

Department of Nutrition and Dietetics

Renal Disease: managing your fluid balance

This information should only be used by patients with renal disease and should only be followed with supervision from a dietitian.

Why fluid management is important

The amount of fluid in our body is controlled by our kidneys. Excess fluid is retained in our bodies when our kidneys are not working properly and unable to produce enough urine. Dialysis helps to remove this extra fluid from the body. However it does not remove all excess fluid. Therefore you may need to limit your daily fluid intake to prevent fluid retention and fluid overload.

Symptoms and complications of fluid overload include the following:

- Swelling of the hands, feet, face and legs.
- Increased blood pressure (due to an increase in the water content of the blood). This can weaken the heart and increase the risk of stroke and heart attack.
- Shortness of breath or breathlessness. Fluid may remain in the lungs and lead to chest infection
- Post-dialysis low blood pressure resulting in feeling “washed out” and lethargic.
- If you are on peritoneal dialysis (PD), excess fluid may require the use of stronger dialysis bags. Using stronger bags frequently puts a greater strain on the lining of your abdomen (the peritoneum) and may shorten your time on PD. It can also cause weight gain since these bags contain a lot of glucose (sugar).

Target Weight

If you are on dialysis you will have been advised of your target weight. This is the weight you should be when the excess fluid has been removed.

Your target weight may need to be increased if you are eating very well or reduced if you are not eating well. Therefore it is important to inform the dialysis nurses if you have noticed changes in your intake of food.

Please note: Weight changes due to fluid can occur over a few days, whereas changes in actual body weight occur more slowly, for example, over weeks or months.



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How much can I drink?

This will depend on how much urine you pass and the type of dialysis (PD or HD) you have. It is important to regularly check how much urine you produce because any changes in the volume of urine you produce will change the amount of fluid you are able to drink.

Haemodialysis (HD)

Your recommended fluid intake is worked out as 500mls + previous day's urine output (i.e. the volume of urine you produce in 24hours). You should aim to gain no more than 1.5kg – 2.0kg of fluid between each HD session.

Your recommended fluid intake is mls a day orcups per day

Peritoneal dialysis (PD)

Your recommended fluid intake is worked out as 750mls + previous day's urine output (i.e. the volume of urine you produce in 24hours).

Your recommended fluid intake is mls a day orcups per day

What counts as fluid?

When counting fluids it is important to remember to include all drinks, including water taken with tablets, milk on cereal and in porridge, puddings and custard, yoghurt, and foods with a high fluid content such as jelly, ice cream and gravy.

Measuring your fluid intake

Keep a measuring jug in your kitchen. Start each day with the jug empty. For every drink or measure of fluid you have, add the same amount of water to the jug. You will then be able to see your total intake of fluid as the day goes on.

This list gives an approximate guide to the fluid content of some food and drinks. Measure your own cups at home as they all vary.

Useful fluid measures

1 average teacup	= 150 – 200mls
1 average mug	= 260mls
1 average glass	= 200mls
1 average can of fizzy drink	= 330mls
½ pint beer or lager	= 280mls

Useful conversions

1 litre	= 1000mls (approx. 1 ¾ pints)
1 tablespoon	= 15mls

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1 dessertspoon	= 10mls
1 teaspoon	= 5mls

Fluid in foods

Bowl of soup	= 200ml
Bowl of rice pudding	= 200ml
Custard, 1 tablespoon	= 15ml
Gravy, 1 tablespoon	= 15ml
Ice cube	= 15 – 30ml
Milk covering a small bowl of cereal	= 100ml
Ice cream, 1 scoop	= 40ml

Salt and Fluid

Your kidneys are responsible for removing excess salt from the body. When the kidneys aren't functioning properly salt can build up in the body causing you to become thirstier, drink more, and retain fluid. Following a low-salt diet will help to prevent fluid build-up, and make dialysis treatments more comfortable.

Try these three steps to help you cut down on your salt intake:

1. Reduce the amount of salt you add to food

Remember your taste buds will adjust over time and there are lots of ways to boost the flavour still without using salt e.g pepper, garlic, herbs and vinegar.

2. Eat Salty foods less frequently

Choose foods that are naturally low in salt e.g. fresh fruit and vegetables, fresh meats, chicken, fish and eggs, porridge and pasta.

Limit tinned and packet soups, salted snacks crisps, nuts, Oxo, Bovril, Marmite, stock cubes, cheese, bacon, tongue, tinned meat e.g. corned beef, Spam, sausages, beef burgers, smoked fish, smoked cheese and smoked or cured meats and ready meals

3. Check food labels so you can purchase healthier, lower salt, choices

Using the Traffic Light system (front of pack food labelling) you can tell at a glance the foods' salt content. If it is red – it is high, eat occasionally; amber – medium, try to limit and green – low, eat freely.

Please note Salt substitutes – Lo Salt and products with Pan Salt should be avoided.

More information on how to decrease your salt intake is available if required.

Diabetes

If you have diabetes, high blood sugars can make you feel thirsty. Aim to improve your blood sugar levels as much as you can. If you need help with this, speak to a diabetes specialist nurse or dietitian.

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Aim for an HbA1c level between 58-68 mmol/mol or 7.5-8.5%

Fluid and Constipation

To help prevent constipation do not drink less than your fluid allowance and be sure to include fibrous foods in your diet such as:

- Wholemeal or soft grain (high fibre) white bread
- High fibre breakfast cereal such as Weetabix, Shredded wheat, porridge, puffed wheat
- Wholemeal pasta and brown rice
- Wholemeal biscuits and crisp breads such as digestives, rye crisp breads.
- Increase intake of fruits and vegetables (take care with these if on a low potassium diet).

Tips to help quench your thirst

- Divide your fluid allowance up into small amounts so that you can drink more frequently
- Use smaller mugs/cup, or only half fill
- Drink between meals and have more chilled rather than hot drinks as this can be more thirst quenching
- Try caffeine free drinks as caffeine can increase thirst for some people
- Sip rather than gulp; try taking cold drinks using a straw to limit amounts taken
- Flavoured ice: try making low sugar lemonade or ginger beer ice cubes, the average ice cube is approximately 15ml
- Use small glasses instead of large ones or fill a large one with reusable ice-cubes before pouring in your drink. Reusable ice-cubes don't melt so will not add any fluid to your drink but will chill it quickly
- Freezer treats: mini ice lollies, sugar free ice-pops or frozen jelly cubes (made with low sugar jelly, make to double strength, freeze as ice cubes)
- Chilled or frozen low potassium fruits e.g. berries, grapes, tinned fruit, sliced apple, satsuma segments, tinned pineapple chunks.
- Frozen citrus slices: add to iced water or even suck, the tartness helps to stimulate saliva flow.
- Fresh mint: add to salads, iced water or even serve with strawberries to refresh your mouth (mint leaves can be frozen)
- Crispy cold vegetables e.g. cucumber, peppers, celery, carrot, radish sticks.
- Sour sweets and chews: e.g. starbursts, sherbet lemons. Note: these are not suitable for diabetics.

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- Sugar free mints and sweets: these sweets can be sucked to provide some relief from a dry mouth. However, always check the label for sorbitol because this can have a laxative effect if taken in large amounts.
- Rinse your mouth with mouthwash or iced water, or clean your teeth to moisten and freshen your mouth. Use lip balm to reduce problems with dry lips.
- Various dry mouth products (gels, mouthwashes, mouth spray, chewing gum, toothpastes) are available from your pharmacy. Ask your dietitian for more information and samples.
- Take medications with food where possible

Summary

- It is important to avoid fluid overload in the short and long term
- Report any changes in appetite so that your dry weight can be adjusted if necessary
- Reduce salt intake as this has a major effect on thirst
- Aim to improve your diabetic control if needed, as this will also help with controlling your thirst
- Record your fluid intake until your fluid gains are well controlled
- Regularly measure the amount of urine you pass over 24 hours

Warning – Starfruit contains a chemical which can be extremely dangerous to people with kidney problems, they should be avoided.

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