

Dietary advice after your kidney transplant

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 particular worries, please do not hesitate to speak to your dietitian, nurse or doctor.

Do previous dietary restrictions need to continue?

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

High doses of immunosuppressive medications are often required after you have a transplant; these medicines can cause high potassium levels and so, a gradual relaxation of your potassium restriction may be required. You may also find that your phosphate levels are low after your transplant; if necessary you will see a dietitian to address this.

Post-transplant you should still be careful with the amount of salt you consume, following a no added salt diet.

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 reducing the body's own natural defence system.

Following food safety guidance is important for all transplant recipients, but it is particularly 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 patient.

These immunosuppressive medications weaken your immune system's ability to fight infections, increasing your risk of catching all types of infection, including foodborne. It is therefore important to use good food hygiene when choosing, preparing and storing foods and to avoid certain high risk foods known to carry certain bacterium.

Symptoms of foodborne infections include:

- headaches
- high temperature
- sore throat
- vomiting
- diarrhoea.

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

The Food Standards Agency (FSA) recommend following the **4Cs** 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 a 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 one to two 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 it straightaway and eat leftovers within 24 hours of defrosting.

4. Avoid **cross-contamination**:
 - Clean and disinfect work surfaces, chopping boards and utensils 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 foods – should be avoided	Safer alternatives
Milk	Unpasteurised milk, eg milk sold on local farms	Any pasteurised, soya or UHT milk.
Cheese	<p>All unpasteurised soft cheese unless cooked until piping hot.</p> <p>Homemade cheeses, eg labneh/paneer. Soft, mould-ripened (white rind) cheeses, eg brie, camembert and chevre/goats' cheese.</p> <p>Blue-veined cheese, eg Danish Blue, Gorgonzola, Roquefort, Dolcelatte.</p> <p>Cheeses from the deli counter.</p>	<p>Pasteurised soft cheese, eg cottage cheese, mozzarella, feta, cream cheese, ricotta, halloumi, hard goats' cheese, paneer and labneh.</p> <p>Processed cheeses such as Dairylea.</p> <p>All hard cheeses (pasteurised and unpasteurised), eg cheddar, red Leicester, edam, gouda, stilton, pecorino and parmesan.</p> <p>Mould-ripened or blue-veined cheeses if cooked until piping hot.</p> <p>It is best to buy pre-wrapped cheese.</p>
Yoghurt	<p>Any form of unpasteurised yoghurt.</p> <p>Yoghurt which is described on the label as 'bio' or 'probiotic' (eg Onken, Yeo valley, Rachel's, Activia).</p> <p>Probiotic drinking yoghurts,</p>	<p>Any yoghurt that does not describe itself as 'bio' or 'probiotic', eg live, plain/natural, sour cream, Greek and fruit yoghurts (eg Muller, supermarket own brands, lassi).</p> <p>Prebiotic yoghurt/products</p>

	eg Yakult, Actimel, and supermarket own brands.	(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, eg whipped ice cream. Homemade ice cream using raw eggs.	Shop bought ice cream stored and consumed as per 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, eg 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, eg homemade mayonnaise, aioli, Caesar salad dressings, hollandaise and béarnaise sauces, chocolate mousse and egg-nog.	Use lion stamped eggs and cook well. Shop bought mayonnaise. Products made with pasteurised egg.

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

Eating out and takeaways

Eating out or consuming takeaways within the first six to eight weeks after transplantation should be avoided.

After this period, eating out can be enjoyed when following the basic principles outlined below.

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

Tips to enjoy eating out safely

- Check the eating area is clean and tidy.
- Avoid all high-risk foods on the menu or enquire if unsure.
- Try to order a plated meal that is cooked fresh to order.
- 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 vigilant with food safety when eating abroad. If you are thinking about travelling abroad, please discuss this with your 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.

If you are overweight or obese you are more likely to have cardiovascular disease, high blood pressure, raised blood fats, stroke and diabetes.

There are lots of things you can do to control your weight, 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, eg 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.
- Exercise regularly at a level you can manage.
- A steady weight loss of about half to one kilogram (1-2 lbs) 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.

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.

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 speaking to your transplant team.

Grapefruit, grapefruit juice and Seville oranges should be avoided as they can also 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 after your 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.

Note: It is important to still avoid high risk dairy products as outlined in the table earlier in the booklet.

New-onset diabetes mellitus after kidney transplantation (NODAT)

About 15-20% 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 a dietitian.

References:

British Dietetic Association (2016) *Dietary advice post renal transplantation*. BDA; Birmingham

Food Standards Agency (2016) *The Eatwell Guide*:
www.food.gov.uk/northern-ireland/nutritionni/eatwell-guide

Further information

For more information about the nutrition and dietetic service at the Royal Free London visit our website:

www.royalfree.nhs.uk/services/services-a-z/therapy-services/nutrition-and-dietetics

For more information about the kidney service at the Royal Free London visit our website:

www.royalfree.nhs.uk/services/services-a-z/kidney-services

This leaflet is also available in large print. If you need this leaflet in another format – for example Braille, a language other than English or audio – please ask a member of staff.

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