

Diet and Your Kidney Transplant

Information for patients, relatives and carers

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Contents	Page
Immediately after your operation	4
How do transplant medications affect my diet?	5
Longer term side effects can include:	5
Food safety	6
High risk foods to avoid	8
Eating out and takeaways	15
In the long term	16
Frequently asked questions	17
Tell us what you think of this leaflet	19
Teaching, training and research	19
Patient Advice and Liaison Service (PALS)	19

This leaflet has been jointly created by the Kidney Dietitians at the York and Scarborough Teaching Hospitals NHS Foundation Trust, The Leeds Teaching Hospitals NHS Foundation Trust and Hull University Teaching Hospitals NHS Foundation Trust.

Diet and your kidney transplant

One of the benefits of having a kidney transplant is that you can enjoy a more varied diet. Some dietary changes may be required and your renal 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 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. 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 clothes and tea towels regularly.
- 2. 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 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. Avoid cross-contamination, this is most likely to happen when raw food touches or drips onto readyto-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

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 ×	Choose these safer alternatives ✓
Raw or undercooked meat or poultry	Well-cooked meat and poultry Tinned meat
Rotisserie chickens	Pre-packaged cooked
Meat or poultry from open deli counters	meats and poultry stored and used according to
Cured meats eg salami, parma ham, chorizo,	manufacturer's instructions
pepperoni	Cured meats if cooked
 Meat and vegetable pâtés 	until piping hot Tinned pâtés
Fermented meat-free alternatives e.g. Tempeh	Pasteurised and cooked tofu

Fish

FISH	
Avoid these high risk	Choose these safer
Foods ×	alternatives ✓
 Raw or undercooked fish and shellfish e.g. sashimi, oysters and caviar Sushi made with raw 	 Fish and shellfish if cooked until piping hot Tinned fish Sushi made with cooked
fish/shellfish	fish or vegetables
Fish and shellfish from open counters	 Pre-packaged fish and shellfish, stored and used according to the
Cold smoked fish (e.g. smoked salmon and	manufacturer's instructions
trout) and ready-to-eat fish and shellfish, unless eaten within 24 hours of opening the packet	Cold smoked fish and ready-to-eat fish that is eaten within 24 hours of opening the packet

Eggs

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Avoid these high risk Foods *	Choose these safer alternatives ✓
Raw or undercooked eggs	Use lion stamped eggs and cook well
Sauces, dressings and desserts made with raw eggs e.g. homemade mayonnaise, aioli, hollandaise and béarnaise sauces, caesar salad dressing, chocolate mousse, eggnog, uncooked meringue	 Shop bought mayonnaise Products made with pasteurised egg
<u> </u>	

Dairy and plant-based alternatives

Avoid these high risk	Choose these safer
Foods ×	alternatives ✓

- Milk and cream
- Raw or unpasteurised dairy milk e.g. milk sold on local farms
- Unpasteurised plantbased 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 (mouldripened/ white rind) eg brie, camembert and some goat's cheese e.g.chevre

Milk and cream

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

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

- Blue-veined cheeses e.g. Danish Blue, gorgonzola, Roquefort
- Cheeses from open delicounters

Yogurt and ice-cream

- Unpasteurised yoghurt
- Yoghurt described on the label as 'live', 'bio' or 'probiotic' (e.g. Onken, Yeo valley, Rachel's, Activia)
- Probiotic drinking yoghurt eg Yakult, Actimel, Supermarket own
- Fermented milk drinks e.g. kefir
- Homemade yogurt and home starter yoghurt kits

- 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.

Yogurt and ice-cream

- Yoghurt that is not described as 'bio' or 'probiotic' e.g. 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

- Ice cream from ice cream vans and soft serve machines e.g. whipped ice cream
- Homemade ice cream using raw eggs

 Homemade ice cream using pasteurised egg or an egg-free recipe

Fruit and vegetables

Avoid these high risk Foods *	Choose these safer alternatives ✓
Unwashed fruits, vegetables and salad	Wash all fruit, vegetables and salad
Unpasteurised fruit juice and smoothies	 Pasteurised fruit juice and smoothies
 Raw sprouted seeds e.g. beansprouts 	Thoroughly cook sprouted seeds e.g.
 Fermented vegetables e.g. sauerkraut and kimchi 	beansproutsCooked fresh, frozen or canned vegetables

Miscellaneous

Avoid these high risk Foods *	Choose these safer alternatives ✓
 Ready-to eat sandwiches that contain high risk foods eg cured meat or smoked salmon 	All pre-packaged sandwiches stored and consumed according to manufacturer's
 Reheated cooked rice and rice dishes 	instructionsFreshly cooked rice
Fermented beverages e.g. kombucha	served immediatelyInstant and brewed coffee and tea

If you are 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.

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.

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. Your dietitian will give you advice on this if your intake of calcium is low.

A few months after your transplant, usually three to six months, your dietitian may discuss healthy eating with you in more detail. If you wish to speak with your dietitian sooner than this, you can request input through your transplant team.

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

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact: Admin Team, The York Hospital, Wigginton Road, York YO31 8HE, telephone 01904 725269 or email Nutrition&Dietetics@york.nhs.uk.

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email pals@york.nhs.uk.

An answer phone is available out of hours.

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