Type 2 Medications

Drug Class	How It Works	Brand and Generic Names	Manufacturers	Usual Starting Dose	Max Daily Dose	
SODIUM GLUCOSE CO-TRANSPORTER-2 (SGLT2) INHIBITOR	JARDIANCE® works by blocking the reabsorption of glucose in the kidney, increasing glucose excretion and lowering blood glucose levels in adults with T2D who have elevated blood glucose levels.	**Jardiance®** (empagliflozin) tablets	**Manufactured by: Boehringer Ingelheim Marketed by: Boehringer Ingelheim and Eli Lilly and Company**	The recommended dose of JARDIANCE is 10 mg once daily, taken in the morning, with or without food.	Dose may be increased to 25 mg once daily	
	SYNJARDY works by helping to control blood glucose in people with T2D. SYNJARDY removes excess glucose through the urine by blocking glucose re-absorption in the kidney while lowering glucose production by the liver and its absorption in the intestine.	**Synjardy® (empagliflozin and metformin hydrochloride) tablets**	**Manufactured by: Boehringer Ingelheim Marketed by: Boehringer Ingelheim and Eli Lilly and Company**	The recommended dose of SYNJARDY is 5 mg empagliflozin/500 mg metformin twice daily with meals	Dose may be increased to 12.5 mg empagliflozin/ 1000 mg metformin twice daily	
SENSITIZERS	**Biguanides:** These drugs work by decreasing the liver's glucose production. 	**GLUCOPHAGE*** (metformin)	**Bristol-Myers Squibb**	Generally, significant effects are not seen with doses below 1,500 mg a day, but starting with lower doses and gradually increasing is recommended to minimize gastrointestinal reactions. The suggested starting dose is one 500 mg tablet taken with both the morning and evening meals, or one 850 mg tablet taken once a day with the morning meal.	GLUCOPHAGE* (metformin) GLUCOPHAGE XR* Extended release tablets (metformin)	
		GLUCOPHAGE XR* Extended-release tablets (metformin)	**Bristol-Myers Squibb**	The usual starting dose is 500 mg or 750 mg, taken once daily with the evening meal.		

* Lactic acidosis—a rare but very serious (often fatal) complication—has been associated with the use of Glucophage (metformin). However, the reported incidence of lactic acidosis in people taking this medication is very low. Lactic acidosis happens more often in people with kidney problems. Signs of lactic acidosis are feeling very weak, tired, or uncomfortable; experiencing unusual muscle pain, trouble breathing, or unusual stomach discomfort; feeling cold, dizzy, or lightheaded; or suddenly developing a slow or irregular heartbeat. Contact your physician if your medical condition suddenly changes.

	Side Effects and Special Considerations
	What is JARDIANCE? JARDIANCE is a once-daily pill taken in the morning, used along with diet and exercise, to lower blood sugar (A1C) in adults with type 2 diabetes. JARDIANCE is not for people with type 1 diabetes or for people with diabetic ketoacidosis (increased ketones in the blood or urine). IMPORTANT SAFETY INFORMATION What is the most important information I should know about JARDIANCE? JARDIANCE can cause serious side effects, including: Dehydration. JARDIANCE can cause some people to have dehydration (the loss of body water and salt). Dehydration may cause you to feel dizzy, faint, light-headed, or weak, especially when you stand up. You may be at a higher risk of dehydration if you: • have low blood pressure • take medicines to lower your blood pressure, including water pills (diuretics) • are on a low salt diet • have kidney problems • are 65 years of age or older. • Vaginal yeast infection. Women who take JARDIANCE may get vaginal yeast infections. Talk to your doctor if you experience vaginal odor, white or yellowish vaginal discharge (discharge may be lumpy or look like cottage cheese), and/or vaginal itching. • Yeast infection of the penis. Men who take JARDIANCE may get a yeast infection of the skin around the penis, especially uncircumcised males and those with chronic infections. Talk to your doctor if you experience redness, itching or swelling of the penis, rash of the penis, foul smelling discharge from the penis, and/or pain in the skin around the penis. Who should not take JARDIANCE? • Do not take JARDIANCE if you are allergic to empagliflozin or any of the ingredients in JARDIANCE. • Symptoms of serious allergic reactions to JARDIANCE may include: • skin rash • raised red patches on your skin (hives) • swelling of the face, lips, tongue, and throat that may cause difficulty breathing or swallowing. If you have any of these symptoms, stop taking JARDIANCE and contact your doctor or go to the nearest emergency room right away. • Do not take JARDIANCE if you have severe kidney problems or are on dialysis. What should I tell my doctor before using JARDIANCE? Tell your doctor if you: • have kidney problems. Your doctor may do blood tests to check your kidneys before and during your treatment with JARDIANCE. • have liver problems • have a history of urinary tract infections or problems with urination • have any other medical conditions • are pregnant or planning to become pregnant. It is unknown if JARDIANCE will harm your unborn baby. • are breastfeeding, or plan to breastfeed. It is unknown if JARDIANCE passes into your breast milk. Tell your doctor about all the medicines you take including prescription and over-the-counter medicines, vitamins, and herbal supplements. Especially tell your doctor if you take water pills (diuretics) or medicines that can lower your blood sugar such as insulin. What are other possible side effects of JARDIANCE? • Low blood sugar (hypoglycemia): if you take JARDIANCE with another medicine that can cause low blood sugar, such as sulfonylurea or insulin, your risk of low blood sugar is higher. The dose of your sulfonylurea or insulin may need to be lowered. Symptoms of low blood sugar may include: • Headache • Confusion • Sweating • Drowsiness • Irritability • Shaking or feeling jittery • Weakness • Hunger • Dizziness • Fast heart beat • Kidney Problems, especially in people 75 years of age or older and people who already have kidney problems. • Urinary Tract Infection: symptoms may include burning feeling when passing urine, pain in the pelvis or back, or urine that looks cloudy. • Increased fats in your blood (cholesterol). The most common side effects of JARDIANCE include urinary tract infections and yeast infections in females. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1 800 FDA 1088. For more information, please see Full Prescribing Information, including Patient Information.
	What is SYNJARDY?SYNJARDY is a prescription medicine that contains 2 diabetes medicines, empagliflozin and metformin. SYNJARDY can be used along with diet and exercise to improve blood sugar in adults with type 2 diabetes who have already been treated with either empagliflozin or metformin and their blood sugar is not controlled well enough, or who are currently taking both empagliflozin and metformin as separate medicines. SYNJARDY is not for people with type 1 diabetes, or for people with diabetic ketoacidosis (increased ketones in the blood or urine). IMPORTANT SAFETY INFORMATION What is the most important information I should know about SYNJARDY? WARNING: RISK OF LACTIC ACIDOSIS Serious side effects can happen in people taking SYNJARDY. Metformin, one of the medicines in SYNJARDY, can cause a rare but serious condition called lactic acidosis (a build-up of lactic acid in the blood) that can cause death. Lactic acidosis is a medical emergency and must be treated in a hospital. Stop taking SYNJARDY and call your doctor right away if you get any of the following symptoms of lactic acidosis: you feel very weak or tired; have unusual muscle pain; have trouble breathing; are very sleepy or sleep longer than usual; have sudden stomach pains, nausea and vomiting or diarrhea; feel cold, especially in your arms or legs; feel dizzy or lightheaded; or have a slow or irregular heartbeat, as these could be symptoms of lactic acidosis. You have a higher chance of getting lactic acidosis with SYNJARDY if you have kidney problems, liver problems, congestive heart failure that requires medicines, drink alcohol very often, or drink a lot of alcohol in short-term "binge" drinking, get dehydrated (lose a large amount of body fluids), have certain x-ray tests with dyes or contrast agents that are injected into your body, have surgery, have a heart attack, severe infection, or stroke, are 80 years of age or older and have not had your kidneys tested. Who should not take SYNJARDY? Do not take SYNJARDY if you: • have severe kidney problems or are on dialysis • have a condition called metabolic acidosis or diabetic ketoacidosis (increased ketones in the blood or urine) • are allergic to empagliflozin, metformin, or any of the ingredients in SYNJARDY. Symptoms of serious allergic reactions to SYNJARDY may include skin rash, raised red patches on your skin (hives), swelling of the face, lips, tongue, and throat that may cause difficulty breathing or swallowing. If you have any of these symptoms, stop taking SYNJARDY and contact your doctor or go to the nearest emergency room right away What should I tell my doctor before using SYNJARDY? Tell your doctor about all of your medical conditions, including if you: • have kidney problems. Your doctor may do blood tests to check your kidneys before and during treatment with SYNJARDY • have liver problems • have a history of urinary tract infection or problems with urination • have heart problems, including congestive heart failure • drink alcohol very often, or drink a lot of alcohol in short-term "binge" drinking • are going to get an injection of dye or contrast agents for an x-ray procedure. SYNJARDY will need to be stopped for a short time. Talk to your doctor about when you should stop SYNJARDY and when you should start SYNJARDY again • have type 1 diabetes. SYNJARDY is not for people with type 1 diabetes • are pregnant or planning to become pregnant. It is not known if SYNJARDY will harm your unborn baby. Tell your doctor right away if you become pregnant during treatment with SYNJARDY • are breastfeeding or plan to breastfeed. It is not known if SYNJARDY passes into your breast milk Tell your doctor about all the medicines you take, including prescription or over-the-counter medicines, vitamins, or herbal supplements. What are the possible side effects of SYNJARDY? SYNJARDY may cause serious side effects including: • Dehydration. SYNJARDY can cause some people to have dehydration (the loss of body water and salt). Dehydration may cause you to feel dizzy, faint, light-headed, or weak, especially when you stand up. You may be at higher risk of dehydration if you have low blood pressure, kidney problems, are 65 years of age or older, are on a low salt diet, or take medicines to lower your blood pressure, including water pills (diuretics). • Low blood sugar (hypoglycemia). If you take SYNJARDY with another medicine that can cause low blood sugar, such as a sulfonylurea or insulin, your risk of getting low blood sugar is higher. The dose of your sulfonylurea medicine or insulin may need to be lowered. Symptoms of low blood sugar may include headache, drowsiness, weakness, irritability, hunger, fast heartbeat, confusion, shaking or feeling jittery, dizziness, or sweating. • Kidney problems. SYNJARDY can cause kidney problems, especially in people 75 years of age or older and people who already have kidney problems. • Vaginal yeast infection. Women who take SYNJARDY may get vaginal yeast infections. Talk to your doctor if you experience vaginal odor, white or yellowish vaginal discharge (discharge may be lumpy or look like cottage cheese), and/or vaginal itching. • Yeast infection of the penis. Men who take SYNJARDY may get a yeast infection of the skin around the penis, especially uncircumcised males and those with chronic infections. Talk to your doctor if you experience redness, itching or swelling of the penis, rash of the penis, foul smelling discharge from the penis, and/or pain in the skin around penis. • Urinary tract infection. Tell your doctor if you have any signs and symptoms of a urinary tract infection that may include a burning feeling when passing urine, urine that looks cloudy, pain in the pelvis, or back pain. • Low vitamin B12 (vitamin B12 deficiency). Using metformin for long periods of time may cause a decrease in the amount of vitamin B12 in your blood, especially if you have had low vitamin B12 blood levels before. Your doctor may do blood tests to check your vitamin B12 levels. • Increased fats in your blood (cholesterol). The most common side effects of SYNJARDY include stuffy or runny nose and sore throat, urinary tract infections, female genital infections, diarrhea, headache, nausea, and vomiting. These are not all the possible side effects of SYNJARDY. For more information, ask your doctor or pharmacist. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch.com or call 1-800-FDA-1088.
	Metformin rarely causes hypoglycemia when used alone. Metformin does not cause weight gain and does improve triglycerides. Gastrointestinal disturbances such as diarrhea, nausea, vomiting, abdominal bloating, and flatulence occur in up to one-third of users. Minimize side effects by taking with food. Do not use if kidney disease or active liver disease is present. Use caution with people 80 years old and older, or if heart failure is present. Do not use during medical tests that involve IV contrast drugs. Do not use for people who are going to have surgery. Do not use for people with significant alcohol intake. Not approved for use during pregnancy or lactation. Refer to the Glucophage/metformin text directly above for important information about this medication. Also, go to www.riomet.com to download or review complete information about Riomet. See the entry for Glucophage/metformin. In some clinical trials, Glucophage XR lost the triglyceride-lowering benefit. Do not divide, crush, or chew these tablets.

Type 2 Medications

Drug Class	How It Works	Brand and Generic Names	Manufacturers	Usual Starting Dose	Max Daily Dose	
STARCH BLOCKERS	**Alpha-Glucosidase Inhibitors:** These drugs work in the intestines to slow the digestion of some carbohydrates so that after-meal blood glucose peaks are not so high.	**PRECOSE** (acarbose)	**Bayer**	25 mg (half a 50 mg tablet), taken orally three times a day at the start of each main meal.	150-300 mg per day (100 mg with each meal)	
		GLYSET (miglitol)	**Pharmacia Upjohn**	25 mg to 50 mg taken with meals.	300 mg per day (100 mg with each meal)	
DPP-4 INHIBITORS	These drugs enhance a natural body system called the incretin system, which helps to regulate glucose by affecting the beta cells and alpha cells in the pancreas. The mechanism of action of DPP-4 inhibitors is glucose-dependent, responding to the presence of elevated glucose and resulting in the release of insulin and decrease of glucagons only when needed, thereby lowering the potential for hypoglycemia.	**JANUVIA** (sitagliptin)	**Merck & Co., Inc.**	100 mg once daily, with or without food, for all approved indications.	100 mg once daily	
	ONGLYZA® (saxagliptin) inhibits DPP-4 enzyme activity for 24 hours period and prolongs the action of naturally secreted incretins. Incretins, such as glucagon-like peptide-1 (GLP-1) and glucose-dependent insulinotropic polypeptide (GIP), increase insulin production from pancreatic β-cells. Additionally, GLP-1 decreases glucagon production from pancreatic α-cells.	 **ONGLYZA™** (saxagliptin)	**Manufactured by: Bristol-Myers Squibb** **Marketed by: Bristol-Myers Squibb Company and AstraZeneca Pharma-ceuticals LP**	Recommended dosage is 2.5 mg or 5 mg once daily taken regardless of meals.	2.5 mg or 5 mg once daily taken regardless of meals	
	TRADJENTA® works by increasing hormones that stimulate your pancreas to produce more insulin and stimulate the liver to produce less glucose. 	**TRADJENTA®** (linagliptin)	**Manufactured by: Boehringer Ingelheim® Marketed by: Boehringer Ingelheim® and Eli Lilly ®and Company**	The recommended dose of TRADJENTA® is one 5 mg tablet once a day, with or without food	N/A	
SGLT2/DPP-4	Sodium-glucose co-transporter 2 (SGLT2) inhibitor and dipeptidyl peptidase-4 (DPP-4) inhibitor combination product GLYXAMBI® works by removing glucose through the urine by blocking blood glucose re-absorption in the kidney, while also increasing hormones that stimulate the pancreas to produce more insulin and stimulate the liver to produce less glucose.	**Glyxambi®** (empagliflozin/ linagliptin) tablet	**Manufactured by: Boehringer Ingelheim® Marketed by: Boehringer Ingelheim® and Eli Lilly ®and Company**	The recommended dose of GLYXAMBI is 10/5 mg once daily, taken in the morning, with or without food	Dose may be increased to 25/5 mg, once daily	

	Side Effects and Special Considerations
	Abdominal pain, flatulence, and diarrhea tend to return to pretreatment levels as therapy continues. Take with the first bite of food for maximum effectiveness. Not approved for use during pregnancy or lactation. When these medications are used in combination with insulin, meglitinides, or sulfonylureas, hypoglycemia may occur and must be treated with pure glucose (tablets or gel) or milk because Precose and Glyset delay the absorption of other carbohydrates.
	In clinical trials, Januvia demonstrated an overall incidence of side effects comparable to placebo. The most common side effects reported with Januvia (≥5 percent and higher than placebo) were stuffy or runny nose and sore throat, upper respiratory infection, and headache. Across the clinical program, Januvia once-daily was weight neutral compared to placebo, and the overall incidence of hypoglycemia was similar to placebo. Because Januvia is renally eliminated, and to achieve plasma concentrations of Januvia similar to those in patients with normal renal function, a dosage adjustment is recommended in patients with moderate renal insufficiency and in patients with severe renal insufficiency or with endstage renal disease (ESRD) requiring hemodialysis or peritoneal dialysis.
	Indication and Limitations of Use for ONGLYZA® (saxagliptin) ONGLYZA is indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus in multiple clinical settings. ONGLYZA should not be used for the treatment of type 1 diabetes mellitus or diabetic ketoacidosis. ONGLYZA has not been studied in patients with a history of pancreatitis. Important Safety Information for ONGLYZA Contraindications • History of a serious hypersensitivity reaction to ONGLYZA (eg, anaphylaxis, angioedema, or exfoliative skin conditions) Warnings and Precautions • Pancreatitis: There have been postmarketing reports of acute pancreatitis in patients taking ONGLYZA. After initiating ONGLYZA, observe patients carefully for signs and symptoms of pancreatitis. If pancreatitis is suspected, promptly discontinue ONGLYZA and initiate appropriate management. It is unknown whether patients with a history of pancreatitis are at increased risk of developing pancreatitis while using ONGLYZA. • Hypoglycemia with Concomitant Use of Sulfonylurea or Insulin: When ONGLYZA was used in combination with a sulfonylurea or with insulin, medications known to cause hypoglycemia, the incidence of confirmed hypoglycemia was increased over that of placebo used in combination with a sulfonylurea or with insulin. Therefore, a lower dose of the insulin secretagogue or insulin may be required to minimize the risk of hypoglycemia when used in combination with ONGLYZA. • Hypersensitivity Reactions: There have been postmarketing reports of serious hypersensitivity reactions in patients treated with ONGLYZA, including anaphylaxis, angioedema, and exfoliative skin conditions. Onset of these reactions occurred within the first 3 months after initiation of treatment with ONGLYZA, with some reports occurring after the first dose. If a serious hypersensitivity reaction is suspected, discontinue ONGLYZA, assess for other potential causes for the event, and institute alternative treatment for diabetes. Use caution in patients with a history of angioedema to another DPP-4 inhibitor as it is unknown whether they will be predisposed to angioedema with ONGLYZA. • Macrovascular Outcomes: There have been no clinical studies establishing conclusive evidence of macrovascular risk reduction with ONGLYZA or any other antidiabetic drug. Most Common Adverse Reactions • Most common adverse reactions reported in ≥5% of patients treated with ONGLYZA and more commonly than in patients treated with control were upper respiratory tract infection (7.7%, 7.6%), headache (7.5%, 5.2%), nasopharyngitis (6.9%, 4.0%) and urinary tract infection (6.8%, 6.1%). • When used as add-on combination therapy with a thiazolidinedione, the incidence of peripheral edema for ONGLYZA 2.5 mg, 5 mg, and placebo was 3.1%, 8.1% and 4.3%, respectively.• Confirmed hypoglycemia was reported more commonly in patients treated with ONGLYZA 2.5 mg and ONGLYZA 5 mg compared to placebo in the add-on to glyburide trial (2.4%, 0.8% and 0.7%, respectively), with ONGLYZA 5 mg compared to placebo in the add-on to insulin (with or without metformin) trial (5.3% and 3.3%, respectively),with ONGLYZA 2.5 mg compared to placebo in the renal impairment trial (4.7% and 3.5%, respectively), and with ONGLYZA 5 mg compared to placebo in the add-on to metformin plus sulfonylurea trial (1.6% and 0.0%, respectively). Drug Interactions Because ketoconazole, a strong CYP3A4/5 inhibitor, increased saxagliptin exposure, the dose of ONGLYZA should be limited to 2.5 mg when coadministered with a strong CYP3A4/5 inhibitor (eg, atazanavir, clarithromycin, indinavir, itraconazole, ketoconazole, nefazodone, nelfinavir, ritonavir, saquinavir, and telithromycin).
	WHAT IS TRADJENTA? TRADJENTA is a prescription medicine that is used along with diet and exercise to lower blood sugar in adults with type 2 diabetes. TRADJENTA is not for people with type 1 diabetes or for people with diabetic ketoacidosis (increased ketones in the blood or urine). If you have had inflammation of the pancreas (pancreatitis) in the past, it is not known if you have a higher chance of getting pancreatitis while you take TRADJENTA. WHAT IS THE MOST IMPORTANT INFORMATION I SHOULD KNOW ABOUT TRADJENTA? Serious side effects can happen to people taking TRADJENTA, including inflammation of the pancreas (pancreatitis), which may be severe and lead to death. Before you start taking TRADJENTA, tell your doctor if you have ever had pancreatitis, gallstones, a history of alcoholism, or high triglyceride levels. Stop taking TRADJENTA and call your doctor right away if you have pain in your stomach area (abdomen) that is severe and will not go away. The pain may be felt going from your abdomen through to your back. The pain may happen with or without vomiting. These may be symptoms of pancreatitis. WHO SHOULD NOT TAKE TRADJENTA? Do not take TRADJENTA if you are allergic to linagliptin or any of the ingredients in TRADJENTA. Symptoms of a serious allergic reaction to TRADJENTA may include rash, itching, flaking or peeling; raised red patches on your skin (hives); swelling of your face, lips, tongue and throat that may cause difficulty breathing or swallowing. If you have any symptoms of a serious allergic reaction, stop taking TRADJENTA and call your doctor or go to the emergency room right away. WHAT SHOULD I TELL MY DOCTOR BEFORE USING TRADJENTA? Tell your doctor about all your medical conditions, including if you have or have had inflammation of your pancreas (pancreatitis). Tell your doctor about all the medicines you take, including prescription and over the counter medicines, vitamins, and herbal supplements. TRADJENTA may affect the way other medicines work, and other medicines may affect how TRADJENTA works. Especially tell your doctor if you take • other medicines that can lower your blood sugar. If you take TRADJENTA with another medicine that can cause low blood sugar, such as sulfonylurea or insulin, your risk of getting low blood sugar is higher. The dose of your sulfonylurea or insulin may need to be lowered while you take TRADJENTA. • rifampin (Rifadin®, Rimactane®, Rifater®, Rifamate®)*, an antibiotic that is used to treat tuberculosis. *These trademarks are owned by third parties not affiliated with TRADJENTA. Tell your doctor if you are pregnant or planning to become pregnant or are breastfeeding or plan to breastfeed. WHAT ARE THE POSSIBLE SIDE EFFECTS OF TRADJENTA? TRADJENTA may cause serious side effects, including • Inflammation of the pancreas (pancreatitis). • Low blood sugar (hypoglycemia), especially if you take TRADJENTA with another medicine that can cause low blood sugar. Signs and symptoms of low blood sugar may include headache, drowsiness, weakness, dizziness, confusion, irritability, hunger, fast heartbeat, sweating, or feeling jittery. • Allergic (hypersensitivity) reactions can happen after your first dose or up to 3 months after starting TRADJENTA. Symptoms may include swelling of your face, lips, throat, and other areas on your skin; difficulty with swallowing or breathing; raised, red areas on your skin (hives); skin rash, itching, flaking, or peeling. • Joint pain. Some people who take medicines called DPP-4 inhibitors like TRADJENTA, may develop joint pain that can be severe. Call your doctor if you have severe joint pain. The most common side effects of TRADJENTA include stuffy or runny nose, sore throat, cough and diarrhea. These are not all the possible side effects of TRADJENTA. For more information, ask your doctor or pharmacist. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1 800 FDA 1088. For more safety information, please see Medication Guide and full Prescribing Information.
	What is GLYXAMBI? GLYXAMBI is a prescription medicine that contains 2 diabetes medicines, empagliflozin and linagliptin. GLYXAMBI can be used along with diet and exercise to lower blood sugar in adults with type 2 diabetes when treatment with both empagliflozin and linagliptin is appropriate. GLYXAMBI is not for people with type 1 diabetes or for diabetic ketoacidosis (increased ketones in the blood or urine). If you have had pancreatitis (inflammation of the pancreas) it is not known if you have a higher chance of getting pancreatitis while taking GLYXAMBI. What is the most important information I should know about GLYXAMBI? Serious side effects can happen to people taking GLYXAMBI, including: • Inflammation of the pancreas (pancreatitis), which may be severe and lead to death. Before you start taking GLYXAMBI, tell your doctor if you have ever had pancreatitis, gallstones, a history of alcoholism, or high triglyceride levels. Stop taking GLYXAMBI and call your doctor right away if you have pain in your stomach area (abdomen) that is severe and will not go away. The pain may be felt going from your abdomen to your back. The pain may happen with or without vomiting. These may be symptoms of pancreatitis. • Dehydration. GLYXAMBI can cause some people to have dehydration (the loss of body water and salt). Dehydration may cause you to feel dizzy, faint, light-headed, or weak, especially when you stand up. You may be at higher risk of dehydration if you have low blood pressure, take medicines to lower your blood pressure, including water pills (diuretics), are on a low salt diet, have kidney problems, or are 65 years of age or older. • Vaginal yeast infection. Women who take GLYXAMBI may get vaginal yeast infections. Talk to your doctor if you experience vaginal odor, white or yellowish vaginal discharge (discharge may be lumpy or look like cottage cheese), and/or vaginal itching. • Yeast infection of the penis. Men who take GLYXAMBI may get a yeast infection of the skin around the penis, especially uncircumcised males and those with chronic infections. Talk to your doctor if you experience redness, itching or swelling of the penis, rash of the penis, foul smelling discharge from the penis, and/or pain in the skin around penis. Who should not take GLYXAMBI? Do not take GLYXAMBI if you have severe kidney problems or are on dialysis. Do not take GLYXAMBI if you are allergic to empagliflozin and linagliptin or any of the ingredients in GLYXAMBI. Symptoms of a serious allergic reaction to GLYXAMBI may include skin rash, itching, flaking or peeling; raised red patches on your skin (hives); difficulty swallowing or breathing; or swelling of your face, lips, tongue, and throat that may cause difficulty breathing or swallowing. If you have any of these symptoms, stop taking GLYXAMBI and call your doctor or go to the emergency room right away. What should I tell my doctor before using GLYXAMBI? Tell your doctor if you: • have kidney problems. Your doctor may do blood tests to check your kidneys before and during your treatment with GLYXAMBI • have liver problems • have a history of inflammation of your pancreas (pancreatitis) • have a history of infection of the vagina or penis • have a history of urinary tract infections or problems with urination • have any other medical condition • are pregnant or plan to become pregnant. It is unknown if GLYXAMBI will harm your unborn baby. Tell your doctor right away if you become pregnant during treatment with GLYXAMBI • are breastfeeding, or planning to breastfeed. It is unknown if GLYXAMBI passes into your breast milk. Tell your doctor about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements. GLYXAMBI may affect the way other medicines work, and other medicines may affect how GLYXAMBI works. Especially tell your doctor if you take: • insulin or other medicines that can lower your blood sugar • diuretics (water pills) • rifampin (Rifadin®, Rimactane®, Rifater®, Rifamate®)*, an antibiotic that is used to treat tuberculosis *These trademarks are owned by third parties not affiliated with GLYXAMBI. What are the possible side effects of GLYXAMBI? GLYXAMBI may cause serious side effects, including: • Low blood sugar (hypoglycemia), if you take GLYXAMBI with another medicine that can cause low blood sugar such as a sulfonylurea or insulin, your risk of getting low blood sugar is higher. The dose of your sulfonylurea or insulin may need to be lowered. Signs and symptoms of low blood sugar may include headache, drowsiness, weakness, confusion, irritability, hunger, fast heartbeat, sweating, or feeling jittery. • Urinary tract infections are a common side effect of GLYXAMBI but can sometimes be serious. Symptoms may include burning feeling when passing urine, urine that looks cloudy, and/or pain in the pelvis or back. • Allergic (hypersensitivity) reactions can happen after your first dose or up to 3 months after starting GLYXAMBI. Symptoms may include swelling of your face, lips, throat, and other areas on your skin; difficulty with swallowing or breathing; raised, red areas on your skin (hives); and/or skin rash, itching, flaking, or peeling. If you have any of these symptoms, stop taking GLYXAMBI and call your doctor or go to the emergency room right away. • Kidney problems, especially in people 75 years and older and people who already have kidney problems • Increased fats in your blood (cholesterol). The most common side effects of GLYXAMBI include urinary tract infections, stuffy or runny nose and sore throat, and upper respiratory tract infections. These are not all the possible side effects of GLYXAMBI. For more information, ask your doctor or pharmacist. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088

Type 2 Medications

Drug Class	How It Works	Brand and Generic Names	Manufacturers	Usual Starting Dose
GLP-1 RECEPTOR AGONIST	**BYETTA** was the first glucagon-like peptide-1 (GLP-1) receptor agonist to be approved by the FDA for the treatment of type 2 diabetes. BYETTA exhibits many of the same effects as the human incretin hormone GLP-1. GLP-1 improves blood sugar after food intake through multiple effects that work in concert on the stomach, liver, pancreas and brain. BYETTA improves glycemic control by reducing postprandial glucose concentrations in the following ways: -stimulates glucose-dependent insulin secretion -improves first-phase insulin response -suppresses postprandial glucagon secretion, which decreases hepatic glucose production -slows gastric emptying -reduces food intake BYETTA is an injectable prescription medicine that may improve blood sugar (glucose) control in adults with type 2 diabetes mellitus, when used with a diet and exercise program. It can also be used with metformin, a sulfonylurea, a thiazolidinedione or Lantus®(insulin glargine), which is a long-acting insulin.	**BYETTA®** (exenatide) injection 	**Manufactured by: Bristol-Myers Squibb** **Marketed by: Bristol-Myers Squibb Company and AstraZeneca Pharmaceuticals LP**	5 micrograms twice a day up to (60 minutes before the two main meals of the day, at least 6 hours apart) for at least 30 days; may be increased to 10 micrograms up to 60 minutes before the two main meals of the day, at least 6 hours apart
	Victoza® is an injectable type 2 diabetes medication. However, it is not insulin and does not contain insulin. Victoza has been studied in combination with basal insulin. It has not been studied in combination with prandial insulin. It can be taken with other diabetes medications, including metformin, sulfonylureas, and basal insulin and TZDs under a doctor's prescription. Victoza® is 97 percent similar to a hormone made in the body called glucagon-like peptide-1, or GLP-1. When a person eats, GLP-1 helps the beta cells in the pancreas release the right amount of insulin to move sugar from the blood into the cells. Victoza® has the same effect and also helps slow down the time it takes for food to leave the stomach, which can help the body manage its blood sugar level. Victoza® also prevents the liver from releasing too much sugar by lowering the amount of another hormone, glucagon.	 **Victoza®** (liraglutide [rDNA origin]injection)  VICTOZA® 	**Novo Nordisk**	For all patients, Victoza® should be initated with a dose of 0.6 mg per day for one week. The 0.6 mg dose is a starting dose intended to reduce gastrointestinal symptoms during inital titration, and is not effective for glycemic control. After one week at 0.6 mg per day, the dose should be increased to 1.2 mg. If the 1.2 mg dose does not result in acceptable glycemic control, the dose can be increased to 1.8 mg.
	BYDUREON is the first and only once-weekly medicine to be approved by the FDA for the treatment of type 2 diabetes. BYDUREON improves glycemic control by reducing postprandial glucose concentrations in the following ways: -stimulates glucose-dependent insulin secretion -suppresses postprandial glucagon secretion, which decreases hepatic glucose production -slows gastric emptying -reduces food intakeBYDUREON was approved in the U.S. in January 2012. BYDUREON is an injectable prescription medicine that may improve blood sugar (glucose) in adults with type 2 diabetes mellitus, and should be used along with diet and exercise. BYDUREON is not recommended as the first medication to treat diabetes. BYDUREON is a long-acting form of the medication in BYETTA® (exenatide) injection so both drugs should not be used together. BYDUREON is not a substitute for insulin and has not been studied in combination with insulin. BYDUREON is not for people with type 1 diabetes or people with diabetic ketoacidosis (a condition caused by very high blood sugar). BYDUREON is not recommended for use in children. It is not known if BYDUREON is safe and effective in people with a history of pancreatitis or severe kidney problems.	**BYDUREON®** (exenatide extended-release for injectable suspension)	**Manufactured by: Bristol-Myers Squibb** **Marketed by: Bristol-Myers Squibb Company and AstraZeneca Pharmaceuticals LP**	Administer 2 mg by subcutaneous injection once every seven days (weekly), at any time of day and with or without meals. 
	Trulicity is a once-weekly injectable prescription medicine to improve blood sugar in adults with type 2 diabetes. It should be used along with diet and exercise.	**TRULICITY®** (dulaglutide)	**Manufactured by: Eli Lilly and Company Marketed by: Eli Lilly and Company**	Trulicity comes in two doses - one with a yellow label (0.75 mg), the other with a blue label (1.5 mg). Your healthcare provider will tell you which one is right for you.
AMYLIN MIMETIC	Taken at mealtime, SYMLIN is the first and only amylin mimetic for use in patients with type 1 and type 2 diabetes treated with mealtime insulin. SYMLIN is a synthetic analogue of human amylin, a naturally occurring hormone that is made in the beta cells of the pancreas, the same cells that make insulin. In patients with type 2 diabetes who use insulin, and in patients with type 1 diabetes, beta cells in the pancreas that make both insulin and amylin are either damaged or destroyed, resulting in reduced secretion of both insulin and amylin after meals. Amylin deficiency can make it harder to control glucose levels after meals; therefore, using SYMLIN may reduce fluctuations in blood glucose levels following a meal. SYMLIN improves blood sugar after food intake through multiple effects. SYMLIN helps slow down the time it takes for food to leave the stomach, which can help the body manage its blood sugar level. SYMLIN also blocks the liver from releasing too much sugar by lowering the amount of another hormone, glucagon. SYMLIN also acts in your brain to help you feel full sooner during a meal, helping you reduce the amount of food you eat.	 **Symlin Pen™** (pramlintide acetate) pen-injector	**Manufactured by: Bristol-Myers Squibb** **Marketed by: Bristol-Myers Squibb Company and AstraZeneca Pharmaceuticals LP**	The amount of Symlin used depends on whether the patient has type 1 or type 2 diabetes. When starting SYMLIN, the dose of Insulin should be reduced to half. Never mix SYMLIN and insulin. For type 2: Start SYMLIN at 60 mcg injected subcutaneously, just before major meals (meal must have at least 250 calories or 30 grams of carbohydrate). For type 1: Start SYMLIN at 15 mcg injected subcutaneously, just before major meals (meal must have at least 250 calories or 30 grams of carbohydrate).

	Max Daily Dose	Side Effects and Special Considerations
	10 micrograms/ twice a day	Side Effects and Special Considerations— Serious side effects can happen in people who take BYETTA, including inflammation of the pancreas (pancreatitis) which may be severe and lead to death. Before taking BYETTA, tell your healthcare provider if you have had pancreatitis, stones in your gallbladder (gallstones), a history of alcoholism, or high blood triglyceride levels. Call your healthcare provider right away if you have pain in your stomach area (abdomen) that is severe, and will not go away. The pain may happen with or without vomiting and may be felt going from your abdomen through to your back. Your risk for getting low blood sugar is higher if you take BYETTA with another medicine that can cause low blood sugar, such as a sulfonylurea or insulin. The dose of your sulfonylurea or insulin medicine may need to be lowered while you use BYETTA. BYETTA should not be used in people who have severe kidney problems and should be used with caution in people who have had a kidney transplant. BYETTA may cause new or worse problems with kidney function, including kidney failure. Before you use BYETTA, tell your healthcare provider if you have severe problems with your stomach, such as delayed emptying of your stomach (gastroparesis) or problems with digesting food. Do not use BYETTA if you have had an allergic reaction to exenatide or any of the other ingredients in BYETTA. Severe allergic reactions can happen with BYETTA. Stop taking BYETTA and get medical help right away. Tell your healthcare provider if you are pregnant or plan to become pregnant. It is not known if BYETTA will harm your unborn baby. Talk to your healthcare provider first if you are breastfeeding or plan to breastfeed. The most common side effects with BYETTA include nausea, vomiting, diarrhea, feeling jittery, dizziness, headache, acid stomach, constipation, and weakness. Nausea most commonly happens when first starting BYETTA, but may become less over time. These are not all the side effects with BYETTA. Talk to your healthcare provider about any side effect that bothers you or that does not go away. For additional important safety information about BYETTA, please see the full Prescribing Information (www.BYETTA.com/pi) and Medication Guide (www.BYETTA.com/mg).
	1.8 mg	Victoza® is an injectable prescription medicine that may improve blood sugar (glucose) in adults with type 2 diabetes when used along with diet and exercise. Victoza® is not recommended as the first medication to treat diabetes. The concurrent use of Victoza® and prandial insulin has not been studied. Victoza® is not for people with type 1 diabetes or people with diabetic ketoacidosis. It is not known if Victoza® is safe and effective in children. Victoza® is not recommended for use in children. Before using Victoza®, patients should tell their doctors about all the medicines they take, especially sulfonylurea medicines or insulin, as taking them with Victoza® may affect how each medicine works. Victoza has not been studied in patients with a history of pancreatitis. Other antidiabetic therapy should be considered in patients with a history of pancreatitis. Victoza has a black box warning for MTC. Patients should tell their doctors if they are allergic to any of the ingredients in Victoza®; have severe stomach problems such as slowed emptying of the stomach (gastroparesis) or problems with digesting food; have or have had kidney or liver problems; have any other medical conditions; are pregnant or plan to become pregnant. Women should tell their doctors if they are breastfeeding or plan to breastfeed. It is unknown if Victoza® will harm an unborn baby or if it passes into breast milk. The risk for getting hypoglycemia, or low blood sugar, is higher if Victoza® is taken with another medicine that can cause low blood sugar, such as a sulfonylurea or insulin. The dose of sulfonylurea or insulin medicine may need to be lowered while taking Victoza®. The most common side effects with Victoza® include headache, nausea, and diarrhea. Nausea is most common when first starting Victoza®, but decreases over time in most people. Based on spontaneous postmarketing reports, acute pancreatitis, including fatal and non-fatal hemorrhagic or necrotizing pancreatitis has been observed in patients treated with Victoza®. Renal impairment has been reported during postmarketing use of Victoza, usually in association with nausea, vomiting, diarrhea, or dehydration which may sometimes require hemodialysis.
	2 mg once every seven days	POSSIBLE THYROID TUMORS, INCLUDING CANCER: In animal studies, BYDUREON caused rats to develop tumors of the thyroid gland. Some of these tumors were cancer. It is not known if BYDUREON causes thyroid tumors or a type of thyroid cancer called medullary thyroid cancer (MTC) in people. Do not take BYDUREON if you or any of your family members have MTC or if you have Multiple Endocrine Neoplasia syndrome type 2. While taking BYDUREON, tell your healthcare provider if you get a lump or swelling in your neck, hoarseness, trouble swallowing, or shortness of breath. These may be symptoms of thyroid cancer. Do not take BYDUREON if you have had an allergic reaction to exenatide or any of the other ingredients in BYDUREON. Severe allergic reactions can happen with BYDUREON. Symptoms of a severe allergic reaction to BYDUREON are severe rash or itching, swelling of your face, lips, and throat that may cause difficulty breathing or swallowing, feeling faint or dizzy and very rapid heartbeat. If you have any symptoms of a severe allergic reaction, stop taking BYDUREON and call your healthcare provider right away. Inflammation of the pancreas (pancreatitis) may happen, which may be severe and lead to death. Before taking BYDUREON, tell your healthcare provider if you have had pancreatitis, stones in your gallbladder (gallstones), a history of alcoholism, or high blood triglyceride levels. Stop taking BYDUREON and call your healthcare provider right away if you have pain in your stomach area (abdomen) that is severe and will not go away, occurs with or without vomiting, or is felt going from your stomach area through to your back. These may be symptoms of pancreatitis. Your risk for getting low blood sugar (hypoglycemia) is higher if you take BYDUREON with another medicine that can cause low blood sugar, such as a sulfonylurea. The dose of your sulfonylurea may need to be lowered while you use BYDUREON. Signs and symptoms of low blood sugar may include shakiness, headache, drowsiness, weakness, dizziness, confusion, irritability, hunger, fast heart beat, sweating, and feeling jittery. Tell your healthcare provider if you have or had kidney problems or a kidney transplant. BYDUREON may cause nausea, vomiting, or diarrhea, leading to loss of fluids (dehydration). Dehydration may cause kidney failure; this can happen in people who have never had kidney problems before. Call your healthcare provider right away if you have nausea, vomiting, or diarrhea that will not go away or if you cannot drink liquids. Tell your healthcare provider if you have severe problems with your stomach, such as delayed emptying of your stomach (gastroparesis) or problems with digesting food. The most common side effects with BYDUREON include nausea, diarrhea, headache, vomiting, constipation, itching at injection site, a small bump (nodule) at the injection site, and indigestion. Nausea most commonly happens when first starting BYDUREON, but may become less over time. Before using BYDUREON, tell your doctor about all the medicines you take, as taking them with BYDUREON may affect how each medicine works. Tell your healthcare provider if you take other diabetes medicines, especially insulin or a sulfonylurea, or warfarin sodium (Coumadin® or Jantoven®). Tell your healthcare provider if you are pregnant or plan to become pregnant. It is not known if BYDUREON will harm your unborn baby. Talk to your healthcare provider first if you are breastfeeding or plan to breastfeed. For additional important safety information about BYDUREON, please see the full Prescribing Information (www.BYDUREON.com/pi) and patient Medication Guide (www.BYDUREON.com/mg).
	Recommended starting dose is 0.75 mg. Dose may be increased to 1.5 mg for additional glycemic control.	Important Safety Information [for Trulicity®] Patients should tell their healthcare provider if they get a lump or swelling in their neck, have hoarseness, trouble swallowing, or shortness of breath while taking Trulicity. These may be symptoms of thyroid cancer. In studies with rats or mice, Trulicity and medicines that work like Trulicity caused thyroid tumors, including thyroid cancer. It is not known if Trulicity will cause thyroid tumors or a type of thyroid cancer called medullary thyroid carcinoma (MTC) in people. Patients should not take Trulicity if they or any of their family members have ever had MTC or if they have Multiple Endocrine Neoplasia syndrome type 2 (MEN 2). Patients should not take Trulicity if they have had an allergic reaction to dulaglutide or any of the other ingredients in Trulicity. Trulicity may cause serious side effects, including: • Inflammation of the pancreas (pancreatitis). If a patient has pain in their stomach area (abdomen) that is severe and will not go away, they should stop taking Trulicity and call their healthcare provider right away. The pain may happen with or without vomiting. It may be felt going from the abdomen through to the back. • Low blood sugar (hypoglycemia). If patients are using another medicine that can cause low blood sugar (such as insulin or a sulfonylurea) while taking Trulicity, their risk for getting low blood sugar (hypoglycemia) may be higher. Signs and symptoms of low blood sugar may include dizziness, blurred vision, anxiety, irritability, mood changes, sweating, slurred speech, hunger, confusion or drowsiness, shakiness, weakness, headache, fast heartbeat, or feeling jittery. Patients should talk to their healthcare provider about low blood sugar and how to manage it. • Serious allergic reactions. Patients should stop taking Trulicity and get medical help right away if they have symptoms of a serious allergic reaction, such as itching, rash, or difficulty breathing. • Kidney problems (kidney failure). In people who have kidney problems, diarrhea, nausea, and vomiting may cause a loss of fluids (dehydration). This may cause kidney problems to get worse. • Severe stomach problems. Trulicity may cause stomach problems, which could be severe. Patients should tell their healthcare provider if they: • have or have had problems with their pancreas, kidneys, or liver. • have severe problems with their stomach, such as slowed emptying of the stomach (gastroparesis) or problems with digesting food. • have any other medical conditions. • are pregnant or plan to become pregnant, or if they become pregnant while taking Trulicity. It is not known if Trulicity will harm their unborn baby. • are breastfeeding or plan to breastfeed. It is not known if Trulicity passes into breast milk. Patients should not use Trulicity while breastfeeding without first talking to their healthcare provider. • are taking other medicines including prescription and over-the-counter medicines, vitamins, and herbal supplements. Trulicity may affect the way some medicines work and some medicines may affect the way Trulicity works. • are taking other medicines to treat diabetes, including insulin or sulfonylureas. The most common side effects with Trulicity may include: nausea, diarrhea, vomiting, decreased appetite, and indigestion. Patients should talk to their healthcare provider about any side effect that bothers them or does not go away. These are not all the possible side effects of Trulicity. Patients should call their doctor for medical advice about side effects. Patients are encouraged to report side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088. Please please see http://pi.lilly.com/us/trulicity-uspi.pdf for prescribing Information, including Boxed Warning about possible thyroid tumors including thyroid cancer, and Medication Guide. Please see Instructions for Use included with the pen. DG PR ISI 24SEP2015
	Type 2: 120 mcg; Type 1: 60 mcg with main meals	SYMLIN is not intended for all patients with diabetes. SYMLIN is used with insulin and has been associated with an increased risk of insulin-induced severe hypoglycemia, particularly in patients with type 1 diabetes. When severe hypoglycemia associated with SYMLIN use occurs, it is seen within three hours following a SYMLIN injection. If severe hypoglycemia occurs while operating a motor vehicle, heavy machinery or while engaging in other high-risk activities, serious injuries may occur. Appropriate patient selection, careful patient instruction and insulin dose adjustments are critical elements for reducing this risk. Other adverse events commonly observed with SYMLIN when co-administered with insulin were mostly gastrointestinal in nature, including nausea, which was the most frequently reported adverse event. The incidence of nausea was higher at the beginning of SYMLIN treatment and decreased with time in most patients. The incidence and severity of nausea are reduced when SYMLIN is gradually increased to the recommended doses. For additional important safety information about SYMLIN, please see the full Prescribing Information (www.SYMLIN.com/pi) and Medication Guide (www.SYMLIN.com/mg). Store unopened packages in the refrigerator, once opened can be stored refrigerated or up to a temperature of 86°F for 30 days.º