
Food safety in Immunocompromised Patients

The disorders affecting the blood and their treatments like chemotherapy and bone marrow transplant can affect the functions of your immune system. This can reduce your body's ability to fight infections. As food can contain bacteria and fungi, patients with low immunity may be at risk if they are not cautious about their dietary intake.

This can occur due to two reasons:

- The type of white blood cells called neutrophils in your blood normally help to prevent food poisoning by fighting bacteria and fungi. Blood disorders and chemotherapy may reduce the neutrophil count in your blood resulting in a condition called neutropenia. It may reduce your ability to fight infections efficiently.
- The lining of your intestine acts as a barrier between your bloodstream and the gut. However, this lining may be damaged by chemotherapy or stem cell transplantation. These changes can make it easier for bacteria to enter your bloodstream.

Hence, it is important to learn about good food handling practice and be careful about the foods you eat in order to prevent food poisoning while receiving chemotherapy and during a stem cell transplant.

Safe practices to follow when buying food

- Check the use-by dates.
- Do not buy food with damaged packaging.
- Buy pre-packaged chilled foods like cheese and cold meats instead of buying items from fresh food counters, delicatessen or wet market.
- Buy frozen and chilled foods last and take them home quickly. Put them into the freezer or fridge immediately. Bacteria tend to multiply quickly in warmer conditions like the car or kitchen. Hence, carrying a cool box would be useful for taking these foods home.

Best practices for food storage

- Keep food covered.
- Bacteria can multiply more quickly above 5°C. Hence, maintain the coldest part of the fridge at 0 to 5°C.
- Keep the temperature of the freezer below -18°C.
- Defrost food thoroughly in the microwave on defrost mode or in the fridge, but not in the warm kitchen
- Do not re-freeze food that has already started to thaw.
- Store cooked food in the upper compartment of your fridge. Keep defrosting or raw meat in a covered container and store it at the bottom of your fridge.
- Use food within its use-by date. Read instructions on the packaging carefully about how soon the food must be used after opening.

Safety guidelines about food preparation

- Wash your hands with gentle soap and warm water before preparing food.
- Wash your hands after touching dirty washing, pets, cat litter, rubbish bin, soil or after going to the toilet.
- Dry your hands using paper napkins instead of a towel.
- Wash fruit and vegetables before cooking or eating, even if they were bought pre-washed.
- Keep pets away from food, dishes, and plates, and surfaces where you prepare and serve food.
- Make sure sponges and cloths are bleached, disinfected, and changed straight away when used for wiping raw meat juices.
- Wash utensils and chopping boards between uses for cooked and raw foods to avoid cross-contamination of food. It is advisable to have 3 boards: one for cooked meat, one for raw meat, and one for other foods.
- Disinfect kitchen surfaces after preparing raw meat.
- Keep the worktops, tap, sinks, and fridge clean.

Safety instructions to follow while cooking

- Cook food thoroughly.
- Read carefully and follow cooking instructions on packaged foods.
- Do not eat eggs raw. Avoid foods containing raw eggs.
- Do not reheat food

Foods to avoid when your immunity is low

Some foods are more likely to cause food poisoning and hence are better avoided while you are undergoing chemotherapy or a stem cell transplant.

Foods to Avoid and Their Suitable Alternatives

Foods to Avoid	Suitable Alternatives
Raw and soft-cooked eggs	Thoroughly cooked eggs
All dairy made from unpasteurised milk	Any pasteurised or UHT milk, almond milk, or soy milk
Homemade mayonnaise, ice creams, or mousses made from raw eggs	Store-bought mayonnaise, ice creams, or mousses
Soft mould cheeses such as: <ul style="list-style-type: none"> • Brie or Camembert Cheese made from unpasteurised milk such as: <ul style="list-style-type: none"> • Parmesan or Blue Vein Cheese 	Processed cheese such as: <ul style="list-style-type: none"> • Laughing Cow, Philadelphia, and Kraft • Cottage cheese • Vacuum-packed hard cheese made from pasteurised milk, such as cheddar and edam
Paté made of meat or fish	Paste or Paté in jars that do not require refrigeration until opened
Raw or lightly cooked shellfish	Well-cooked shellfish
Raw, rare, or medium-rare meat Uncooked cold meats that have been smoked such as: <ul style="list-style-type: none"> • Salami and Parma Ham • Sushi, caviar, sashimi, and oysters 	Well-cooked meat and fish <ul style="list-style-type: none"> • Tinned meat or fish • Vacuum packed cooked cold meat like ham, beef, turkey
Yoghurts that have added bacteria (bio or probiotics): <ul style="list-style-type: none"> • Greek yoghurt • Yoghurt drinks that have added bacteria such as Vitamin or Yakult 	Yoghurt that does not contain extra added bacteria
Raw vegetables and salads Unpeeled fruits, hard to was fruits such as strawberries and blueberries	<ul style="list-style-type: none"> • Cooked or steamed vegetables • Fruits with peeled skin - like bananas, apples, pears

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