Medications for Type 2

Type 2 diabetes is a progressive condition; physical activity and good nutrition can help slow this progression but only up to a certain point. Just because you need medication or insulin does not mean you did not do enough to control your diabetes. Most people with Type 2 diabetes will eventually need some form of oral and/or injectable medication to control their blood sugar. It is unlikely that you will stay on the same medication regimen for your entire life.

Biguanides: Metformin (glucophage)

Method of action = (1) Reduces amount of sugar produced from liver (2) Helps fat and muscle cells use insulin better
A1C Reduction= 1-2%
How to take = same time daily, with food. 1-2 times a day. Maximum daily dose is 2500 mg, lowest dose is 500 mg for adults, 250 mg for children.
Effect on weight = slight, ~2-5 lb. weight loss
Risk for hypoglycemia = low risk when used alone
Side effects =

- GI issues, include nausea, bloating, diarrhea, B12 deficiency
- Usually go away on their own in a week or two. XR formulation is associated with fewer GI side effects

GLP-1 Agonists: Rybelsus (semaglutide)

Method of action = GLP-1 is produced by the intestines and stimulates the pancreas to produce insulin after a meal. This medication increases GLP-1 in the body
A1C Reduction = 0.5-1.3%
How to take = take upon waking on an empty stomach with 4 ounces of water. Wait 30 minutes before first meal.
Effect on weight = significant weight loss
Risk for hypoglycemia= low
Side effects=

- GI issues: nausea, abdominal pain, diarrhea, vomiting, constipation
- Decreased appetite
- Weight loss

SGLT2 Inhibitors: Farxiga (dapagliflozin), Invokana (canagliflozin), Jardiance (empagliflozin)

Method of action = Helps to stop sugar from being reabsorbed back into your blood as it passes through the kidneys. More sugar will pass into the urine and be removed instead.
A1C Reduction = 1-2%
How to take = Typically dosed 1x/day in the morning before the first meal
Effect on weight = slight ~1-3 lb. weight loss
Risk for hypoglycemia = low
Side effects =

- Urinary frequency
- Increased frequency of UTIs and yeast & genital infections
- Hypotension
- Ketoacidosis

DPP-4 Inhibitors: Tradjenta (linagliptin), Onglyza (saxagliptin), Januvia (sitagliptin)

Method of action = (1) prolongs action of gut hormones by preventing the breakdown of *GLP-1* which → (2) increases insulin secretion after meals (3) can also delay gastric emptying
A1C Reduction = 0.6 – 0.8%
How to take = once daily without regard to food
Effect on weight = neutral
Cardiovascular = can increase risk for heart failure
Kidney = can be used in those with decreased kidney function
Risk for hypoglycemia = low
Side effects =

- Headache and flu-like symptoms
- Possible pancreatitis
- Possible severe and disabling joint pain

Sulfonylureas: Diabeta (glyburide) Amaryl (glimepiride), Glucotrol (glipizide)

Method of action = Help your pancreas make more insulin. In some people, they work well at first but stop working later on. If your pancreas can no longer produce enough insulin, they will be ineffective.
A1C Reduction: 1-2%
How to take = 1x/day in morning before first meal. 1 or 2 times daily at the beginning of the meal. No skipping doses. Eat meals on a regular schedule
Effect on weight = may cause weight gain
Kidney = not for people with kidney dysfunction
Risk for hypoglycemia = **high**
Side effects=

- Low blood sugars
- Hunger
- Weight gain

TZDs: Actos(pioglitazone) & Avandia(rosiglitazone)

Method of action = Help insulin work better in the muscle and fat. Reduce glucose made by the liver.
A1C Reductions = 0.5-1%
How to take = Prescribed 1 or 2 times a day. Take without regard to food. Can take 8-12 weeks to see the full effect
Effect on weight = can cause weight gain from fluid retention
Risk for hypoglycemia = possible when combined with other drugs
Side effects =

- Could worsen congestive heart failure CHF = Any swelling in feet or lower legs, SOB, or unexplained cough should be reported to provider. If you gain more than 7 lbs., report to provider
- Muscle aches
- Abdominal pain

Combination Pills

Can be more convenient because it is less to remember. May cost more and may not be more effective to take as a single pill

Janumet: metformin +januvia (dpp4 inhibitor)
Jentadueto: metformin + tradjenta (dpp4 inhibitor)
Xigduo: metformin + farxiga (sglt2 inhibitor)
Synjardy: metformin + jardiance (sglt2 inhibitor)
Invokamet: metformin + invokana (sglt2 inhibitor)
Metaglip: metformin + glipizide (sulfonylurea)
Glucovance: metformin + glyburide (sulfonylurea)