

Antihyperglycemic Agents and Renal Failure

Adapted by Steve Chalifoux RN, CDE
from the CPG Diabetes Canada 2018 (Appendix 7)
and/or the product monographs.
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		CRF stage					
		5	4	3	2	1	
		eGFR (mL/min/1.73 m ²):					
		<15	15-29	30-59	60-89	≥90	
Alpha-Glucosidase Inhibitor	Acarbose (Glucobay™)		25			100 mg TID	
Biguanides	Metformin (Glucophage®)		30	500 mg to 1000 mg OD	45 ¹	850 mg TID	
DPP-4 Inhibitors	Alogliptin (Nesina®)		6.25 mg	30	12.5 mg	45	25 mg OD
	Linagliptin (Trajenta®)	Limited experience	15				5 mg OD
	Saxagliptin (Onglyza®)		15	2.5 mg	50		5 mg OD
	Sitagliptin (Januvia®)		25 mg	30	50 mg	50	100 mg OD
GLP-1R Agonists	Dulaglutide (Trulicity®)	Limited experience	15				1.5 mg per week
	Exenatide (Byetta®)		30	Possible GI Effect	50		10 ug BID
	Exenatide QW (Bydureon®)		30	Possible GI Effect	50		2 mg per week
	Liraglutide (Victoza®)		15				1.8 mg OD
	Lixisenatide (Adlyxine™)		30				20 ug OD
	Semaglutide (Ozempic®)		15	Limited experience	30		1 mg per week
	Semaglutide (Rybelsus®)		15	Limited experience	30		14 mg OD
Insulin Secretagogues	Gliclazide (Diamicron®)			Risk of hypoglycemia	60		MR 120 mg OD or 160 mg BID
	Glimepiride (Amaryl®)			Risk of hypoglycemia	60		4 mg BID
	Glyburide (Diabeta®)				60		10 mg BID
	Repaglinide (Gluconorm®)			Risk of hypoglycemia	60		4 mg TID
SGLT2 Inhibitors	Canagliflozin (Invokana®)		100 mg	30 ²	100 mg	60	300 mg OD
	Dapagliflozin (Forxiga®)			30		45	10 mg OD
	Empagliflozin (Jardiance®)			30			25 mg OD
Thiazolidinediones	Pioglitazone (Actos®)			Heart failure	45		45 mg OD
	Rosiglitazone (Avandia®)			Heart failure	45		8 mg OD
	Insulin			Risk of hypo if accumulation	30		

■ Contraindicated
 ■ Not recommended
 ■ Dose adjustment required
 ■ Caution: reason indicated
 ■ Safe

¹ = Do not initiate if eGFR is < 45 ml/min

² = Previously treated patients with albuminuria > 33.9 mg/mmol. Do not initiate if < 30
For more details please refer to the product monograph.

The indicated dose is the maximum dose that can be used at this eGFR.