

## Healthy eating for peritoneal dialysis

This resource is for people with kidney disease on peritoneal dialysis (PD). Peritoneal dialysis removes water and waste through a tube in your stomach. It does not completely replace the role of the kidneys, and not all the water and waste is removed. For this reason, diet changes may be needed to help you feel better and for your overall health.

### What diet should I eat?

There is **no standard** diet for people on dialysis, and each person is different. Information on the internet about 'kidney diets' is often incorrect and may not be right for you. Your dietitian will talk to you about the best diet for you based on your health needs and blood results. Research findings have changed over the years. Healthy dietary patterns (e.g. Mediterranean diet) are beneficial for people with kidney disease. This is in line with diet advice for the general population. These are some general tips:

-  Eat a variety of foods from all food groups - especially plant-based foods and wholegrains.
-  Aim for a colourful mix of fruit (2 servings a day) and vegetables (5 servings a day).
-  Keep your bowels moving regularly.
-  Cook fresh as much as possible. Eat less processed foods, takeaways, and soft drinks.
-  Check you are eating enough protein (see page 4).
-  Use herbs and spices to flavour foods instead of salt.
-  You may need to limit the amount of fluid that you drink (see page 5).
-  PD can increase your blood sugars and make you more likely to gain weight without trying. Speak to your dietitian if you have concerns.



Image source: <https://food-guide.canada.ca/en/>

## How can I keep my bowels regular?

It is important for people on PD to keep their bowels moving daily. Reduced bowel movements, hard stools and straining can be signs of constipation. Constipation can affect how well the dialysis works. Healthy tips to improve your bowels are:



Enjoy two or more serves of **fruit** every day.

- *Enjoy as a snack*
- *Add to cereal at breakfast*
- *Try adding to a salad*



Aim for 5 serves of **vegetables** each day.

- *Fill half of your plate with non-starchy vegetables or salad*
- *Add salad to your sandwich at lunch*
- *Snack on vegetable sticks and dips*



Choose **high fibre grain** foods.

- *Use wholemeal/grain, or high fibre white bread*
- *Snack on wholegrain crackers with cheese*
- *Use wholegrain breakfast cereals e.g. All Bran, Weet Bix, rolled oats, and muesli*
- *Try quinoa, rice, and barley*
- *Try high fibre or pulse pasta*



Increase your intake of **legumes and pulses, nuts, and seeds**

- *Try including 1 vegetarian meal each week*
- *Try baked beans for breakfast*
- *Add chickpeas or nuts to salads*
- *Snack on a small handful of nuts*
- *Add lentils or kidney beans to pasta dishes*



Drink to your **fluid** allowance each day to keep stools soft



Find ways to **move** your body. Try walking, cycling or yoga.



Try a **fibre supplement** e.g. Benefibre, Metamucil



Take your **laxatives** as recommended by your doctor or nurse to prevent constipation.

## What foods should I focus on to improve my health on dialysis?

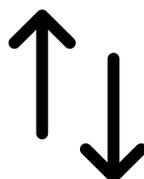
<b>Processed foods</b> Highly processed foods are packet, convenience, and takeaway foods. A large amount of <b>salt</b> and <b>phosphate</b> is added to these foods when they are made. These foods are high in unhealthy fats and sugars and can lead to weight gain.	<b>Better choices</b> Aim to cook with fresh ingredients as much as you can. Include plant-based proteins and wholegrains. Have a colourful mix of fruit and vegetables daily.
<b>Swap This...</b>	<b>For this</b>
 <p>Salted and smoked meats:</p> <ul style="list-style-type: none"> <li>• Ham, bacon, luncheon meat, hamper meat, corned beef, salami</li> </ul>	 <ul style="list-style-type: none"> <li>✓ Canned or dried legumes.</li> <li>✓ Eggs</li> <li>✓ Canned fish in Springwater or oil</li> <li>✓ Fresh (unprocessed) beef, lamb, pork, chicken, and fish</li> </ul>
 <p>Fast and convenience foods:</p> <ul style="list-style-type: none"> <li>• Pizza, pies, sausage rolls, hot dogs, burgers, fried chicken, dim sims, spring rolls, chicken nuggets</li> <li>• Crumbed and battered meats</li> <li>• Instant noodles and soups</li> </ul>	 <ul style="list-style-type: none"> <li>✓ Roast meat/chicken/egg and salad sandwiches or wraps</li> <li>✓ Tuna or fresh salmon sushi rolls (with minimal added sauces)</li> <li>✓ Grilled fish and salad</li> </ul>
 <ul style="list-style-type: none"> <li>• Hot potato chips</li> <li>• French fries</li> </ul>	 <ul style="list-style-type: none"> <li>✓ Rice or pasta</li> <li>✓ Potato (mashed, boiled, baked or homemade wedges with no added salt)</li> <li>✓ Corn</li> </ul>
 <ul style="list-style-type: none"> <li>• Potato crisps</li> <li>• Corn chips</li> </ul>	 <ul style="list-style-type: none"> <li>✓ Unsalted popcorn</li> <li>✓ Small handful of unsalted nuts</li> <li>✓ Plain rice cakes or corn thins with cottage cheese and sliced tomato</li> <li>✓ Wholegrain crackers with hummus or guacamole</li> </ul>

 <ul style="list-style-type: none"> <li>• Cakes</li> <li>• Biscuits</li> </ul>	 <ul style="list-style-type: none"> <li>✓ Fruit (fresh or dried)</li> <li>✓ Raisin toast with ricotta/cottage cheese</li> <li>✓ Sourdough bread with ricotta, blueberries, and honey</li> </ul>
 <p>Café coffee, Iced coffee, flavoured milk, cola drinks, sarsaparilla, beer</p>	 <ul style="list-style-type: none"> <li>✓ Water, soda water, tea, instant coffee, black coffee, lemonade, ginger ale</li> </ul>

### How much protein should I eat?

Protein helps keep your muscles strong and recover from illness or injury. When you start dialysis, your protein needs may increase. A good starting point is to include a protein source at each main meal.

The **type of protein** you eat is most important. Choose a range of protein foods across the week, especially plant-based choices:



<p><b>Include more</b></p> <ul style="list-style-type: none"> <li>✓ Tofu and plant-based proteins like tempeh, legumes, and pulses. This includes chickpeas, black beans, lentils, four bean mix, baked beans.</li> <li>✓ Nuts and seeds</li> <li>✓ Fish, particularly oily varieties e.g. salmon and sardines</li> <li>✓ Chicken</li> <li>✓ Eggs (up to 7 per week)</li> <li>✓ Dairy foods (milk, yoghurt, cheese)</li> </ul>	<p><b>Many people need to reduce intake of:</b></p> <ul style="list-style-type: none"> <li>• Processed meats e.g. ham, bacon, sausages, deli meats, rotisserie chicken</li> <li>• Red meat (aim for less than 350g per week or a small serve 1-2 times per week)</li> </ul>
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## Why is reducing salt important?

Eating less salt (sodium) can help protect the kidneys, keep your heart strong, and make dialysis easier. Sodium is only needed in small amounts. We can get all the salt we need from fresh foods. Limit your salt intake to **less than 2300mg** of sodium (equal to one teaspoon of salt) each day. Your taste buds will adapt, so give it time!

### WHAT CAN I DO?



**Use fresh/dried herbs and spices** e.g. pepper, parsley, garlic, onion, chilli, lemon juice. Limit adding salt in cooking or at the table. Check seasoning blends don't contain salt.



**Fresh is best.** Choose tinned fish in spring water, eggs, and home cooked meats. Reduce takeaways and highly processed foods e.g. deli meats, sausages – these are high in salt.



**Choose** fresh fruit, yoghurt, muesli bars, plain roasted chickpeas, unsalted nuts, or popcorn. Limit salty snack foods e.g. chips, biscuits, crackers, bhujia mix.



**Choose low salt**, reduced salt, and no added salt options. For example, margarine/butter, stocks, baked beans, tinned tomatoes, sauces. Avoid table salt alternatives e.g. Lite Salt.

## How much fluid should I drink?

Some people may need to reduce their fluid intake while others may need to drink more. Your fluid allowance depends on how much urine you make and how well your dialysis works. Monitoring your fluid intake is important as stronger PD bags contain more sugar. This may lead to unwanted weight gain.

Signs you may have too much fluid in your body include:

- Fast weight gain
- Swelling of feet, hands, face
- Shortness of breath
- High blood pressure
- Reduced fluid removed during dialysis

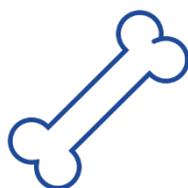
Tell your kidney team if you are getting any of the above symptoms. Your dietitian or nurse can provide suggestions to help manage your fluid.

## What about potassium and phosphate?

These are nutrients processed by the kidneys. Sometimes these can build up in the blood if not enough is removed during dialysis. Your levels will be checked through monthly blood tests. Your doctor or kidney team will refer you to the dietitian if you need to make any diet changes.



Potassium helps to control heartbeat. Most people on PD don't need to reduce the amount of potassium they eat. If you have been told to avoid foods that are high in potassium in the past this may no longer be necessary.



Phosphate helps to keep bones strong. If the level of phosphate in your blood gets too high, it can weaken your bones and harden your blood vessels. Phosphate is often used as a food additive in highly processed and pre-packed foods. This form of phosphate is more easily absorbed by the body, compared to natural phosphorus found in fresh foods.

Many people on dialysis require phosphate binder medications. These need to be taken **with food**. Binders work by attaching to the phosphate in food, stopping it from going into your blood.

### WHAT CAN I DO?

- Enjoy a healthy and balanced dietary pattern. Include a variety of fruits, vegetables, nuts, seeds, legumes, pulses, and wholegrains.
- Cook using fresh ingredients as often as you can.

Take your phosphate binders at the start of your meal or snack.

Read food labels and avoid foods with the following additive numbers.

101, 338, 339, 340, 341, 342, 343

450, 451, 452, 541, 542

1410, 1412, 1413, 1414, 1442

## What if I'm struggling to eat enough?

You may also find that you don't get hungry or feel full quickly on PD. If you are unable to eat enough, you could lose muscle and become weak. This can make completing your day-to-day activities more difficult. Speak to your dietitian if this is happening to you.

## Meal and Snack Ideas

### Breakfast Options



- Porridge: rolled oats made with milk, fruit, honey and/or nuts.
- Natural Greek style yoghurt with fruit, nuts or untoasted muesli, and honey.
- Wholegrain breakfast cereal (Weet-Bix, All Bran, Sultana Bran) with milk/yoghurt.
- Wholegrain toast with ricotta/cottage/feta cheese OR eggs OR grilled tomato and herbs OR salt reduced baked beans.
- Congee: cooked rice, dried shrimps and scallops, mushrooms, with herbs.

### Light Meal Options



- Vegetable soup, including chickpeas/lentils.
- Omelette or quiche with salad.
- Salad vegetables with canned beans, legumes, or tuna and extra virgin olive oil.
- Sandwiches/wraps – wholegrain bread, wrap or pita with salad. Use canned fish, beans, hummus, falafel, eggs, or chicken breast as a filling.

### Main Meal Options



- Wholemeal pasta with vegetables and extra virgin olive oil or tomato-based sauce. Try replacing meat with canned lentils or beans.
- Homemade pizzas, with a wholemeal base and tomato paste. Try vegetable toppings such as onion, eggplant, capsicum, and zucchini. Add bocconcini and herbs.
- Noodles (e.g. rice, soba) with tofu, seafood, chicken, or egg. Include vegetables, herbs, and spices.
- Grilled salmon or tuna with steamed vegetables or salad and basmati rice.
- Chickpea/chicken/meat/fish curry with vegetables. Make fresh with herbs and spices. Serve with naan, roti, or rice.
- Tacos/burritos with chicken or beef mince. Add cheese, bean mix, salsa, salad, avocado and yoghurt.
- Stew or casserole with lean meat, chicken, legumes/beans and vegetables. Use salt reduced stock or gravy. Serve with rice, pasta, barley, wholegrain bread or ½ cup boiled taro.
- Chicken breast: stir-fry, baked or grilled in extra virgin olive oil and mixed herbs. Add salad or vegetables and wholemeal pasta or rice.
- Small serve of lean beef, lamb, or kangaroo: stir-fry, baked or grilled in extra virgin olive oil. Add salad or vegetables and canned beans/lentils.

## Snack Options



- Fruit (fresh, canned, or frozen)
- Small handful of unsalted nuts or seeds
- Natural Greek style yoghurt (no added sugar)
- Fresh vegetable sticks with hummus or tzatziki
- Roasted chickpeas/fava beans or unsalted popcorn
- Wholegrain crackers or bread with avocado, pesto, boiled eggs, cottage/ricotta cheese, hummus

## Useful Websites, Recipes and Apps

<p><b>Kidney Health Australia</b></p>  <p><a href="#">Nutrition and Kidney Disease Resource Library</a></p>	<p><b>Kidney Kitchen</b></p>  <p><a href="https://www.kidneycareuk.org/about-kidney-health/living-kidney-disease/kidney-kitchen/recipes/">https://www.kidneycareuk.org/about-kidney-health/living-kidney-disease/kidney-kitchen/recipes/</a></p>	<p><b>Calorie King</b></p>  <p><a href="#">Food Nutrition Facts and Free Calorie Counter   CalorieKing (Australia)</a></p>
<p><b>Australian Heart Foundation</b></p>  <p><a href="https://www.heartfoundation.org.au/recipes">https://www.heartfoundation.org.au/recipes</a></p>	<p><b>International Federation of Kidney Foundations</b></p>  <p><a href="https://ifkf.org/world-kidney-recipes/">https://ifkf.org/world-kidney-recipes/</a></p>	<p><b>OLDWAYS – Cultural Food Traditions</b></p>  <p><a href="https://oldwayspt.org/traditional-diets">https://oldwayspt.org/traditional-diets</a></p>
<p><b>Spice It Up</b></p>  <p><a href="https://www.myspiceitup.ca/">https://www.myspiceitup.ca/</a></p>	<p><b>Foodswitch</b></p>  <p>Simply scan a barcode to get its nutrition information and healthier alternatives.</p> <p>*Available via the App Store or Google Play</p>	<p><b>Easy Diet Dairy</b></p>  <p>Australian Calorie Counter</p> <p>*Available via the App Store or Google Play</p>

Things I can do to improve my diet for kidney disease:

1.

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2.

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3.

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**Tips for eating healthy on peritoneal dialysis:**

- Aim for half of your plate to be fresh colourful vegetables. Refer to the plate guide.
- Keep your bowels moving by eating a high fibre diet. Include a variety of plant-based foods and wholegrains. Find a way to move your body that you enjoy!
- Cook using fresh ingredients as often as you can.
- To feel good and stay strong, include protein at each meal.

**For further information, contact your dietitian or nutritionist \_\_\_\_\_**