

Post kidney transplant dietary advice

Information for patients

This booklet answers common questions about eating after you have had a kidney transplant. If you would like further information, or have any worries, please do not hesitate to speak to your dietitian, nurse, or doctor.

This booklet will cover:

- When to speak with your dietitian.
- Previous dietary restrictions, what happens after transplant?
- Food safety at home and abroad after transplant.
- Dietary recommendations to keep you and your transplanted kidney well.

Do I need to see a dietitian after transplant?

After transplant, it may take some time for your new kidney to start working. New medications or changes in medication doses might affect your bloods. During this time, you may need some support with helping to maintain normal blood phosphate or potassium levels from the dietitian, nurses, or doctors.

Do previous dietary restrictions need to continue?

Prior to transplantation you may have been advised to restrict your intake of salt, potassium, phosphate, and fluid. **If you have a well-functioning transplanted kidney, producing good volumes of urine**, it may be possible to relax these restrictions and start following an unrestricted healthy diet.

Potassium

High doses of immunosuppressive medications are often required initially after transplantation; this can cause high potassium levels therefore a gradual relaxation of dietary potassium restriction may be required.

Phosphate

You may also find that your phosphate levels are low after your transplant; If you are still taking phosphate binders these may be stopped by your doctor, nurse, or dietitian.

Salt

Post-transplant you should follow a no added salt diet to protect your new kidney.

Why is food safety important?

Following a transplant, you will need to take one or more immunosuppressive medications, which help prevent the immune system from attacking or rejecting the new organ by dampening down the body's own natural defence system.

Following food safety guidance is important for everyone after transplant, but it is very important when high doses of immunosuppressive medications are recommended or when dose changes are made. This is likely to be the case in the first six months after transplantation but will vary for each person.

Immunosuppressive medications weaken the immune system's ability to fight infections, Food can cause infection if not prepared or stored correctly. It is important to follow good food hygiene when choosing, preparing, and storing foods. It is also important to avoid certain food that are 'high risk.' These are foods known to carry certain bacterium.

Symptoms of foodborne infections:

- Headache
- Temperature
- Sore throat
- Vomiting
- Diarrhoea

During periods of vomiting or diarrhoea, you can become dehydrated and essential medications may not be absorbed which could potentially result in kidney rejection.

The FSA (Food safety Authority) recommend following the **four Cs** of good food hygiene:

1. Wash your hands properly and keep them **clean**
 - Keep hands clean when eating and preparing food.
 - Dry hands with a separate towel, not dishcloth.
2. **Cook** food properly
 - When cooking or reheating food, always check that it is steaming hot throughout.
 - Only keep leftovers for two days and only reheat once.
 - Do not eat food that is past its 'use-by' date.
3. **Chill** food properly
 - Keep fridges at 0-5°C and freezers at -18°C or below.
 - Cool cooked food within 1-2 hours and then store in the refrigerator or freezer.
 - Defrost food in the fridge overnight or in the microwave if you intend to cook and eat straightaway and eat leftovers within 24 hours of defrosting.
4. Avoid **cross-contamination**
 - Clean and disinfect work surfaces, chopping boards and equipment thoroughly before, in between and after preparing foods, especially raw foods.
 - Always cover raw meat/fish/poultry and store at the bottom of the refrigerator
 - Keep raw and ready-to-eat food separate during storage and preparation.

High risk foods

Food type	High risk (should be avoided)	Safer alternative to enjoy
Milk	Unpasteurised milk e.g., milk sold on local farms	Any pasteurised milk, soya milk or UHT milk.
Cheese	All unpasteurised soft cheese unless cooked until piping hot. Homemade cheeses e.g., labneh/paneer Dolcelatte Soft cheeses – mould-ripened (white rind) e.g., brie, camembert and certain goats' cheese like chevre Blue-veined cheese e.g., Danish Blue, gorgonzola, Roquefort Cheeses on the deli counter	Pasteurised soft cheese e.g., cottage cheese, mozzarella, feta, cream cheese, ricotta, halloumi, hard goats' cheese, paneer and labneh. Processed cheeses such as cheese spreads (e.g., Dairylea) All hard cheese (pasteurised and unpasteurised) e.g., Cheddar, red Leicester, edam, gouda, stilton, pecorino, and parmesan Mould-ripened or blue-veined cheeses if cooked until piping hot It is best to buy pre-wrapped cheese
Yoghurt	Any form of unpasteurised yoghurt Yoghurt which is described on the label as 'bio' or 'probiotic' (e.g., Onken, Yeo valley, Rachel's, Activia) Probiotic drinking yoghurts e.g., Yakult, Actimel, Supermarket own versions	Any yoghurt that does not describe itself as 'bio' or 'probiotic' e.g., live, plain/natural, sour cream, Greek and fruit yoghurts (e.g., Muller, supermarket own, lassi) Prebiotic yoghurt/product (these contain substances which promote the growth of healthy bacteria. They do not contain any live bacteria themselves)
Ice cream	Ice cream from ice cream vans and soft serve machines e.g., whipped ice cream Homemade ice cream using raw eggs	Shop bought tubs of ice cream stored and consumed according to manufacturer's instructions, individual ice cream portions Homemade ice cream using pasteurised egg or an egg free recipe
Meat	Raw or undercooked meat or poultry Rotisserie chickens Meat or poultry from deli counters Cured meats e.g., salami, Parma ham, chorizo and pepperoni	Well cooked meat and poultry Tinned meat Pre-packaged cooked meats and poultry stored and used according to the manufacturer's instructions Cured meats if cooked until piping hot
Pâtés	Meat and vegetable pâtés	Tinned pâtés
Egg	Raw or undercooked eggs Sauces, desserts and dressings made with raw eggs e.g., homemade mayonnaise, aioli,	Use lion stamped eggs and cook well Shop bought mayonnaise Products made with pasteurised egg

	Caesar salad dressings, hollandaise and béarnaise sauces, chocolate mousse and egg-nog.	
Fish	Raw/undercooked fish and shellfish e.g., sushimi, oysters and caviar Sushi made with raw fish/shellfish Fish and shellfish from open counters Cold smoked fish e.g., smoked salmon and trout, ready to eat fish and shellfish unless consumed within 24 hours	Fish and shellfish if cooked until piping hot Tinned fish Sushi made with cooked seafood or vegetables Pre-packaged fish and shellfish stored and used according to the manufacturer's instructions Consume cold smoked fish/ready to eat fish including smoked salmon within 24 hours of opening the packet
Fruit and vegetables	Unwashed fruits, vegetables, and salad Unpasteurised fruit juice and smoothies Raw sprouted seeds	Wash all fruit, vegetables, and salad Pasteurised fruit juice and smoothies Well-cooked sprouted seeds
Sandwiches	Ready to eat sandwiches that contain high risk foods e.g., cured meat or smoked salmon	All other pre-packaged sandwiches which have been stored and consumed according to manufacturer's instructions
Rice	Reheated cooked rice and rice dishes	Freshly cooked rice served immediately

Eating out and takeaways

Avoid Eating out and avoid takeaways for the first six to eight weeks after transplantation. After this period, eating out can be enjoyed when following the guidelines below.

Tips to enjoy eating out safely

Check the food hygiene rating on the Food Standards Agency mobile phone app or website (<http://ratings.food.gov.uk>), which lists all the ratings for both local and out-of-area food establishments.

- Check the eating area is clean and tidy
- Avoid all high-risk foods on the menu or enquire if unsure (high risk foods listed above)
- Try to order a plated meal that is cooked fresh to order (not from a deli counter)
- Avoid foods from salad bars and deli counters
- Ensure your meal is piping hot and thoroughly cooked when it arrives
- Avoid rice that has already been cooked; ask for it to be cooked fresh.
- Beef burgers should be 'well done'.
- If transplant recipients need to eat from a buffet it is recommended to try to be first in the queue and not to go back for further servings as there is a risk the food may have been contaminated by other diners.

Eating abroad

It is especially important to be very careful with food safety when eating abroad. It is recommended for those considering travelling abroad to discuss this with their transplant team in advance.

Managing weight gain

Eating healthily is important to maintain good health, reduce risk of diseases and help maintain a healthy weight. With relaxed dietary restrictions, a general feeling of wellbeing and possible steroid induced hunger, weight gain is common after a transplant.

Being overweight or obese increases the risk of developing cardiovascular disease, hypertension, hyperlipidaemia, stroke, and diabetes.

There are lots of things that can be done to control weight gain, such as:

- Eat regular, planned meals and try not to snack on high-energy foods between meals.
- Decrease portion sizes – use a smaller plate or bowl and serve food on individual plates.
- Eat fewer foods that are high in fat and sugar e.g., fizzy drinks, cakes, biscuits, fried foods, crisps, chocolate.
- Choose lower fat cooking methods such as grilling, baking, and boiling.
- Fill up on plenty of fruit and vegetables
- Eat small portions of more filling foods such as bread, pasta, and rice
- Shop from a list and avoid shopping when you're hungry.
- Take regular exercise at a level you can manage.
- A steady weight loss of about half to one kilogram (1-2lb) per week is the safest way to lose weight and means you are more likely to keep the weight off than rapid weight loss over a short amount of time.

If you would like more help on reducing your weight after you have recovered from your transplant surgery, please refer to your GP for local services.

A balanced diet

A balanced diet contains a variety of foods from the five different food groups. This is important to make sure you get enough energy (calories) and protein from food, as well as essential vitamins and minerals.

The five food groups are:

- Bread, cereals, and potatoes
- Fruit and vegetables
- Meat, fish, and alternatives
- Milk and dairy foods
- Fatty and sugary foods

The Eatwell guide shows the proportions of these food groups in a healthy diet.

Eatwell Guide

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.



Water, lower fat milk, sugar-free drinks including tea and coffee all count.
Limit fruit juice and/or smoothies to a total of 150ml a day.

Check the label on packaged foods

Each serving contains			
Energy 1000kJ 200kcal	Fat 5g	Sugar 1.2g	Salt 0.3g
12.5%	7%	6.5%	15%

Typical values for solid per 100g (60%)/ 100kcal

Choose foods lower in fat, salt and sugars



Eat less often and in small amounts

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

Source: Public Health England in association with the Welsh government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

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Foods that interact with medications

Some foods, plant compounds and herbal remedies can interact with immunosuppressive medications and prevent them from working properly. It is not recommended to take any 'alternative' medicines or high dose vitamins without first discussing with the transplant team.

Grapefruit, grapefruit juice and Seville oranges should be avoided as they can interact with your immunosuppressive medications.

Renal transplant bone disease

The risk of bone fractures is increased among people who have had a kidney transplant. This can be due to pre-existing bone disease or transplant specific medications, especially corticosteroids which can cause osteoporosis (weak bones).

Therefore, it is important to ensure a good intake of calcium in the diet post-transplant.

High sources of Calcium:

- Milk – all types. If choosing non-dairy milk such as soya or rice milk check the label to make sure that it is fortified with calcium.
- Cheese – all types except cottage cheese and cream cheese
- Yoghurt and yoghurt drinks - plain or fruit
- Tofu
- Tinned fish especially sardines, pilchards, and salmon (if the bones are eaten)
- Sesame seeds and tahini
- Instant porridge (fortified with calcium)

New-onset diabetes mellitus after kidney transplantation (NODAT)

About 15 to 20 per cent of patients will have developed NODAT one year post transplant due to the immunosuppressive medications.

To reduce the risk of developing NODAT the most important thing you can do is to keep to a healthy weight. Ask your dietitian, nurse, or doctor if you are unsure about this.

All transplant patients will have their blood glucose levels monitored and if necessary, they will be referred to the diabetes specialist including the dietitian.

More information

For more information about the Therapies/ Renal Dietetic service at the Royal Free London, please visit our website: www.royalfree.nhs.uk/services/kidney-services/

Your feedback

If you have any feedback on this leaflet or for a list of references for it, please email: rf-tr.communications@nhs.net

Alternative formats

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