Kidney Health® Australia

# How to...
# Make the Link -
## Chronic Kidney Disease, Diabetes and Cardiovascular Disease

November 2023

**Kidney disease is known as the silent disease. The early warning signs are not symptoms, but clinical signs. The link between diabetes, cardiovascular disease and kidney disease is an important one to make, both for detecting and managing disease progression, and adverse outcomes for all three conditions.**




**Chronic kidney disease, diabetes and cardiovascular disease together affect 29% of Australian adults and frequently occur together.**

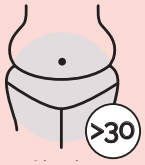
# 1 Reduce the risk

## CKD, diabetes and cardiovascular disease are inextricably linked, with **interrelated biological pathways** and **shared risk factors.**

Reduce the prevalence of risk factors for the onset of kidney damage, insulin resistance, hypertension, atherosclerosis and dyslipidaemia: Risk assessment, lifestyle changes, medication management, and consumer education.


Physical inactivity


Poor nutrition



Overweight and obesity


High blood pressure


Smoking


Harmful use of alcohol


High blood cholesterol


Insulin resistance

**Lifestyle modification -** Individuals can:


Say no to smoking


Maintain a healthy weight


Drink less alcohol


Keep your cholesterol in check


Keep active


Eat less salt


Reduce stress

### Healthcare providers can assist with:

- Hypertension management.
- Cholesterol monitoring.
- Connection to support opportunities.
- Recall people with risk factors for any of the 3 conditions.
- Complete risk assessments with all 3 conditions in mind: Diabetes Risk Assessment; Kidney Health Check; CVD Risk Assessment.

# 2 Early detection: Kidney Health Check

**Blood Pressure Check**
(Maintain below BP goals)
Record result in person's notes

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**Urine ACR Test**
(Albumin/Creatinine Ratio (ACR) to check for albuminuria)

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**Blood Test**
(eGFR calculated from serum creatinine)

# 3 Improve access

## First Nations peoples experience a **higher burden** of comorbid CKD, diabetes and cardiovascular disease.

Over **one-third** of First Nations peoples have **one or more** of CKD, diabetes or cardiovascular disease, and:

- Appear at a younger age;
- Co-occur more frequently;
- Progress faster;
- Are associated with more complications.


**6%** of all First Nations Australian deaths listed **all three conditions** on the death certificate, compared to less than 2% of non-Indigenous deaths.

Record First Nations peoples' origin in medical software. Ask if they identify as First Nations peoples.

# 4 Management

Appropriate management of people with CKD, diabetes and cardiovascular disease requires seeing the person wholistically and managing their health with all conditions.

- Investigations to determine underlying cause.
- Reduce progression of kidney disease.
- Assessment of Absolute Cardiovascular Risk.
- Avoidance of nephrotoxic medications or volume depletion.

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- Early detection and management of complications.
- Adjustment of medication doses to levels appropriate for kidney function.
- Appropriate referral to a Nephrologist when indicated.

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- Prepare for kidney replacement therapy if appropriate.
- Prepare for non-dialysis supportive care if appropriate.

# 5 Support


Social isolation


Depression


Factsheets

The presence of any one of CKD, diabetes or CVD increases the likelihood of having depression and is associated with reduced quality of life. Connect people with support networks, refer to **Kidney Health Australia** for a range of services and community connections. Utilise information online, booklets and factsheets to support your messages.

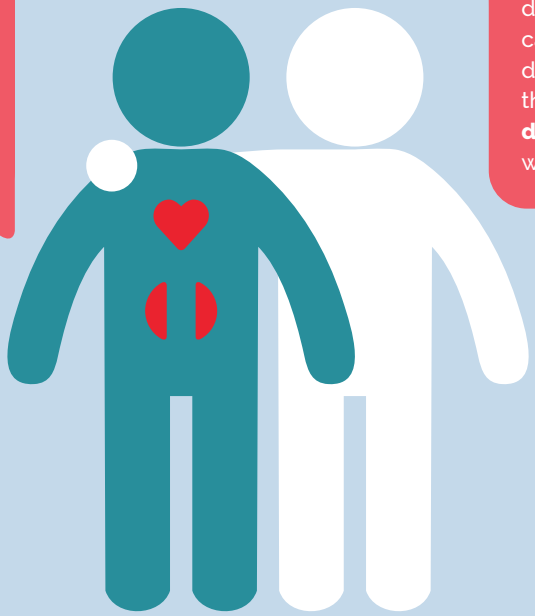
# 6 The onset of comorbid CKD

## The onset of comorbid CKD is associated with **significantly worse** prognosis and **quality of life.**

Patient-centred treatment approaches are needed that consider both physical and mental health.

Individuals with comorbid CKD, diabetes and/or cardiovascular disease experience **greater disease severity, significantly worse quality of life**, and **poorer prognosis** than individuals with any one condition in isolation.

The presence of any one of CKD, diabetes or cardiovascular disease **increases** the likelihood of having **depression** and is associated with **reduced quality of life**.



The onset of CKD causes **worsening** of depressive symptoms and further **reductions** in quality of life.

Caring for someone with kidney failure has a **major impact on relationships** and disrupts roles within the **family**.

It is critical that health systems consider the **inter-relationships** between CKD, diabetes and cardiovascular disease and respond with integrated **prevention strategies, clinical care pathways and broader support systems**.

The **impact** of an individual's disease on **family and friends**, feeling unwell, low mood, insufficient home care and other life stressors are other key factors that increase the likelihood of **low self-reported quality of life** in CKD.

CKD exacerbates the **psychosocial burden** of diabetes and cardiovascular disease while compounding the **physical symptom burden**.

**5.7%**

Prevalence of self-reported **diabetes** (2017-18), true prevalence is **likely higher**.

**5.6%**

Prevalence of self-reported **heart, stroke and vascular disease** among Australian adults (2017-18), with another **13%** self-reporting a diagnosis of **hypertension**.

**CKD, diabetes & CVD**

The prevalence of all three conditions **increases steadily** with increasing age.

# 7 Case study

## Dennis is 54 years old, works full-time in landscaping supplies.

**Background:**

Dennis hasn't shown an interest in his role in disease prevention measures. However, his cousin's recent primary coronary angioplasty for an MI has Dennis worried this could happen to him, his main concern is not being able to afford it financially.

He has hypertension, dyslipidaemia, and diabetes. Because he has diabetes and risk factors for cardiovascular disease, he should be assessed for CVD risk using the CVD risk calculator.

You need to know his eGFR and Urine ACR to accurately assess his CVD risk.

# 8 A long-term, coordinated approach

## A **long-term, coordinated** approach to the prevention of CKD, diabetes and cardiovascular disease is needed.

### Reduce the risk

Reducing the prevalence of risk factors for the onset of kidney damage, insulin resistance, hypertension, atherosclerosis and dyslipidaemia.

### Improving access

Improving access to primary health care and preventive therapies for First Nations peoples and Australians who are socioeconomically disadvantaged or reside in remote areas.

### Early detection

Early detection of CKD, diabetes and cardiovascular disease through targeted population screening.

### Careful management

Careful management of disease from its earliest stages to prevent complications and adverse events, including access to new therapies.

### Support

Provision of adequate psychosocial support to enable people to manage their own disease as effectively as possible, to prevent adverse mental health outcomes, and to support healthy cognitive ageing.

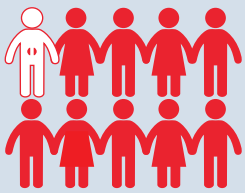
10%

of the Australian adult population is affected by CKD

# Resources and information

**2.4 million**

Australian adults estimated to be affected by CKD (2018), an estimated **50% were over 65 years** and **30% over 75 years**



**< 1 in 10** Australians with CKD are aware of their condition

**Health Professional Hub**
kidney.org.au/hphub

**CKD Handbook & CKD-Go! App**
kidney.org.au/ckdhandbook

**Make the Link: Evidence Reports**
Full Report / Executive Summary

**Kidney Helpline**
1800 454 363
kidney.helpline@kidney.org.au

For more information and support, contact the primary care team at **Kidney Health Australia**
primary.care@kidney.org.au or
kidney.org.au/health-professionals

Kidney Health® Australia

**Connect with us:**
Freecall 1800 454 363
kidney.org.au

**RACGP 5th Standards for General Practice Indicator**

QI1.3 B: Our practice uses relevant patient and practice data to improve clinical practice (e.g., chronic disease management, preventive health).

Every effort has been taken to ensure that the information in this guide was correct at the time of publication. Please check relevant sources for updates that may affect the accuracy of this information since publication. Any feedback or content updates can be referred to our primary care team **primary.care@kidney.org.au**. This 'How to...' guide was kindly supported by a grant from Astra Zeneca.