



## FREQUENTLY ASKED QUESTIONS STEM CELL TRANSPLANTS (SCT) / BONE MARROW TRANSPLANTS (BMT)

Here are some frequently asked questions about SCT/BMT's. If you have further questions, please don't hesitate to ask your nurse or doctor.

### **Note:**

“**allogeneic**” transplants are when your child gets stem cells (usually from bone marrow) from a donor (ie: sibling, parent, unrelated).

“**autologous**” transplants are when your child gets stem cells from himself. He may donate stem cells for himself from peripheral blood (through an apheresis machine) or he may donate stem cells from his bone marrow (he will go to the operating room and have many bone marrow aspirations to get the stem cells he needs). Sometimes this is called a “rescue”, since we are not giving him a new immune system, but rescuing him from effects of “megatherapy”, or high dose chemotherapy.

## ABOUT THE INPATIENT UNIT AND THE ONCOLOGY PROGRAM...

For information about 3B, the inpatient unit, and more about the Oncology Program refer to the Parent Handbook. Hardcopies are given to each family admitted to the program and can be found in the Family Resource Library. You can view a copy online as well:

<http://www.bcchildrens.ca/Services/OncoHemBMT/ForFamilies/Parenthandbook.htm>

### • **What room will we be in? Can we choose our room?**

There are 5 rooms designated for stem cell transplants on 3B. If you have a room preference we will consider that. However, the room assignments are based on the needs of each child, so you may not get the room you wish.

### • **What do the rooms look like?**

- Two of the rooms have bathrooms attached; the others do not. (We will bring a commode in and make sure we pay attention to privacy.)
- Each room has:
  - TV
  - VCR
  - telephone

### • **What can we bring into the room?**

Any clean personal items from your own home or those that are new (keep the plastic wrap on them if possible).

- plastic, glass, even electronics such as a game boy: can be wiped with alcohol or a disinfectant before they come into the room.
- clothes: should be washed in hot water, dried on high heat and immediately double bagged directly from the dryer (put into a bag, sealed or tied, put into another bag and sealed again)  
**Note:** Your own clothes do not need special cleaning. However, make sure you wear clean clothes every day. There is a washer/dryer on the 3<sup>rd</sup> floor that you can use. If you need to store your own clothes in the SCT room, please double bag them. If you are storing them outside the room, they can be single bagged.
- stuffed toys: clean as you would clothes. Make sure they are in the dryer long enough to get dry. Stuffing may take a very long time to dry.

- books and other paper products: only from home or new ones (not library books or those from other children). Paper products cannot be wiped down.
- pictures or posters for the walls (new; wrapped in plastic or laminated)

Not allowed: plants, flowers, pets, latex balloons.

Anything that falls on the floor will have to be wiped down before using it (remember: paper cannot be wiped and will have to be removed from the room).

- **Can he have visitors?**

Only 2 visitors are allowed in the room at a time. Because his immune system will be knocked out, he is much more susceptible to infections. Therefore, it is best to limit the numbers of people he is exposed to. So, choose about 3-5 people to visit inside the room. These people must be healthy. Others can wave from the hallway outside the anteroom or room. No other children, except siblings who are healthy, can visit.

## ABOUT DONORS...

- **Where will the new stem cells come from?**

The first step toward finding a donor that closely matches your child involves a simple blood sample. Blood will be taken from your child for tissue typing. This is also called “HLA typing”. Similar to finding a match for giving blood cells, tissue typing involves matching proteins on the surface of some blood cells. Identical twins are exact matches for each other. Other members of the family may be close matches; called *related donors*. Sometimes, we have to go outside the family, to registries, to find a close match from an *unrelated donor*. This will all be investigated and organized here at Children’s Hospital.

Some treatment protocols require children to donate stem cells for themselves so that they can be given back to him after megatherapy, intensive chemotherapy: *autologous transplants*.

Since there are several sources of stem cells, your oncologist will tell you which source is the best for your child:

- Related donor: usually a sibling or parent. Members of your immediate family may be asked to donate blood so it can be tested to see if your child has a match.
- Unrelated donor: may be bone marrow or cord blood. We go through a bone marrow registry to try to find a match for your child.
- Your own child donates stem cells for himself

- **How are the stem cells collected?**

Stem cells are collected in 3 ways:

1. *Bone marrow harvest:*

- Adults: If the donor is an adult, he will be harvested at Vancouver General Hospital. You will be given instructions by your oncologist.
- Children: This is an outpatient procedure that takes place in the operating room. A nurse from the Surgical Day Care Unit (SDCU) will call you the day before the transplant to ask you for information about the health of the donor. She will tell you exactly what time to be there, usually at 6:30 AM on the day of the transplant. The donor will be taken to the operating room and given an anesthetic so he will not be awake during the procedure. Once he is asleep, the oncologist will make a small incision on the back of his pelvic bone and insert a needle into the center of the bone, which is where the bone marrow is. The bone marrow, which is a liquid in the center of the bone, is drawn into

the needle with a syringe. Depending on the size of the patient and the number of stem cells in each withdrawal, this may have to be repeated several times to get enough stem cells. The donor's body makes more bone marrow all the time; what is removed will be replaced in a few weeks. After the oncologist gets enough stem cells, a pressure bandage is placed on the sites where marrow has been removed and the donor is taken to the Post Anesthesia Recovery Unit (PACU) to recover from the anesthesia. The nurses will take his vital signs frequently and monitor him closely. You will be able to visit him there. When he has recovered, he will go back to the SDCU where he will continue to be monitored. When he is able to keep fluids down, is passing urine and awake, you will be discharged home, usually around 3-5 PM. An adult should plan to be with the donor over night. Watch for the following:

- Pain : the donor might experience some discomfort. The doctor will give him mild pain medicine. If this continues past 24 hours, call the doctor.
- Bleeding: There may be some minor bleeding the first night. If this continues into the next morning, call the doctor.
- Infection: If you see signs of infection (redness, swelling, pain, discharge) call the doctor.

The nurses in the SDCU will review the discharge instructions with you.

2. *Peripheral blood stem cell harvest or apheresis:* stem cells are also in the bloodstream. The donor has a special IV and is hooked up to a machine that separates the blood. The stem cells are removed, taken to the lab, frozen, and stored until they are needed. If you or your child is going to donate peripheral blood stem cells, your doctor or nurse will explain this further.
3. *Umbilical Cord blood:* Stem cells can also be collected from umbilical cord blood through cord blood banks. Your child will be tissue typed

## **ABOUT THE STEM CELL TRANSPLANT...**

### **• What will happen before the transplant?**

Your child will have baseline blood tests and imaging done before he is admitted for the transplant. These can be done as an outpatient, through the Oncology Clinic.

He will be admitted to 3B about a week before the transplant. We start his "countdown" when he is admitted. This means, we count the days until the day of transplant (Day 0). So around Day -7 your child will be admitted. He will start the countdown by getting strong medications, called chemotherapy. We give chemotherapy for 2 reasons: to get rid of any cancer cells or parts of the blood system that are causing your child's problem; and to clear the bone marrow space to make room for the new cells. The exact schedule, drugs and their side effects, will be explained by your doctor and nurse. You will be given a calendar and drug information sheets.

### **• What will happen on transplant day (Day 0)?**

You will be moving into the room in which you will be receiving your stem cells. This room will be specially cleaned using a "BMT" protocol. Before entering the room, your child will take a bath (shower or in a tub), and put on the clothes you have specially cleaned (see guidelines above).

If your child is getting cells that have been preserved in DMSO (peripheral blood stem cells, bone marrow from a donor who is far away, and cord blood) we will premedicate your child. This is to prevent a reaction to the preservative.

The stem cells, which have been put into a blood bag, are filtered in the laboratory, where they remove fat, small pieces of bone and some fluid. They are brought to 3B. If they have been frozen, they are thawed using a special warm water bath right outside the room. Once ready, it is given as a blood transfusion through the central line over a few hours. Sometimes, if the volume is small, the stem cells are put into a syringe and the doctor gives them directly into the central line by “IV push”.

The stem cells find the bone marrow spaces and within a few weeks grow and produce new blood and immune system cells. Risks of the stem cell infusion are fluid overload (we will give her medications to help her urinate if this happens) and anaphylactic reaction (an acute allergic reaction which we treat immediately). We will monitor your child very closely, taking her vital signs (blood pressure, heart rate, respiratory rate, temperature) very often, even after the stem cells have gone in.

- **What do I need to do to go into the room when my child receives his SCT/BMT?**

The first time you enter the room, the nurse will review these guidelines with you:

- Handwashing
  - Anyone entering the room (staff, family and visitors) must wash their hands for 1 minute (you should time yourself):
    - ~ Remove all rings and watches and ensure sleeves are rolled up past the elbow. Ensure all nail polish and artificial nails are removed.
  - Staff must wash again after patient contact and **between** patients.
- Gowns: for allogeneic SCTs only.
  - Staff, family and visitors must wear a yellow protective gown before entering the patient room.
  - Gowns should be changed following direct patient contact and if soiled or wet.

- **What are the problems and side effects we can expect?**

Chemotherapy affects the fastest growing cells in the body. These are found in the intestines, the hair follicles, and the bone marrow. So some of the side effects related to the chemotherapy are related to these areas of the body. Other side effects may be related to problems with her organs or with engraftment.

- nausea/vomiting: mainly at the time chemo is given. We will give medications to control it.
- hair loss: she will lose all the hair on her head and maybe other parts of her body (eyebrows and eyelashes). This is usually temporary and will start to regrow when the chemotherapy is out of her system, within about a month.
- profound suppression of the bone marrow and blood cells. She will be dependent on transfusions of red blood cells and platelets. White blood cells (WBC), called neutrophils, will be the first cells to come back and platelets will be the last. We will monitor the recovery of her blood counts daily. When her blood counts come up we will know that she is engrafted.
- infections: her WBCs will be suppressed and she will be very susceptible to infections. If she develops a fever or other signs of infection, she will need antibiotics, and may also need anti-fungals or antivirals. We will do blood cultures to make sure we are giving the right drug for the right organism. Infections are the main problem that BMT patients have.

- graft problems:
  - graft rejection: occurs when the new donor cells do not stay engrafted.
  - Graft vs Host Disease (GVHD): This only occurs in an allogeneic transplant, when the stem cells are coming from a donor, not from herself. It occurs when there are differences between the donor and the recipient, even though we have matched them as closely as possible. In this case, the donor cells recognize they are in a different body and do what they are meant to do - they mount an immune response against the recipient. GVHD may be mild, or very severe.

We try to prevent GVHD by giving medications, such as cyclosporine and methotrexate. In spite of this, sometimes transplant patients do get GVHD. There are medications that we use to treat GVHD, but sometimes children have it for a long time. There are 2 forms of GVHD:

- ~ acute: 10-20% chance of having this within the first 100 days after the transplant. Liver, skin and intestinal tract may be affected. She may get a rash, diarrhea, abdominal pain, increased liver function tests; these symptoms may be mild to severe. We can treat acute GVHD with steroids and immunosuppressing drugs and then taper them when it gets better.
- ~ chronic: 10-15% chance of having this form after the first 100 days after transplant. Chronic GVHD may or may not be preceded by the acute form. This chronic form can be a life-long problem, with symptoms that may be debilitating, although most of the time it burns itself out. Any of the following may happen:
  - skin: leathery, discolored
  - eyes: dry
  - liver
  - heart: rare
  - kidneys
  - joints
  - lung problems
  - infections
- mucositis (mouth sores): may be sores in her mouth and through her intestines, depending on what drug we use. It may get very uncomfortable and require intravenous (IV) pain medication. When her counts come up, the mucositis will resolve.
- nutrition: might need to feed her through a small feeding tube (called an NG tube - goes in through her nose and down into her stomach). This is the preferable way to maintain her nutrition since it keeps the gut working. Some children need TPN (total parenteral nutrition), which is feeding her nutrients through her central line. When she is admitted, the dietitian will meet with you to discuss the nutrition plan.
- effects on other organs: chemotherapy does not only effect the bone marrow, but other organs as well. We will get baseline assessments of his heart, lungs, kidneys, so that when he is in transplant we can use them to judge how his organs are doing. Some patients may have organ damage as a result of the chemotherapy.

Note: Sometimes transplant patients may need the special services of the Intensive Care Unit (ICU). If your child is very sick, needs ventilation to support his breathing, or if he needs monitoring or medication to support his blood pressure or other body functions, and we cannot care for him on 3B, it may be safer for him to be cared for in the ICU. The most likely reason for going to the ICU is an infection. While he is there, the ICU team will have primary responsibility for the day to day care. The transplant team will be present to consult and guide care from the transplant perspective. We work closely together to provide the

best care for your child. As soon as he does not need these special services, he will come back to 3B.

- There is a small risk that she could die from the complications of the BMT, but it is unlikely. The major cause of death is overwhelming infection.

- **What will our days look like when we are in the BMT room?**

Your daily schedule will depend on your child. She may be experiencing side effects and need a lot of supportive care (ie, blood and platelet transfusions, IV fluids, pain medications, antibiotics, etc). She may not feel like doing much. Each day, your nurse will review the plan for the day. This has to be flexible - it will depend on your child's needs. You can expect:

- monitoring:
  - a nurse will be doing:
    - ~ vital signs (temperature, blood pressure, heart rate, respiratory rate) at least every 4 hours around the clock (may be more often if needed)
    - ~ central venous pressure (CVP) monitoring daily (this helps us assess how she is handling fluids)
    - ~ physical assessment (at least at the beginning of every shift, and periodically as needed)
  - a doctor will be assessing her at least daily, and as needed
  - bloodwork will be done as needed, usually every day between 4 and 6 AM. This is so the doctors will have the most up to date information when they do their daily assessments and plan each day's care
  - other tests (ie, x-rays, scans, etc) will be done as needed, depending on your child's condition
- daily weights (maybe more frequently if we are concerned about his nutrition and fluid balance)
- daily baths. If you are in a room without a bathroom, these will be sponge baths or he may go to the tub room. He will be using a mild cleaner (Proshield Foam). After rinsing thoroughly, (use hand held shower head as possible), generously apply a moisturizing cream (ie: Dermabase). Baxedin soaked wipes are used for cleaning after using the bathroom. Proshield cream is used in the diaper area and after toileting to treat/prevent skin breakdown.
- Mouthcare: this is very important since her ability to fight off infections is decreased. She will need to do mouthcare at least 4 times per day with a toothbrush or toothette and bicarbonate solution. She may need to suction thick secretions that are hard to spit on her own.
- nutrition (see below).
- exercise. Anne or Maria, the physiotherapists, will help you and your nurses develop a plan for exercising. It is important that your child get out of bed and move as much as she can. Even sitting on the side of the bed or in a chair is better than lying in bed, whenever possible.

Of course, all this depends on your child's physical health and needs. In addition:

- Catia or Sharon, the child life specialists, will be planning to work with your child daily, if she feels up to it.
- Erin, the music therapist, is available at times throughout the week.
- Others who might spend time with your child include the dietitian, spiritual care, social worker, psychologist, teacher, and occupational therapist.

**Tip:** When others are with your child, use the time for yourself: rest, exercise, meals. Plan to have a friend meet you for a coffee break or a walk.

- **How will we know that the new cells are growing (engraftment)?**

Usually within 14-21 days we see signs of engraftment: blood counts begin to come up. This means that she will be able to fight infections better; if there is any mucositis, it should get better; and the need for blood product transfusions will decrease. The neutrophils are usually the first to grow, and the platelets are usually the last.

- **How long will we have to stay in the SCT room?**

When her absolute neutrophil count (ANC) is .500 for 2 consecutive days, and if she does not have any infections, she can go on “*stepdown isolation*”. This means she can come out of the SCT room, walk around the ward (wearing a mask) or go to the playroom (no other patients or visitors will be allowed to come in while she is there). Once on stepdown, your child may be moved to another single room on the unit.

- **When can my child go home?**

After stepdown isolation, you can go home when all these occur:

- ANC is .500 or higher for at least 2 consecutive days
- able to maintain his/her nutrition by tube feedings or by mouth
- no fever or signs of infection
- limited need for transfusions

When we see signs of engraftment, we will start talking to you about going home. The nurses will start discharge teaching and you will receive a pamphlet called “Going Home After a Transplant”.

- **How will she maintain her nutrition?**

Most children having a transplant struggle with maintaining their nutrition. Most have a feeding tube placed so that they can receive feedings directly into their stomach and don't have to try to eat by mouth. These feedings also have the benefit of keeping the intestines working. If this type of feeding is not possible, we can give nutrients through his/her central line. The dietitian will meet with you when she is admitted and advise you about the “SCT diet” and what things you can bring in from home. Some guidelines are listed below for autologous and for allogeneic transplants. If you are not certain which one your child is having, ask the doctor, nurse or dietitian.

## OTHER QUESTIONS...

- **Can we get flu shots?**

Yes! We encourage you to get flu shots. Check with your GP, since we cannot give them to you here at the hospital. If you live outside the Lower Mainland, you will have to make arrangements to get a flu shot from a community clinic. Check with your oncologist about flu shots for the child who will be getting a BMT.

- **Where can I get more information?**

Please don't hesitate to ask your doctor or nurse for more information or if you have questions. You can also get information from:

- The Family Resource Library. It is located on the 2<sup>nd</sup> floor of the Ambulatory Care Building and online: <http://www.bcchildrens.ca/KidsTeensFam/FamilyResourceLibrary/default.htm>
- Internet resources that you might find helpful:
  - UCSF Childrens Hospital: [http://www.ucsfhealth.org/childrens/medical\\_services/cancer/bmt/moreinfo/patient\\_education.html](http://www.ucsfhealth.org/childrens/medical_services/cancer/bmt/moreinfo/patient_education.html)
  - National Cancer Institute: <http://www.cancer.gov/cancertopics/factsheet/Therapy/bone-marrow-transplant>
  - Blood and Marrow Information Network: <http://www.bmtinfonet.org/>
  - "Me and My Marrow" (an excellent book for children): <http://www.astellas.us/docs/meandmymarow.pdf>

# The HSCT Patient Diet for Allogeneic Recipients

\*From day 0 to stepdown isolation precautions started and advised by Dietitian.

Food Group	Allowed	Not Allowed
<b>Dairy</b>	All <i>pasteurized</i> milk, processed cheese slices; cheese whiz; cream cheese; handi-snaks®. Cooked products with regular mild/medium cheddar, mozzarella, brick, parmeggian and swiss cheese	<i>Unpasteurized or raw</i> milk. Yogurt, ice cream, sour cream. Other cheeses.
<b>Meats and meat substitutes</b>	All <i>well-cooked or canned</i> meats (beef, pork, lamb, fish, poultry, shellfish, game, ham, bacon, sausage, hot dogs); <i>well-cooked</i> eggs; <i>pasteurized</i> egg substitutes (Egg beaters®); <i>commercially packaged</i> bologna, salami, and other lunch meats; cooked tofu (cut into 1 inch or smaller cubes, boiled a minimum of 5 minutes in water or broth before eating or using in recipes)	<i>Raw or undercooked</i> meat, poultry, fish, game, tofu; meats and cold cuts from delicatessens; hard cured salami in natural wrap; cold smoked fish, lox, pickled fish; tempeh; beef jerky, sushi.
<b>Entrees, Soups</b>	All cooked entrees and soups	All miso products (miso soup)
<b>Fruit and Nuts</b>	Canned and frozen cooked fruit; dried fruit & nuts in baked products, pasteurized peanut butter (commercially packaged); All juices in juice boxes or bottles.	raw fruits; <i>unpasteurized</i> fruit juice; Nuts and dried fruit (except in baked products). Peanut butter from bulk food section.
<b>Vegetables</b>	All cooked frozen, canned or fresh vegetables and potatoes; dried herbs & spices used in cooked foods; shelf stable salsa.	raw vegetables, herbs; salads, commercial salsas stored in refrigerated case (ie. Fresh salsa);
<b>Bread, grain and cereal products</b>	All breads, bagels, rolls, muffins, pancakes, sweet rolls, waffles, french toast; potato chips, corn chips, tortilla chips, pretzels, popcorn; cooked pasta, rice and other grains; all cereals, cooked and ready to eat	Raw grain products

Food Group	Allowed	Not Allowed
<b>Beverages</b>	Bottled Ozone treated distilled or spring water (Evian®, Perrier®), hospital issued sterile water, all canned, bottled or powdered beverages; instant and brewed coffee, tea; cold tea brewed with boiling water, brewed herbal teas using commercially packaged tea bags	Well water, tap water; cold brewed tea made with warm or cold water; unpasteurized fruit or vegetable juices
<b>Desserts</b>	Refrigerated commercial and homemade cakes, pies, pastries and pudding; refrigerated cream-filled pastries; homemade and commercial cookies; shelf stable cream filled cupcakes (Twinkies®, Ding Dongs®), fruit ies (Pop tarts®, Hostess fruit pies®), and canned pudding; ices, popsicle like products	Unrefrigerated cream filled pastry products (not shelf stable)
<b>Fats</b>	Oil, shortening; refrigerated lard, margarine, commercial shelf-stable mayonnaise; cooked gravy and sauces	Butter
<b>Other</b>	Salt, granulated sugar, brown sugar; jam, jelly, syrups (refrigerated after opening): commercially packaged (pasteurized) honey; ketchup, mustard, BBQ sauce, soy sauce, other condiments (refrigerated after opening): pickles, pickle relish, olives (refrigerated after opening); candy, gum.  Commercial nutritional supplements and baby formulas (liquid and powder)	Raw or unpasteurized honey, herbal and nontraditional (health food store) nutrient supplements, Chinese herbs, Brewer's yeast if eaten uncooked <i>Non-traditional and herbal supplements should be reviewed with a physician on an individual basis.</i>

Allogeneic recipients

# The HSCT Patient Diet for Autologous Recipients

\*From day 0 to stepdown isolation precautions started and advised by Dietitian.

Food Group	Allowed	Not Allowed
<b>Dairy</b>	All <i>pasteurized</i> milk and milk products: commercially packaged cheese and cheese products made with <i>pasteurized</i> milk (ie. <u>mild and medium</u> cheddar, mozzarella, Parmesean, Swiss); <i>pasteurized</i> yogurt; frozen <i>pasteurized</i> whipped topping; ice cream; frozen yogurt ; sherbet; ice cream bars.	<i>Unpasteurized or raw</i> milk, cheese, yogurt and other milk products; cheese form delicatessens, cheeses containing chilli peppers or other uncooked vegetables: cheeses with molds (ie. Blue, Stilton, Roquefort, Gorgonzola); aged or Sharp cheddar, Brie, Camembert, feta, farmer's cheese
<b>Meats and meat substitutes</b>	All <i>well-cooked or canned</i> meats (beef, pork, lamb, fish,poultry, shellfish, game, ham, bacon, sausage, hot dogs); <i>well-cooked</i> eggs ( <i>pasteurized</i> egg substitutes (Egg beaters®); <i>commercially packaged</i> bologna, salami, and other lunch meats; cooked tofu (cut into 1 inch or smaller cubes, boiled a minimum of 5 minutes in water or broth before eating or using in recipes)	<i>Raw or undercooked</i> meat, poultry, fish, game, tofu; meats and cold cuts from delicatessens; hard cured salami in natural wrap; cold smoked fish, lox, pickled fish; tempeh; beef jerky; sushi
<b>Entrees, Soups</b>	All cooked entrees and soups	All miso products (miso soup)
<b>Fruit and Nuts</b>	Canned and frozen cooked fruit; Fruit juices; <i>well-washed</i> raw fruit*, foods containing <i>well-washed</i> raw fruits, dried fruits in packages; canned or bottled <u>roasted</u> nuts, nuts in baked products, pasteurized peanut butter (commercially packaged)	<i>Unwashed</i> raw fruits; unroasted raw nuts; roasted nuts in the shell; <u>unpasteurized</u> fruit juice; Dried fruit from bulk food section. Peanut butter from bulk food section.
<b>Vegetables</b>	All cooked frozen, canned or fresh vegetables and potatoes; <i>well-washed</i> raw vegetables* and herbs, dried herbs and spices, shelf stable salsa	<i>Unwashed</i> raw vegetables or herbs; salads from delicatessens; commercial salsas stored in refrigerated case (ie. Fresh salsa); raw vegetable sprouts (alfalfa, mung bean etc)

Food Group	Allowed	Not Allowed
<b>Bread, grain and cereal products</b>	All breads, bagels, rolls, muffins, pancakes, sweet rolls, waffles, french toast; potato chips, corn chips, tortilla chips, pretzels, popcorn; cooked pasta, rice and other grains; all cereals, cooked and ready to eat	Raw grain products
<b>Beverages</b>	Bottled Ozone treated distilled or spring water (Evian®, Perrier®), hospital issued sterile water; all canned bottled or powdered beverages; instant and brewed coffee, tea; cold tea brewed with boiling water, brewed herbal teas using commercially packaged tea bags	Well water, tap water; cold brewed tea made with warm or cold water; <u>unpasteurized</u> fruit or vegetable juices
<b>Desserts</b>	Refrigerated commercial and homemade cakes, pies, pastries and pudding; refrigerated cream-filled pastries; homemade and commercial cookies; shelf stable cream filled cupcakes (Twinkies, Ding Dongs), fruit ies (Pop tarts, Hostess fruit pies), and canned pudding; ices, popsicle like products	Unrefrigerated cream filled pastry products (not shelf stable)
<b>Fats</b>	Oil, shortening; refrigerated lard, margarine, butter; commercial shelf-stable mayonnaise and salad dressing (including cheese based salad dressings; refrigerated after opening); cooked gravy and sauces	Fresh salad dressings containing aged cheeses (ie. bleu, Roquefort) or raw eggs
<b>Other</b>	Salt, granulated sugar, brown sugar; jam, jelly, syrups (refrigerated after opening): commercially packaged (pasteurized) honey; ketchup, mustard, BBQ sauce, soy sauce, other condiments (refrigerated after opening): pickles, pickle relish, olives (refrigerated after opening): candy, gum.  Commercial nutritional supplements and baby formulas (includes liquids and powder)	Raw or unpasteurized honey, herbal and nontraditional (health food store) nutrient supplements, Chinese herbs, Brewer's yeast if eaten uncooked <i>Non-traditional and herbal supplements should be reviewed with a physician on an individual basis.</i>

Autologous Recipients

*Adapted from Fred Hutchinson Cancer Research Centre, Seattle Washington*

## HOW TO HANDLE TAKE-OUT FOODS DURING TRANSPLANT

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Families are allowed to bring in foods from restaurants or home for your child during transplant. The following tips will help you make good choices and decrease the likelihood of a food-borne illness.

### General tips for restaurants:

- foods from delis, salad bars and sushi are not allowed
- choose restaurants that are well-managed and clean
- select only food items that are cooked and heated. Food items that are served cold, such as salads, lettuce on a burger, etc. are not allowed
- beverages should be in sealed containers, such as bottles and tetra boxes. Avoid unpasteurized juices (usually found in the produce section of stores or in the “organic” section. Read labels carefully!) Beverages that are dispensed from a spout are not allowed
- ask for condiments to be given in sealed individual packets
- avoid fresh salsa, dips or unheated sauces
- foods brought in to the hospital must be used the same day. Left-overs should not be reheated. If you bring in food and want to save it for later the same day, place immediately in the BMT fridge. Label with your child’s name and date. If the item is not labeled, it will be discarded! Reheat in the microwave. Discard fresh food items not eaten after 24 hours.

### Fast Food Outlets (eg. McDonalds, Burger King, etc.)

The following items can be purchased and brought in immediately:

- freshly cooked hamburger, cheeseburger, chicken burger, fish sticks or breakfast sandwich. Ask for the item to be prepared “plain.” Raw onions, lettuce, tomatoes, etc. should be avoided. Burgers should be cooked to well-done – no “pink.” Ask for portioned condiment packets to use – open and use in your child’s room
- freshly cooked fries, onion rings, and hashbrowns are okay
- AVOID poured beverages and milkshakes. Select beverages in tetra boxes, bottles or cans.

### Pizza Restaurants

Any freshly cooked pizza of your child’s choosing is okay.

### Japanese Restaurants

Sushi and miso soup are not allowed.

Hot prepared food items such as teriyaki chicken and sukiyaki are allowed.

### Tips for Take-out Facilities/ Restaurants

- Only select “hot food” items that are freshly prepared
- Reheat foods in the microwave in the Anteroom
- Ask for portioned condiments in sealed packets
- Ask that all “raw” items normally served with the food item purchased to be removed. For example, remove all side salads, salsa, dips, raw vegetables, raw fruits, etc.