

# Summary of Medications for Type 2 Diabetes

DIABETES MEDICATIONS			
Class of Medication	Common Name	Actions	Potential for Hypoglycemia
Biguanides	Metformin (Glucophage)	Reduces the amount of glucose released by the liver and decreases insulin resistance by muscle cells.	Not when used as monotherapy.
Alpha-glucosidase inhibitors	Acarbose (Precose) Miglitol (Glyset)	Slows digestion and absorption of dietary carbohydrate.	Increased risk when used in combination with insulin or sulfonylurea agents. Must treat hypoglycemia with dextrose.
Thiazolidinediones	Pioglitazone (Actos) Rosiglitazone (Avandia)	Increases insulin sensitivity, decreases liver glucose output. Takes 12 or more weeks to achieve maximal effectiveness.	Increased risk when used in combination with insulin or insulin secretagogues.
Dipeptidyl peptidase 4 (DPP-4) inhibitors	Sitagliptin (Januvia) Saxagliptin (Onglyza) Linagliptin (Tradjenta) Alogliptin (Nesina)	Slows the inactivation of glucagonlike peptide-1 (GLP-1) by the degradation enzyme DPP-4. Prolongs the action of GLP-1, thus increasing insulin secretion and decreasing glucagon secretion.	May increase risk with insulin secretagogues; not studied with insulin.
Sodium-glucose cotransporter-2 inhibitors	Canagliflozin (Invokana) Dapagliflozin (Farxiga) Empagliflozin (Jardiance)	Inhibits glucose reabsorption in the kidneys.	Low risk when used as monotherapy.
Sulfonylureas	Glimepiride (Amaryl) Glipizide (Glucotrol) Glyburide (Micronase, Glynase)	Stimulates the beta cells of the pancreas to increase insulin production.	Yes
Meglitinides	Repaglinide (Prandin) Nateglinide (Starlix)	Stimulates the beta cells of the pancreas to increase insulin production. They are shorter acting than sulfonylureas.	Yes
Incretin mimetics (injectable)	Exenatide (Byetta) Exenatide LAR (Bydureon) Liraglutide (Victoza) Dulaglutide (Trulicity)	Mimics the effect of incretin hormones to increase insulin secretion in the presence of elevated blood glucose levels, decreases glucagon production, slows gastric emptying, and improves first-phase insulin response.	Often used in combination with insulin or sulfonylureas, which may result in hypoglycemia.
Amylin analogues (injectable, taken with mealtime insulin but as a separate injection)	Pramlintide (Symlin)	Slows gastric emptying (therefore delays glucose from entering the bloodstream), suppresses glucagon.	Yes
Insulin (injectable)	Long-acting insulin: Glargine (Lantus) Detemir (Levemir) Intermediate-acting insulin: NPH (Humulin R, Novolin R) Short-acting insulin: Regular (Humulin N, Novolin N) Rapid-acting insulin: Lispro (Humalog) Aspart (NovoLog) Glulisine (Apidra)	Increases the passage of glucose from the bloodstream into the cells and decreases the production of glucose by the liver.	Yes Understanding when the insulin peaks as well as its onset and duration of action can help prevent hypoglycemic episodes.

\* Not a complete list

## RESOURCES

1. MENSING CE. *THE ART & SCIENCE OF DIABETES SELF-MANAGEMENT EDUCATION DESK REFERENCE*. 3<sup>RD</sup> ED. CHICAGO, IL: AMERICAN ASSOCIATION OF DIABETES EDUCATORS; 2014.
2. NAUCK MA. UPDATE ON DEVELOPMENTS WITH SGLT2 INHIBITORS IN THE MANAGEMENT OF TYPE 2 DIABETES. *DRUG DES DEVEL THER*. 2014;8:1335-1380.