

Antihyperglycemic Agent Comparison Chart

CLASS	DRUG (BRAND NAME)	REGULAR DOSE(S)	RENAL DOSE	EXPECTED A1C DECREASE	IMPACT ON HYPOGLYCEMIA	IMPACT ON WEIGHT	COST* (30 day supply)	CARDIOVASCULAR DISEASE OUTCOMES REPORTED IN CLINICAL TRIALS
BIGUANIDE	Metformin (Glucophage)	500 - 1000 mg po BID	Contraindicated if CrCl/eGFR <30 mL/min or hepatic failure	1.0 → 1.5%	<>	<>/↓	\$6-\$9	UKPDS POSITIVE OUTCOMES IN CAD
SULFONYLUREA	Gliclazide (Diamicron MR)	30 - 120 mg po daily	Adjust dose cautiously Avoid if eGFR < 15	0.8%	Ť	Ť	\$3-\$7	
DPP4 INHIBITORS	Sitagliptin (Januvia)	100 mg po daily	If eGFR \geq 30 to \leq 50 mL/min: 50 mg po daily; If eGFR \leq 30 mL/min: 25 mg po daily	0.7%	<>	<>/↓	~ \$95	TECOS NEUTRAL CV OUTCOMES (Sitagliptin vs placebo on a background of standard care)
	Saxagliptin (Onglyza)	5.0 mg po daily	If eGFR ≤ 50 mL/min: 2.5 mg po daily. Avoid if eGFR < 15	0.7%	<>	<>/↓	\$75-\$90	SAVOR NEUTRAL CV OUTCOMES AVOID IF AT RISK FOR HEART FAILURE (Saxagliptin vs placebo on a background of standard care)
	Linagliptin (Trajenta)	5 mg po daily	No adjustment necessary	0.7%	<>	<>/↓	~ \$75	CAROLINA Reports in 2019 (Linagliptain vs Glimiperide on a background of standard care)
								CARMELINA Reports in 2019 (Linagliptain vs placebo on a background of standard care)
GLP-1 AGONISTS	Liraglutide (Victoza)	Starting dose of 0.6 mg for one week then transition to maintenance dose. 1.2 - 1.8 mg subcut daily.	No adjustment necessary	1.0%	<>	**	\$180-\$270	LEADER POSITIVE OUTCOME DRIVEN BY DECREASED DEATH FROM CV CAUSES AND DEATH FROM ANY CAUSE (Liraglutide vs placebo on a background of standard care)
	Exenatide (Bydureon & Byetta)	2 mg subcut once weekly (Bydureon) 10 mcg subcut BID (Byetta)	Caution if eGFR < 50 mL/min; Contraindicated if eGFR < 30 mL/min	1.0%	<>	##	\$155-\$220	EXSCEL (Exenatide vs placebo on a background of standard care)
	Dulaglutide (Trulicity)	0.75 - 1.5 mg subcut weekly	Caution if eGFR < 30 mL/min	1.0%	<>	##	~ \$255	REWIND Reports in 2018 (Dulaglutide vs placebo on a background of standard care)
	Semaglutide is not currently marketed in Canada.						SUSTAIN - 6 POSITIVE OUTCOME DRIVEN BY A SIGNIFICANT DECREASE IN NON-FATAL STROKE (Semaglutide vs placebo on a background of standard care)	
SGLT 2 INHIBITORS	Empagliflozin (Jardiance)	10 - 25 mg po daily	Should not be initiated in patients with an eGFR < 60 mL/min, discontinue if eGFR falls < 45 mL/min, Contraindicated in ESRD or patients on dialysis.	0.7 - 1.0%	<>	**	~ \$85	EMPA REG POSITIVE OUTCOME DRIVEN BY REDUCED DEATH FROM CV CAUSES, DEATH FROM ANY CAUSE AND HOSPITALIZATION FOR HEART FAILURE (Empagliflozin vs placebo on a background of standard care)
	Canagliflozin (Invokana)	100 - 300 mg po daily	Should not be initiated in patients with an eGFR < 60 mL/min, discontinue if eGFR falls < 45 mL/min, Contraindicated in ESRD or patients on dialysis.	0.7 - 1.0%	<>	++	~ \$85	CANVAS DECREASED CV EVENTS WITH NO CHANGE IN CV DEATH (Canagliflozin vs placebo on a background of standard care)
	Dapagliflozin (Forxiga)	5 - 10 mg po daily	Contraindicated in patients with moderate to severe renal impairment, defined as an eGFR < 60 mL/min, end-stage renal disease [ESRD] and patients on dialysis.	0.7 - 1.0%	<>	++	~ \$85	DECLARE Reports in 2019 (Dapagliflozin vs placebo on a background of standard care)
TZD	Pioglitazone (Actos)	15 - 30 mg po daily	Contraindicated if eGFR < 15 mL/min	0.7 - 1.0%	<>	t	\$35-\$80	PROActive - NEUTRAL CV OUTCOMES AVOID IF AT RISK FOR HEART FAILURE (Pioglitazone vs placebo on a background of standard care)
INSULIN	Insulin Glargine (Lantus 100 U/ml)	Starting dose of 10 U once daily, adjust according to the patient's need. May be administered at any time of day as long as it is administered at the same time every day.	Careful glucose monitoring and dose adjustments of insulin may be necessary in patients with renal dysfunction.	0.9 - 1.0%	Ť	Ť	\$0.062 / Unit	ORIGIN TRIAL NEUTRAL CV OUTCOMES Insulin glargine (100 U/ml) vs. Standard Care
	Insulin Glargine (Toujeo 300 U/ml)	0.2 units per kilogram of body weight once daily in insulin naïve patients with type 2 diabetes.	Careful glucose monitoring and dose adjustments of insulin may be necessary in patients with renal dysfunction.	0.9 - 1.0%	Ť	t	\$0.059 / Unit	ORIGIN TRIAL NEUTRAL CV OUTCOMES Insulin glargine (100 U/ml) vs. Standard Care
	Insulin Degludec (Tresiba 100 U/ml, 200 U/mL)	Starting dose of 10 U once daily, adjust according to the patient's need. Administer at the same time every day. Titrate every 3 to 4 days as needed.	Careful glucose monitoring and dose adjustments of insulin may be necessary in patients with renal dysfunction.	0.9 - 1.0%	Ť	Ť	Not currently available	DEVOTE TRIAL NEUTRAL CV OUTCOMES (Insulin degludec vs insulin glargine U100)

= Outcome evidence from clinical trials

= Neutral evidence from clinical trials

= Pending evidence from clinical trials

*cost does NOT include dispensing fee