

■ A high salt intake is a significant risk factor for high blood pressure, which can lead to chronic renal failure

What I tell my patients about salt restriction

Traditionally, salt was used to preserve foods, but the high use of salt in the UK today is certainly not helping to preserve the nation! The efforts we as a country have made to reduce our salt intake have already saved 8,500 lives in the last year. The number of lives saved per year could be increased to 17,000 if salt consumption is reduced by a further 25%.

Salt (sodium chloride) is a mineral commonly found in food. It is present in small amounts naturally in foods, but then is added in much larger amounts by the manufacturer during food processing, or by the consumer during food preparation.

How much salt am I allowed?

Guidelines from the Food Standards Agency suggest that 6 g of salt is allowed per person each day.¹ A report by the Food Standards Agency in June 2012 found that the average person in the UK consumes around 8.1 g of salt per day. This is a reduction compared with the situation ten years ago, when the average was 9.5 g, but there is still scope to reduce this further.²

The 6 g target should include the amount added by manufacturers as well as that which you add during cooking or at the table.

What are the benefits of reducing salt?

The reduction from 9.5 g to 8.1 g of salt that has already been made in the last decade is likely to have prevented approximately 20,000 heart-related conditions like strokes, heart attacks and heart failure

– 8,500 of which are fatal – in the UK each year. If the salt target of 6 g is reached, it is estimated that 17,000 lives a year would be saved.² This figure does not include the extra benefit that improved blood pressure would have on controlling kidney failure.

Why should I reduce my salt intake?

A high salt intake is a significant risk factor for high blood pressure (hypertension). High blood pressure is the second most common cause of chronic renal failure. If blood pressure is not well controlled, chronic renal failure can progress to a level where dialysis is needed. If high blood pressure is causing or contributing to your chronic renal failure, then controlling blood pressure can help prevent it from progressing.

How do I know if I have high blood pressure?

For many, high blood pressure causes no symptoms (is asymptomatic). There are many cases where patients are admitted to hospital, needing to start dialysis, and this is found to be due to uncontrolled high blood pressure. Some are not aware of this, as their blood pressure has never been checked; however, in many cases people are aware, but do not think it is anything to worry about as they have no symptoms. Dialysis could have been avoided if blood pressure was better controlled in this patient group.

As high blood pressure doesn't always cause symptoms, it is important that you have it checked regularly and follow the dietary and medication plan for your high blood pressure.

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Table 1. Ways to reduce your salt intake

Avoid ...	Try ...
Adding salt during cooking	Using herbs (oregano, basil) and spices (garlic, ginger, chilli) to flavour foods
Bottled sauces (ketchup, brown sauce)	Using vinegar, lemon juice, pepper
Using high-salt stock cubes (Oxo®, Maggi®)	Making stock with meat juices or buying reduced-salt stock cubes
Salted meats and fish	Using fresh meat and fish or tinned fish in spring water. If you do need to use salted fish, try to pre-soak it to remove some of the salt
Salted nuts and crisps	Crisps with no added salt and unsalted nuts

Table 2. Salt content of common sauces and condiments

Sauce/condiment	Salt content (per serving)
Indian lime pickle (20 g)	1.6 g
Gherkins (40 g)	1.1 g
Sweet chilli dipping sauce (28 g)	1.2 g
Worcester sauce (7.5 g)	0.5 g
Tomato ketchup (15 g)	0.4 g
Mustard (5 g)	0.4 g
Salad cream (15 g)	0.3 g
Raita (40 g)	0.2 g
Cranberry sauce (15 g)	Trace
Apple sauce (15 g)	Trace

Are there any other reasons why I should restrict salt?

If you have kidney problems, salt may be restricted for a reason other than blood pressure. Salt makes us feel thirsty, and if your kidneys are struggling to expel the fluid from your body adequately, fluid can build up. A high salt intake will make you want to drink more, as your body tries to dilute it down. If you are struggling to pass much urine, or you have swelling caused by fluid (oedema) on your body, you may be requested to limit the amount of fluid and salt you consume.

Should everyone with kidney failure or kidney problems restrict fluid?

No, not all people with kidney failure need to restrict fluid. For some it may actually be harmful, so please discuss it with your medical team. Fluid is only usually restricted in those who are unable to produce much urine. Even if other people that you know from the kidney unit are restricting their fluid, please discuss it with your team, as it is an individualised treatment and restricting fluid unnecessarily can cause harm.

Should everyone with kidney failure or kidney problems restrict salt?

As the average intake of salt in the general population is above the recommended level, an effort from everyone – including those with kidney conditions – to reduce their salt intake will lead to health benefits.

The exception to this is when people are very unwell and struggle to eat. If this is the case, then some dietary restrictions may be relaxed where possible, to allow adequate protein and calories to be consumed so that you get better. Limiting salt can then be reconsidered once your appetite is back to normal.

Do we all receive equal benefits from reducing our salt intake?

Everyone with high blood pressure who reduces their salt intake to the recommended target will see a beneficial effect on their blood pressure. Some ethnic groups (for

Table 3. Salt content of common takeaway and restaurant meals

Common takeaway foods	Salt content (per portion)	Alternatives	Salt content (per portion)
Big Mac®	2.1 g	Hamburger	1.2 g
Large fries	0.9 g	Medium fries	0.6 g
Large chocolate milkshake	0.9 g	Large Sprite zero®	0.1 g
		Garden salad	0.0 g
Total salt content of meal	3.9 g		1.9 g
7 x BBQ chicken wings	4.3 g	4 x garlic bread slices	1.2 g
11" stuffed-crust vegetable pizza	5.4 g	11" regular vegetable pizza	3.4 g
Total salt content of meal	9.6 g		4.6 g (this is still very high, so only have as a treat)



Did you know that one large chocolate milkshake from a fast food chain has the same amount of salt as three packets of crisps?

example, black Africans) are more 'salt sensitive', and hence reducing salt intake in these groups is likely to bring about a larger decrease in blood pressure. Salt reduction in black Africans has also been found to reduce urinary protein excretion (urinary protein is a further risk factor for renal disease).

Where does the salt in my diet come from?

Studies have shown that the majority of the salt in the diet of black African and South Asian populations in the UK comes from that which is added during cooking or at the table. This is in contrast to the rest of the UK population, where 75% of the salt comes from processed foods.³

What is the difference between sodium and salt?

Salt = sodium + chloride. The weight of salt you are allowed is more than the amount of sodium you are allowed, as salt contains both sodium and chloride.

In salt, 6 g is approximately 2.4 g or 2,400 mg of sodium. To convert sodium to salt, multiply the amount of sodium by 2.5.

Won't cutting the salt down make my food bland?

Salt is an acquired taste, so if you are using lots of salt at the moment, think about cutting down gradually. Your taste buds get used to less salt very quickly, so please don't give up. Consider using herbs and spices to flavour foods instead (see Tables 1 and 2).

Most people who have reduced their salt intake are shocked when they go out and have a meal, as they can taste how salty some of the meals they used to enjoy are.

Is sea salt better than table salt?

In terms of blood pressure, both sea salt and table salt have the same health risks, so we need to be careful with both types.

I have seen salt substitutes in the supermarket – can I use them?

Salt substitutes such as Lo[®] Salt, Saxa So-Low[®] and own-brand 'reduced sodium salt' are usually made from a combination of sodium chloride and potassium chloride. Potassium can build up in the body when you have kidney problems and cause an irregular heartbeat. For this reason, salt substitutes are not generally recommended in people with kidney problems.

■ *What I tell my patients about ...* is a patient information service specifically designed for renal units to use with their patients. You can now view this, and all of the previous *What I tell my patients about ...* articles online and download them free of charge via www.bjrm.co.uk

Table 4. Comparison between salt content of common ready meals

Ready meal	Salt content (per portion)
Sainsbury's 'basics' [®] spaghetti bolognese (300 g)	1.2 g
Sainsbury's standard spaghetti bolognese (400 g)	2.0 g
Sainsbury's 'Taste the Difference' [®] spaghetti bolognese (400 g)	1.0 g
Asda 'Smart Price' [®] macaroni cheese (300 g)	1.1 g
Asda frozen macaroni cheese (400 g)	2.4 g
Asda 'Extra Special' [®] macaroni cheese (400 g)	2.4 g

Can I have takeaway or restaurant meals?

Many takeaway and restaurant meals can be high in salt, so only have these as an occasional treat (see Table 3). If you don't have much time to devote to food preparation, consider making it in bulk and freezing portions for several days. Alternatively, you may want to consider ready meals, but check the labels to see which ones are low in salt.

Are lower-salt meals more expensive?

Low-salt ready meals do not need to be more expensive; in some supermarkets, the basic or low-cost meals have less salt than the regular or premium versions (see Table 4). It makes sense to check the labels to know what you are buying. As you are allowed 6 g of salt in a day, try to keep the salt in a main meal to less than 2 g per portion ■

Declaration of interest

The author declares that there is no conflict of interest.

References

1. www.actiononsalt.org.uk (last accessed 03/12/12)
2. www.wp.dh.gov.uk/transparency/files/2012/06/Sodium-Survey-England-2011_Text_to-DH_FINAL1.pdf (last accessed 18/12/12)
3. www.food.gov.uk/scotland/scotnut/salt/ (last accessed 01/08/12)

Further reading

Consensus Action on Salt and Health. www.actiononsalt.org.uk

Key points

- Reducing your salt intake will benefit your blood pressure.
- Good blood pressure control in those with high blood pressure can help reduce the progression of kidney damage or failure.
- Think where the salt comes from in your diet and consider alternatives. Your taste buds will adjust within a few weeks.
- If you find your blood pressure is lower with diet and medical treatments and you have friends or family with high blood pressure, consider sharing your ideas so they, too, can benefit.