Medications to Treat Type 2 Diabetes

Type 2 diabetes can be treated with insulin shots, other injections, pills, or a combination.

What medication should I take to treat my diabetes?
Diabetes medicines work in different ways and are often used together. The goal is to help manage your blood sugar.

Some people with type 2 diabetes are able to manage their diabetes with pills alone. Other people with type 2 diabetes need take insulin shots to treat their diabetes. There are also newer injectable medicines that are helpful for some people with diabetes. In many cases, a combination of pills and shots may be needed.

The table below reviews the different types of diabetes medications. All diabetes medications work best when combined with a daily diet and exercise plan.

How do diabetes pills work?
Some pills:
- Stop your liver from releasing too much sugar
- Help your pancreas to make more insulin
- Help your body better use your insulin
- Slow the digestion of some carbohydrates

When should I call my healthcare provider?
- If you have very low (less than 70 mg/dl) or very high (persistently higher than 300 mg/dl) blood sugar
- If you are concerned about any new side effects
- If you stop taking your pills for any reason

What things might affect how well my medicines work?
- Alcohol
- Other illnesses
- Worsening kidney or liver problems
- Over-the-counter medications
- Herbal supplements

What should I know about taking my pills?
- Take your pills at the right time every day
- Eat at regular meal times
- Review your list of medications with your healthcare provider at every visit
- It is important to know what medication(s) you are taking. Keep a list of your medications in one place and keep it up to date with this information:

- Name of your diabetes medicine
- How to take it
- Reasons for taking it
- Possible side effects

**Examples of diabetes medications and how they work**

<table>
<thead>
<tr>
<th>Generic or brand names</th>
<th>Class</th>
<th>Where they work</th>
<th>How they control your blood sugar</th>
<th>Side effects/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metformin/ Glucophage Pills</td>
<td>Biguanides</td>
<td>Liver and intestine</td>
<td>Stops the liver from releasing too much glucose. Improves intestinal handling of glucose. Pre-meal blood sugars are lowered.</td>
<td>Bloating, decreased appetite, nausea, and diarrhea. Usually improve after a few weeks. Take with food.</td>
</tr>
<tr>
<td>Glyburide/ Glipizide/ Glimepiride Pills</td>
<td>Sulfonylureas</td>
<td>Pancreas</td>
<td>Helps pancreas to release more insulin.</td>
<td>Low blood sugar and weight gain. Take with meals. Don't take if you are skipping a meal.</td>
</tr>
<tr>
<td>Pioglitazone / Actos Pills</td>
<td>Thiazolidinediones (TZDs)</td>
<td>Liver and fat cells</td>
<td>Makes liver and fat cells sensitive to insulin. Fasting blood sugars are lowered.</td>
<td>Weight gain and swelling. Takes 4-6 weeks to see an effect on your blood sugar.</td>
</tr>
<tr>
<td>Sitagliptin/Januvia Saxagliptin/Onglyza Linagliptin/Trajenta Others Pills</td>
<td>Dipeptidyl peptidase-4 (DPP-4) inhibitors</td>
<td>Bloodstream</td>
<td>Prevents the breakdown of GLP-1, a hormone that increases insulin release from the pancreas.</td>
<td>Rarely, headache or upper respiratory infection. May cause pancreatitis.</td>
</tr>
<tr>
<td>Canagliflozin /Invokana Dapagliflozin/Farxiga Empagliflozin/Jardiance Others Pills</td>
<td>Sodium-glucose co-transporter 2 (SGLT2) inhibitors</td>
<td>Kidney</td>
<td>Increases glucose in the urine, allowing the body to discard extra glucose.</td>
<td>Frequent urination, genital and urinary yeast and bacterial infections. Weight loss.</td>
</tr>
<tr>
<td>Exenatide/Byetta Liraglutide/Victoza Exenatide ER/Bydureon Dulaglutide/Trulicity Others Injections</td>
<td>Glucagon-like peptide-1 (GLP-1) agonist</td>
<td>Pancreas, liver, intestine</td>
<td>Stops the liver from releasing too much glucose; slows digestion; increases insulin release when glucose is high.</td>
<td>Nausea and vomiting in 15-40%. Weight loss.</td>
</tr>
<tr>
<td>Nateglinide/Starlix Repaglinide/Prandin Pills</td>
<td>Meglitinides</td>
<td>Pancreas</td>
<td>Helps pancreas release more insulin. Post-meal blood sugars are lowered.</td>
<td>Low blood sugar. Take up to 30 minutes before each meal. Don’t take if you are skipping a meal.</td>
</tr>
<tr>
<td>Acarbose/Precose Pills</td>
<td>Alpha–glucosidase Inhibitors</td>
<td>Intestine</td>
<td>Slows the digestion of starches. Post-meal blood sugars are lowered.</td>
<td>Bloating, gas, and diarrhea, which usually improve after 6 months. Take with first bite of food.</td>
</tr>
</tbody>
</table>
| Many types:  
  - Glargine  
  - Basaglar  
  - NPH  
  - Degludec Injections | Long-acting insulin | Liver, muscle, fat cells | Insulin replaces the natural hormone that is in short supply or absent in people with diabetes. Can lower fasting and post-meal sugars. | Low blood sugar and weight gain. Dose may need to be reduced for exercise or changed to match the size of meals. |

**Patient Care Advice (PCOI)** documents are available under **Resources** on your Patient Gateway home page.

This document is not a substitute for your care team’s medical advice and should not be relied upon for treatment for specific medical conditions.

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