

GLP-1 Receptor Agonist

Dual GIP/GLP-1 Receptor Agonist

Common medications	Dual GLP-1 RA: dulaglutide (Trulicity®), liraglutide (Victoza®), semaglutide (Ozempic®/Rybelsus®) Dual GIP/GLP-1 RA: tirzepatide (Mounjaro®)			
Type of drug	Incretin mimetic			
Cardiorenal benefits in high- risk populations*	<ul style="list-style-type: none"> • Heart protection: reduces the risk of heart attacks • Brain protection: reduces the risk of strokes • Kidney protection: reduces albuminuria (protein in the urine) 			
Blood glucose lowering and weight-reducing action	<ul style="list-style-type: none"> • Increases the body's response to blood sugar: Increases the body's own insulin levels (to lower blood sugar) and decreases glucagon (a hormone that raises blood sugar) • Sugar-dependent action: stronger blood sugar-lowering when blood sugars are above-target; weak (or no) blood sugar-lowering when blood sugars are at- or below-target (medication on its own does not cause low blood sugars, but may have low blood sugar with other diabetes medications) • Slows the emptying of the stomach – promotes feeling full (not hungry) • Can lower blood pressure slightly 			
		Glucose-lowering efficacy	A1C-lowering (%)	Weight-lowering (kg)
	GLP-1 RA	High to very high	0.6 – 1.4	1.1 - 4.4
Dual GIP/GLP-1 RA	Very high	1.7 – 2.4	5.4 - 11.3	
Dosing	Initiation dose	Minimum maintenance dose	Minimum demonstrated cardiorenal protective dose*	Potential dose escalations for additional glucose-/ weight-lowering
Dulaglutide [†]	0.75mg	0.75mg	1.5mg	3mg, 4.5mg
Liraglutide [‡]	0.6mg	1.2mg	1.8mg	– (2.4mg, 3.0mg) [§]
Semaglutide s.c. [†]	0.25mg	0.5mg	0.5mg	1mg, 2mg (1mg, 1.7mg, 2.4mg) [§]
Semaglutide p.o. [#]	3mg	7mg	–	14mg
Tirzepatide [†]	2.5mg	5mg	–	7.5mg, 10mg 12.5mg, 15mg
	<p>† administer once weekly and consider dose escalations at a minimum 4-week interval; ‡ administer daily and consider dose escalations at a minimum 7-day interval # administer once daily and consider dose escalations at a minimum 30-day interval * cardiorenal protection currently demonstrated for dulaglutide, liraglutide & semaglutide s.c. § doses indicated for chronic weight management</p> <p>Continued</p>			

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Dual GIP/GLP-1 Receptor Agonist (continued)

Medication considerations and/or side effects	<ul style="list-style-type: none">• GI adverse effects, e.g. nausea, diarrhea/constipation, vomiting, can often be avoided or reduced with attention to food choices• To reduce possible GI upset: Eat smaller meals, stop eating when not hungry, avoid spicy and/or fatty foods, stay hydrated (i.e. drink water)• With GI upset: consider extending the interval between dose up-titrations and/or reducing the up-titration dose• If low blood sugars occur: assess and adjust (decrease/stop) other medications associated with hypoglycemia such as insulin secretagogue and insulin• With known diabetic eye disease (retinopathy), semaglutide should be started with your eye doctor's knowledge• See an eye doctor (ophthalmologist or optometrist) every 1 to 2 years specifically to look at the blood vessels at the back of the eye (retina)
Cautions	<ul style="list-style-type: none">• History of pancreatitis, pancreatic cancer• Can increase heart rate by 7-8 bpm & prolong PR interval by 10ms• Limited clinical experience in GFR <15 mL/min/1.73m² or on dialysis
Contraindications	<ul style="list-style-type: none">• Personal or family history of medullary thyroid carcinoma (MTC), multiple endocrine neoplasia syndrome in type 2 (MEN 2), pregnancy and breastfeeding