CKM Guidance

Cardiovascular-Kidney-Metabolic Disease

Preventing Adverse Outcomes in Cardiovascular Kidney Metabolic Conditions

Last content update date: 9th January 2026
File date: 13th June 2026
Please make sure to periodically check for updated content.

Instructions:

The guidance is separated into the multiple sections.

Clicking on the yellow highlighted text will take you to the relevant section of the guidance on the guidance web site.

Clicking on a pink highlighted abbreviation will take you to the relevant abbreviation within the abbreviations section of this document.

Clicking on a blue link will open relevant external guidance in a new window for more detailed information.

Contents:

3. CKM Risk Assessment (CKMRA)

Role of the CKMRA

The CKMRA replaces and expands from the traditional CV risk assessment to include screening for excess adiposity, kidney disease, gout and OSA to enable early intervention, more accurate calculation of CV risk and best management based on overall risk. The CKMRA should include:

- Seated +/- standing blood pressure to screen for high blood pressure
    - Measure sitting/standing or ideally lying/standing BP if any concerns over postural hypotension e.g. postural symptoms, frail, elderly etc.
- HbA1c +/- fasting glucose to screen for diabetes

    - A fasting glucose is typically only required if measurement of HbA1c may be unreliable due to:
        - Any haemoglobinopathy e.g. thalassaemia, sickle cell etc.
        - Altered red cell turnover e.g. bleeding, haemolysis, pregnancy
        - Post blood transfusion

- eGFR and Urinary ACR to screen for chronic kidney disease
- Non-fasting lipid studies to screen for dyslipidaemia
- Waist circumference, height and weight to screen for excess adiposity
- Smoking and alcohol history
- Gout history → serum urate if history suggestive
- Epworth Sleep score if history suggestive of OSA
- Calculation of CV risk using CKM-RAM calculator
    - CKM-RAM is an updated version of the PREDICT calculator to more accurately calculate CV risk by including significant mental illness, chronic kidney disease and gout

Timing of the first CKMRA

- A CKMRA should be performed whenever a CKM condition is diagnosed even if < 30 years of age including ANY of:
    - HbA1c ≥ 48 mmol/mol
    - Blood pressure ≥ 130/80 mmHg
    - LDLc ≥ 4.9 mmol/L
    - Chronic kidney disease (UACR > 3 mg/mmol and/or eGFR < 60 mL/min)
    - Obesity
- Otherwise the first CKMRA should be performed at the following ages:

Population subgroup	Men	Women
Māori, Pacific peoples or Indo-Asian peoples	30 years	40 years
Individuals with risk factors for CKM conditions*	35 years	45 years
Individuals without risk factors for CKM conditions	45 years	55 years

Population subgroup	Men	Women
People with severe mental illness	25 years	25 years

*Risk factors for CKM conditions include:

- First-degree family history of CKM conditions at < 40 years of age
- Unemployment and low family income
- Kai unavailability/insecurity
- Tobacco smoking
- Excessive alcohol intake
- Prediabetes (HbA1c 42 – 47 mmol/mol)
- History of preeclampsia or gestational diabetes
- Chronic inflammatory conditions e.g. autoimmune inflammatory disease
- Clinical features of insulin resistance e.g. acanthosis nigricans, PCOS etc.
- Long term glucocorticoid and/or antipsychotic use
- Chronic dental and/or periodontal disease
- Sleep disorders
- Post transplant

Stratification of CV and CKM risk

- CV risk is now stratified as:
    - High CV risk → 5 year CV risk ≥ 10%
    - Moderate CV risk → 5 year CV risk 5 – 9.9%
    - Low CV risk → 5 year CV risk < 5 %
    - **NB:** 10 year CV risk is approximately 2.5 times greater than 5 year CV risk and may be more useful in shared decision making with younger people
        - E.g. 5 year CV risk of 5% equates to a 12.5% or 1 in 8 chance of a CV event within the next 10 years

- CKM conditions may be high-risk independent of the calculated CV risk and include ANY of the following:
    - CV disease including asymptomatic coronary or carotid disease (includes CT calcium score > 300)
    - Diabetes with any microvascular or macrovascular complication(s)

- LDLc ≥ 4.9 mmol/L and/or familial hypercholesterolaemia
- UACR ≥ 30 mg/mmol
- eGFR < 45 mL/min
- UACR 3 – 29 mg/mmol AND eGFR 45 – 59 mL/min

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Abbreviations:

CKM
Cardiovascular-Kidney-Metabolic

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