Centre for Sustainable Delivery

NHS SCOTLAND

National Green Theatres Programme

Pròg̀ram Nàiseanta Lannsaireachd Uaine

Sustainable Food for Kidney Health

Action for Adoption

March 2026

About

The purpose of this document is to support dieticians, clinicians and wider staff in educating patients with kidney disease and provide them information on healthy, sustainable food choices. This document collates the latest published information on plant-based diets and how to create kidney-friendly meals.

Background

A sustainable, predominantly plant-based diet provides a wealth of health and environmental benefits, particularly for individuals with Chronic Kidney Disease (CKD). Evidence suggests it supports better management of conditions such as hypertension, diabetes and obesity, and may reduce disease progression [1,2]. Importantly, such diets tend to be more affordable and environmentally sustainable compared to those rich in animal products [3].

The term “plant-based diet” (PBD) commonly refers to dietary patterns emphasising the intake of plant-derived foods, with varying degrees of animal product inclusion [4,5]. It is essential to differentiate between wholesome plant-based foods and their ultra-processed counterparts, which may not offer the same health advantages.

Patients do not need to shift to an entirely PBD. Any shift away from ultra-processed food and meat-focused meals towards more vegetables, plant-based proteins and wholegrains will provide benefit to patients and environment.

Plant based Diets in CKD

Recent attention has highlighted the potential of PBDs to prevent CKD onset and progression, and to manage associated complications [1,2,6]. The Kidney Disease Improving Global Outcomes (KDIGO) 2024 guidelines advocate for diets that are rich in plant foods, low in ultra-processed foods, and include fewer animal products [7].

Key dietary considerations include:

Protein Sources: Animal proteins can put extra pressure on the kidneys (increase intraglomerular pressure) and contribute to kidney stress. Plant proteins are less concentrated and so put less strain on the kidneys [6,7].

Phosphate Management: Phosphate from plant foods is absorbed by the body less easily than phosphate from animal products or food additives. This helps keep phosphate levels in the blood lower [2,8].

Gut Health: High-fibre plant-based diets help support a healthy mix of gut bacteria. This reduces harmful waste products in the body and lowers inflammation by producing beneficial compounds called short-chain fatty acids [8,9].

Potassium: Although whole plant foods contain a lot of potassium, the body does not absorb it as readily (low bioavailability) as we absorb potassium added to processed foods (high bioavailability) [10,11].

Acid-Base Balance: Plant-based diets can help lower acid levels in the body as, compared to animal-proteins, they contain other nutrients that balance this (alkalise), and because they have lower amounts of certain proteins that create acid as they break down (sulphur-containing amino acids) [2,8].

Plain English version of above paragraph: **Acid–base balance:** Plant-based diets can help acid levels in the body because compared to animal-proteins they contain other nutrients that balance this (alkalise), and have lower amounts of certain proteins that create acid as they are broken down (sulphur-containing amino acids).

Creating a Kidney-friendly Plant-based Plate

Fruits and Vegetables: Encourage at least 5 portions daily, but restrict high-potassium varieties if advised by a renal dietitian. Star fruit (Averrhoa carambola) should always be avoided due to its neurotoxicity in CKD [3].

Whole Grains and Starches: Prioritise whole grains like oats, quinoa and wholemeal products for their fibre content and metabolic benefits [12].

Plant-Based Proteins: Favour legumes, lentils, tofu, and tempeh, while limiting salt-laden, processed meat alternatives [3,7].

Dairy Alternatives: Select fortified plant milks such as oat, almond or soya. Check labels for phosphate additives, often hidden under names containing "phosph" [13].

Fats: Use healthy unsaturated fats like olive and rapeseed oils sparingly. Include omega-3 rich seeds like flax and chia [3].

Managing Key Nutrients

Potassium:	Work with your renal dietitian to manage potassium intake tailored to CKD stage and individual tolerance [10].
Phosphate:	Prefer plant sources and avoid processed foods with phosphate additives [2].
Salt:	Aim for <5g/day by cooking from scratch and avoiding processed products [13].

Sustainable Eating Tips for Patients

Cook from Scratch:	Reduces intake of salt and additives.
Label Reading:	Look for hidden phosphate and potassium additives.
Hydration:	Tailor fluid intake to disease stage.
Supplementation:	Consider vitamin B12, vitamin D, and iodine supplements if on a fully plant-based diet.

Additional resources – suitable for wider staff and for patients

- Patient Testimony Webinar, End-Stage Kidney Disease and Plant Based Diet: https://youtu.be/ktsmWkt2tQA?si=W9At7JyL5EQQ8hv4
- Kidney Care UK
- Plant-Based Health Professionals UK
- Healthy Eating with CKD – British Dietetic Association (BDA) Environmentally Sustainable Diet Project
- The EAT-Lancet Commission on healthy, sustainable, and just food systems UK Health Alliance on Climate Change

Contact us

If you have any questions about this action, please contact the National Green Renal Programme by emailing cfsdghs@nhs.scot.

Acknowledgements

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