

Table 1. Dosing adjustment for oral hypoglycemic drugs according to CKD stage

Class	Drug	Chronic kidney disease stage (dialysis not included)			
		3A 45-59 mL/min	3B 30-44 mL/min	4 15-29 mL/min	5 <15 mL/min
Biguanides	Metformin	No dose adjustment ¹	Half-dose ¹	Avoid	
Sulfonylureas	Glibenclamide	Avoid			
	Glipizide	No dose adjustment		No dose adjustment ²	
	Gliclazide	No dose adjustment		No dose adjustment ²	
	Glimepiride	Initiate at low dose (1mg)	Initiate at low dose (1mg) ²		
Meglitinide analogues	Nateglinide	No dose adjustment		Initiate at low dose (60mg)	Avoid
	Repaglinide	No dose adjustment		Initiate at low dose (0.5mg)	
Thiazolidinediones	Pioglitazone	No dose adjustment ³			
Alpha-glucosidase inhibitors	Acarbose	No dose adjustment		Avoid	
	Miglitol	No dose adjustment		Avoid	
Dipeptidyl Peptidase-4 Inhibitors	Sitagliptin	No dose adjustment ⁴		50mg/day ⁴	25mg/day
	Vildagliptin	No dose adjustment ⁴		50mg/day ⁴	
	Saxagliptin	No dose adjustment ⁴		2.5mg/day ⁴	
	Alogliptin	No dose adjustment ⁴		12.5mg/day ⁴	6.25mg/day
	Linagliptin	No dose adjustment			

¹Avoid if patient has other risk factors for lactic acidosis; these levels are controversial.

²Glipizide is the preferred sulfonylurea; however, safer options which carry no risk of hypoglycemia should be considered.

³Although it is not contraindicated in patients with advanced CKD, the possibility of fluid retention and bone disease may limit its use.

⁴Dose adjustment required for GFR <50mL/min.

Adapted from National Kidney Foundation, 2012 KDOQI Clinical Practice Guideline for Diabetes and CKD: 2012 Update. Am J Kidney Dis 60: 850-886.⁴