 4 (DPP-4) inhibitors Saxagliptin (Onglyza)	By mouth	Don't cause weight gain	May cause upper respiratory tract infection, sore throat and

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Sitagliptin (Januvia)			headache; sitagliptin has been associated with severe inflammation of the pancreas
Glucagon-like peptide 1 (GLP-1) agonists Exenatide (Byetta)	By injection	May promote weight loss	May cause nausea, headache and dizziness; rarely, may cause kidney problems including kidney failure; taken twice a day
Meglitinides Repaglinide (Prandin) Nateglinide (Starlix)	By mouth	Work quickly	May cause low blood sugar and weight gain; taken three times a day
Sulfonylureas Glipizide (Glucotrol) Glimepiride (Amaryl) Glyburide (DiaBeta, Glynase)	By mouth	Can be used alone or with other diabetes medications; work quickly	May cause low blood sugar, nausea and weight gain
Medications that improve the effectiveness of insulin			
Metformin (Fortamet, Glucophage, others)	By mouth	Don't cause weight gain; may decrease LDL ("bad") cholesterol and triglycerides	May cause nausea and diarrhea; rarely, may cause a harmful buildup of lactic acid (lactic acidosis)
Thiazolidinediones Rosiglitazone (Avandia) Pioglitazone (Actos)	By mouth	May slightly increase HDL ("good") cholesterol	May cause swelling and weight gain that leads to or worsens heart failure; may increase LDL ("bad") cholesterol; may increase risk of heart attack, although this may not apply to Actos; rarely, may cause liver problems
Medications that affect food absorption			
Alpha-glucosidase inhibitors Acarbose (Precose) Miglitol (Glyset)	By mouth	Don't cause weight gain	May cause nausea and diarrhea; taken three times a day

How to choose your diabetes medication

No single diabetes treatment is best for everyone, and what works for one person may not work for another. This is where your health care provider comes in. He or she can help you compare the advantages and disadvantages of specific diabetes drugs, as well as determine how a specific medication or multiple medications may fit into your overall diabetes treatment plan. Sometimes insulin therapy becomes necessary.

Also remember that there's more to diabetes treatment than medication.

Eating healthy foods, including physical activity in your daily routine and maintaining a healthy weight can help you control your diabetes. In fact, lifestyle changes may reduce — or eliminate — the need for diabetes medication.

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