

# What should I eat while I am neutropenic or my immune system is weakened?

The risk of food poisoning is increased when your immune system is weakened. This can occur when undergoing chemotherapy if neutrophils become low. Neutrophils are a type of white blood cell that helps to protect your body from bacterial infections.

Food safety is very important to reduce your risk of infection. You may be advised to follow a low microbial diet, which can help to protect you from bacteria and other harmful organisms found in some food and drinks.

## *Food safety*

**Keeping food safe** is very important, especially when your immune system is weakened. Ensure foods are carefully prepared, handled, transported and stored to prevent bacterial growth and help keep your food as safe as possible.

### **Food preparation:**

- Wash and dry your hands well before handling and eating food.
- Wash all fruit and vegetables well under running water, and avoid damaged or blemished fruit and vegetables. For information on safe water to use, please see 'Drinks' section over the page.
- Avoid cross contamination between cooked and raw foods, especially meat, poultry, seafood, and eggs. Use separate chopping boards and utensils for cooked and raw foods, and wash them thoroughly with hot soapy water after use.
- Cook foods to safe temperatures - make sure that all meat, poultry, seafood and eggs are cooked through.

### **Food storage:**

- Put leftovers in the fridge as soon as possible, and use within 24 hours.
- Avoid eating food that should be refrigerated if it has been out of the fridge for two hours or more.
- Food brought into hospital to eat later must be stored in a container, labeled with the patient's name and the date the food was made. Labels can be obtained from the ward clerk. If the food requires refrigeration, place it in the ward fridge as soon as possible.
- Discard the food when it is past its 'use by' or 'best before' date.

## Cooling and reheating food safely:

- **Keep cold food cold** (below 5°C) during storage and transportation – in the fridge or on ice in an Esky®.
- If you are transporting hot food, it **should be kept hot** (above 60°C) – in a thermos or Esky®.
- Re-heating and refrigeration facilities may be available on the ward – check with the ward nurse before bringing in food.
- To reheat food transported cold, bring to **steaming hot** (greater than 75°C) just prior to eating.
- Make sure there are no cold sections in the food after reheating has occurred.
- Follow manufacturer's instructions when reheating purchased prepared meals or food.
- **Never** re-heat food more than once.
- Defrost frozen food in the fridge or microwave, rather than at room temperature.
- Do not refreeze food that has been defrosted.

## Choosing appropriate foods

Choose foods listed under the 'safer options' column.

	<b>Safer option</b>	<b>High risk foods to avoid</b>
<b>Breads and cereals</b>	<ul style="list-style-type: none"> <li>• Cooked rice (serve immediately), cooked pasta and other grains</li> <li>• Cereals, cooked or ready to eat</li> <li>• Breads, rolls, muffins, bagels, pancakes, waffles, crackers, biscuits</li> <li>• Potato chips, corn chips, pretzels, popcorn and other snack foods</li> </ul>	<ul style="list-style-type: none"> <li>• Reheated cooked rice</li> <li>• Raw (not cooked or baked) grain products e.g. untoasted muesli, raw oats</li> <li>• Unrefrigerated baked goods with cream or custard</li> <li>• Raw cake or cookie dough</li> </ul>
<b>Fruit and vegetables</b>	<ul style="list-style-type: none"> <li>• Well washed, fresh and unblemished fruit and vegetables</li> <li>• Cooked fruit and vegetables (from frozen, canned or fresh)</li> <li>• Dried and frozen fruit and vegetables</li> </ul>	<ul style="list-style-type: none"> <li>• Unwashed or blemished fresh fruit, vegetables, herbs</li> <li>• Pre cut fresh fruit</li> <li>• Readymade salads from deli/ self serve/ salad bars</li> <li>• Raw vegetable sprouts (alfalfa or bean)</li> </ul>
<b>Meat, fish, poultry, and alternatives</b>	<ul style="list-style-type: none"> <li>• All well cooked meat, fish and poultry</li> <li>• Canned meat, fish, and shellfish</li> <li>• Cooked tofu</li> <li>• Cooked eggs (firm white and yolk)</li> <li>• Canned or cooked legumes (peas, beans, lentils)</li> <li>• Deli meats reheated until steaming hot</li> <li>• Roasted nuts with shells removed</li> </ul>	<ul style="list-style-type: none"> <li>• Raw/ undercooked meat, fish, poultry, tofu, eggs, egg substitutes</li> <li>• Pate/ liverwurst or fish paste</li> <li>• Tempeh and miso products</li> <li>• Ready to eat seafood e.g. oysters, prawns, sashimi, smoked mussels</li> <li>• Raw, pickled, cold smoked fish</li> <li>• Cold deli meats e.g. ham, chicken roll, roast beef</li> <li>• Raw nuts, nuts in their shells</li> </ul>
<b>Dairy</b>	<ul style="list-style-type: none"> <li>• Pasteurised, UHT or powdered milk (dairy, soy, and alternatives)</li> <li>• Yoghurt from pasteurized milk</li> <li>• Processed hard cheese e.g. cheddar</li> <li>• Cottage cheese, cream cheese</li> <li>• Ice cream, frozen yoghurt, ice blocks</li> <li>• Custards and dairy desserts</li> </ul>	<ul style="list-style-type: none"> <li>• Unpasteurised (raw) milk, cheese and yoghurt</li> <li>• Soft/ semi soft or surface ripened cheeses e.g. brie, camembert, blue vein, feta, ricotta</li> <li>• Soft serve ice cream, smoothies and thick shakes</li> </ul>

	Safer option	High risk foods to avoid
<b>Fats, oils, and condiments</b>	<ul style="list-style-type: none"> <li>• Refrigerated butter/ margarine</li> <li>• Oil</li> <li>• Shelf stable mayonnaise and salad dressings</li> <li>• Cooked gravy and sauces</li> <li>• Shelf stable jam and nut butters (e.g. peanut, almond)</li> <li>• Mustard, BBQ, tomato and soy sauces</li> </ul>	<ul style="list-style-type: none"> <li>• Fresh salad dressings containing aged cheese</li> <li>• Mayonnaise/ aioli containing raw egg</li> <li>• Raw honey/ honey containing comb</li> <li>• Homemade jam</li> </ul>
<b>Take away and convenience meals</b>	<ul style="list-style-type: none"> <li>• Foods freshly cooked/ cooked to order and served steaming hot</li> <li>• Microwave meals should be heated in accordance with the manufacturer's directions</li> </ul>	<ul style="list-style-type: none"> <li>• Food kept hot and not freshly cooked, e.g. food in pie warmers, hot boxes, buffets, bain maries</li> <li>• Salads, sandwiches, sushi</li> </ul>
<b>Drinks</b>	<ul style="list-style-type: none"> <li>• Tap water- boiled or filtered</li> <li>• Carbonated water</li> <li>• Commercially bottled distilled, spring and natural waters</li> <li>• Soft drinks</li> <li>• Pasteurised fruit and/ or vegetable juice</li> <li>• Packaged tea/ coffee</li> <li>• Powdered drinks e.g. skim milk powder, Ovaltine®, Milo®</li> <li>• Liquid and powdered nutritional supplements e.g. Sustagen®, Ensure®, Fortisip®, Resource®</li> </ul>	<ul style="list-style-type: none"> <li>• Water from water coolers and fountains, bottled still mineral water (these have more impurities and bacteria)</li> <li>• Drinks from self-serve soft drink or slushy machines</li> <li>• Commercial freshly squeezed fruit or vegetable juices</li> <li>• Probiotic drinks, powders, or capsules</li> <li>• <b>Alcohol should only be consumed with medical team approval</b></li> </ul>

**For more information, please contact your dietitian:**

**Dietitian:**

**Phone:** 6244 2567

**Date:**

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