

CHRONIC KIDNEY DISEASE (CKD)
Protection of Damaged Kidneys MANAGEMENT
STAGE 3 AND STAGE 4 CKD

<p style="text-align: center;">Stage 3 – CKD GFR 59 – 30mls/min/1.73m² Review 3 – 6 monthly</p> <ul style="list-style-type: none"> • Review medications (prescribed & non-prescribed & herbal) – each visit (dose & interaction) • Review polypharmacy (where possible pharmacist review) 	<p><i>Client Education</i></p>	<p style="text-align: center;">Stage 4 – CKD GFR 29 – 15mls/min/1.73m² Review 1-3 monthly</p> <ul style="list-style-type: none"> • Review medications (prescribed & non-prescribed & herbal) – each visit (dose & interaction) • Review polypharmacy (where possible pharmacist review)
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PHARMACOLOGY CONCERNS		
Concern	Stage 3	Stage 4
NSAIDs (non-steroidal anti-inflammatory)	Use with caution	Do not use
Frequent cause of Acute Renal Failure Worsening of hypertension, hyperkalaemia, sodium retention		
Antibiotics	Dosage Adjustments	Dosage Adjustments
Aminoglycosides require dose adjustment based on GFR and monitoring of serum levels (preference once daily doses to divided doses) & monitor kidney function Trimethoprim sulphamethoxazole can cause hyperkalaemia.		
Gout Therapy	Dosage Adjustments	Dosage Adjustments
Allopurinol decreased dosage is renally excreted so dose should be reduced in renal failure. Colchicine should be used with caution to avoid neutropenia and diarrhoea.		
Hypoglycaemic Agents	Cease Metformin	Cease Metformin
Insulin – dosage decreased related to increased half like. Oral – Biguanides (Metformin) used with caution		
Radio contrast	Avoid but when necessary Nephrologist consult	
Hospital Policy & Procedure re: pre-hydration etc; and client and nephrologist consent		
Lipid Lowering Agents	As per cardiovascular pathway	As per cardiovascular pathway
HMG CoA Reductase Inhibitor (STATIN) - lower dose to reduce risk of myopathy Combination of Fibrates & should be avoided (Nephrologist consult)		
Cardiac Glycosides (Digoxin)	Reduced dose – monitor Digoxin levels 3 monthly <i>Digoxin Target range < 0.5 – 1.2 ng/ml (nephrologist)</i>	
Over the counter preparations		
Antacids	Preference for magnesium or calcium based	
Relief of constipation	Review for Potassium content	
Salt substitutes	Review for Potassium content	
Miscellaneous		
Urinary Tract Infection	Treat promptly to avoid acute-on-chronic renal failure	
Urinary retention	Review older males for prostate concerns and refer to urologist where appropriate	
Dehydration	Avoid dehydration - monitor fluid status as per Metabolic Imbalances pathway	

References: CARI Guidelines
VA/DoD Clinical Practice Guidelines for Management of Chronic Kidney Disease & pre-ESRD in Primary Care
British Columbia Guidelines & Protocols “Identification, Evaluation and Management of Patients with Chronic Kidney Disease: