CKM Guidance

Cardiovascular-Kidney-Metabolic Disease

Preventing Adverse Outcomes in Cardiovascular Kidney Metabolic Conditions

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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.

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4. Healthy living interventions

Education and Support

Education and support

- Adequate education and support is essential in empowering all individuals and whānau to self-manage their CKM condition(s) to achieve best outcomes.
- Providing evidence-based advice that applies to people living in Aotearoa New Zealand is paramount.
- Identifying and addressing social determinants of health and barriers to self-management are important in CKM conditions. The Wellbeing Wheel can be a useful tool to discover the greatest priorities and urgent needs of people with CKM conditions.

- Utilise specialists within the primary care multidisciplinary team to optimise health outcomes. In addition to the GP and nursing team, many practices have access within the practice, PHO or community clinicians including:
    - Dietitian (diet/nutrition and prescribing thereof)
    - Health Improvement Practitioner (to support mental/psychological wellbeing/adherence)
    - Pharmacist (medicines and prescribing)
    - Podiatrist (feet)
    - Psychologist (to support mental/psychological wellbeing)
    - Social worker (social support and wellbeing)
    - Support from the unregulated workforce is also important:
    - Health Coach (to support physical wellbeing and behaviour change)
    - Kaiāwhina (to support navigation of the healthcare system)

- Continuity of care is also important, where people and their care teams collaborate to achieve a shared goal. Continuity of care is associated with increased adherence, less acute care, reduced hospital admissions, and better mental health
- Utilise locally available courses and programmes that are relevant and evidence-based to improve health outcomes, e.g. Green Prescription, Diabetes Self-Management Education (DSME), Cardiovascular Rehabilitation/Self-Management, etc.

Holistic care

Holistic care

- Smoking cessation remains critical and should be offered yearly if smoking tobacco
    - There is increasing evidence that vaping may increase the risk of CV disease, lung disease and heart failure → so vaping should likely only be seen as an interim measure for stopping smoking

- Discuss reduction of alcohol intake and other recreational drugs as required
    - There is no safe alcohol limit in CV health.
    - Risk of all recreational drugs including marijuana and methamphetamine are much greater in people with CKM conditions.
    - Reduction in kava intake can aid CKM management

- Ensure vaccination status is up to date given greater adverse effects of communicable diseases in people with CKM conditions
- Ensure cancer screening as per national recommendations is up to date given greater risk of solid cancers, particularly in obesity and type 2 diabetes

- Screen for depression and treat as required as high risk of depression in CKM conditions
    - Scores ≥ 3 should prompt further screening with PHQ-9 or other tools with referral to psychology and pharmacological treatment as required.
- Screen for diabetes distress if known diabetes
    - Scores ≥ 3 on DDS2 highlights need to fully evaluate diabetes distress and consider support as appropriate
- Contraception and pregnancy advice should be discussed in women of childbearing age
- Optimise treatment of non-CKM conditions that increase CV risk – these include but are not limited to:
    - Dental and periodontal disease
    - Mental Health Disorders e.g. depression and anxiety
    - Chronic inflammatory conditions e.g. rheumatoid arthritis, SLE, inflammatory bowel disease, psoriasis, HIV/AIDS etc.
    - Respiratory and sleep disorders e.g. COPD, asthma and OSA
    - Endocrine disorders e.g. PCOS, thyroid disease, hypogonadism etc.

Healthy eating

Healthy eating

- Healthy eating is essential for all people with CKM conditions, irrespective of body weight.
- Social determinants of health and the unequal distribution of obesogenic environments are major risk factors for the development of CKM conditions, particularly for Māori and Pacific communities. Screen for household food insecurity, assess knowledge on how to achieve a healthy, balanced diet on a budget and utilise social workers, kaiāwhina or health navigators input as required.
    - Screen for household food security with these 2 questions using the scale ‘often true’ or ‘sometimes true’ (vs. ‘never true’). Often true should be referred to a social worker +/- kaiāwhina for support
    - Within the past 12 months we worried whether our food would run out before we got money to buy more
    - Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more
- Strongly consider referral to a dietitian to improve nutrition-related biomarkers and/or if requiring personalised nutrition advice
- General principles of healthy eating in CKM conditions align to guidance on healthy eating for all New Zealanders. People with or at risk of CKM conditions should be encouraged to enjoy a variety of nutritious foods every day, including:

    - Plenty of vegetables (5 serves/day) and whole fruit (2 serves/day) - fresh, seasonal, frozen, low-salt or low-sugar canned options are acceptable
    - Good quality grain foods, mostly whole grains, wholemeal grains and those naturally high in fibre
    - Some reduced-fat milk and milk products, or calcium fortified plant-based alternatives
    - Some protein foods (2.5 – 3 serves/day) - legumes, unsalted nuts, seeds, fish and other kai moana (seafood), eggs, poultry and/or red meat with the fat removed.
        - Promote plant-based protein e.g. legumes and nuts, and limit cooked red meat to less than 500g per week/person
    - Avoiding calorie dense and nutrient-poor food and drinks as much as possible e.g. ultra processed foods including packaged snacks, processed meats, sugary drinks etc.
    - People with or at risk of CKM conditions should be encouraged to choose and prepare foods and drinks:
        - With unsaturated fats and oils (e.g. canola, rice bran, avocado, olive, plant-based margarines) instead of saturated fats and oils (e.g. coconut, lard, butter)
        - Low in salt (sodium)
        - With little or no free sugar
        - That are mostly wholefoods, or less processed
        - Make water their first choice over juices, energy and sports drinks or other carbonated drinks

- “Following a diet” might be interpreted as a time-bound activity, but these general principles of a balanced, healthy eating pattern with small changes made over time are more sustainable long term. Evidence-based eating patterns to support people living with CKM conditions include:
    - Mediterranean diet (whole, plant-based foods, moderate reduced fat dairy, moderate animal protein, high Ω3 & Ω9, high fibre)
    - Dietary Approaches to Stop Hypertension – DASH (adapted Mediterranean with low sodium, high calcium, potassium & magnesium)
    - Portfolio diet (adapted Mediterranean, increased plant sterols, unsalted nuts, soy protein and soluble fibre)
- Specific recommendations for healthy eating in each CKM condition are discussed in the relevant section

Physical activity

Physical activity

- Any increase in physical activity is beneficial. Current recommendations for non-pregnant adults include:

- 150 minutes of moderate or 75 minutes vigorous aerobic exercise per week spread over ≥ 3 days each week with ≤ 2 consecutive days without exercise
- ≥ 2 sessions of resistance exercise at low to moderate intensity per week
- Sitting for < 30 minutes at a time
- **NB:** The intensity and duration of the exercise may need to be reduced due to comorbidities such as heart disease and previous stroke etc.
    - Ensure safety including adequate footwear if increased foot risk e.g. peripheral arterial disease.

- Some of these recommendations may not be immediately realistic for many people with CKM conditions. Resistant exercise can be an effective form of exercise for people with high body weight, but support should be provided to increase physical activity and movement as much as possible, given the significant benefits:
    - Explain that any physical activity is better than being sedentary
    - Physical activity and movement can take on many forms rather than ‘exercise’.
        - Housework, gardening, dance, walking around shops, taking the stairs and mowing the lawns etc. are effective and sometimes overlooked forms of physical activity.
    - A 5 – 6 minute brisk walk a day is associated with an additional 4 years of life
    - Adding 500 steps per day is associated with up to 10% reductions in mortality
    - Moving briskly doing everyday activity is associated with up to 50% reductions in CVD
    - Stretching reduces blood pressure and glucose levels

Healthy sleep

Healthy sleep

- Sleep disorders are common in people with CKM conditions and are associated with weight gain, above-target glucose levels, high blood pressure, arrhythmias and cardiovascular disease.
- Obstructive sleep apnoea (OSA) is the most common sleep disorder in people with CKM conditions. Treatment of OSA significantly reduces sleep-related respiratory events with associated improvements in HbA1c and blood pressure.
- Discuss healthy sleep patterns and good sleep hygiene with all people with CKM conditions
    - Optimal length of overnight sleep for beneficial effects on body weight and CKM conditions appears to be 6 – 8 hours every day.
    - Unfortunately, ‘catch-up’ sleep does not fully reverse the deleterious effects of insufficient sleep duration across the week → beware of the risk of CKM conditions in shift workers.
    - Screen for OSA and other sleep disorders when appropriate for all people with CKM conditions

Interventions for weight loss

Interventions for weight loss

- Interventions for weight loss should be considered in all people with CKM conditions who are overweight or obese. These are discussed in detail here
- Pharmacotherapy and bariatric surgery for weight loss can be considered if failure to reach medical targets for weight loss with nutritional strategies alone.
    - 5% total body weight loss significantly improves the majority of metabolic parameters including glucose levels, BP, and lipid profile. This may allow for a reduction in medications, but typically, greater weight loss is required for remission of CKM conditions.
    - At least 10-15% total body weight loss is typically required to achieve remission of:
        - Type 2 diabetes
        - OSA
        - Hypertension
    - At least 15-20% reduction in total body weight loss is typically required to achieve remission of:
        - Metabolic dysfunction-associated steatotic liver disease
        - Heart failure with preserved ejection fraction

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Abbreviations:

CKM
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