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Food safety advice if you have a low white blood cell count (Neutropenia)

Nutrition and Dietetic Service

Information for Patients

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What is a low white blood cell count?

Neutrophils are a type of white blood cell that help your body fight infection.

A low white blood cell count, also called **neutropenia**, means there are fewer neutrophils in your blood than normal. This is usually when the count is less than **1.5×10^9/L**.

If your neutrophil count is low, you are more likely to get infections. This can happen during an illness, after a transplant, or if you take medicines that weaken your immune system.

When your neutrophil count is low, your body may find it harder to fight infection. It is important to take extra care with food hygiene and avoid foods that may carry harmful germs.

The advice in this leaflet will help reduce your risk of infection while still allowing you to eat a varied diet and maintain your weight.

You only need to follow this advice while you are neutropenic, or until your medical team tells you it is safe to eat these foods again.

Shopping for food

- Check the **use-by** and **best-before** dates before buying food.
- Do not buy food in damaged packaging or dented tins.
- Keep food covered to prevent contamination.
- Avoid buffets and self-service food stations.
- Keep raw meat separate from ready-to-eat foods.
- Buy chilled and frozen foods last when shopping.
- Use a cool bag if possible to keep food cold on the journey home.
- Do not allow frozen food to thaw unless you are going to use it straight away.

 Please note the published version will look different.

Storing food

- Keep your fridge between **0°C and 5°C**.
- Keep your freezer below **-18°C**.
- Make sure frozen food is still frozen when you take it out of the freezer.
- Keep raw meat, fish and poultry separate from cooked and ready-to-eat foods.
- Store raw or defrosting meat and fish in a covered container on the bottom shelf of the fridge.
- Never refreeze food that has fully thawed.
- Do not overfill your fridge or freezer, as this can stop food staying cold enough.

Preparing food safely

- Wash your hands thoroughly with soap and warm water before and after handling food.
- Cover any cuts with a waterproof plaster.
- Anyone preparing your meals should also follow this advice.
- Remove jewellery, especially rings and watches, before preparing food.
- Use disposable cloths where possible or wash reusable cloths daily on a hot cycle.
- Avoid using sponges, as they are difficult to keep clean.
- Clean and disinfect work surfaces regularly, especially after preparing raw meat, poultry or unwashed vegetables.
- Use separate chopping boards, knives and utensils for raw and cooked foods.
- Plastic chopping boards are usually easier to clean.
- Wash and disinfect chopping boards after each use and replace them regularly.
- Do not wash raw meat or poultry before cooking. This can spread harmful bacteria around the kitchen.
- Wash all fruit and vegetables before eating them.
- Wipe the tops of cans and bottles before opening.
- Keep pets and litter trays away from food preparation areas.
- Wash your hands after touching pets, litter trays or pet treats.

Cooking food

- Defrost meat and poultry in the fridge, not at room temperature.
- Make sure food is cooked all the way through and is piping hot.

- The centre of the food should reach **75°C or above**.
- Cool cooked food as quickly as possible, ideally within 1 to 2 hours, before refrigerating or freezing it.
- Divide leftovers into smaller containers to help them cool more quickly.
- Do not put very hot food straight into the fridge, as it can raise the temperature inside.
- Eat reheated food within 24 hours of cooking or defrosting it.
- Reheat food until it is piping hot.
- Do not reheat food more than once.
- Eat freshly cooked rice straight away while it is hot.
- Do not reheat rice.
- When ordering a takeaway, it is safer to prepare fresh rice at home.

Eating out

- At barbecues and picnics, make sure all meat is thoroughly cooked.
- Keep cooked food separate from raw food.
- Keep food covered and eat it promptly.
- Only eat in places that look clean and hygienic.
- Avoid buffets and self-service restaurants.
- Your healthcare team may advise you not to eat out while your white blood cell count is very low.
- You can check food hygiene ratings at: https://ratings.food.gov.uk

During your hospital stay

- If you visit hospital restaurants, cafés or food outlets, please continue to follow this advice.
- This also applies if you have a dietetic restaurant pass.
- The inpatient menu highlights foods suitable for people with neutropenia. 
- If family or friends bring food or snacks from home, please speak to your nurse first.
- They can advise you about what is safe to bring onto the ward and any foods you should avoid.

Water

- If you use a water filter at home, follow the manufacturer's instructions for cleaning and replacing filters.
- When travelling abroad, bottled water may be safer.
- Avoid ice in drinks when travelling overseas.

What to eat and what to avoid

The table below shows which foods are safe to eat and which foods you should avoid while your white blood cell count is low.

This advice uses the latest evidence about food safety for people with neutropenia. It aims to lower your risk of infection while still allowing you to eat a wide range of foods.

We do not want your diet to be more restrictive than it needs to be. Most foods can still be eaten if they are stored, prepared and cooked safely.

Use the table to help you make food choices while your white blood cell count is low. If you are unsure about a food, speak to your doctor, nurse or dietitian.

	Safe Foods	Foods to avoid
Dairy products	• All hard pasteurised cheeses (for example, cheddar). • Soft pasteurised cheeses without rind (for example, mozzarella, feta, paneer, cream cheese, ricotta, halloumi, goats cheese). • All cheese that is cooked until steaming hot. • All pasteurised milk, yoghurt, cream and ice cream. • All plant-based milks.	• Mould ripened soft cheeses (for example, brie). • Soft blue cheeses (for example, gorgonzola, roquefort). • Cheese/ dairy uncovered at a buffet or deli. • Unpasteurised milks and food made from unpasteurised milk (for example, unpasteurised goats cheese). • Probiotic products (for example, kefir, Yakult, Actimel). • Soft serve ice cream.
Meat, poultry, fish and eggs	• Meat, poultry that is cooked all the way through with no trace of blood or pink colour. • Pasteurised egg products (for example, shop bought mayonnaise that use British Lion eggs). • Eggs cooked all the way though such as hard-boiled eggs or scrambled eggs. • Well cooked fish shellfish and crustaceans that are cooked all the way through. • Pre-packaged cooked meats (for example, ham). • Pasteurised pate in a jar.	• Raw or undercooked meat, poultry, fish shellfish. • Raw or undercooked eggs from any egg source. • Any product using raw eggs that is not fully cooked. • Cured or smoked foods (for example, smoked salmon, salami- unless cooked) • Sushi. • Unpasteurised pate.
Fruit and Vegetables	• Make sure all fruit and vegetables and salad are washed properly (including pre-packaged ready washed salad).	• Damaged or bruised fruit and vegetables. • Raw, sprouted seeds.

Other	• Black pepper, herbs and spices in sealed jars. • All sealed packets (for example. cereals, dried nuts, fruits, biscuits). • Pasteurised or heat-treated honey.	• Black pepper, herbs and spices bought loose from the deli/ farm shops. • Buffet style foods, refill or very large packets. • Raw honey and honeycomb (unless cooked).

Contact details

All leaflets must include a contact number for patients if they have questions.

Phone number	0116 258 5400 (Nutrition and Dietetic department)
Opening times	8:00am to 4:00pm Monday to Friday