Medicines to Treat Diabetes

There are many medicines used to treat diabetes. They are used along with a healthy eating meal plan and activity. You and those on your health care team will choose which medicines are best for you.

Medicine Names	Key Points
Biguanides Examples: • Metformin (Glucophage®) • Metformin extended release (Glucophage XR®, Fortamet®, Glumetza®, Riomet®)	How they work: • Help muscle cells use glucose • Lower the amount of glucose your liver makes Possible side effects: • Nausea, upset stomach, diarrhea, bloating, decreased appetite Notes: • Take with food to decrease side effects • May need to stop for surgery or certain tests • Expected decrease in A1C: 1-2%
Sulfonylureas Examples: • Glipizide (Glucotrol®) • Glipizide extended release (Glucotrol XL®) • Glimepiride (Amaryl®) • Glyburide (Diabeta®, Micronase®)	How they work: • Help your pancreas make more insulin Possible side effects • Low blood sugar, weight gain, headache, upset stomach Notes: • Take within 30 minutes of eating • Avoid with sulfa allergy • Expected decrease in A1C: 1-2%
Meglitinides Examples: • Repaglinide (Prandin®) • Nateglinide (Starlix®)	How they work: • Help the pancreas make more insulin right after you eat Possible side effects: • Low blood sugars, weight gain Notes: • Work best if you take before a meal • Expected decrease in A1C: 0.5-1.5%
Alpha-Glucosidase Inhibitors Examples: • Miglitol (Glyset®)	How they work: • Slow the break down of sugars in the body Possible side effects: • Gas, bloating, diarrhea Notes: • Does not cause weight gain • Must treat low blood sugar with oral glucose (dextrose), not sucrose (cane sugar) • Expected decrease in A1C: 0.5-1%

Medicine Names	Key Points
Dipeptidyl Peptidase-4 (DPP-4) inhibitors Examples: • Saxagliptin (Onglyza®) • Sitagliptin (Januvia®) • Linagliptin (Tradjenta®) • Alogliptin (Nesina®)	How they work: • Increase insulin your body makes after you eat • Lower the amount of glucose your liver makes Possible side effects: • Nausea, vomiting, diarrhea, pancreatitis Notes: • Do not cause weight gain • Expected decrease in A1C: 0.4 – 0.8%
Thiazolidinediones ("TZDs") Examples: • Pioglitazone (Actos®)	How they work: • Lower insulin resistance so that insulin can work better • Reduce glucose made by the liver Possible side effects: • Swelling, weight gain/fluid retention Notes: • Should not be used in those with heart failure • May increase risk of bladder cancer, bone fractures • Expected decrease in A1C: 0.5-1.4%
Sodium-glucose transporter 2 (SGLT2) Inhibitor Examples: • Canagliflozin (Invokana®) • Dapagliflozin (Farxiga®) • Empagliflozin (Jardiance®) • Ertugliflozin (Steglatro®)	How they work: • Help remove glucose from the body through the urine Possible side effects: • Urinary tract infections or genital infections • Increased urination, dehydration and/or low blood pressure • Euglycemic ketoacidosis (normal or nearly normal blood glucose levels) Notes: • Take before the first meal of the day • Expected decrease in A1C: 0.5-1% • For more information, refer to **Health Facts for You #8281: SGLT2 (Sodium Glucose Cotransporter-2) Inhibitors** 

Non-Insulin Injectable Medicines

Some treatment options are injectable but are not insulin. Your care team will share more about these medicines if prescribed.

Medicine Names	Key Points
GLP-1 Receptor Agonists Examples: • Liraglutide (Victoza®) • Dulaglutide (Trulicity®) • Semaglutide (Ozempic®, Rybelsus®, Wegovy®) • Exenatide (Byetta®) • Exenatide extended release (Bydureon BCise®) **Dual Incretin Agonist** (GLP-1 receptor agonist/gastric inhibitory peptide or GIP) Example: • Tirzepatide (Mounjaro®, Zepbound®)	How they work: • Increase insulin released from the pancreas when eating • Slow down stomach emptying • Lessen glucagon release which lowers the amount of glucose the liver makes Possible side effects: • Nausea, vomiting, diarrhea, constipation, decreased appetite, dehydration • Weight loss • Injection site reactions Notes: • Should not be taken by those with a personal or family history of medullary thyroid cancer or for those with multiple endocrine neoplasia syndrome type 2 (MEN 2) • May need to stop taking 1 week before surgery or procedures • May cause pancreatitis • Expected decrease in A1C: 1-3% • For more information, refer to **Health Facts for You #8318: GLP-1 (Glucagon-like Peptide-1) Receptor Agonist**
Amylin Mimetics Examples: Pramlintide (Symlin®)	How they work: • Slow how fast the stomach empties • Lower the amount of glucose the liver makes Possible side effects: • Low blood sugars, decreased appetite • Injection site reactions Notes: • Should not be used by those with gastroparesis and with caution in those with no symptoms of low blood sugar • Must use right before meals; skip dose if meal skipped • May need to take other medicines 1 hour before or 2 hours after pramlintide dose • Expected decrease in A1C: 0.4-0.6%

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright ©8/2024. University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#6264.