Bone marrow transplant (BMT) diet precautions for inpatients

This information sheet from Great Ormond Street Hospital (GOSH) explains about the diet precautions that need to be followed while your child is an inpatient undergoing a bone marrow transplant (BMT). The BMT diet is not complicated but does restrict the use of some foods. There are also certain guidelines that must be followed when preparing food.

During a BMT, your child’s own bone marrow is destroyed by high doses of chemotherapy and/or radiotherapy and the ability to fight infections is reduced. Many foods contain small amounts of micro-organisms, such as bacteria or fungal infections that are usually harmless, but during the transplant period it is advisable to reduce the total microbial load.

Your child can eat all food from the hospital trolley. All meals will be prepared in the hospital kitchen by a trained cook. You will be able to choose your child’s meals daily. Snacks can be prepared in the ward kitchen following guidelines.

Hot foods and any foods that have come from the fridge such as milk or yoghurts should be eaten within 45 minutes. Room temperature foods such as crisps or snacks should be eaten within four hours. After these times, the foods must be removed from the cubicle and thrown away in the kitchen bin.

Why do BMT patients need BMT meals?

- During the BMT process children’s ability to fight infection is greatly reduced. BMT meals minimise the risk of any bacterial, fungal or viral contamination from food once the child goes into isolation (greens).

What are BMT meals?

- These are meals which have been adjusted from the main kitchen menu in order to ensure they are appropriate for the child’s low immunity.
- The food trolley will leave the main kitchen first to reduce the amount of time it is waiting to be delivered.
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Are there any foods that are not allowed?

- Yes, a few examples include unpeeled fruit, unpeeled raw vegetables and salad, herbs and pepper added after cooking, cream added after cooking, unpasteurised cheese, reheated food, and undercooked food. The dietitian can discuss this in more detail.

How do I order a BMT meal?

- Housekeepers on the ward give menus out so you and/or your child can choose what to eat.
- If your child would like something not on the menu, for instance, plain chicken, or if you want the same thing ordered every day, you can check with the housekeeper to see if they are able to get a special request for that item.
- Therapeutic meals (such as a milk free or egg free diet) are arranged by the ward dietitian or dietetic assistant and made in the diet kitchen.

When are meals delivered?

- Lunch is at 12 midday and supper at 4pm.
- Meals must be eaten within 45 minutes of being delivered to the patient.

What about breakfast?

- Breakfast is provided on the ward from the ward kitchen.
- The housekeepers will organise individual portions of a variety of foods such as bread, cereals, butter, milk cartons or fruit juice for example.

What about snacks?

- These are provided on the ward from the ward kitchen.
- The housekeepers will organise individual portions of a variety of foods (for instance, crisps, cheese, biscuits or cartons of fruit juice).

Can parents bring food in for their own child?

- Yes, pre-packaged individual sized portions can be brought in.
- Home cooked food or takeaways are not allowed.
- Parents should check with ward staff or dietitian if unsure.
- Food must be within sell by date and in a sealed packet.
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- We encourage children to drink the individual juice cartons available on the ward or brought in by parents. A child’s preferred flavour of squash may be brought in. This will need to be prepared by the Special Feeds Unit and sent up to the ward daily. Orange and lemon squash are available in the Special Feeds Unit.

Can parents cook for their child in the ward kitchen?

- No, but certain foods can be heated, for example, tinned soup, baked beans, baby food jars or pouches.

Why may children having a BMT need a nasogastric (NG) tube?

- Oral intake may be reduced for a number of reasons such as nausea, diarrhoea, sore mouth (mucositis) or taste changes. It is important to maximise their nutritional intake and prevent weight loss to help recovery. The NG tube enables children to receive nutritional support as soon as oral intake begins to decline.
- The NG tube can also be used for medicines and fluid.

What are BMT feeds?

- All special feeds for BMT patients are prepared in the Special Feeds Unit.
- Once the patient is in isolation, powdered feeds are pasteurised as an added precaution.

Can ready-made liquid formulas be given to BMT children?

- Yes. A range of formulas are available on the ward and from the Special Feeds Unit. The dietitian will advise what feed is appropriate for your child. These are sterile and do not need to be pasteurised.

How long does it take for appetite or taste changes to return?

- Each child’s appetite varies and so it is difficult to say when appetite will return. Taste changes following chemotherapy can also affect appetite and so a few weeks are usually required before these improve. Most children gradually start to eat better once they are home in their own environment. Encouraging tastes of food while in hospital may help a child progress quicker to their previous eating habits. Messy play with food may be useful with infants older than six months.
BMT meal guidance

<table>
<thead>
<tr>
<th>Foods to avoid</th>
<th>Alternatives</th>
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<tbody>
<tr>
<td><strong>Meats</strong></td>
<td></td>
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<tr>
<td>• Raw or undercooked (pink) meat and poultry</td>
<td>• Well-cooked meat and poultry</td>
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<tr>
<td>• Smoked or cured meats such as Parma ham or salami</td>
<td>• Vacuum-packed cold meats such as turkey or ham</td>
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<tr>
<td>• Pate</td>
<td>• Tinned meats</td>
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<tr>
<td></td>
<td>• Pasteurised pate or paste in tins or jars</td>
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<tr>
<td><strong>Fish</strong></td>
<td></td>
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<tr>
<td>• Raw, smoked or lightly cooked fish such as sushi</td>
<td>• Well-cooked fish</td>
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<tr>
<td>or smoked salmon</td>
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<tr>
<td><strong>Eggs</strong></td>
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<tr>
<td>• Raw or soft-cooked eggs such as homemade</td>
<td>• Hard-boiled eggs, shop-bought mayonnaise, mousses, sauces or meringues</td>
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<tr>
<td>mayonnaise, mousses, sauces or meringues</td>
<td>• Other products made with pasteurised eggs</td>
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<tr>
<td><strong>Milk and milk products</strong></td>
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<tr>
<td>• All unpasteurised dairy products, such as</td>
<td>• Any pasteurised milk, soya milk, Jersey milk, UHT milk and cheese products</td>
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<tr>
<td>unpasteurised cheeses including parmesan cheese,</td>
<td>• Vacuum-packed pasteurised and hard cheeses such as cheddar and edam</td>
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<tr>
<td>milk sold on local farms</td>
<td>• Processed cheeses such as Dairylea®, Kraft®, Philadelphia® and halloumi</td>
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<tr>
<td>• Blue-veined cheese such as Danish blue or stilton</td>
<td>• Pasteurised plain or fruit yoghurts, such as thick and creamy or Greek</td>
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<tr>
<td>• Soft ripened cheeses such as brie, camembert,</td>
<td>• Commercial ice cream individually wrapped portions</td>
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<td>goat’s cheese, paneer and labnah</td>
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<td>• Probiotics, live, active or bio products</td>
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<tr>
<td>• Soft ice-cream sold by ice cream vans such as Mr</td>
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<tr>
<td>Whippy®</td>
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</tbody>
</table>
Vegetables
- Unpeeled vegetables including salad items, stuffed vine leaves, fatoosh and tabouleh
- Damaged or overripe vegetables
- Unpasteurised or freshly squeezed fruit or vegetable juices or smoothies containing vegetables that cannot be peeled

Fruit
- Unpeeled fruit
- Raw dried fruit such as dates or raisins and products containing these such as muesli
- Damaged or overripe fruit
- Unpasteurised or freshly squeezed fruit or vegetable juices or smoothies containing fruits that cannot be peeled
- NOTE: Grapefruit is not allowed as it can interfere with ciclosporin levels

Herbs and condiments
- Uncooked herbs, spices and pepper

Drinks
- Non-drinking water, bottled mineral or spring water, water from wells, coolers or drinking fountains

Nuts
- All nuts
  NOTE: Food Standards Agency recommends avoiding whole or chopped nuts for children under five years of age

Honey
- Unpasteurised or ‘farm fresh’ honey

- Good quality vegetables that are well cooked or peeled
- UHT or long life fruit and vegetable juices sold in cartons or jars
- Pasteurised smoothies

- Good quality fruit that is well cooked or peeled
- UHT or long-life fruit and vegetable juices sold in cartons or jars
- Pasteurised smoothies
- Tinned fruit or cooked dried fruit such as in cake, flapjacks or cereals bars

- Cooled boiled water
- Sterilised water such as Farley’s® water or Aquasol®

- Pasteurised or heat-treated honey
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| and honeycomb |  
|----------------|-------------------------------------------------|
| NOTE: Food Standards Agency does not recommend honey for infants aged less than 12 months |  

| Miscellaneous |  
|----------------|-------------------------------------------------|
| • Food items from ‘pick and mix’ or ‘buffet’ counters | • Packets should be individually wrapped or portioned on the ward only  
| • Deli counter foods such as olives, hummus, shawarma and baklava |  

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