Bone marrow transplant (BMT) diet precautions for children going home following transplant: information for families

This information sheet explains about food-borne diseases and how to avoid them when preparing or serving food to children after a bone marrow transplant. The range of foods your child can eat will increase after you have come home, but you still have to take precautions against food-borne diseases.

What is a food-borne disease?

A food-borne disease is any disease that comes from a food you eat. Many foods contain small amounts of micro-organisms (bacteria and fungi) that are normally harmless. However, as your child has had a bone marrow transplant and is taking immunosuppressive medicines, such as ciclosporin, mycophenolate mofetil (MMF) or steroids, these micro-organisms can be harmful, causing infections such as salmonella, listeria, E.coli, cryptosporidium and campylobacter.

How will I know if my child gets a food-borne disease?

Food-borne diseases may give your child the following:

- Diarrhoea
- Headache
- Nausea and/or vomiting
- Fever
- Stomach ache

If you suspect that your child has a foodborne illness, please contact the BMT team for further advice.

Why are some foods riskier than others?

Where the food comes from, how it is processed and how it is stored and prepared all affect the risk that foods will contain micro-organisms. Uncooked animal products, including raw unpasteurised milk, cheese, meat, eggs, fish, poultry and seafood, are ‘high risk’ foods. This leaflet will give you more information about what you can do to reduce the risk of your child getting a food-borne disease.
Which micro-organisms are harmful to children after BMT?

Listeria monocytoge

This is most often found in foods such as unpasteurised milk and soft, goat or ewe cheeses, especially if made with unpasteurised milk. Raw and undercooked meats and ready to eat foods such as deli meats and deli salads can also contain listeria.

E. coli O157

This is a common bacterium and is found in animals, especially cattle, and in the soil. A few types of E. coli, including the strain O157, can cause serious illness. Food sources of E. coli include raw or undercooked beef burgers and unpasteurised milk.

Salmonella

Salmonella bacteria are most often found in protein foods, such as unpasteurised milk, raw or undercooked poultry, soft cheeses, raw or undercooked eggs and foods made from uncooked egg.

Cryptosporidium

This is a parasite found in contaminated or infected animals. It can be spread from one person to another or contaminated food. Cryptosporidium causes the infection cryptosporidiosis.

Campylobacter

This is the most common bacterial cause of diarrhoeal illness in England and Wales, causing severe diarrhoea and abdominal pain. It is found in foods such as raw or undercooked meats, raw unpasteurised milk and milk products.

Toxoplasmosis

Toxoplasmosis is an infection caused by a parasite called Toxoplasma gondii. The parasite is found in the poo of infected pets and other animals, and in infected meat (particularly infected, undercooked lamb and pork) or food contaminated with animal poo.

Precautions to avoid food-borne disease

While your child is taking ciclosporin, MMF or steroids, it is important that you follow these guidelines. The amount of time you need to follow these guidelines varies from children to child, but it is usually for the first three to six months after the BMT.
Basic hygiene

- Make sure all preparation surfaces are clean: use an anti-bacterial spray before food preparation
- Prepare food as near to meal times as possible
- Wash hands thoroughly with soap and hot water before preparing food and dry on disposable kitchen towels or use a clean towel each day
- Buy your chilled and frozen food at the end of your shop to minimise the time it is out of the fridge/freezer: if you have a long journey or it is a very hot day consider using a cool box for transporting food home
- Clean tops of tins/cans before opening
- Wash fruit/vegetables before eating/cooking
- Separate cooked and raw meats/fish in the fridge
- Ensure your fridge and freezer are at the correct temperature and that food taken out of the freezer is frozen solid
- Keep pets away from food preparation surfaces
- Avoid buying dented tins
- Avoid buying bruised/damaged fruit and vegetables
- Do not use wooden chopping boards or wooden utensils. If possible use separate chopping boards for raw meat/fish and other ready to eat foods such as vegetables/fruit/bread. Colour codes ones are available to make this easier.
- Use clean utensils: cutlery and crockery can be washed in either a dishwasher or in hot soapy water, and dried with a clean tea towel. Change the tea towel daily and do not use this for drying hands.

Food storage

- Use all food before the ‘best before’ date and look for foods with a long ‘use by’ date
- Your child no longer needs individually wrapped or portioned food.
- Read all food labels and follow the storage and preparation instructions exactly.
- Ensure your fridge and freezer are at the correct temperature. A fridge should be between 0°C and 5°C and a freezer lower than -18°C – buy a fridge/freezer thermometer so you can check regularly.
- Avoid putting hot foods into the fridge: allow them to cool down before refrigerating
- Do not overstock the fridge/freezer
- Ensure food is frozen solid when removed from the freezer. Thaw frozen food in the fridge: avoid defrosting either at room temperature or in the microwave. NEVER refreeze thawed food
- Store cooked food at the top of the fridge. Raw/defrosting meat/poultry/fish should be covered and stored at the bottom of the fridge to prevent it contaminating other foods.

This document must be read in conjunction with all Great Ormond Street Hospital NHS Foundation Trust Policies and Procedures.

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- Eggs should be stored in the fridge

Food preparation

- Do not re-heat food or meals
- Do not use a slow cooker
- Pre heat the oven to ensure food is cooked at the recommended temperature
- Cook all food thoroughly until piping hot all the way through
- Ensure all meat/poultry/fish is well cooked and cook meat until juices are clear

If you have any questions about food-borne diseases and how to avoid them, please contact the BMT team on 020 7813 8584

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Compiled by the Bone Marrow Transplant team in collaboration with the Child and Family Information Group