

The role of Primary Care in CKD

In-clinic education for primary care teams



Learning aim

Provide the tools to drive the early detection of Chronic Kidney Disease (CKD) in a primary care setting, using optimal management of CKD to slow or halt disease progression.

Learning outcomes

Explain why chronic kidney disease (CKD) is an important consideration for primary health care professionals.

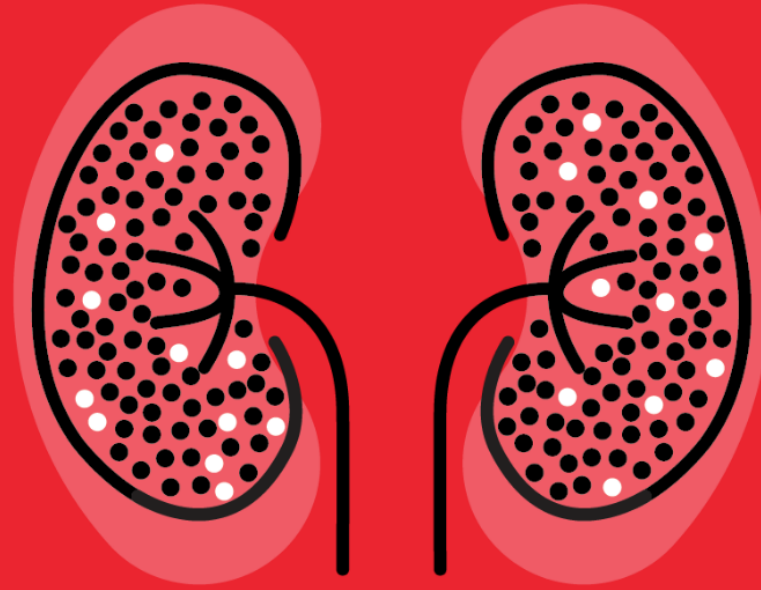
Explain the importance of uACR testing as part of a Kidney Health Check.

Embed CKD assessment & management in your practice.



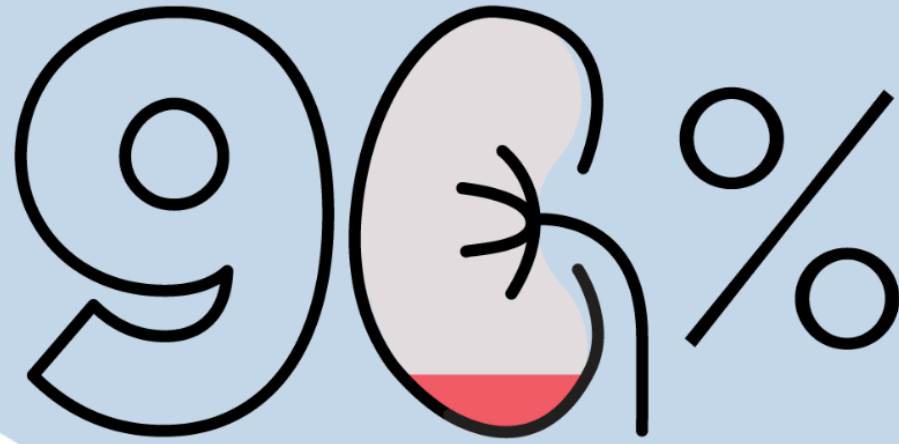
CKD is common.

1 in 7 Australians are
affected by kidney disease.



A hidden national problem.

2.5 million Australians are
unaware they have signs of CKD.

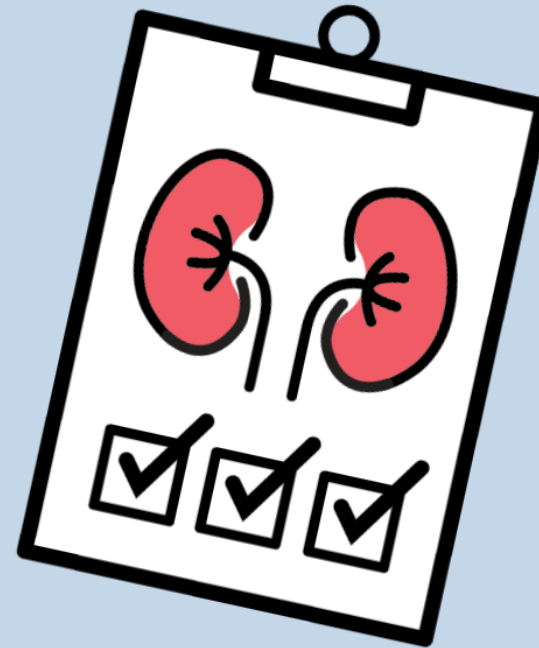


**People do
not know they have
kidney disease.**

You can lose **90%** of kidney
function without symptoms.

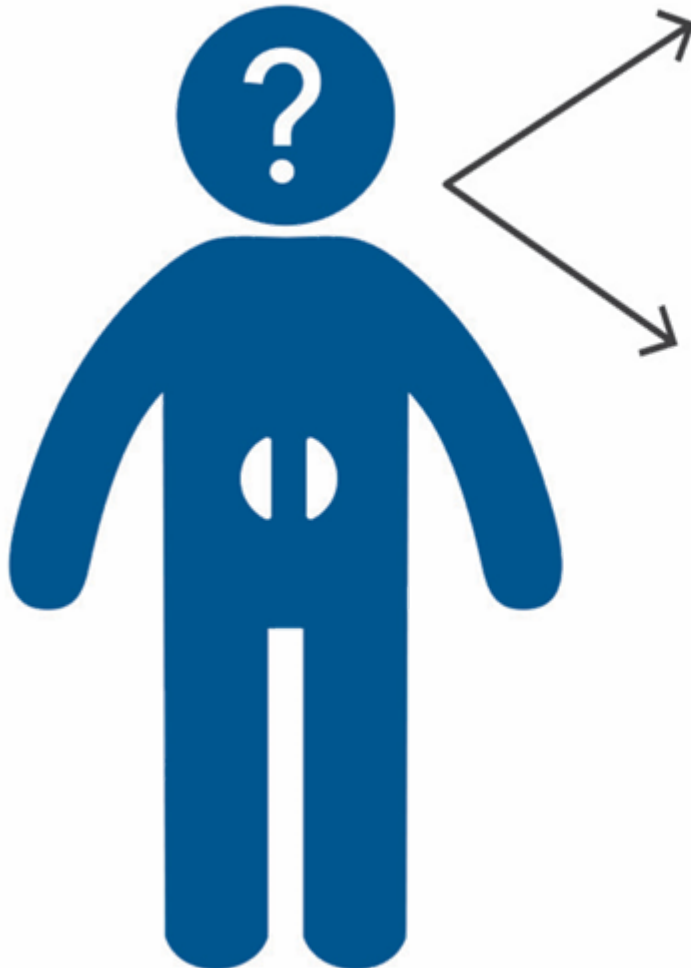
Kidney disease is under-detected in Australia.

Only **23%** of people at known risk of CKD have had a **Kidney Health Check** in the last two years.



What is CKD?

CKD is defined as...



An estimated or measured glomerular filtration rate (GFR) <60 mL/min/1.73m² that is present for ≥ 3 months with or without evidence of kidney damage.

Or

Evidence of kidney damage with or without decreased GFR that is present for ≥ 3 months as evidenced by the following, irrespective of the underlying cause:

- Albuminuria
- Haematuria after exclusion of urological causes
- Structural abnormalities (e.g. on kidney imaging tests)
- Pathological abnormalities (e.g. renal biopsy)

Case study - Marlena

Background

- 63 years old
- School librarian
- History of mild asthma
- Hypertension – lifestyle managed

Marlena presents needing a repeat script salbutamol.



Case study - Marlena

Past medical history

- History of overweight /obesity (current BMI 31kg/m²)
- Mild intermittent asthma
- Chronic low back pain
- Mild hypertension

Family history

- Maternal grandmother died of a heart attack in her 60's but also had a history of 'kidney problems'
- Mother has type 2 diabetes
- Father has angina and hypertension



Case study - Marlena



Smoker	<i>20-25 cigarettes per day (25 pack-year history)</i>
Alcohol	<i>1-2 glasses of wine 3-4 nights per week</i>
Allergies	<i>Nil known</i>
Medications	<i>Salbutamol 100mcg/dose as needed</i>

The visit

Make every review count:

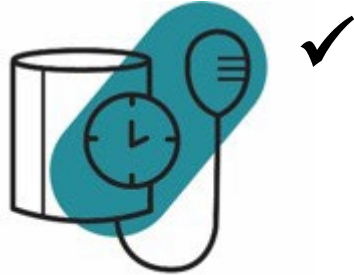
- Review asthma control and medication needs.
- Check whether preventive screenings and vaccinations are due.
- Promote overall health and wellbeing through opportunistic screening.



Who should be offered a Kidney Health Check?



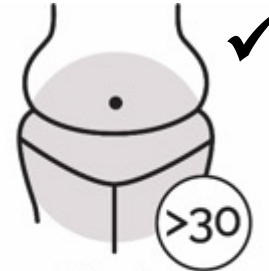
Diabetes



Hypertension



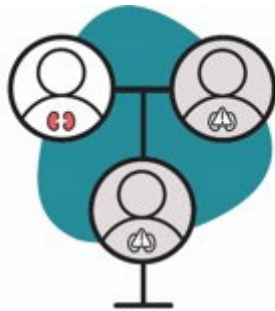
Current or
former smoker
/vaper



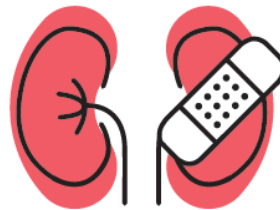
Obesity
(body mass index)
>30 kg/m²



Established
cardiovascular disease



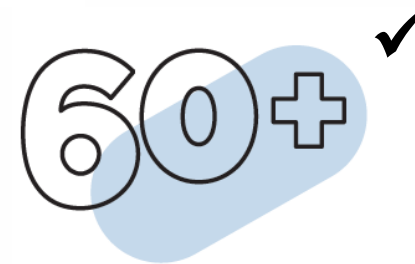
Family history
of kidney failure



History of
an acute
kidney injury



First Nations Australians²



Over 60 years
of age

*Marlena has a high risk for diabetes but currently not diagnosed

*Marlena fits
into 4 of
these groups,
possibly 5 **

1. Chronic Kidney Disease (CKD) Management in Primary Care, (5th edition). Kidney Health Australia: Melbourne, 2024

2. Recommendations for culturally safe kidney care for First Nations Australians. 2022

What are the elements of targeted assessment for CKD in at risk groups?

- a) Serum creatinine and eGFR
- b) Renal imaging
- c) Blood pressure measure
- d) Urine Protein:Creatinine Ratio (uPCR)
- e) Urine dipstick
- f) Urine Albumin:Creatinine Ratio (uACR)

Question



To confirm CKD, complete a kidney health check.

✓	Frequency
BP	Measure every visit to check against target (130/80mmHg)
Urine ACR	Repeat 2x in next 3 months
eGFR	Initial test, repeat in 7 days have 3 confirming results over 3 months

In the AusDiab study population, 92% of patients with eGFR $<60\text{mL/min/1.73m}^2$ did not have albuminuria/proteinuria

57% of subjects with albuminuria/proteinuria did not have an eGFR $<60\text{mL/min/1.73m}^2$

Answer



**Don't miss the
uACR test.**



Kidney Health Australia's latest campaign to Primary Care is to **NOT MISS** the uACR test!

Everyone who is at risk of CKD should have a complete Kidney Health Check.

MBS item for uACR is 66560: Microalbumin - quantitation in urine



Albuminuria is a warning sign

Albuminuria is:

- More common indicator of CKD than a decreased eGFR.
- A key marker of kidney damage.
- Linked to increased risk of progression to kidney failure and CVD.
- An independent risk factor for CVD. ¹



Albuminuria is a warning sign

But...

Urine check is the most frequently missed part of a Kidney Health Check in practice.¹

In Australia, **62%** of patients with CKD did not have uACR measured within 18 months of diagnosis.²

PRACTICE TIP: Reduction of albuminuria is kidney-protective so the annual uACR must be done.



1. Chronic Kidney Disease (CKD) Management in Primary Care (5th edition). Kidney Health Australia, Melbourne, 2024.
 2. Wallace et al. Assessing patterns of chronic kidney disease care in Australian primary care: a retrospective cohort study of a national general practice dataset. The Lancet Regional Health -Western Pacific 2025;57: 101541
- Not to be reproduced without permission from Kidney Health Australia

Why reduce albuminuria

- Guidelines recommend albuminuria reduction as a key treatment target in CKD.
- Albuminuria is used to assess risk, guide treatment, and monitor response.
- Evidence suggests that a 30% reduction in albuminuria is associated with a roughly 20-30% reduction in the risk of kidney disease progression.
- ACE inhibitors or ARBs, SGLT2 inhibitors, and finerenone reduce albuminuria and have been shown to slow CKD progression, reduce kidney failure, and improve cardiovascular outcomes.

1. Stevens P, et al. KDIGO 2024 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease, Kidney International, 105, S117-S314

2. Perkovic V et al. CREDENCE Trial Investigators (2019). Canagliflozin and Renal Outcomes in Type 2 Diabetes and Nephropathy. The New England journal of medicine, 380(24), 2295–2306.

3. Heerspink H, et al. Change in albuminuria as a surrogate endpoint for progression of kidney disease: a meta-analysis of treatment effects in randomised clinical trials, The Lancet Diabetes & Endocrinology, 2019; 7, 128-139

Testing for kidney damage

A Urine Albumin to Creatinine Ratio test (uACR) exhibits greater sensitivity than urine protein/creatinine ratio (uPCR) for detecting lower amounts of clinically important albuminuria.



Clinical tip

If eGFR is <60 mL/min/ 1.73m^2 , retest within 7 days to exclude AKI and again after 3 months to establish a diagnosis of CKD. Also consider clinical situations where eGFR results may be unreliable and/or misleading.



Clinical tip

Albuminuria is present, if at least two uACR results are ≥ 3.0 mg/mmol. If this is consistent over a 3-month period, it is indicative of CKD.

What is Glomerular Filtration Rate (GFR)?

Best measure of kidney function.

Estimated from serum creatinine using equations.

eGFR	Indicates...
≥ 90 mL/min/1.73m ²	Normal GFR in healthy adults (declines with age)
60-89 mL/min/1.73m ²	Preserved kidney function unless there is evidence of kidney damage
Consistently ≤ 59 mL/min/1.73m ²	CKD

GFR can be estimated (eGFR) from serum creatinine using the CKD-EPI prediction equation and is routinely reported by all Australian pathology laboratories with requests for serum creatinine in individuals aged ≥ 18 years. Kidney Health Australia uses the 2009 formula.

Case study – Marlena *first examination results*

You recognise that based upon Marlena's increased risk of CKD, she should have a kidney health check.

Marlena's kidney health check results reveal the following:

Marlena's Kidney Health Check results		Normal range
Creatinine	128 $\mu\text{mol/L}$	<115 $\mu\text{mol/L}$
eGFR	55 mL/min/1.73m²	>90 mL/min/1.73m ²
Urine ACR	15 mg/mmol	<3.0 mg/mmol
Blood pressure	155/95 mmHg	<130/80 mmHg (target)



Do Marlena's Kidney Health Check results mean she has chronic kidney disease?

- a) Yes**
- b) No**
- c) Maybe**

Question



Do Marlena's Kidney Health Check results mean she has chronic kidney disease?

c) Maybe



Remember

For a CKD diagnosis Marlena should have her urine ACR and eGFR needs to be repeated twice over 3 months (preferably first morning void).

However, as Marlena's eGFR is **<60 mL/min/1.73m²** and **uACR >3 mg/mmol**, **retest within 7 days to exclude acute kidney injury (AKI).**

Answer



Case study - Marlena

Marlena returns with more test results for urine ACR, eGFR, and you measure her blood pressure for the 3rd time.

Test	1 st visit	2 nd visit (7days later)*	3 rd visit (3 months later)
eGFR	55 mL/min/1.73m ²	54 mL/min/1.73m ²	52 mL/min/1.73m ² ↓
Urine ACR	15 mg/mmol	30 mg/mmol	23 mg/mmol ↓
BP	155/95 mmHg	155/95 mmHg	145/80 mmHg** ↓

***Tests were repeated seven days later. Then repeated within three months as the results were stable.**

**** Marlena was started on a low dose ACE/ARB at the 2nd visit.**



Refer to
algorithm in the
CKD Go! app or
page 16 of the
handbook

CKD Calculator

Urine ACR (mg/mmol)

23



eGFR

52



Orange Clinical Action Plan

ACR

23

eGFR

52

CKD stage 3a with microalbuminuria (A2)

eGFR 30-59mL/min/1.73m² with microalbuminuria (A2) or eGFR 30-44 mL/min/1.73m² with normoalbuminuria (A1)

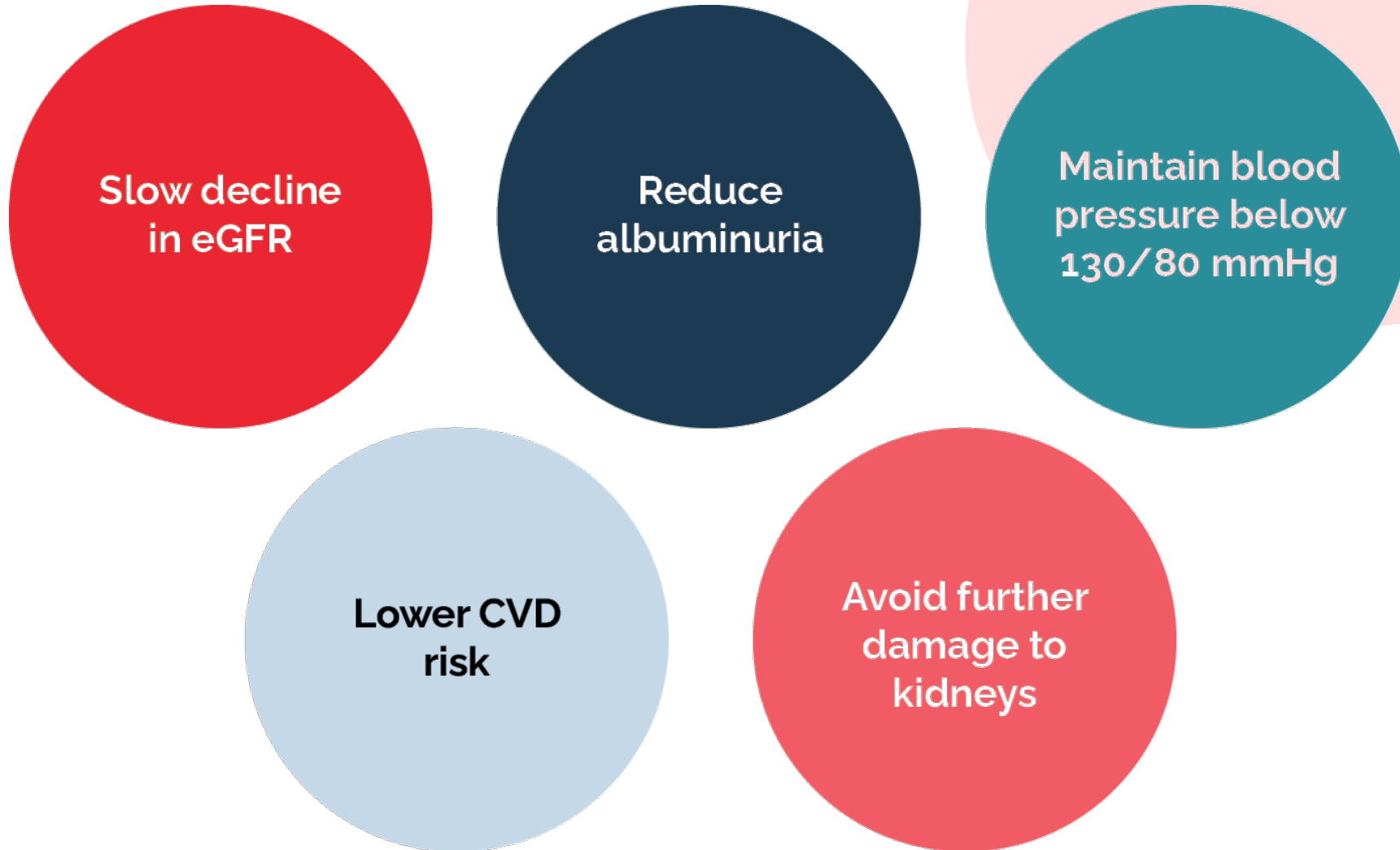
[Email clinical action plan](#)

Management Goals

Management Strategies

- Slow progression of CKD - Slow decline in eGFR, Reduce albuminuria by at least 30%.
- Assess and lower cardiovascular risk.
- Avoid nephrotoxic medications or volume depletion.
- Encourage positive lifestyle changes and self-management practices.
- Early detection and management of complications.
- Adjust medication doses to levels appropriate for kidney function.
- Appropriate referral to a nephrologist when indicated.

Key management strategies for all people with CKD



SGLT2 inhibitors are under-utilised in people with CKD

~45% of eligible people with CKD were **NOT** treated with a SGLT2 inhibitor

Studies indicate optimal* implementation of SGLT2 inhibitors in CKD projected fewer cardiorenal events and fewer patients progressing to kidney failure.

*Defined as 75% uptake

- ~230,000 Australians with CKD could benefit from SGLT2 inhibitor therapy

GPs play a key role in identifying eligible patients and initiating treatment.

PRESCRIBE: SGLT2 inhibitors

When can SGLT2 inhibitors be used in CKD?

PBS Criteria (Authority required STREAMLINED):

- Diagnosis of CKD (with or without diabetes) present for ≥ 3 months prior to prescribing.
 - eGFR 20-45 mL/min/1.73m² regardless of uACR or
 - eGFR 45-90 mL/min/1.73m² with uACR>22.6 mg/mmol
- Must be stabilised, for at least 4 weeks, on either: (i) an ACE inhibitor or (ii) an angiotensin II receptor antagonist.
- May be prescribed by nurse practitioners.

Albuminuria Stage				
Kidney Function Stage	GFR (mL/min/1.73m ²)	Normal (A1) uACR <3.0 mg/mmol	Microalbuminuria (A2) uACR 3.0-30 mg/mmol	Macroalbuminuria (A3) uACR >30 mg/mmol
1	≥ 90	Not CKD unless haematuria, structural or pathological abnormalities present		
2	60-89			
3a	45-59			
3b	30-44			
4	15-29			
5	<15 or on dialysis			

Nutrition and diet – lifestyle modification

Target	Detail
Healthy dietary pattern	• Vegetables, fruit, wholegrains, nuts and legumes, dairy foods, lean meat, poultry, fish and plant protein. • Associated with reduced risk of mortality, kidney failure, developing CKD, and progression of CKD • Can reduce rate of kidney function decline, decrease body weight and blood pressure, and metabolic acidosis.
Fluid	• Make water the drink of choice. • No recommended number of glasses to consume daily. • Drink to thirst. • Avoid sugar sweetened beverages – they have shown to elevate risk of and progression of CKD.
Salt	• Reduce intake to <5g per day
Ultra-processed foods	• Avoid foods high in fat, sugar and salt e.g. biscuits, cakes, packaged snack foods, takeaway foods, energy drinks, fruit juices and cordials.



Refer to the CKD Go! app or page 30 of the handbook



Alcohol – lifestyle modification

- Australian guidelines recommend **healthy** men and women should drink no more than 10 standard drinks a week and no more than 4 standard drinks on any one day to reduce the risk of harm from alcohol-related disease or injury.
- There are no specific recommendations about safe levels of alcohol consumption people with CKD, however... the less you drink, the lower your risk of harm from alcohol.

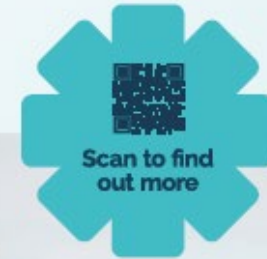


Introducing Kidney Health 4 Life

A new health and wellbeing
management program for all
stages of kidney disease



FOR YOU, FOR THEM, 4 LIFE



What treatment plan(s) should you consider for Marlene's 3rd clinic visit?

- a) Diagnose Marlene with CKD 3a with microalbuminuria (A2) and document the diagnosis in her chart
- b) Increase ACE/ARB to maximum tolerated dose
- c) Start Marlene on an SGLT-2 inhibitor
- d) Reinforce lifestyle interventions
- e) All the above

Question



What treatment plan(s) should you consider for Marlene's 3rd clinic visit?

- a) Diagnose Marlene with CKD 3a with microalbuminuria (A2) and document the diagnosis in her chart
- b) Increase ACE/ARB to maximum tolerated dose
- c) Start Marlene on an SGLT-2 inhibitor
- d) Reinforce lifestyle interventions
- e) All the above

Answer



Implementing in practice

What systems do you already have in place that a Kidney Health Check can be added in to the process?

- Diabetes clinics
- Heart Health Checks
- Over 75-year-old health assessments
- GP Chronic Condition Management Plans
- New patient screening
- 40–45-year-old health checks

Update practice
templates

Create
checklists for
clinical team
members

Complete QI
activities to
gauge
improvements

Finding Marlena in your practice

- Search for people with Diabetes, CVD, or high blood pressure.
- Recall patients and complete Kidney Health Checks for those with risk factors.
- Display risk posters and brochures in your practice.
- Ask people to complete the online Risk Test.
- Join our CKD Sprint activity in August 2026

Please download the

CKD GO!

