

Approved GLP-1 RAs in the United States, 2022

Generic Name	Exenatide	Liraglutide	Lixisenatide	Exenatide ER	Dulaglutide	SQ Semaglutide	Oral Semaglutide	SQ Semaglutide 3.0mg	SQ Semaglutide 2.4 mg
Brand name	Byetta	Victoza	Adlyxin	Bydureon Bcise	Trulicity	Ozempic	Rybelsus	Saxenda	Wegovy
Indications	<ul style="list-style-type: none"> Adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus 	<ul style="list-style-type: none"> Adjunct to diet and exercise to improve glycemic control in patients 10 years and older with type 2 diabetes mellitus To reduce the risk of major adverse cardiovascular events in adults with type 2 diabetes mellitus and established cardiovascular disease 	Adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus	Adjunct to diet and exercise to improve glycemic control in adults and pediatric patients aged 10 years and older with type 2 diabetes mellitus	<ul style="list-style-type: none"> Adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus. To reduce the risk of major adverse cardiovascular events in adults with type 2 diabetes mellitus who have established cardiovascular disease or multiple cardiovascular risk factors. 	<ul style="list-style-type: none"> Adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus To reduce the risk of major adverse cardiovascular events in adults with type 2 diabetes mellitus and established cardiovascular disease 	Adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus	Adjunct to a reduced-calorie diet and increased physical activity for chronic weight management in: Adult patients with an initial body mass index (BMI) of <ul style="list-style-type: none"> 30 kg/m2 or greater (obese), or 27 kg/m2 or greater (overweight) in the presence of at least one weight-related comorbid condition (e.g. hypertension, type 2 diabetes mellitus, or dyslipidemia) (1). Pediatric patients aged 12 years and older with: <ul style="list-style-type: none"> body weight above 60 kg and an initial BMI corresponding to 30 kg/m2 for adults (obese) by international cut-offs (1). 	Adjunct to a reduced calorie diet and increased physical activity for chronic weight management in adult patients with an initial body mass index (BMI) of; <ul style="list-style-type: none"> 30 kg/m2 or greater (obesity) or 27 kg/m2 or greater (overweight) in the presence of at least one weight-related comorbid condition (e.g., hypertension, type 2 diabetes mellitus, or dyslipidemia)
Contraindications or Important Precautions	<ul style="list-style-type: none"> History of severe hypersensitivity to exenatide or any product components Pancreatitis Renal Impairment Severe GI disease (e.g. gastroparesis) 	<ul style="list-style-type: none"> Contraindicated in patients with a personal or family history of medullary thyroid carcinoma (MTC) or in patients with Multiple Endocrine Neoplasia syndrome type 2 (MEN 2). Counsel patients regarding the potential risk of MTC and the symptoms of thyroid tumors Contraindicated in patients with a prior serious hypersensitivity reaction to liraglutide or any of the excipients in liraglutide Pancreatitis Renal Impairment Acute gallbladder disease 	<ul style="list-style-type: none"> Severe hypersensitivity to lixisenatide or any component of ADLYXIN Pancreatitis Acute kidney Injury or renal impairment 	<ul style="list-style-type: none"> Personal or family history of MTC, patients with MEN 2. Counsel patients regarding the potential risk of MTC and the symptoms of thyroid tumors Prior serious hypersensitivity reactions to exenatide or product components History of drug-induced, immune-mediated thrombocytopenia from exenatide products Pancreatitis Renal Impairment GI disease 	<ul style="list-style-type: none"> Patients with a personal or family history of medullary thyroid (MTC) or in patients with Multiple Endocrine Neoplasia syndrome type 2 (MEN 2). Counsel patients regarding the potential risk of MTC and the symptoms of thyroid tumors. Patients with a prior serious hypersensitivity reaction to TRULICITY or any of the product components Pancreatitis Renal impairment GI disease Diabetic retinopathy 	<ul style="list-style-type: none"> Patients with a personal or family history of medullary thyroid (MTC) or in patients with Multiple Endocrine Neoplasia syndrome type 2 (MEN 2). Counsel patients regarding the potential risk of MTC and the symptoms of thyroid tumors. Prior serious hypersensitivity reaction to semaglutide or any of the excipients in OZEMPIC Pancreatitis Diabetic retinopathy Renal impairment 	<ul style="list-style-type: none"> Patients with a personal or family history of medullary thyroid (MTC) or in patients with Multiple Endocrine Neoplasia syndrome type 2 (MEN 2). Counsel patients regarding the potential risk of MTC and the symptoms of thyroid tumors. Known hypersensitivity to semaglutide or any of the components in RYBELSUS. Pancreatitis Diabetic retinopathy Renal impairment 	<ul style="list-style-type: none"> Patients with a personal or family history of medullary thyroid (MTC) or in patients with Multiple Endocrine Neoplasia syndrome type 2 (MEN 2). Counsel patients regarding the potential risk of MTC and the symptoms of thyroid tumors. Hypersensitivity to liraglutide or any excipients in SAXENDA Pregnancy Pancreatitis Gallbladder disease Renal impairment Heart rate increase Monitor for depression or suicidal thoughts 	<ul style="list-style-type: none"> Personal or family history of medullary thyroid carcinoma or in patients with Multiple Endocrine Neoplasia syndrome type 2. Counsel patients regarding the potential risk of MTC and symptoms of thyroid tumors. Known hypersensitivity to semaglutide or any of the excipients in WEGOVY™ Pancreatitis Pancreatitis Renal impairment Diabetic retinopathy Heart rate increase Monitor for depression or suicidal thoughts
Dosage and Administration	Starting: 5 mcg twice a day Maintenance: 5 - 10 mcg twice a day Max: 10 mcg twice a day	Starting: 0.6 mg once daily for 1 week Maintenance: 1.2 - 1.8 mg once daily Max: 1.8 mg once daily	Starting: 10 mcg once daily for 14 days Maintenance: 20 mcg once daily Max: 20 mcg once daily	Dosing: 2 mg once weekly Max: 2 mg once weekly	Starting: 0.75 mg once weekly Maintenance: 0.75 - 4.5 mg once weekly Max: 4.5 mg once weekly	Starting: 0.25 mg SQ once weekly for 4 weeks Maintenance: 0.5 - 1 mg SQ once weekly Max: 1 mg SQ once weekly	Starting: 3 mg once daily for 30 days Maintenance: 7 mg once daily. 7 mg dose may be increased to 14 mg after at least 30 days. Max: 14 mg once daily	Starting: 0.6mg once daily for 1 week Maintenance: 0.6-3.0mg once daily Max: 3.0mg once daily (pediatric patients who cannot tolerate this dose may have their dose reduced to 2.4mg daily)	Starting: 0.25mg once weekly for 4 weeks Maintenance: 2.4mg once weekly Max: 2.4mg once weekly
Black-box warning		<ul style="list-style-type: none"> Liraglutide causes thyroid C-cell tumors at clinically relevant exposures in both genders of rats and mice. It is unknown whether VICTOZA® causes thyroid C-cell tumors, including medullary thyroid carcinoma (MTC), in humans, as the human relevance of liraglutide-induced rodent thyroid C-cell tumors has not been determined Thyroid C-cell tumors (see above) 		<ul style="list-style-type: none"> Exenatide extended-release causes thyroid C-cell tumors at clinically relevant exposures in rats. It is unknown whether BYDUREON causes thyroid C-cell tumors, including medullary thyroid carcinoma (MTC) in humans, as the human relevance of exenatide extended-release-induced rodent thyroid C-cell tumors has not been determined Thyroid C-cell tumors (see above) 	<ul style="list-style-type: none"> Dulaglutide causes thyroid C-cell tumors in rats. It is unknown whether TRULICITY causes thyroid C-cell tumors, including medullary thyroid carcinoma (MTC), in humans as the human relevance of dulaglutide-induced rodent thyroid C-cell tumors has not been determined Thyroid C-cell tumors (see above) 	<ul style="list-style-type: none"> In rodents, semaglutide causes thyroid C-cell tumors. It is unknown whether OZEMPIC® causes thyroid C-cell tumors, including medullary thyroid carcinoma (MTC), in humans as the human relevance of semaglutide-induced rodent thyroid C-cell tumors has not been determined Thyroid C-cell tumors (see above) 	<ul style="list-style-type: none"> In rodents, semaglutide causes thyroid C-cell tumors. It is unknown whether RYBELSUS causes thyroid C-cell tumors, including medullary thyroid carcinoma (MTC), in humans as the human relevance of semaglutide-induced rodent thyroid C-cell tumors has not been determined. Thyroid C-cell tumors (see above) 	<ul style="list-style-type: none"> Liraglutide causes thyroid C-cell tumors at clinically relevant exposures in both genders of rats and mice. It is unknown whether SAXENDA® causes thyroid C-cell tumors, including medullary thyroid carcinoma (MTC), in humans, as the human relevance of liraglutide-induced rodent thyroid C-cell tumors has not been determined Thyroid C-cell tumors (see above) 	<ul style="list-style-type: none"> In rodents, semaglutide causes thyroid C-cell tumors at clinically relevant exposures. It is unknown whether WEGOVY™ causes thyroid C-cell tumors, including medullary thyroid carcinoma (MTC), in humans as the human relevance of semaglutide-induced rodent thyroid C-cell tumors has not been determined Thyroid C-cell tumors (see above)