

ANTIHYPERGLYCEMIC DRUGS for type 2 diabetes

Rx	Dosage Form	Strength and Dosage Schedule	eGFR (mL/min/1.73m ²)				↓ A1C (add-on to MET)	Weight (add-on to MET)	Hypo Risk	Major Adverse Cardiovascular Events ¹	Cardiorenal Benefits	RAMQ reimbursement criteria			NIHB reimbursement criteria (Non-Insured Health Benefits program for First Nations and Inuit)		
			< 15 or dialysis	15-29	30-44	45-59						Monotherapy MET + SU Contraindicated or not tolerated	In conjunction If the other agent is contraindicated, not tolerated, or ineffective		Combination treatment EN 150: SU contraindicated, not tolerated or ineffective; MET stable for 1 month EN 219: Recognized indication for Empa; MET stable for 1 month	Coverage	Combination treatment coverage
													+ MET	+ SU			
1* Metformin	GLUCOPHAGE (Metformin)	500 - 850 mg BID/TID (max. 850 mg TID/1000 mg BID)		500 mg QD (do not initiate)	500 mg BID		Neutral	Rare	-	-	Covered	-	Covered	-	Open Benefit	-	
	GLUMETZA (Metformin)	500 - 1000 mg QD (max. 2000 mg QD)			1000 mg QD			Rare	-	-	Private ins.	-	Private ins.	-	Not listed	-	
SGLT2i	INVOKANA (Canagliflozin)	100 - 300 mg QD		Continue treatment	100 mg (Recommended for cardiorenal benefits. Lower glycemic efficacy.)	0.8 to 0.9%	3.3 to 4.0 kg	Rare	POSITIVE ¹ (Established atherosclerotic cardiovascular disease)	↓ Hospitalization for heart failure ³ ↓ Progression of nephropathy ⁴	EN 167	EN 148	EN 149	Invokamet 50 - 150/500 - 1000 Private ins.	Limited Use Uncontrolled T2D and intolerance to MET and SU	Invokamet (Not listed)	
	JARDIANCE (Empagliflozin)	10 - 25 mg QD	< 20 ml/min	10 mg Continue treatment	(Recommended for cardiorenal benefits. Lower glycemic efficacy.)	0.7 to 0.8%	2.1 to 3.1 kg	Rare			EN 167	EN 148	Private ins.	Synjardy 5 - 12.5/500 - 850 - 1000 EN 219 Jardiance EN 179	Open Benefit	Synjardy Open Benefit	
	FORXIGA (Dapagliflozin)	5 - 10 mg QD		Continue treatment		0.5 to 0.8%	2.9 to 3.2 kg	Rare	NEUTRAL			Private ins.	EN 148	EN 149	Xigduo 5/850 - 1000 EN 150	Open Benefit	Xigduo Open Benefit
2** GLP-1 RA	VICTOZA (s.c. Liraglutide)	0.6 mg QD x 1 week 1.2 mg QD x 1 week 1.8 mg QD (optional)	NR			1.0 to 1.5%	2.6 to 3.4 kg	Rare	POSITIVE ² (Established atherosclerotic cardiovascular disease AND/OR >60 yo with 2 CV risk factors)	↓ Albuminuria ⁵	Exception drugs Not at target + MET; BMI >30; DPP-4i is ineffective, contraindicated, and/or not tolerated. 12 months per authorization (first continuation: ↓ A1C ≥ 0.5% or a value ≤ 7%)			-	Not listed	-	
	TRULICITY (s.c. Dulaglutide)	0.75 mg Q1W x 2 weeks 1.5 mg Q1W (optional)	Caution			1.0 to 1.4%	2.7 to 3.1 kg	Rare			Exception drugs In association with MET, where a SU is contraindicated, not tolerated or ineffective			-	Not listed	-	
	OZEMPIC (s.c. Semaglutide)	0.25 mg Q1W x 4 weeks 0.5 mg Q1W x 4 weeks 1 mg Q1W (optional)	NR	Caution		1.3 to 1.6%	4.2 to 5.8 kg	Rare			Exception drugs			-	Open Benefit	-	
	RYBELSUS (oral Semaglutide)	3 mg QD x 30 days 7 mg QD x 30 days 14 mg QD (optional)		NR		1.0 to 1.3%	2.2 to 3.8 kg	Rare	NEUTRAL (superiority study ongoing)		Exception drugs			-	Limited Use Uncontrolled T2D and intolerance to MET and SU	-	
AR GIP + GLP-1	MOUNJARO (Tirzepatide)	2.5 mg Q1W x 4 weeks 12.5 mg Q1W x 4 weeks ad 5 mg, 10 mg or 15 mg Q1W (optional)				2.0 to 2.3 kg	7.6 to 11.2 kg	Rare	(ongoing study)		Private ins.			-	Not listed	-	
DPP-4i	JANUVIA (Sitagliptin)	100 mg QD		25 mg	50 mg	0.7%	Neutral	Rare			EN 167	EN 148	Private ins.	Janumet 50/500 - 850 - 1000 EN 150 Janumet XR 50/500 - 1000; 100/1000 EN 150	Limited Use Uncontrolled T2D and intolerance to MET and SU	Janumet Limited Use Uncontrolled T2D and intolerance to MET and SU	
	TRAJENTA (Linagliptin)	5 mg QD	Caution			0.5%	Neutral	Rare	NEUTRAL		EN 167	EN 148	Private ins.	Jentaduetto 2.5/500 - 850 - 1000 EN 150	Open Benefit	Jentaduetto Open Benefit	
	NESINA (Alogliptin)	25 mg QD		6.25 mg	12.5 mg	0.6%	Neutral	Rare			EN 167	EN 148	EN 149	Kazano 12.5/500 - 850 - 1000 EN 150	Not listed	Kazano (Not listed)	
	ONGLYZA (Saxagliptin)	5 mg QD	Caution	2.5 mg		0.7%	Neutral	Rare	↑ Hospitalization for heart failure		Private ins.	EN 148	EN 149	Komboglyze 2.5/500 - 850 - 1000 EN 150	Open Benefit	Komboglyze Open Benefit	
Alpha-glucosidase	GLUCOBAY (Acarbose)	50 - 100 mg TID				0.6%	Neutral	Rare	NEUTRAL		Covered	Covered	Covered	-	Open Benefit	-	
Secretagogues	DIABETA (Glyburide)	2.5 - 5 mg QD/BID (max. 10 mg BID)			Caution	0.5 to 1.0%	1.5 kg	++			Covered	Covered	-	-	Open Benefit	-	
	DIAMICRON (Gliclazide)	80 mg (max. 160 mg BID) MR 30 - 60 mg (max. 120 mg QD)	NR			0.5 to 1.0%	1.5 kg	+			Covered	Covered	-	-	Open Benefit	-	
	AMARYL (Glimperide)	1 - 2 - 4 mg (max. 8 mg QD)	NR	Caution		0.5 to 1.0%	1.5 kg	++	NEUTRAL		EN 23	EN 23	-	-	Not listed	-	
	GLUCONORM (Repaglinide)	0.5 - 1 - 2 mg TID (max. 4 mg QID)	Caution			0.5 to 1.0%	1.6 kg	+			Covered	Covered	-	-	Open Benefit	-	
TZD	ACTOS (Pioglitazone)	15 - 30 - 45 mg QD		Caution		0.9 to 1.5%	1.5 to 2.8 kg	Rare	NEUTRAL	↑ Heart failure	EN 121	EN 118	EN 119	EN 117 (For patients with CKD) EN 120 (In combination with MET + SU when insulin is indicated, but the patient is unable to receive it)	Open Benefit (generic only)	-	
	AVANDIA (Rosiglitazone)	2 - 4 - 8 mg QD		Caution		0.9 to 1.5%	1.5 to 2.8 kg	Rare			EN 121	EN 118	EN 119		Not listed	-	

Rx	Pens pre-filled	Delivery System and Maximum Single Dose	Dosage †			Hypo Risk	RAMQ Coverage	SSNA Coverage	Duration of Action	Onset	RAMQ Coverage	NIHB Coverage
			Initiation	Titration	Switch							
BASAL INSULIN	Long-acting	TRESIBA U100 (Degludec)	FlexTouch (max. 80 U)	10 U at any time of day	2 U every 3-4 days OR 4 U once a week until targets reached (4 to 7 mmol/L)	1:1 (↓ by 20% when switched from TOUJEO or twice daily insulin)	Covered	Open Benefit	<p>TRESIBA U100 U200 > 42 h TOUJEO U300 up to 36 h LANTUS U100 BASAGLAR 24 h LEVEMIR up to 24 h HUMULIN N NOVOLIN NPH 12-18 h</p> <p><small>Hirsch BB, N Engl J Med. 2005; 353:174-83. Hood TM, J Fam Pract. 2007; 56(suppl 1):S1-S2. Becker RH et al. Diabetes Care. 2015; 38:637-42. Tim Heise. Expert Opinion on Drug Metabolism & Toxicology. 2015; 118, 1199-1201.</small></p>	Fast	Private ins. (Plan dependent)	Not listed
		TRESIBA U200	FlexTouch (max. 160 U)				Covered	Open Benefit			Private ins. (Plan dependent)	Open Benefit
		TOUJEO U300 (Glargine)	SoloSTAR (max. 80 U)	10 U at bedtime or in the morning	1 U QD until targets reached (4 to 7 mmol/L)	1:1 (↓ by 20% when switched from twice daily insulin)	Covered	Open Benefit			Covered	Open Benefit
		LANTUS U100 (Glargine)	Cartridge SoloSTAR (max. 80 U)				Private ins. (Plan dependent)	Open Benefit			Covered	Open Benefit
		BASAGLAR (Biosimilar glargine)	Cartridge KwikPen (max. 80 U)	10 U at bedtime or in the morning	1 U QD until targets reached (4 to 7 mmol/L)	1:1 (↓ by 20% when switched from TOUJEO or twice daily insulin)	Covered	Open Benefit			Covered	Open Benefit
		SEMGLEE (Biosimilar glargine)	Semglee (max. 80 U)				Covered	Open Benefit			Covered	Open Benefit
		LEVEMIR (Detemir)	Cartridge	10 U at bedtime or in the morning	1 U QD until targets reached (4 to 7 mmol/L)	1:1 (↓ by 20% when switched from twice daily insulin)	Covered	Open Benefit			Covered	Open Benefit
	Intermediary	HUMULIN N	Cartridge KwikPen (max. 60 U)	10 U at bedtime	1 U QD until targets reached (4 to 7 mmol/L)	1:1	Covered	Open Benefit	Covered	Open Benefit		
			NOVOLIN NPH	Cartridge				Covered	Open Benefit	Covered	Open Benefit	
			NOVOLIN GE TORONTO	Cartridge				Covered	Open Benefit	Covered	Open Benefit	

Recommendations based on Diabetes Canada guidelines. 1* Metformin is the first line of treatment. 2** SGLT2i and GLP-1 RA should be favoured after metformin in patients with CV comorbidity and/or in poorly controlled patients in whom it is desirable to promote CV benefits and/or weight loss while minimizing the risk of hypoglycemia. † Patients on insulin should have an individualized fasting glucose targets. ‡ 3-point MACE is defined as a composite of nonfatal stroke, nonfatal myocardial infarction, and cardiovascular death. Results of CV studies (evidence level A and B in italic): 1 ↓ in MACE; if established Atherosclerotic Cardiovascular Disease OR if CKD. 2 ↓ in MACE; if established Atherosclerotic Cardiovascular Disease OR if >60 yo with 2 risk factors (tobacco, HBP, DLD, obesity) OR if CKD. 3 ↓ in Hospitalization for Heart Failure; if history of Heart Failure OR if CKD OR if established Atherosclerotic Cardiovascular Disease OR if >60 yo with 2 CV risk factors. 4 ↓ progression of nephropathy; if CKD OR if established Atherosclerotic Cardiovascular Disease. 5 ↓ Albuminuria; if established Atherosclerotic Cardiovascular Disease. CAD: coronary artery disease | CKD: chronic kidney disease | CV: cardiovascular | DLD: dyslipidemia | eGFR: estimated glomerular filtration rate | HBP: high blood pressure | MET: metformin | NR: not recommended | PAD: peripheral artery disease | QD: once per day | Q1W: once weekly | QID: four times a day | s.c.: subcutaneous | SU: sulfonylurea. Reference: Efficacy on A1C and weight lowering data as add-on to metformin have been taken from product monographs or from head-to-head trials. This guide reflects current standards and the author's opinion, Dr. Pierre McCabe, specialist in general internal medicine. It does not replace clinical judgement and should only be used as a reference. Some products are not represented on the chart as they are rarely prescribed. | 2020 © Photos by Vigilance Santé inc. © Diabetes Québec, 2024