

Pharmacological Management of Glycaemia in People with Type 2 Diabetes and Renal Impairment

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	CKD stage (mL/min/m ²)				
	Stages G1 and G2 eGFR ≥60	Stage G3a eGFR 45–59	Stage G3b eGFR 30–44	Stage G4 eGFR 15–30	Stage G5 eGFR <15
Metformin	3 g total maximum daily dose (in 2–3 daily doses)	2 g total maximum daily dose (in 2–3 daily doses)	1 g total maximum daily dose (in 2–3 daily doses)		
Sulfonylureas		Increased risk of hypoglycaemia if eGFR <60. Consider reducing dose. Gliclazide and glipizide preferred as metabolised in the liver			
Repaglinide					
Acarbose				Avoid if CrCl <25 mL/min/1.73 m ²	
Pioglitazone	Avoid in those on dialysis				
Alogliptin			Reduce to 12.5 mg od if CrCl ≤50 mL/min	Reduce to 6.25 mg od if CrCl <30 mL/min or dialysis required	
Linagliptin					
Saxagliptin			Reduce to 2.5 mg od	Avoid in those on dialysis	
Sitagliptin			Reduce to 50 mg od	Reduce to 25 mg od	
Vildagliptin			Reduce to 50 mg od if CrCl <50 mL/min		
Canagliflozin	Initiate 100 mg and titrate to 300 mg if additional glycaemic control required	Initiate or continue 100 mg only	Not recommended for glycaemic control. See GPnotebook Shortcut "SGLT2 Inhibitors in Extra-Glycaemic Indications: Use in People with Renal Impairment" for dose recommendations in the treatment of diabetic kidney disease		
Dapagliflozin	Recommended dose is 10 mg		Not recommended for glycaemic control. See GPnotebook Shortcut "SGLT2 Inhibitors in Extra-Glycaemic Indications: Use in People with Renal Impairment" for dose recommendations in the treatment of CKD or heart failure		
Empagliflozin	Initiate 10 mg and titrate to 25 mg if additional glycaemic control required	Do not initiate. For those already taking empagliflozin, continue 10 mg only	Not recommended for glycaemic control. See GPnotebook Shortcut "SGLT2 Inhibitors in Extra-Glycaemic Indications: Use in People with Renal Impairment" for dose recommendations in the treatment of heart failure		
Ertugliflozin	Initiate 5 mg and titrate to 15 mg if additional glycaemic control required. Do not initiate if eGFR <60				
Dulaglutide qw					
Exenatide bid			Dose escalation should proceed conservatively if CrCl 30–50 mL/min		
Exenatide qw					
Liraglutide od					
Lixisenatide od					
Semaglutide sc qw	Limited experience in patients with severe renal impairment eGFR <30				
Semaglutide oral od	Limited experience in patients with severe renal impairment eGFR <30				
Degludec + liraglutide (Xultophy)			Intensify glucose monitoring and dose adjust on an individual basis		
Glargine + lixisenatide (Suliqua)			Intensify glucose monitoring and dose adjust on an individual basis		
Insulins	Intensify glucose monitoring and dose adjust on an individual basis due to increased risk of hypoglycaemia				

● No dose adjustment required ● Dose adjustment recommended ● Not recommended

Table based on author's clinical experience and interpretation of relevant summaries of product characteristics.

Abbreviations

bid: twice daily; CKD: chronic kidney disease; CrCl: creatinine clearance; eGFR: estimated glomerular filtration rate; od: once daily; qw: once weekly; sc: subcutaneous

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