

Diet and Your Kidney Transplant

Information for patients, relatives
and carers



Adult
Therapies

Diet and your kidney transplant

One of the benefits of having a kidney transplant is that you can typically enjoy a more varied diet. However some dietary changes may be required and your kidney dietitian will guide you with this.

The aim of this diet booklet is to explain the importance of nutrition and food safety after your kidney transplant.

Immediately after your operation

A good nutritional intake will help your recovery. Eating enough of the right foods can help to prevent infections and heal wounds. If your appetite is poor after your operation, your dietitian can offer advice on how to improve your food intake or suggest nutritional supplement drinks to take.

Your transplant medications may affect your blood results and you may need to alter your diet. However this is usually short term and your dietitian will guide you through any changes.

Food safety is important to prevent any foodborne illness (food poisoning), which may result in vomiting and diarrhoea. This may cause you to become dehydrated or not absorb your transplant medications.

How do transplant medications affect my diet?

Early side effects include:

- High blood potassium level - this may occur for a short time after your transplant. If necessary, you will be advised to reduce your intake of foods high in potassium.

- Low blood phosphate level - this may occur for a short time after your transplant. If necessary, you will be advised how to increase the phosphate in your diet.
- Unstable blood glucose level - if necessary, you will be given advice to help manage this. If you have diabetes, you may also wish to discuss this with your diabetes specialist nurse or dietitian.

Longer term side effects can include:

- Weight gain - this is common, especially in the first year after your transplant. It is usually due to a combination of eating too well, lack of exercise or activity and the effect of some tablets, such as steroids.

Being overweight can lead to high blood pressure and cholesterol levels which, can lead to diabetes and heart disease. Keeping a healthy weight can help maintain the lifespan of your kidney transplant.

Food safety

Immediately after your transplant surgery, you will start taking immunosuppressive medications to prevent your body from rejecting the new kidney. These medications weaken your body's ability to fight infection, including those that can come from food. It is important to prevent foodborne illness, as during episodes of vomiting and diarrhoea you can become dehydrated and not absorb your medications.

While food safety is especially important during the first **six** months after your transplant surgery, you should continue to follow food safety advice for the lifetime of your transplant.

Minimise the risk of getting foodborne illness - by following the 4 C's

1. Clean

Wash your hands properly and keep them **clean** especially before handling food, preparing food and before eating. Keep work tops, chopping boards and utensils clean at all times. Wash and change dish cloths and tea towels regularly.

2. Cook

Cook food thoroughly (to 75°C) or follow the manufacturer's cooking instructions on food packaging. Eat cooked food within an hour of making. Do not eat food that is past its 'use by' date and discard food that is out of date.

3. Chill

Chill food quickly (cool cooked food at room temperature and then place in the fridge within one to two hours). Store leftovers in the fridge in sealed containers and eat within two days. Keep fridges at the correct temperature (between 0-5°C) and freezers at -18°C. Defrost foods fully in the fridge where possible.

4. Cross-contamination

Avoid **cross-contamination**, this is most likely to happen when raw food touches or drips onto ready- to-eat food, equipment or surfaces. Store raw foods at the bottom of the fridge and ready-to-eat foods above. Use different chopping boards and utensils for raw and ready- to-eat foods.

High risk foods to avoid and safer alternatives

After your transplant you should avoid foods which put you at greater risk of a foodborne illness. The following tables list the high risk foods to avoid and safer alternatives to choose instead.

Meat and meat-free foods

Avoid these high risk foods

- Raw or undercooked meat or poultry
- Rotisserie chickens
- Meat or poultry from open deli counters
- Cured meats eg salami, parma ham, chorizo, pepperoni
- Meat and vegetable pâtés
- Fermented meat-free alternatives e.g. Tempeh

Choose these safer alternatives

- Well-cooked meat and poultry
- Tinned meat
- Pre-packaged cooked meats and poultry stored and used according to manufacturer's instructions
- Cured meats if cooked until piping hot
- Tinned pâtés
- Pasteurised and cooked tofu

Fish

Avoid these high risk foods

- Raw or undercooked fish and shellfish e.g. sashimi, oysters and caviar
- Sushi made with raw fish/shellfish
- Fish and shellfish from open counters
- Cold smoked fish (e.g. smoked salmon and trout) and ready-to-eat fish and shellfish, unless eaten within 24 hours of opening the packet

Choose these safer alternatives

- Fish and shellfish if cooked until piping hot
- Tinned fish
- Sushi made with cooked fish or vegetables
- Pre-packaged fish and shellfish, stored and used according to the manufacturer's instructions
- Cold smoked fish and ready-to-eat fish that is eaten within 24 hours of opening the packet

Eggs

Avoid these high risk foods

- Raw or undercooked eggs
- Sauces, dressings and desserts made with raw eggs e.g. homemade mayonnaise, aioli, hollandaise and béarnaise sauces, caesar salad dressing, chocolate mousse, egg-nog, uncooked meringue

Choose these safer alternatives

- Use lion stamped eggs and cook well
- Shop bought mayonnaise
- Products made with pasteurised egg

Dairy and plant-based alternatives

Avoid these high risk foods

Milk & Cream

- Raw or unpasteurised dairy milk e.g. milk sold on local farms
- Unpasteurised plant-based milks e.g. soya, rice or nut milks
- Unpasteurised cream

Cheese

- Unpasteurised soft cheeses, unless cooked until piping hot
- Homemade cheese e.g. labneh/paneer
- Dolcalette
- Soft cheeses (mould-ripened/ white rind) eg brie, camembert and some goat's cheese e.g. chevre
- Blue-veined cheeses, unless cooked until piping hot e.g. Danish Blue, gorgonzola, Roquefort
- Cheeses from open deli counters

Choose these safer alternatives

Milk & Cream

- Pasteurised dairy milk (cow, goat or sheep), UHT milk
- Pasteurised plant-based milks e.g. soya, rice or nut milks
- Pasteurised cream e.g. double, single, soured cream, crème fraîche

Cheese

- Pasteurised soft cheeses (check the label e.g. cottage cheese, mozzarella, feta, cream cheese, ricotta, halloumi, hard goat's cheese, paneer and labneh)
- Hard cheeses (pasteurised and unpasteurised) e.g. cheddar, red Leicester, edam, gouda, stilton, pecorino and parmesan
- Processed cheeses e.g. cheese spreads, mould-ripened and blue-veined cheeses, if cooked until piping hot.
- Vegan cheeses made from coconut oil, soya or cashews. It is best to buy pre-wrapped cheese.

Avoid these high risk foods

Yogurt and ice-cream

- Homemade yogurt and home starter yoghurt kits
- Unpasteurised yoghurt
- Yoghurt described on the label as 'bio' or 'probiotic' (e.g. Onken, Yeo Valley, Rachel's, Activia)
- Probiotic drinking yoghurt e.g. Yakult, Actimel, Supermarket own
- Fermented milk drinks e.g. Kefir
- Ice cream from ice cream vans and soft serve machines e.g. whipped ice cream
- Homemade ice cream using raw eggs

Choose these safer alternatives

Yogurt and ice-cream

- Yoghurt that is not described as 'bio' or 'probiotic' e.g. live, natural, Greek and fruit yoghurts (e.g. Muller, supermarket own, lassi)
- Prebiotic yoghurt or products (these contain substances which promote the growth of healthy bacteria. They do not contain any live bacteria themselves)
- Shop bought tubs of ice cream stored and consumed according to manufacturer's instructions
- Homemade ice cream using pasteurised egg or an egg-free recipe

Fruit and vegetables

Avoid these high risk foods

- Unwashed fruits, vegetables and salad
- Unpasteurised fruit juice and smoothies
- Raw sprouted seeds e.g. beansprouts
- Fermented vegetables e.g. sauerkraut and kimchi

Choose these safer alternatives

- Wash all fruit, vegetables and salad
- Pasteurised fruit juice and smoothies
- Thoroughly cook sprouted seeds e.g. beansprouts
- Cooked fresh, frozen or canned vegetables

Miscellaneous

Avoid these high risk foods

- Ready-to eat sandwiches that contain high risk foods eg cured meat or smoked salmon
- Reheated cooked rice and rice dishes
- Fermented beverages e.g. kombucha

Choose these safer alternatives

- All pre-packaged sandwiches stored and consumed according to manufacturer's instructions
- Freshly cooked rice served immediately
- Instant and brewed coffee and tea

If you have a question about any food that is not on the above lists, please ask to see your dietitian.

Eating out and takeaways

Eating out and take-away meals should be avoided for the first six to eight weeks after your transplant. After this time, eating out can be enjoyed if following food safety advice.

Every business selling food will be given a food hygiene rating issued by the local authority. This provides guidance on the overall cleanliness of a business and whether it is a suitable place to eat. The Food Standards Agency website (<https://ratings.food.gov.uk>) list all the ratings and a mobile phone app is also available.

Choose restaurants with a high, or level 5, food hygiene rating and decide on menu options using the guidance in this booklet. Caution should be taken when eating foods from buffets, street vendors, deli counters and salad bars due to the risk of cross-contamination.



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 or choose another option such as potato, pasta, chips, chapatti or noodles
- Beef burgers should be well done, even if freshly made, as there is a risk of food poisoning with minced/ground beef if not cooked thoroughly
- If you 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.

In the long term

Weight gain is common after a transplant. This is due to relaxed dietary restrictions and a general sense of well-being, as well as potentially steroid-induced hunger. Most weight gain has been found to occur during the first 6-12 months after transplantation. Keeping a healthy weight can help maintain the lifespan of your kidney transplant.

A healthy diet includes eating foods which are low in fat, sugar, salt and high in fibre. In particular, continue to be careful with the amount of salt you eat to help manage your blood pressure. Including enough calcium in your diet is also important to keep your bones healthy and reduce the risk of osteoporosis. You may be referred to a dietitian for advice if your intake of calcium is low.

If you require further information about your diet please speak with your transplant team who can refer you to a kidney dietitian.

Frequently asked questions

Do I need to be careful with my diet if I travel abroad?

It is important to take extra care following food safety advice when you travel abroad. Please discuss this with your dietitian before travelling to help reduce the risk of a foodborne illness.

I've heard that I shouldn't drink bottled water, is this true?

Bacteria can be found in some bottled waters so it is recommended to avoid non-carbonated (still) bottled and mineral water. Carbonated (fizzy) bottled water and treated tap water are safer alternatives. If you travel abroad you should avoid tap water if it is unsafe.

Why should I not eat reheated rice?

Uncooked rice can contain spores of bacteria (*Bacillus cereus*) that can cause food poisoning. The spores can survive even when rice is cooked. If cooked rice is left standing at room temperature, the spores can grow into bacteria. These bacteria will multiply and may produce toxins (poisons) that cause vomiting or diarrhoea. It is best to eat rice immediately after cooking to reduce the risk of the spores becoming bacteria.

Why should I avoid certain yoghurts?

Bacteria naturally found in yoghurt are destroyed by the acidic nature of the stomach. However, the extra probiotic bacteria added to 'probiotic' or 'bio' yoghurts may survive. It is therefore best to avoid 'probiotic' and 'bio' yoghurts to reduce the risk of illness. Plain, natural, Greek, fruit and live yoghurts are safer alternatives.



Tell us what you think of this leaflet

If you have any suggestions, comments or queries regarding this leaflet please let your dietitian know.

Dietitian

Contact Number



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© The Leeds Teaching Hospitals NHS Trust • 1st Edition Version 1
Developed by: A collaboration with The Leeds Teaching Hospitals NHS Trust, Kidney Dietitians at the York and Scarborough Teaching Hospitals NHS Foundation Trust, and NHS Humber Health Partnership.
Produced by: Medical Illustration Services • MID code: 20250917_008/RC

LN006100
Publication date
11/ 025
Review date
02/2029