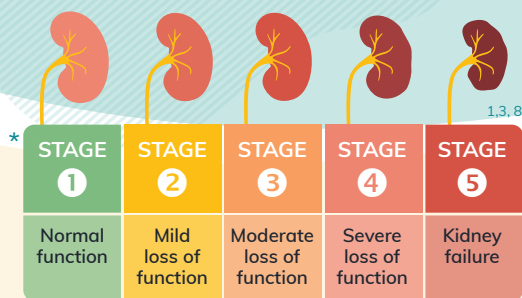


Nutrition & Diet In Patients Receiving Dialysis



Chronic Kidney Disease (CKD) Stages

Your kidneys' main job is to clean your blood by getting rid of waste. **Chronic kidney disease (CKD)** is a condition where your kidneys have a hard time working properly. When this happens, your kidneys are not able to clean your blood as effectively.

There are five stages of CKD. Each stage means your kidneys are becoming more and more damaged; with stage 1 meaning slight kidney damage and stage 5 meaning your kidneys are failing and not able to remove waste and clean your blood.^{1,3,8}

Kidney Failure Treatments

Two treatments are used to replace failing kidneys. These two treatments are **dialysis** and **transplantation**. Dialysis choices are hemodialysis (HD) and peritoneal dialysis (PD).^{1,3}

Hemodialysis (HD)



HD requires a machine to clean your blood and remove waste, usually three times a week and can be done at a dialysis clinic or at home.^{1,4}

Peritoneal Dialysis (PD)



PD uses the peritoneal membrane (inside your belly) to remove the waste. This is usually done more frequently (several times a week) and happens at home.^{1,4}

Diet Plan: PD patients have more food choices when compared to patients on HD.¹ You should learn about your diet plan on dialysis from your dietitian.⁸



Caloric Intake

- Adequate nutrition is very important for patients receiving dialysis^{3,4}
- The recommended calorie intake for adult patients is 30-35 calories/kg (1 kg = 2.2 pounds) of body weight^{3,4}
 - Ex. For a 175 pound (~80kg) adult the recommended intake would be 2,400 to 2,800 calories/day
- This calorie goal can be affected by the patient's age, sex, physical activity levels, weight goals, body shape, CKD stage, and any chronic illnesses³
- Patients receiving PD absorb calories from glucose (sugar) in dialysis fluid^{1,4}



Protein



- Daily protein intake should be 1.0-1.2 gram/kg of body weight³
 - Ex. For a 175 pound (~80kg) adult the recommended intake would be 80-96 grams of protein per day
- Patients receiving dialysis need higher amounts of protein daily compared to healthy people due to protein loss during dialysis^{3,4}
- People often think of meat, dairy, and eggs as protein sources, but studies are showing that eating plant-based proteins can improve survival for patients receiving both HD and PD^{5,6}
- Plant-based protein foods include nuts, seeds, tofu, and beans¹¹



Fat



- Choose heart-healthy fats. These are called monounsaturated and polyunsaturated fats.⁷
 - Heart-healthy fats are found in nuts, seeds, plant oils (olive oil), and avocado⁷
 - Limit foods with trans-fats such as beef, lamb, and dairy⁷
 - Limit foods with saturated fats such as cheese, beef, coconut oil, and butter^{3,7}



Fluid



- Follow your dietitian's recommendations for how much water and other liquids to drink⁴
- Liquid foods such as popsicles and soups will be counted as fluids^{5,8}

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- National Kidney Foundation. Choosing Dialysis: Which Type is Right for Me? <https://www.kidney.org/atoz/content/choosing-dialysis-which-type-right-me>. Accessed January 25, 2024.
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- Image Source: Kidney Disease Concept. (n.d.). Pikovit [Vector]. Adobe Stock. <https://stock.adobe.com/images/kidney-disease-concept/431394169>

The information provided through NephU is intended for the educational benefit of health care professionals and others who support care for those with kidney disease and other related conditions. It is not intended as, nor is it a substitute for, medical care, advice, or professional diagnosis. Health care professionals should use their independent judgement when reviewing NephU's educational resources. Users seeking medical advice should consult with a health care professional.

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Sodium

- Too much sodium in the diet can cause your body to hold on to more water, leading to fluid overload. Fluid overload is common in patients starting dialysis³
- Limiting sodium intake to 2.3 grams (approximately one teaspoon) per day can help improve your blood pressure and avoid fluid overload³
- Avoid high sodium foods such as table salt, soy sauce, salty seasonings, frozen dinners, canned soups, and salty snack foods⁸



Potassium

- Both high and low potassium levels are known to affect patients receiving dialysis, so work with your dietitian to maintain normal potassium levels^{5,6,8}
- Avoid high potassium foods such as dried fruit, tomato sauce, molasses, potatoes, dried beans, and potassium-based salt substitutes⁸



Acid/Base Balance

- Patients with kidney disease are prone to a condition called metabolic acidosis, which is when there is a build-up of acid in the body
- When the body digests animal proteins, it increases acid in your body³
- On the other hand, digesting plant-based proteins, fruits, and vegetables decreases acid production and can improve the body's acid/base balance³



Fiber

- Foods high in fiber include fruit, vegetables, seeds, whole grains, and legumes¹¹
- Adding high fiber foods to your diet can improve survival for patients receiving dialysis⁹



General Daily Fiber Recommendations (grams/day)¹⁰

	Age ≤ 50	Age > 50
Female	25 grams	21 grams
Male	38 grams	30 grams



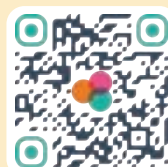
Phosphorus

- Patients with kidney disease are at risk of having too much phosphorus in their blood.
- Dialysis cannot remove all of the extra phosphorus from the blood, which is why it is important to be mindful of the amount of phosphorus in your diet⁸
- High phosphorus foods include milk, cheese, beef, pork, nuts, and lentils⁸
- Your body processes phosphorus from plant and animal-based foods differently.
 - Compared to plant-based phosphorus, animal-based phosphorus gets digested and into your blood more easily and, as a result, increases the amount of phosphorus in your blood.
 - Eating plant-based phosphorus foods are a good way to decrease phosphorus in your body⁸
- Avoid ready-to-eat foods with phosphorus additives
- Look for “Phos” or “Phosphate” ingredients on food labels¹³
- Avoid dark cola sodas or ice teas which contain phosphorus^{3,8}



Calcium

- Work with your dietitian to include a healthy amount of calcium in your body⁸
- Calcium-rich foods include dairy, canned sardines or salmon with bones, legumes, and green leafy vegetables¹¹
- You may need to limit calcium-enriched or calcium-fortified foods^{4,8}



Education Center

Kidney Health Resources Developed by NephU

Scan the code to discover more Nutritional & Lifestyle Support resources for people living with kidney disease.

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1. National Kidney Foundation. Choosing Dialysis: Which Type is Right for Me? <https://www.kidney.org/atoz/content/choosing-dialysis-which-type-right-me>. Accessed January 25, 2024.
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