

# Safe eating for Immuno-compromised patients following liver/kidney transplant

Information for patients, parents  
and carers



Leeds children's  
hospital

caring about children



## Why do I need advice on what to eat?

When your immune system becomes weakened (immuno-compromised) you are at greater risk of infections. Infections can develop from bacteria or fungus which can be found in small amounts in many foods. This is due to the level of your white blood cells falling which would normally help to fight these organisms. This is referred to as neutropenia.

Many foods we eat contain small amounts of bacteria or fungi. For most people this is not a problem. However, when you become immuno-compromised these can be harmful and may lead to infections.

The guidelines in this booklet will help you to lower the risk of a food-borne infection, whilst having as varied a diet as possible. Other foods which are not listed are generally safe as long as good hygiene is observed. It also gives general advice on safe food handling and storage for all patients. If you are unsure about any foods, then please ask your dietitian or a member of your health care team for advice.

## Foods have been divided into lower risk foods and higher risk foods:

**Lower risk foods:** foods which are considered safer to eat as long as they have been stored, handled and served appropriately.

**Higher risk foods:** foods where there may be a risk of infection and which may be sensible to avoid.

## How long do I need to keep to these guidelines?

We advise that you follow these guidelines for the life of your transplanted organ.

## Food safety - general advice

Store, handle and cook food properly to avoid food-borne infections.

### Shopping

- Avoid buying food with damaged or broken packaging
- Check all use by dates and best before dates on packaging and discard if out of date
- Transport chilled and frozen foods home as quickly as possible. Use an insulated container or cool bag to help keep food at the correct temperature
- Pack raw meats, poultry and fish in a separate carrier bag to other foodstuffs. Remember, the packaging may be contaminated
- Avoid buying foods like meat and cheese from open deli counters or sweets and chocolate from pick and mix stalls

### Food preparation

- Always wash your hands with warm soapy water before handling and preparing any foods
- Wash your hands after going to the toilet, sneezing and after touching any pets, hair, dirty washing, rubbish or raw food
- Use a separate towel or use kitchen paper to dry hands. Do not use a tea towel
- Cover any cuts and grazes with a waterproof plaster
- Avoid preparing food if you have been unwell with food related sickness and / or diarrhoea until 48 hours after symptoms have passed

- Wash salad, vegetables and fruit (if eaten with the skin on) thoroughly
- Always wash your hands after touching raw meat, poultry or fish
- Avoid washing poultry under the tap as this can spread bacteria over the sink and work surfaces. Leave unwashed

## Storage

- Check fridge temperature. Fridges should be between 0°C - 5°C
- Store cooked foods at the top of the fridge
- Store raw or defrosting food at the bottom of the fridge in a covered container to stop it dripping or leaking out into the fridge
- Use and store food following the manufacturer's instructions. Use within best before or use by dates
- Keep eggs in the fridge - ideally in the egg tray away from other foods to minimise risk of transmission of any bacteria (Salmonella) that maybe on the shell
- Check your freezer temperature. Freezers should be below -18°C
- Do not refreeze thawed food
- If food is frozen at home, label and date when put in the freezer and use within freezer star guideline on packet or inside the door of the freezer

## Kitchen hygiene

- Keep the kitchen clean
- Use a food safe sanitiser or disinfectant on food contact surfaces (E.g. microwave handles, fridge door handles, taps)
- Make sure any cloths or sponges are regularly bleached, disinfected or changed
- Keep pets away from work surfaces, food and your dishes
- Avoid cross-contamination of food - change or wash chopping boards and utensils between preparing raw and cooked foods. Ideally, you should have three boards; one for raw meat and fish, one for cooked meat and one for other foods

## Cooking

- Thaw meat and poultry in the fridge and not at room temperature. This is because bacteria can grow more quickly at room temperature
- Always cook raw foods thoroughly and ensure the food is piping hot all the way through. Cook meat until the juices run clear and there is no pink showing
- Always follow the manufacturer's cooking guidelines and do not shorten cooking times
- Pre-heat the oven to make sure food is cooked at the recommended temperature

## Reheating foods

- Do not reheat rice
- If refrigerating / freezing home cooked foods, cover and cool food at room temperature within one hour after cooking and then place in fridge or freezer
- Eat reheated food within 24 hours of preparing or defrosting it. Only reheat once and ensure food is piping hot. Eat immediately after it is reheated

## Eating out / take-aways

- Use reliable / reputable outlets
- Look for the local council environmental health five star rating guide, with five being the top score for hygiene and cleanliness
- Ask for food to be cooked fresh rather than anything standing around
- Ensure food is piping hot when served
- Avoid salad bars / deli counters, street vendors, buffet style restaurants, market stalls and ice-cream vans
- Avoid pre-packed sandwiches from shops, supermarkets and garages
- Avoid pots of ready prepared sandwich fillings

More information on safer shopping and eating can be found at: [www.food.gov.uk/safereating](http://www.food.gov.uk/safereating)

## Meat and Poultry

| <i>Higher risk foods</i>  | <i>Lower risk foods</i>  |
|---|--|
| <ul style="list-style-type: none"><li>• Raw or undercooked meat and poultry</li><li>• Barbecued meat represents a particularly high risk and is best avoided altogether</li><li>• Cooked meat from the deli counter</li><li>• Salami</li><li>• Pâté</li></ul> | <ul style="list-style-type: none"><li>• Well cooked meat and poultry juices must run clear and no pink showing</li><li>• Vacuum packed sliced meat - check use by dates and eat within manufacturer's guidelines once opened</li><li>• Well-cooked sausages and burgers cooked in an oven or grill</li><li>• Hot dog sausages reheated thoroughly</li><li>• Tinned meat / tinned paste</li><li>• Once opened transfer to an airtight container, label, date and keep in the fridge. Eat within the manufacturer's guidelines</li></ul> |

## Eggs

| <i>Higher risk foods</i>   | <i>Lower risk foods</i>   |
|--|---|
| <ul style="list-style-type: none"><li>• Undercooked or raw eggs</li><li>• Products containing raw egg e.g. soufflé, homemade mayonnaise, mousse, soft meringue</li><li>• Any dressings containing raw eggs e.g. home / restaurant made Caesar salad dressing</li></ul> | <ul style="list-style-type: none"><li>• Use only Lion branded eggs or those bought from a farmer who has a certificate to show the hens are salmonella free</li><li>• Hard boiled eggs</li><li>• Firm cooked scrambled egg or omelettes</li><li>• Shop bought mousses</li><li>• Baked shop bought products made with eggs e.g. meringue, custard tart</li><li>• Mayonnaise - most bottled mayonnaise is safe as it is generally made using dried egg powder or pasteurised eggs</li></ul> |

## Fish

| <i>Higher risk foods</i>   | <i>Lower risk foods</i>  |
|--|--|
| <ul style="list-style-type: none"><li>• Raw or lightly cooked shellfish e.g. prawns, mussels and any products containing them</li><li>• Fish pâté</li><li>• Raw fish e.g. Sushi</li><li>• Smoked fish e.g. Salmon</li><li>• Vacuum packed fish e.g. mackerel</li></ul> | <ul style="list-style-type: none"><li>• Freshly cooked fish, fishcakes, fish fingers</li><li>• Well- cooked shellfish e.g prawn curry</li><li>• Tinned fish, tinned fish paste</li><li>• Frozen fish thoroughly defrosted and well cooked</li><li>• Cooked dishes containing smoked fish</li></ul> |

## Salad, Fruit and Vegetables

| <i>Higher risk foods</i>   | <i>Lower risk foods</i>  |
|--|--|
| <ul style="list-style-type: none"><li>• Avoid pre-packed salads and deli counter salads</li><li>• Avoid pre-packed lettuce</li><li>• Avoid pre-packed unpasteurised fruit e.g. chopped pineapple, sliced melon</li><li>• Avoid damaged or bruised fruit</li><li>• Avoid rice salads</li><li>• Vegetable pâté</li><li>• Raw sprouted seeds e.g. alfalfa, beansprouts</li><li>• Unwashed or unpeeled raw fruit and vegetables</li><li>• Unpasteurised fruit juice or smoothies</li></ul> | <ul style="list-style-type: none"><li>• All other salad vegetables are safe to eat as long as they are well washed</li><li>• Tinned fruit and pasteurised fruit pots</li><li>• Peel fruit or vegetables where possible</li><li>• Thoroughly cooked sprouted seeds</li><li>• Wash all fruit and vegetables well in freshly run water and peel where possible</li><li>• Pasteurised fruit juice or smoothies</li></ul> |

## Water and Drinks

| <i>Higher risk drinks</i>   | <i>Lower risk drinks</i>   |
|---|--|
| <ul style="list-style-type: none"><li>• Still bottled mineral water</li><li>• Un-boiled water that is not from a local authority supply e.g. from a borehole or private water supply</li><li>• Unpasteurised fruit juices and smoothies</li><li>• Unpasteurised milk and milkshakes</li></ul> | <ul style="list-style-type: none"><li>• Carbonated (fizzy) bottled water</li><li>• If you drink water from a borehole or private water supply this must be boiled, prior to drinking</li><li>• Tea, coffee</li><li>• Pasteurised cartons or bottles of drinks e.g., fruit juices, Oasis, Drench, Fruit shoots, Ribena, water with a hint of flavouring e.g. lemon, peach</li><li>• Fizzy drinks</li></ul> <p>*Freshly run tap water if from a local authority supply is considered safe to drink but you may choose to boil this of your own accord.</p> |

## Water and Drinks

| <i>Higher risk drinks</i> | <i>Lower risk drinks</i>  |
|---------------------------|---|
|                           | <ul style="list-style-type: none"><li>• It is recognised that on rare occasions some infections may be transmitted by tap water or private water supplies in Yorkshire and the rest of the UK and therefore, you may choose to routinely boil the water for your child. Listen to any advice from health / local authority regarding the need to boil your water supply. Ensure you run the tap for a couple of minutes first and that it is a tap that is regularly used</li></ul> |

## Additional note

### Medicines and health products

- Check with your dietitian or pharmacist before giving any health products that have not been prescribed by your doctor. These include vitamin supplements, herbal remedies, complementary medicines or probiotics
- Remember you may need to avoid certain foods when taking some immuno-suppressant medicines e.g. avoidance of grapefruit / grapefruit juice if taking Tacrolimus
- Always check the medicine label

### Liver Dietitians

Telephone: 0113 392 0630

### Renal Dietitians

Telephone: 0113 392 0624





## What did you think of your care?

Scan the QR code or visit [bit.ly/nhsleedsfft](https://bit.ly/nhsleedsfft)

*Your views matter*



© The Leeds Teaching Hospitals NHS Trust • 2nd edition (Ver 1)  
Developed by: Kirsten Tremlett, Children's Dietitian. With thanks to Yorkshire  
Regional Centre for Paediatric & Adolescent Oncology and Haematology  
Produced by: Medical Illustration Services • MID code: 20230907\_004 /JG  
Cover photo by Mathilde Langevin on Unsplash

LN005072  
Publication date  
10/2023  
Review date  
10/2026