

Information for  
patients and families



**Information for patients  
and families about**

# **Autologous Peripheral Stem Cell Transplant**



*"Riding the Dragon" A Cancer Journey | by Conrad Furey*

# About this book

This book has been developed by members of the Oncology Program at the Juravinski Hospital and Cancer Centre, which is part of Hamilton Health Sciences.

Reading this book will help you learn about your peripheral stem cell transplant (PSCT). It will give you general information about the transplant program, treatment, and discharge.

**We welcome your feedback on how  
we can improve this book for other patients.**

**Please fill in the survey at the back of this book  
or tell us directly.**

The amount of information given to you about PSCT can become overwhelming. This book provides written information to go along with the teaching you will receive from your health care team.

Please read the sections as you feel ready to learn. While reading this book you may come up with some questions. We encourage you to write your questions down and bring this book along with you to your appointments.

At the end of the book there is a section with descriptions of certain tests as well as a glossary. Throughout the booklet you will find words in *italics*. A definition for these words is provided in the glossary.

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## **Your health care team**

The health care team is specially trained to care for patients having stem cell transplants.

**You and your family are very important members of the team.**

The team also includes:

- doctors
- peripheral stem cell transplant co-ordinator
- nurse practitioners
- nurses
- social workers
- dietitians
- physiotherapists
- community care access centre co-ordinator
- pharmacists
- chaplain
- business clerks
- environmental aides

You may meet some or all of these team members during your stay.

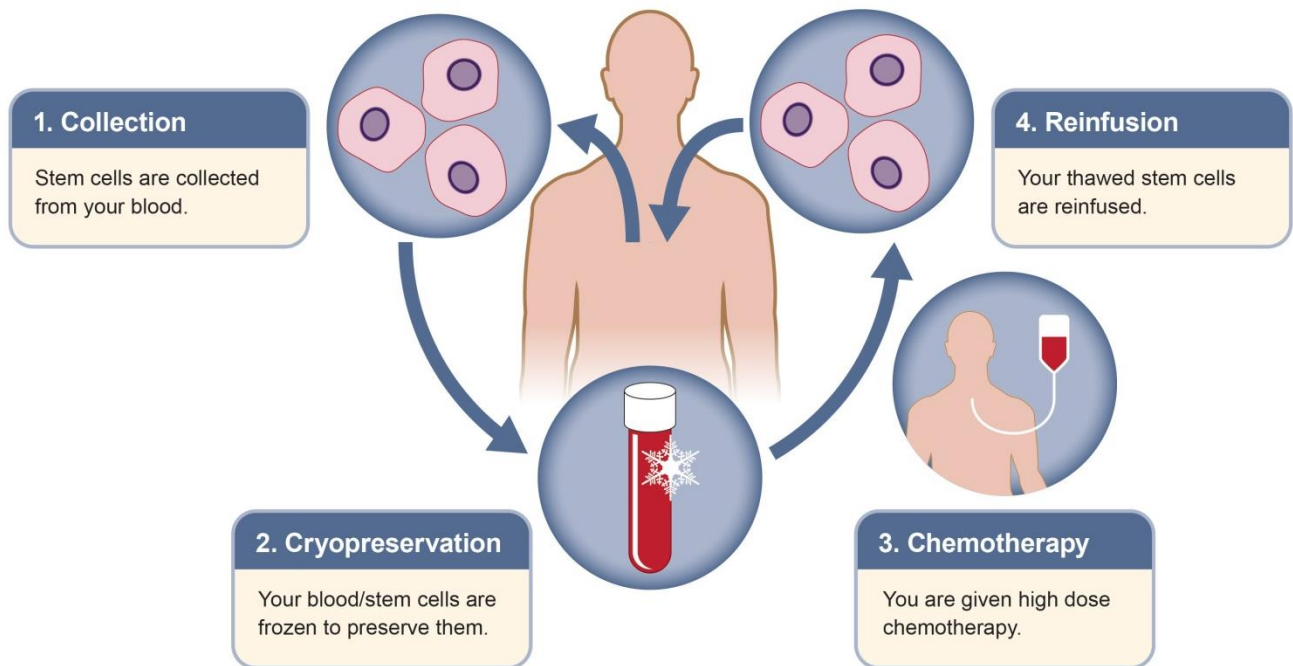
**We welcome your comments and questions.**

## What is a peripheral stem cell transplant?

The transplant is a “rescue” from the very high doses of *chemotherapy* you will be given. Large doses of chemotherapy used in the treatment of cancer can permanently damage the *bone marrow*. We can protect you by removing some of your blood stem cells and then giving it back to you after treatment.

In this treatment we remove or “harvest” *stem cells* from your blood stream. The stem cells will be returned to you through your blood stream. They finally settle into the bone marrow where they will start making a new bone marrow. This technique, in which your own cells are collected before chemotherapy, and later returned to you after you have received cancer treatment, is known as *autologous transplantation*.

You and your doctor have decided to treat your cancer with a *peripheral stem cell transplant (PSCT)*. This is an autologous transplant, which means that you will be the donor and the recipient of the transplant.



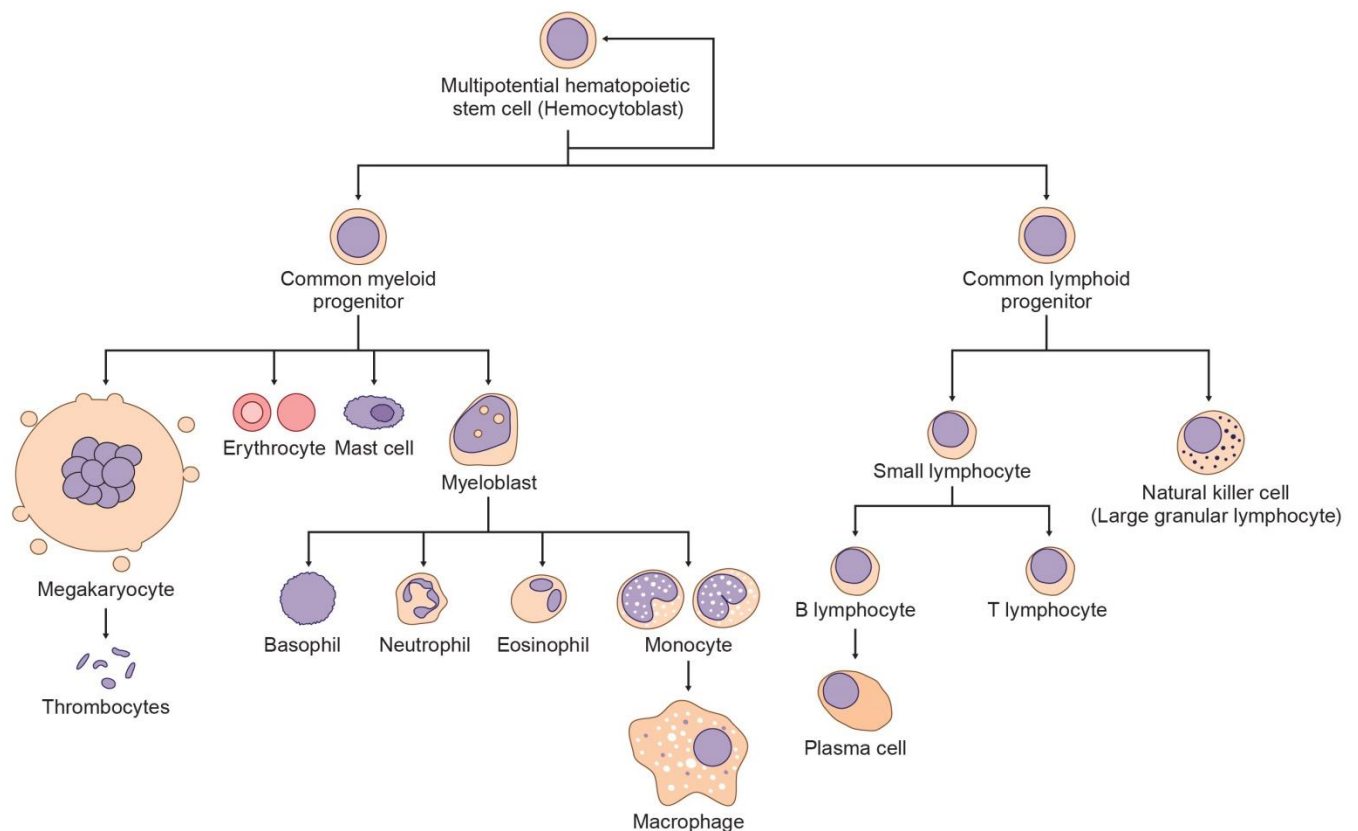
The main diseases that are treated with PSCT at this hospital are:

- Relapsed Hodgkin's disease
- Relapsed Lymphoma
- Myeloma
- A select group of aggressive lymphomas

The purpose of the transplant is to cure the disease or control the disease symptoms and improve your quality of life.

## Bone marrow and stem cells

- Blood is made inside bones in a spongy place called the bone marrow. Blood is made from "parent" cells called stem cells.
- Most stem cells are found in the bone marrow. Small amounts can be found in the blood stream and are called *peripheral stem cells*.
- When needed, stem cells can make more stem cells. They can also make other cells called *white blood cells*, *red blood cells*, and *platelets*; more information can be found on pages 42 to 44.





# Steps to transplant

## 1. Insertion of apheresis catheter

- An *apheresis catheter* is used to collect your stem cells.
- A radiologist puts the catheter in your chest, below your collarbone.
- You will be given medication to reduce any pain.
- The catheter will remain in your body until after you have your transplant.
- One end goes into a large blood vessel in your body, the other end is on the outside of your body.
- The doctors and nurses can use this outside end to take blood samples. This is also the end that will be used to give you blood and your stem cells, as well as chemotherapy.
- If you would like, you can meet with a patient who has a catheter in place.



## Care of your apheresis catheter

- The catheter needs to be "flushed" weekly with a citrate solution and covered by a sterile dressing. This dressing will be changed once a week.

A nurse will flush the catheter and change your dressing, either at home or in a clinic. You may be taught how to flush the catheter on your own.



### Call the doctor or nurse right away if you notice:

- **signs of infection** – pain, puss or redness around your catheter, or a temperature of 38°C or 100°F or more. This is a fever. **Do not take Tylenol, Aspirin, ibuprofen or anti-inflammatory medications without checking with your team first.** They may cause bleeding and may hide a fever. Call if you need medication for pain.
- **signs of a clot** - swelling in your arm on the side of your catheter and you have trouble flushing your catheter

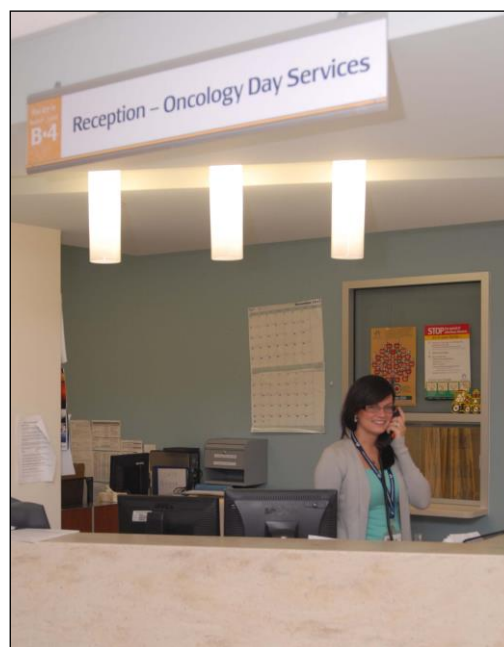
## 2. Preparation for stem cell harvest

The goal of this step is to increase the number of stem cells in your blood stream to provide enough cells for the stem cell harvest. This process is called *mobilization*. We do this by using chemotherapy and injections of *growth factors*.

### Chemotherapy preparation

(Not all patients have this step)

- This is given in an outpatient area you will be given an appointment time and date at the family meeting.
- Bring your lunch and medications with you.
- You will be given intravenous (IV) fluids and a medication to prevent nausea, as the chemotherapy may make you nauseous.
- This chemo regimen will take approximately 7 hours.
- You will be given a prescription for the medication that prevents nausea that you will need to fill prior to this appointment.



**Contact your doctor if you are unable to eat or drink or keep this medication down while at home.**

- You will be given a prescription for medication to take home to protect your bladder.
- You will be given a prescription for your G-CSF (growth factor); a family member will need to go to the pharmacy at the Cancer Clinic before 4:30 pm or have it filled at your own pharmacy.
- Arrangements will be made for the home care nurse to start G-CSF injections.
- You will be given a date to come for your stem cell harvest.

### 3. Injections of G-CSF (colony stimulating factor)

You will get a daily needle (injection) of G-CSF, a growth factor, called *Neupogen®*. Neupogen® will increase the production of cells so there are enough cells in the blood stream to be collected through your catheter.

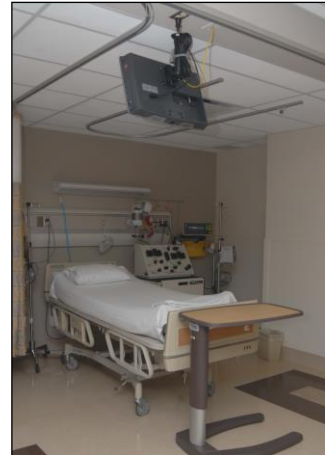
- Neupogen® is very expensive. If you have private drug insurance you will be asked to check if this drug is covered by your plan.
- If you do not have coverage, the transplant co-ordinator will arrange for the government to cover the cost of the drug.
- You will need an injection of G-CSF every day for 5 to 10 days. If you had chemotherapy, the injections start the day after chemotherapy is finished.
- It is very important to keep the Neupogen® in the refrigerator.
- \*A community nurse will be arranged by your coordination team to give you the injections in your abdomen or arm and may teach you or a family member to give the injections.
- You may feel some bone pain from the injections. You can take medication to help relieve the pain. If that does not help, call the doctor for something stronger.



## 4. Harvest day (stem cell collection)

The harvest takes place in the Apheresis Suite. The Apheresis Suite is located in Oncology Day Services on B4. A nurse will be with you during the day and will monitor your care.

- You should not feel any pain during the harvest.
- Some people get a tingling feeling around their mouth or in their arms or legs. You may be given calcium to decrease this tingling.
- Your apheresis catheter will be hooked up to an apheresis machine.
- Your blood is spun in this machine and the layer of stem cells is collected in a bag.
- The rest of your blood is returned to you by another IV line.
- All of your blood will go through the machine about 3 times during the day.



## Preparation of stem cells

- At the end of the day the bag of stem cells that has been collected is sent to the lab where the cells (called CD 34) are counted.
- If not enough cells have been collected, you may be given an additional injection of a medication called Plerixafor to help mobilize stem cells and you will be asked to come back the next day.
- Your cells are then frozen so they can be used later. A preservative called DMSO is added to prevent "freezer-burn".



## Suggestions for your harvest day



- ☐ You will come to the CSU early in the morning so it is important to eat breakfast before coming to the unit. **Please bring your lunch, fluids and medications you need for the day.**



- ☐ Bring your supply of G-CSF with you to the hospital on the day of your harvest so the nurse can give it to you that day.

It takes about 6 to 8 hours to collect your stem cells.



- ☐ You may bring a friend with you for the day to keep you company.



- ☐ You may also want to bring a book, tablet, laptop, or listening device with you.

## **5. High dose chemotherapy**

Research has shown that higher doses of chemotherapy kill more cells. You will get very high doses of chemotherapy – about 10 times higher than standard chemotherapy. This chemotherapy will be given in Oncology Day Services as an outpatient, or in some circumstances it will be given as an inpatient. Please keep a list of all your current medications with you.

The type of chemotherapy you will get depends on your type of cancer. You will be told which days you get your chemotherapy.

The members of the health care team will watch and care for you very closely. They will help to reduce any discomfort you may have and help to keep you healthy.

There are side effects from the chemotherapy, which can last for days to weeks after the chemotherapy. You may experience some or all of these side effects:

- mouth sores\*
- diarrhea and rectal pain\*
- constipation
- bleeding easily
- risk of infection
- lack of energy
- loss of hair
- loss of appetite
- changes in the taste of food
- nausea and vomiting\*
- weight loss

\* You can expect these side effects to get better by the time in a couple weeks, or by the time you leave the hospital if an inpatient. The others can take a few weeks to resolve.

For more information please read “Managing Side Effects” and “Eating Well” on pages 14 to 33.



## 6. Transplant day (reinfusion of stem cells)

The stem cells are given back to you (reinfused) through your apheresis catheter. During the *reinfusion* you may have:

- nausea
  - vomiting
  - stomach pain
  - diarrhea
  - flushing (feeling very warm)
- 
- You will be given medication before the reinfusion to limit your reaction.
  - There will be many people in the room during your reinfusion:
    - Nurses and staff from the lab.
  - Your frozen stem cells are thawed in a tub of warm water. They are drawn up into a syringe and then injected into your apheresis line.
  - It takes less than 1 hour to give you back the stem cells.



- You will taste and smell a garlic-like odour caused by the DMSO during the reinfusion. Sucking on a citrus flavoured candy may help get rid of this taste.
- Your urine may be a reddish colour due to the DMSO. This may last up to 24 hours after your reinfusion.

## 7. Bone marrow recovery

The chemotherapy will cause your white blood cells to fall to a very low level for at least 7 to 21 days. **This is the time that you are at the greatest risk for infection.** Try to avoid people with colds. Any infections will be treated with *antibiotics*.

- You will start daily injections of G-CSF on the 5<sup>th</sup> or 7<sup>th</sup> day after transplant. (Depending on your cancer type)
- Injections will continue until your white blood count is above 1.0
- Doctors and/or the nurse practitioner will see you each day.
- Your *blood counts* will be checked daily.
- You will receive blood and platelet transfusions as needed.

### After your transplant

- You may stay (in some circumstances) in the hospital until your *blood counts* have begun to recover after the transplant; or
- You may stay at a nearby hotel/lodging (your coordinator or social worker will assist with arrangements) with daily visits to Oncology Day Services; or
- You may be discharged the day after your reinfusion home and asked to return to the Oncology Day Services area daily to have your blood counts monitored; or
- You may return to the hospital in your community.

Please note that during your bone marrow recovery it may be necessary to be admitted to the hospital if you develop an infection or are not able to drink enough fluids.



## 8. Resuming a normal life

*Engraftment* is the term used when your stem cells go back to your bone marrow and begin to make new white blood cells, red blood cells and platelets. Engraftment usually takes 10 to 12 days after the reinfusion.

- The apheresis catheter will be removed a few weeks after transplant.
- You may feel tired for several months after the transplant.
- You may also have a decreased appetite and changes in taste for 1 to 2 months after the transplant.
- It is a personal choice, but some people may find they are able to return to work about 6 months after transplant.
- You may resume sexual activity when your white count and platelet count are high enough; check with your doctor. You should speak to your doctor about the need for birth control.
- You may wish to speak to your health care team doctor about resuming other activities, including exercise and drinking alcohol.
- You will have follow up appointments in the Cancer Clinic.

## Pets

If you have a pet we advise:

- You and your pets should not sleep in the same bed.
- Have someone else clean the litter box.
- Do not pick up animal waste. Have someone else do this for you.
- Do not clean out cages.

Please talk with your nurse or social worker about having your dog or cat visit you in the hospital.



## Managing side effects

The chemotherapy you receive will affect many cells in your body. However, some symptoms may be from the cancer itself. If in doubt, please contact your doctor. You can also visit the Drug Information for Patients page of the Cancer Care Ontario website:

[www.cancercare.on.ca](http://www.cancercare.on.ca)

While receiving chemotherapy, it is important to care properly for your body. This will help reduce the risk of infection and help you feel more comfortable.

While your body is recovering you may experience some side effects. Here are some suggestions to manage these symptoms and help prevent infection.

### **\*Mouth sores**

- It is important to clean your mouth often. Tell your nurse if you have trouble swallowing or have sores in your mouth. Good mouth care can help with the discomfort of mouth sores.
- You should clean your teeth at least after every meal and at bedtime. Use a soft bristle tooth brush to clean your teeth
- Use a mouthwash that does not contain alcohol. Alcohol can dry your mouth and hurt any sores you may have.
- You could use a mixture of 1 teaspoon baking soda with warm club soda.
- Do not use toothpicks or dental floss.
- Talk with your doctor before you have any dental work.

## **Diarrhea and rectal pain**

- You may have changes in your bowel movements related to the chemotherapy.
- Diarrhea can cause rectal pain as the skin becomes irritated.
- Tell your nurse if you have any diarrhea. A sample will be taken to test for any infection.
- Daily showers and the use of a sitz bath will keep the area clean and relieve pain.

## **Constipation**

- The goal is to maintain your normal bowel habits.
- Constipation may occur due to changes in diet, medication and inactivity. Tell your nurse if you feel constipated or you have 3 days without a bowel movement.
- You should avoid straining to have a bowel movement.
- Laxatives and diet changes should be helpful. Do not use suppositories or enemas.

## Bleeding easily

- Your platelets are affected by the chemotherapy. You will be at greater risk of bleeding and precautions need to be taken to prevent bleeding.
- Blood tests are done daily after your transplant. If your platelet count becomes too low, you may need a platelet transfusion.



### **Report any signs of bleeding to the doctor or nurse. Signs of bleeding include:**

- excessive bruising
- vomit that looks like coffee grounds
- black, tarry bowel movements
- bright red blood with bowel movements
- heavy or long menstrual periods

### **Here are some tips to try:**

- Use an electric razor, instead of a blade, to prevent cuts.
- When your platelet count is low, do not pick sores or forcefully blow your nose.
- Do not use tooth picks, dental floss or a hard toothbrush.
- Be careful when cutting your nails.
- Women should not use tampons during their periods.

## \*Risk of infection

- Your white blood cells are affected by the chemotherapy. You will be at greater risk of infections due to your lowered immune system. Much of your care will be intended to reduce or prevent infection.
- \*Your vital signs will be checked throughout the day to watch for signs of infection. **When you are at home/ hotel, check your apheresis catheter and your temperature each day.** If you have an infection, the doctor will treat you with antibiotics and you may see an infection specialist.



**Call your doctor or nurse if you notice signs of infection. Signs of infection include:**



- a temperature of 38°C or 100°F or more. This is a fever. **Do not take Tylenol, Aspirin, ibuprofen or anti-inflammatory medications without checking with your team first.** They may cause bleeding and may hide a fever. Call if you need medication for pain.
- shaking and chills
- sore mouth or throat
- productive cough
- shortness of breath
- loose watery bowel movements
- vaginal burning or itching and discharge
- pain, swelling or redness around your apheresis catheter

## Here are some ways to prevent infection:

- People with the flu, colds, or other contagious diseases should not visit you.
- Try to keep your body as clean as possible. Any cuts in the skin can provide a place for infection to develop.
- Hand washing is the best defense against infection.



## **Lack of energy**

- Symptoms of fatigue include feeling tired, weak and sleeping often; as well as having difficulty concentrating or completing small tasks.
- Tiredness may be caused by many factors such as low blood counts, infections, eating less food and being less active.
- You will need to balance rest periods and exercise.
- Chemotherapy affects your red blood cells. You may need transfusions to increase your red blood cells and give you more energy.
- Limit your visitors at this time, as you will need to rest.
- Light exercise such as walking will help keep your muscle tone.
- Plan activities that need concentration or energy when you are more rested.

## **Loss of hair**

- Transplant chemotherapy will cause you to lose your hair.
- You may want to buy a wig or wear a scarf or hat.
- Some people prefer to shave their head as the hair begins to fall out.
- The Look Good-Feel Better program can provide suggestions for women. Ask your nurse for the next meeting date.

## Eating well

As you go through treatment, you may experience some side effects, which may affect your eating habits or ability to eat. Each person will react differently and some people may not have any side effects at all. Side effects become a concern if they prevent you from eating well.

During your treatment, your body will need enough energy and protein to heal and repair tissue. Being well nourished can help you cope with your disease and treatment. It will also keep your energy level up and help you recover. Poor nutrition can decrease your immune function and slow bone marrow response.

Maintaining a healthy weight is important. Ask your doctor or dietitian if your weight is within the healthy range. Being underweight can weaken your ability to fight infection. If you are underweight, try to gain some weight.



Dietitians are available to help you eat well, despite your illness and treatment. They can help you learn about foods and their components and can provide suggestions on how to eat as well as you can during your treatment.

## Poor appetite

When you have a poor appetite, it is important to make every bite count. Try the following ideas to increase your food intake:

- Eat frequent meals during the day.
- Have a meal or snack every one to two hours.
- Choose snacks that are higher in protein and calories, such as eggs, cheese, and higher fat milk.

## Upset stomach

- Try cold foods such as meat, tuna or egg salad sandwiches and creamed cottage cheese with fruit.
- Eat soft bland foods that are easier on your stomach, such as rice, soft cooked eggs, apple juice and custards.
- Limit greasy and fried foods.



## Sores in the mouth and throat

Sores can make it difficult to eat and painful to swallow.

- Try soft, non-irritating foods such as eggs, cream soups, ice cream and ground meats.
- Gravies, sauces and soups can help soften foods.
- Limit foods that may irritate a sore mouth such as hard or crunchy foods, very hot or very cold foods, and acidic, spicy or salty foods.



## Change in taste

Each person's taste may be affected differently. Here are some tips to help your food taste better:

- If red meat is unappealing, try dairy products, eggs and fish.
- Tart foods may help to overcome a metallic taste. Try citrus juices, pickles and mints.
- Add extra sugar to mask the flavor of salty foods.
- Add salt to decrease the sweetness of sugary foods.



## Dry mouth

Some treatments can reduce the flow of saliva and cause a dry mouth or thick saliva. If this is a problem, try these suggestions:

- sip liquids often
- try soft, moist foods
- eat less dry foods such as crackers
- avoid thick syrups

## Diarrhea

- Drink plenty of fluids to replace losses, at least 8 to 10 large glasses per day. Try water, broth, fruit juices, Jell-O® and Gatorade Recover®.
- Eat high potassium foods such as bananas, apricot and peach nectars, meat and potatoes.
- Limit the use of bowel stimulants such as coffee, chocolate and prune juice.
- Check with your doctor before taking any over-the-counter (not prescribed by a doctor) medications for diarrhea.



## Constipation

- Try gradually increasing high fiber foods such as bran and whole wheat breads and cereals.
- Drink at least 8 to 10 large glasses of fluid each day.
- Try natural laxative foods such as prunes, prune juice or rhubarb.
- Check with your doctor before taking any over-the-counter (not prescribed by a doctor) medications for constipation.



## Tiredness

Being constantly tired can make it difficult to spend the time necessary to prepare healthy meals and snacks. If tiredness is a problem:

- When you feel well, prepare meals ahead of time and freeze individual servings.
- Keep easy to prepare foods on hand, such as frozen dinners, canned foods, eggs, tuna and noodles.
- Eat small, frequent meals.
- Try take-out food restaurants.
- Use home delivery services.



## Healthy eating

The basic nutrients found in food are:

- protein
- fat
- carbohydrate
- vitamin
- minerals
- water

No single food can provide all the nutrients your body needs. You should eat a variety of foods everyday.

Eating Well with Canada's Food Guide is a useful tool in helping you to make the right choices. Ask your caregiver for a copy of the guide, or go to Health Canada's website:

[www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)

Choosing the minimum recommended number of servings from each of the four food groups is a good start to a healthy diet.

- 6 to 8 servings of **grain products** per day
- 7 to 10 servings of **vegetables and fruits** per day
- 2 to 3 servings of **milk and/or milk products** per day
- 2 to 3 servings of **meat and alternatives** per day

## **Don't forget about fluids**

- You need to try to drink at least 8 to 10 glasses of fluid a day to prevent dehydration.
- Water, tea, juice, popsicles, Jell-O® and Gatorade Recover® are excellent fluid choices. Ice cream, milk and pop are higher in calories.



## **Commercial nutrition supplements**

- Supplements that are high in protein and calories are available. Your dietitian will be able to recommend a supplement that is best suited for you.

## **Vitamin and mineral supplements**

- Vitamins and minerals are an important part of a healthy diet.
- Following Eating Well with Canada's Food Guide will ensure you receive all your vitamins and minerals in the correct amounts.
- Due to the stress of your disease and treatment your ability to eat a healthy diet may be affected and a multi-vitamin may be recommended. Check with your doctor before taking any vitamin or mineral supplements.
- You may read articles or books that encourage the use of high doses of vitamins or minerals to prevent or cure cancer. Most nutrition and medical experts agree that high doses of vitamins or minerals are not effective in preventing or curing cancer. In fact, taking too much of one vitamin or mineral can be unhealthy to your body.
- Vitamins and minerals found in foods are better absorbed and used by your body. Therefore it is best to eat a variety of foods in your daily diet. Discuss your vitamin and mineral concerns with your dietitian or doctor.

## Herbal teas

- Although most foods come from plants, so do many drugs and poisons.



- Many herbal teas are safe to use regularly, as they contain herbs that have little or no effect on the body. Some teas are known to have a medicinal effect on the body. If they are not used in proper amounts, they can be harmful.
- Some teas are combinations of herbs that increase the toxic effects of each other. Certain herbal teas increase or decrease the effects of medications so they should not be taken with medication.
- You should use the same care in choosing herbal teas as you would in choosing any drug product.



## **Food safety**

### **Why should I be concerned about food safety?**

When a food makes you sick, it is called a foodborne illness or food poisoning.

To prevent getting a foodborne illness, you will need to take extra care to make sure your food is as safe as possible.

### **When is food unsafe to eat?**

Food can be unsafe to eat when bacteria and other microorganisms, called pathogens, grow on it. You will not be able to see, smell or taste bacteria or pathogens in the food.

Sources of bacteria and other pathogens may be from:

- the person making or handling the food
- the environment (where the food is grown)
- the food itself “going bad”

By following safe food handling habits you can decrease your risk of getting sick from food.

## **What do I look for at the grocery store?**

At the grocery store, look for:

### **Canned or packaged foods**

- Buy cans or jars that are free of dents, cracks, bulges, leaks and rust.
- Check that packaged and boxed foods are properly sealed.

### **Fresh food**

- Make sure eggs are not cracked or broken and have been refrigerated.
- Select fruits and vegetables without spots or soft spots.
- Avoid deli foods such as cold cuts and salads.
- In the bakery, avoid cream and custard containing desserts and pastries that are not in a refrigerator or freezer.

### **Dates**

- Check the “best before” dates on dairy products and avoid buying items on or near this date.
- Buy foods that state “packaged on” the day that you buy them such as meat and cheese.
- Check packaging date on fresh meats, poultry and seafood.
- Check for strange smells, mold or insect contamination.
- Check “sell by” and “use by” dates.

### **Other**

- Avoid foods from bulk bins.
- Avoid tasting free food samples.
- Purchase frozen and refrigerated foods last, especially during the summer months.
- During the warmer months, use a cooler with ice packs to transport frozen and refrigerated foods home from the grocery store.
- Store groceries promptly; never leave food in a hot car. Cold and hot food should never be kept at room temperature longer than 2 hours.

### **What foods do I need to avoid?**

The foods listed below could have high levels of bacteria:

#### **Raw or uncooked food**

- Fish such as sushi, sashimi, ceviche and cold smoked lox.
- Shellfish such as oysters.
- Meat such as steak tartare or and other raw meats including pork or chicken.
- Eggs used in caesar salad dressing, homemade ice cream, homemade egg nog, and cookie and cake batters. Commercial, pasteurized egg products such as Egg Beaters® can be substituted in recipes calling for raw eggs.
- Raw uncooked grain products.
- Raw undercooked brewer's yeast.
- Raw vegetable sprouts such as bean and alfalfa.

#### **Other foods to avoid:**

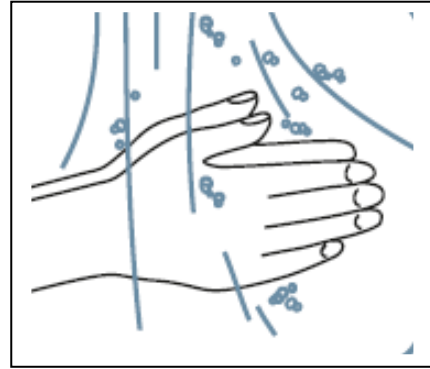
- Non-pasteurized honey, milk, cheese, yogurt, vegetable and fruit juice (apple cider) and beer (homemade or micro-brewed).
- Non-refrigerated cream and mayonnaise based foods such as tuna or macaroni salad, custards, puddings, cream sauces, kefir or other egg dishes.
- Mate tea.
- Well water, unless tested regularly and found safe. For more information on well water, contact your local health department.

## How do I keep my food safe at home?

Use the following guidelines to reduce your risk of infection at home:

### Personal care

- Wash hands with soap and water for 20 seconds before and after handling food.
- Wash your hands again when you switch from one food to another.
- Wash your hands before eating, especially when eating finger foods and other hand-held foods.
- Wash your hands after using the washroom, handling garbage, touching pets, sneezing, coughing, blowing your nose, smoking, touching dirty cutting boards or dirty dishes.



### Work surfaces and kitchen equipment

- Use separate cutting boards for cooked and raw foods. Use a different coloured cutting board for each use. For example, use:
  - a red cutting board for raw meats
  - a yellow cutting board for cooked meats, and
  - a green cutting board for fruits and vegetables
- After contact with raw meat, fish or chicken, rinse cutting boards, counter tops and utensils in hot soapy water and sanitize. Sanitize using a spray bottle that contains 5 ml of bleach and 750 ml of water. Rinse with clean water and use a clean towel to dry or air dry.
- Use 2 plates: one to carry the raw meat to the BBQ and the other to bring the cooked meat to the table.



- Clean food particles from kitchen appliances such as microwave oven, toaster, can openers, blenders and mixer blades. Remove the blender blades and bottom when washing the glass. Use the bleach solution to sanitize these items.
- Keep counter and kitchen surfaces free of food particles.

### **Sink area**

- Use a liquid soap for hand washing.
- Use paper towels for drying hands instead of a dish or hand towel.
- Replace dishcloths and dish towels daily.
- Sanitize dishcloths daily in a bleach solution.
- Do not use sponges as they are a breeding ground for bacteria.
- Do not store food supplies under the sink. Do not store chemicals and cleaning solutions near the food supplies.
- Use a liquid dish soap when hand washing dishes and pans.

### **What is the safest way to cook food?**

- Thaw meat, fish, or poultry in the refrigerator or microwave in a dish to catch the drips. Use defrosted foods right away. Do not refreeze.
- Wash fruits and vegetables thoroughly under running water before peeling and cutting.
- Wash tops of cans before opening and do not use if top of can is rusty.
- Cook meat until no longer pink. Red meats should be cooked to an internal temperature of 74°C or 165°F, poultry to 82°C or 180°F and fish 70°C or 158°F.
- Cook ground meats until well done. Meats are done when they are gray or brown and the juices run clear. There should be no signs of pink in the meat.
- Keep food at safe holding temperatures. Use a thermometer.  
Safe holding temperatures are:
  - **Hot food.** Keep to an internal temperature above 60°C or 140°F.
  - **Cold foods.** Keep to an internal temperature below 5°C or 41°F.

- Cook eggs for at least 3 minutes. The yolks must be cooked through and hard.
- When using the BBQ, precook meats in a microwave or frying pan to make sure they are cooked through.
- While preparing food, do not taste the food with the same utensil used for stirring.
- Never leave high risk or perishable food out of the refrigerator for over 2 hours. Egg dishes and cream and mayonnaise based foods should not be left out of the fridge for more than 1 hour.
- **Never taste food that looks or smells strange.**

### **Microwave cooking**

- Microwave cooking can leave cold spots in food where bacteria can grow. To avoid this, rotate the dish  $\frac{1}{4}$  turn once or twice during cooking if there is no turntable in the appliance.
- Cook foods in the microwave to an internal temperature of 88°C or 190°F.
- When heating leftovers, do not use plastic bowls or wrap unless they are labeled as microwave safe. Stir several times during re-heating.

### **Slow cooker**

- Use a thermometer to test whether your slow cooker will heat food to a safe temperature.

### **How to test**

- Fill the slow cooker 2/3 full with water and cover with the lid.
- Use the low setting and test the water after 2 hours.  
The temperature of the water should be at least 60°C or 140°F (generally it will be between 85°C or 185°F and 95°C or 203°F).

### **Food storage guidelines**

- Use these guidelines to safely store food at home.

### **Fridge and freezer:**

Throw out:

- Eggs with cracked shells.
- Food older than the “use by” expiration dates.
- All prepared foods after 24 hours.
- Entire food packages or containers with any signs of mold present. This includes yogurt, cheese, cottage cheese, fruit, vegetables, jelly, bread and pastry products.
- Foods with freezer burn or mold.

### **Storing**

- Keep raw foods such as meat, chicken and fish away from ready to eat foods. Store them in their own containers or plastic bags.
- Store all leftover food in covered containers after cooling. Hot foods need to be put in the refrigerator uncovered to cool. Once cooled, cover the container and make sure the covers are sealed tightly.
- Divide larger amounts of leftovers into small shallow containers for quick cooling in the refrigerator.
- Keep leftovers in the refrigerator no longer than 24 hours.

### **Cleaning**

- Clean up spills right away.
- Keep shelves and doors sanitized.

### **Cupboards and pantry:**

- Throw out and do not taste foods in bulging, leaking or cracked cans or cans dented in the seam area.
- Rotate food stock so older items are used first. Keep track of expiration dates.
- Keep cupboards clean. Watch for signs of insects or rodents.
- If you use home-canned foods, look for mold and leaks. Check seals. Look for signs of improper processing such as a bulging lid or food that has a bad smell or looks strange after opening.

**If in doubt, throw it out.**

**How long can I safely store food in the fridge or freezer?**

Use this chart as a guide to find out how long you can safely store food in the fridge and freezer.

Type of Food	Fridge	Freezer
Eggs	3 weeks	do not freeze
Cheese - firm	2 to 3 months	3 months
Fruits and vegetables	5 to 7 days	1 year
Beef such as roasts, steak	2 to 3 days	10 to 12 months
Chicken and turkey	2 to 3 days	6 to 12 months
Hamburgers and sausages	1 to 2 days	2 to 3 months
Lamb, pork and veal	3 to 5 days	8 to 12 months
Bacon	1 week	1 month
Hotdogs and lunch meats – opened	3 to 7 days	1 to 2 months
Ham	1 week	1 to 2 months
Fish	3 to 4 days	1 month

For more information on safe food handling, contact your local public health department.

**Can I eat at restaurants?**

Yes, you can eat at a restaurant. These guidelines will help you to keep the food you eat safe:

- Eat early to avoid crowds.
- Select restaurants with a reputation for cleanliness.
- Ask that food be prepared fresh in fast food establishments.
- Ask for single-serving condiment packages. Avoid self-serve bulk condiment containers.
- Avoid salad bars, delis, buffets and smorgasbords, sidewalk vendors, pot luck meals, soft-serve ice cream, milkshake or yogurt machines.

Be careful when traveling or keeping food outdoors. Pack foods in a cooler with ice packs to prevent growth of bacteria.

If you have questions, please ask your dietitian or dietetic assistant.

Dietitian: \_\_\_\_\_

Dietetic Assistant: \_\_\_\_\_

Phone: \_\_\_\_\_ Ext. \_\_\_\_\_

For more information see the website: [www.inspection.gc.ca](http://www.inspection.gc.ca) and then click on the Consumer Centre tab within the Food section.

## **Coping issues**

Going through a transplant, also known as a peripheral stem cell transplant or PSCT, can affect every part of your life. Your body, your feelings, relationships, self-image and sexuality can all be affected. It is not surprising then that the emotional parts of a transplant can be harder to handle than the physical parts.

Your feelings may change from day to day or minute to minute. Your feelings may also change because of the stage of the transplant process you are in.

### **Your emotions**

Some of the feelings you may have include:

- hope, nervousness, helplessness, impatience, isolation
- being out of control and overwhelmed
- afraid of sickness, death or the unknown

**All of these feelings are normal.**

### **Here are some tips to try:**

- Share your feelings with those you feel close to, such as your family and friends.
- Ask the staff questions, so you will know what to expect.
- Ask to speak to other patients who have had a transplant.
- Practice relaxation techniques such as meditation and listening to music.
- Keep physically strong before, during and after the transplant by eating well and exercising.
- Bring personal belongings to the hospital (if staying in) which may comfort you such as family pictures, books, crafts and your own clothes.
- Set small daily goals for yourself.
- Take one day at a time.

## Your family

Your family is also affected by the transplant treatment. Some of their feelings and worries may be like yours. Role changes are common. Family members may take on more responsibilities. Financial or legal problems are also common for those going through a transplant.

Children too may have their own worries. You may see changes in your children's behaviour.

### Here are some tips to try:

- As a family, try to openly share your feelings and work together to solve your problems. The social worker can help if this is hard to do.
- Prepare your children by talking with them and giving them information suited to their age and level of understanding.
- Ask the staff questions, so you know what to expect.
- Ask family and friends for extra help at this time with car rides, meals, child care and daily routines.
- Encourage family members to take care of themselves by getting enough sleep, eating well, exercising and finding time alone.
- Tell family members how they can best help you. They want to be there to love and support you, but need to know what is most helpful.
- Take care of any financial or legal problems such as wills, Power of Attorney, sick benefits and disability pensions. The social worker can help you with this.



## **Self image and sexuality**

Catheters, hair loss, weight changes and the transplant treatment can make you feel less attractive. Being weak and tired can also reduce your sexual desire.

There are many ways to express your affection. Hugging, kissing and touching are important. Once you are discharged and your blood cell counts have recovered, you may have sexual intercourse.

### **Here are some tips to try:**

- Try to talk about your feelings of self-image and sexual desire with your partner.
- Remember that your personal qualities, such as sense of humour and compassion, also make you attractive. These qualities do not change because of transplant.
- Exercise improves self-image and energy.
- Talk with your health care team if you have questions about birth control, periods (menstruation) or fertility.
- You and your partner can speak with the social worker about sexual issues.

## **Going home and recovery**

You may have mixed feelings once you are discharged. You may be relieved and frightened at the same time. You may worry about whether your transplant has worked and for how long it will work. As your follow up visits become less often you may feel isolated or abandoned by the health care team.

Getting back to “normal” will take time. You will have good and bad days. It will take time for you to become a parent, spouse, employee and friend again. Be patient with yourself.

### **Here are some tips to try:**

- Gradually return to your routine.
- Talk with your health care team about when you can return to work.
- Talk with the social worker if you have trouble adjusting.
- Try to find small pleasures in each day.



## Hospital routines (if you hospitalized)

### Daily routines

- Blood tests are done each day. This is necessary so that blood transfusions and treatment can be planned for the day.
- Each day the doctor on service and/or the resident or nurse practitioner will visit.
- A chest x-ray and ECG (electrocardiogram) may be done on admission and as needed.

### Meals

- Your daily menu will have choices and special diets are available.
- You will be asked to fill out menus 2 days in advance. If you want between meal snacks, write them on your daily menu and they will be sent on your tray.
- There is a kitchen with a microwave available on the unit.
- You can bring food from home. Please put your name and date on the food you leave in the refrigerator. Foods such as ice cream, coffee, and peanut butter are available in the kitchen for patients.
- Meal times are 8:30 am for breakfast, 12:30 pm for lunch and 5:00 pm for supper.



## Visitors

- Visiting hours are flexible. Please have children supervised.
- People with the flu, colds or other contagious diseases should not visit.
- All visitors must wash their hands before and after leaving patient's rooms.
- There are a limited number of cots for overnight visitors.
- The staff can give you information about local accommodations.



## Activities available on the ward

Many activities are available on the ward. Please ask your nurse if you would like to use:

- TV, videos
- audiotapes
- computer games
- books
- exercise equipment
- iPads, CDs

## What you can bring from home

- You can wear street clothes instead of pajamas.
- Please feel free to bring pillows and comforters from home.
- Bring crafts, puzzles, cards or other items to help pass the time.
- You are responsible for all items brought from home. Please label each item with your name.

## Personal and entertainment devices

- We encourage you to keep in contact with your family and friends.
- If needed, you can rent a phone. Patient Registration will ask you if you wish to rent a phone and provide you with cost information.
- Wi-Fi service is available for a fee. On launching your internet browser and selecting the 'i-visitor' network, you will be prompted through payment and establishing a username and password.
- If you wish to rent a TV, complete the form found at the nurse's station. The salesperson will tell you the cost and hook up the service.

## Leaving the ward

Please check with your nurse to see if you can leave the ward. Several areas in the hospital are available to patients and visitors.

**On the ground floor:** The cafeteria

**On the first floor:**

- Chapel
- Outdoor Patio
- Gift Shop
- Wellwood



## Tests and procedures

Depending on your needs you may have one or more of these tests.

### **CT scan**

At the CT Department, Juravinski Hospital, 1st floor.

A thin beam of x-rays is focused on a specific part of your body. The x-ray tube moves rapidly around the site, making many images from different angles, to create a cross-sectional picture.

- During some CT scans, a dye is used to outline blood vessels or fill up organs of the body so they can be seen more easily. You will be asked to sign a consent form if a dye is used.
- A CT scan is usually painless. Some patients may experience a slight discomfort from the injection if the dye is used.
- You may be asked not to eat or drink anything for 4 hours before the scan.

### **Bone scan**

At Nuclear Medicine, Juravinski Hospital, 1st floor

- No preparation is needed before this test.
- You may continue to take your medications (if any) and have your meals.
- You will be given a small injection when you arrive.
- You will then wait 3 to 4 hours before the actual bone scan. If you wish, you can leave the department and return for the scan.
- The scan will take about 1 hour.
- You may have some x-rays the same day.

### **Echocardiogram**

This test is an ultrasound of your heart which allows your doctor to see how your heart and its valves are working. No preparation is needed.

## **Bone marrow aspiration and biopsy**

This is a test in which a needle is placed into your pelvic bone and a small amount of bone marrow is removed. The test will show how well your bone marrow is making blood cells.

- The doctor will inject freezing into the area first. You can expect to feel some discomfort, mostly pressure.
- After the freezing wears off, you may experience a bruised feeling. If necessary you can take plain Tylenol® for relief.

## **RNA scan**

At Nuclear Medicine, Juravinski Hospital, 1st floor.

This test is done to see how well your heart is working. This is called your cardiac status.

- No preparation is needed before this test.
- A series of images of the heart are taken after 2 injections of radioactive solution are given in your arm.
- The scan takes about 1 ½ hours.



## **Gallium scan**

At Nuclear Medicine, Juravinski Hospital, 1st floor.

This test is done to determine disease sensitivity to gallium for future evaluation.

- No preparation is required prior to this test.
- You may continue to take your medications (if any) and have your meals.
- You will be given a small injection in your arm when you arrive on day 1.
- You will then return days later and the scan will be done.
- You may need to return for further scans on subsequent days also.

## **X-rays**

A skeletal survey is an overall view of your bones and takes about 45 minutes to complete. Your doctor will decide if you need other x-rays.

## **Blood tests**

Blood samples will be taken often. While in hospital, blood will be taken daily from your apheresis catheter. Your blood will be tested to see how well your liver, kidneys and bone marrow are functioning.

Before the transplant you are required to have a blood test done for hepatitis and HIV. This is a standard policy in Canada.

### **Explanation of blood counts**

Bone marrow is the “factory” where blood cells are made. Bone marrow is found in the skull, breast bone (sternum), ribs, back bone (spine) and pelvis. Chemotherapy affects the growth of cancer cells and some normal cells, especially blood cells (temporarily). Because of this it is necessary to count your blood cells at regular times during treatment.

The most common blood cells you will hear about are red blood cells, white blood cells and platelets.

### **Red blood cells (RBC)**

- The normal range for women is 120 to 160 g/L.
- The normal range for men is 140 to 170 g/L.
- These cells carry oxygen to all cells in the body. Our bodies need oxygen in order to work properly.
- A blood test called a CBC will measure the red blood cells.
- When your RBC is low, or these cells do not contain enough hemoglobin, you have anemia. This may occur temporarily after standard chemotherapy.
- Following high dose chemotherapy your hemoglobin is likely to be very low. You may need a blood transfusion to increase your hemoglobin.

### **White blood cells (WBC)**

- The normal range is between 4.5 and 10.5.
- White blood cells are made in the bone marrow and their purpose is to fight infection.
- When your white blood cells are low you have a lowered immune system and are at higher risk of infection.
- After high dose chemotherapy your WBC will be very low for several days.
- Transplanting your own stem cells will help these blood cell counts to return to safe levels about 12 to 14 days after high dose chemotherapy.
- Neutrophils are part of the white blood cells and are important in fighting infections. These cells are measured separately as part of the white blood count.
- Your neutrophil counts needs to be at an adequate amount before you leave the hospital.

## **Platelets**

- The normal range is between 150 and 450.
- Platelets are cells in the body that make blood clot. When the platelet count is lower you may bleed more easily and for a longer time.
- A lower platelet count occurs after chemotherapy because the bone marrow is temporarily damaged.
- If your platelet count is quite low and not expected to return to a safe level for a few days you may need a platelet transfusion.
- A platelet transfusion is given through your IV to increase your platelet count until your blood cells recover and you are making enough platelets on your own.



## Community resources

To find out if the following resources are available in your area, check your local phone book.

### Financial support

#### Canada Pension Plan/Disability Insurance

1-800-277-9914

[www.servicecanada.gc.ca/eng/isp/cpp/cpptoc.shtml](http://www.servicecanada.gc.ca/eng/isp/cpp/cpptoc.shtml)

- Must have enough Canada Pension Plan contributions and have a severe and prolonged disability.

#### Department of Veteran's Affairs

905-572-2531 or 1-866-522-2122

[www.veterans.gc.ca/eng/](http://www.veterans.gc.ca/eng/)

- Provides financial assistance for home maintenance to eligible veterans.

#### Ontario Disability Support Program

1-905-521-7280

[www.mcass.gov.on.ca/en/mcass/programs/social/odsp/](http://www.mcass.gov.on.ca/en/mcass/programs/social/odsp/)

- Provincially funded income assistance program for people with low incomes.

#### Trillium Drug Plan

1-800-575-5386

[http://www.health.gov.on.ca/en/public/programs/drugs/programs/odb/opdp\\_trillium.aspx](http://www.health.gov.on.ca/en/public/programs/drugs/programs/odb/opdp_trillium.aspx)

- Provides assistance to eligible individuals and families who spend a large portion of their income on prescription drugs.

## Information services

### Canadian Cancer Society (Ontario)

[www.cancer.ca](http://www.cancer.ca)

Brant.....	519-753-2566
Cambridge.....	519-623-7144
Halton.....	905-332-0060
Hamilton .....	905-575-9220
Kitchener-Waterloo.....	519-886-8888
Niagara.....	905-356-3151
Norfolk.....	905-426-3953
Wellington.....	519-824-4261

### Cancer Information Services

1-888-939-3333

- Confidential, dependable information about cancer, from around the world.

### Patient and Family Resource Centre

[www.jcc.hhsc.ca/](http://www.jcc.hhsc.ca/)

Juravinski Cancer Centre (Level 1, main lobby)

- 905-387-9495, ext. 65109

### Wellwood

[www.wellwood.on.ca/](http://www.wellwood.on.ca/)

- 905-389-5884 (hospital location)
- 905-667-8870 (community location)
- Provides various programs including a computer resource for information needs of cancer patients.

## **Personal support**

### **Trillium Drug Plan**

1-800-575-5386

[http://www.health.gov.on.ca/en/public/programs/drugs/programs/odb/opdp\\_trillium.aspx](http://www.health.gov.on.ca/en/public/programs/drugs/programs/odb/opdp_trillium.aspx)

- Provides assistance to eligible individuals and families who spend a large portion of their income on prescription drugs.

### **Cancer Assistance Program**

[www.cancerassist.ca](http://www.cancerassist.ca)

905-383-9797

- Provides respite care and baby-sitting services to Hamilton patients.

### **Canadian Cancer Society**

[www.cancer.ca](http://www.cancer.ca)

905-383-9797

- See information services for out-of-town branches.
- Provides numerous supports including: Peer Support Groups and Transportation, Wig & Turban Service (905-575-9220).
- Information on available support services is at the information desk at the Cancer Clinic or by calling the Cancer Society.

**Hamilton Niagara Haldimand Brant Local Health Integrated Network, HNHD LHIN (Formerly CCAC)**

1-800-810-0000

[www.hnhblhin.on.ca](http://www.hnhblhin.on.ca)

- Provides a single point access to information, coordinated health care and support services.

Brantford .....	519-759-7752
Haldimand-Norfolk .....	905-426-7400
Halton .....	905-639-5228
Niagara .....	905-684-9441
Waterloo.....	519-883-2110
Wellington, Dufferin, Guelph .....	519-823-2550

**The “Grocer-Ease” Program**

[www.grocerease.org/](http://www.grocerease.org/)

905-545-1175

- Provides grocery shopping assistance for a minimal fee.

**Homemaking Services**

- See the yellow pages of the telephone book.

**Look Good Feel Better**

[www.lgfb.com/](http://www.lgfb.com/)

905-575-9220

- Free program that teaches techniques to help cancer patients with such things as makeup application, use of scarves and wigs. Sponsored by the cosmetics industry.

**Meals-on-Wheels**

[www.von.ca/en/home/default.aspx](http://www.von.ca/en/home/default.aspx)

905-522-1022

- Provide a hot, nutritious mid-day meal. Funded privately.

## **Nursing Services**

905-389-5884

- See the yellow pages of the telephone book.

## **Wellwood**

[www.wellwood.ca](http://www.wellwood.ca)

- 905-389-5884 (hospital location)
- 905-667-8870 (community location)
- Provides various programs including a computer resource for information needs of cancer patients.
- Wellwood has two locations, both of which are open to you for free programs. The hospital location is on the first floor (near the west elevators) of the Juravinski Hospital. The community location is at 501 Sanatorium Road (where Rice meets Sanatorium), near Chedoke Hospital. The community site has free parking.

## **Spiritual support**

### **Chaplaincy Services**

905-527-4322

- Provided by the Chaplain at the Juravinski Hospital, ext. 44259.

### **Hospital Chapel**

- Visiting hours: The chapel is open 24 hours a day and is located on the first level of the Juravinski Hospital near the large windows, across from the main entrance.

## **Equipment support**

### **Cancer Assistance Program**

905-383-9797

[www.cancerassist.ca/](http://www.cancerassist.ca/)

- Provides equipment to Hamilton patients. In some cases may also help out-of-town patients.

### **Canadian Cancer Society**

[www.cancer.ca](http://www.cancer.ca)

- For equipment, see the Information Services section for Canadian Cancer Society telephone listings.

### **Canadian Red Cross Home Equipment Service Loan Program**

[www.redcross.ca/](http://www.redcross.ca/)

905-522-8485

- Rents sick room equipment for a fee.

## **Getting to the Juravinski Hospital and Cancer Centre, 699 Concession Street**

### **From St. Catharines**

Take the QEW to the Centennial Parkway/Red Hill Valley Parkway exit.

Follow the sign for the Red Hill Valley Parkway exit.

The parkway becomes the Lincoln Alexander Parkway (LINC).

Exit onto Upper Gage. Turn right on Upper Gage and travel north to Concession Street. Turn left on Concession Street. Travel several blocks.

The hospital and cancer centre are on the right.

### **From Cambridge**

Take Hwy #52 to Hwy #403 and exit at the Lincoln Alexander Parkway (LINC).

Follow the LINC exit to Upper Wentworth Street.

Travel north on Upper Wentworth Street.

Turn right on Concession Street. The hospital and cancer centre are several blocks up on Concession Street on the left.

### **From Brantford**

Take Hwy #403 and exit at the Lincoln Alexander Parkway (LINC).

Follow the LINC exit to Upper Wentworth Street.

Travel north on Upper Wentworth Street.

Turn right on Concession Street. The hospital and cancer centre are several blocks up on Concession Street on the left.

### **From Toronto**

Take QEW to Hwy 403.

Exit onto the Lincoln Alexander Parkway (LINC).

Follow the LINC exit to Upper Wentworth Street.

Travel north on Upper Wentworth Street.

Turn right on Concession Street. The hospital and cancer centre are several blocks up on Concession Street on the left.

### **From Guelph**

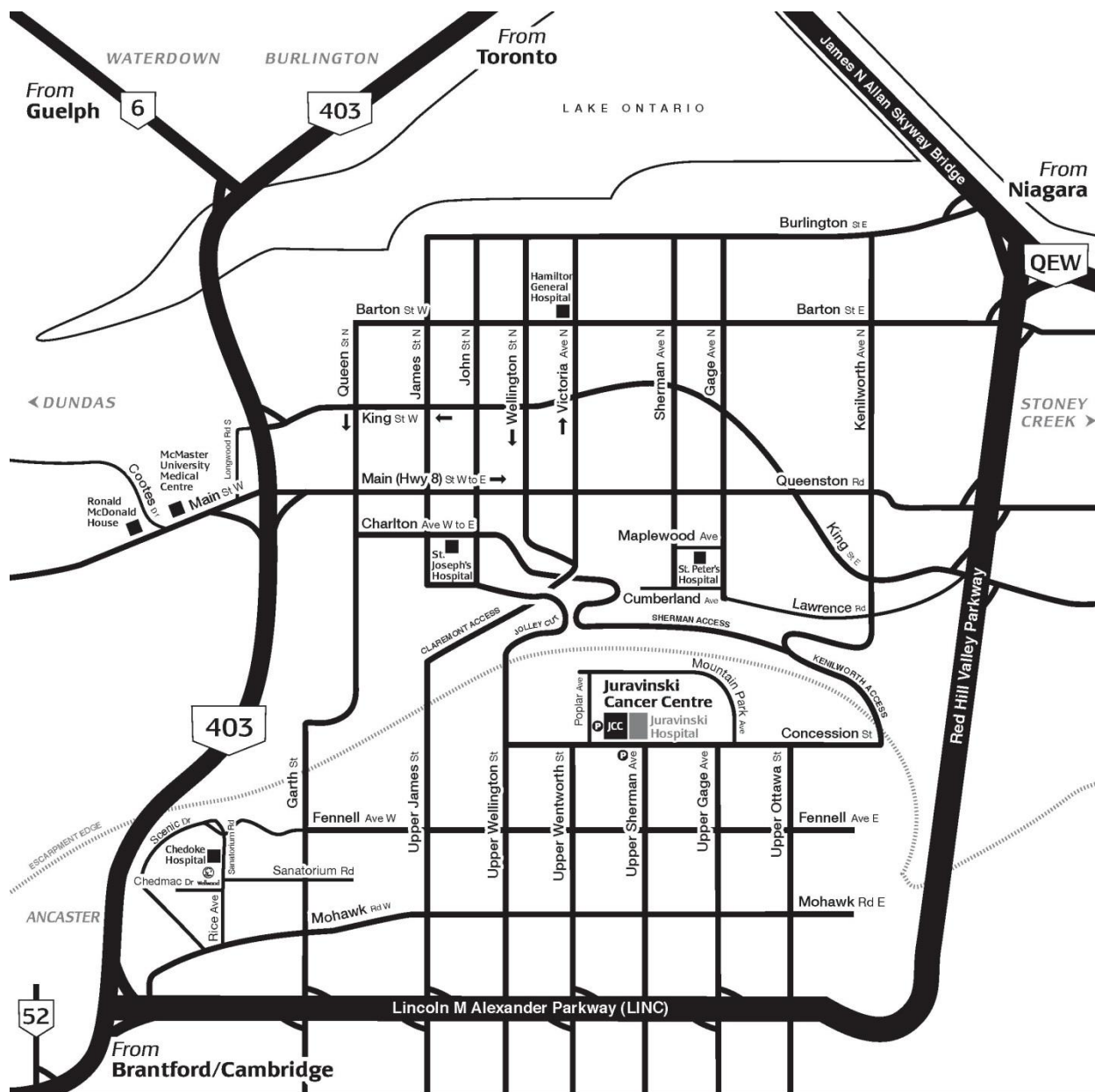
Take Hwy #6 to Hwy #403.

Exit onto the Lincoln Alexander Parkway (LINC).

Follow the LINC exit to Upper Wentworth Street.

Travel north on Upper Wentworth Street.

Turn right on Concession Street. The hospital and cancer centre are several blocks up on Concession Street on the left.



## Important:

1. Please note the Juravinski Hospital and Cancer Centre have 2 separate entrances on Concession St. The Cancer Centre is **Entrance J** at 699 Concession St. and the Hospital is Entrance A at 711 Concession St.
2. At St. Joseph's Hospital (Charlton Campus), there is a building named Juravinski Innovation Tower. It is **not** to be confused with the Juravinski Hospital and Cancer Centre.

## Parking instructions

There are two parking lots near the Juravinski Hospital and Cancer Centre. One is on Concession Street right across from the hospital.

The other is on Poplar Avenue right next door to the Cancer Centre.



### **How to contact a volunteer driver**

The Canadian Cancer Society offers a transportation service to those who may have no other means of getting to cancer related appointments. To see if you are eligible for this service call your local Canadian Cancer Society office or the Cancer Information Service at 1-888-939-3333. Transportation is a busy service, so please give at least 2 full business days notice.

### **Transportation for specific service needs is available through:**

Canadian Cancer Society, Hamilton-Wentworth .....	905-575-9220
Cancer Assistance Program .....	905-383-9797
Red Cross Society (for medical appointments and day programs) .....	905-522-8485
Victorian Order of Nurses (VON) (for medical appointments) .....	905-522-0053
Ancaster Community Services, Volunteer Driver Program .....	905-648-6675

## Glossary

<b>Anemia</b>	A condition in which the blood has too few red blood cells, or not enough hemoglobin in these cells.
<b>Antibiotics</b>	Medications used to fight bacterial infections.
<b>Apheresis</b>	A painless procedure by which your blood is withdrawn and circulated through a machine that removes the stem cells and then returns remaining cells back to your bloodstream.
<b>Aspiration</b>	To draw out the marrow by suction using a syringe.
<b>Autologous Transplantation</b>	A transplant in which the tissue infused comes from the individual receiving it.
<b>Biopsy</b>	Removal of small piece of tissue for microscopic examination.
<b>Blood Counts</b>	A routine test that determines the number of white blood cells, red blood cells and platelets in a sample of blood.
<b>Bone Marrow</b>	Spongy tissue inside the bones where the blood cells are produced.
<b>Chemotherapy</b>	Anticancer drugs or combination of drugs designed to kill cancer cells.
<b>Clinical trial</b>	A carefully controlled and monitored research to test a new drug or therapy, involving human patients.
<b>DMSO (dimethyl sulfoxide)</b>	A drug used when freezing stem cells to prevent “freezer burn”.
<b>Engraftment</b>	The process in which reinfused stem cells begin to grow in the bone marrow and make new blood cells.

<b>Growth Factors</b>	Natural substances that stimulate cells to divide and grow.
<b>Hematologic</b>	Relating to blood and blood forming tissues.
<b>Heparin</b>	A drug used to thin the blood and keep it from clotting.
<b>High-dose Chemotherapy</b>	Higher than standard doses of anticancer drugs which is sometimes needed to destroy tumor cells.
<b>Immuno-suppression</b>	Suppression of the immune system.
<b>Infusion</b>	The introduction of a liquid into the body through a vein.
<b>Mobilization</b>	Using chemotherapy and/or a colony stimulating factor to move stem cells from the bone marrow into the bloodstream for apheresis.
<b>Neupogen (Filgrastim)</b>	A colony stimulating factor given by injection which mobilizes stem cells from bone marrow into the bloodstream.
<b>Peripheral Blood Stem Cell</b>	A stem cell that has left the bone marrow and is circulating in the blood stream.
<b>Apheresis Catheter</b>	A small, flexible tube inserted into the chest through which drugs and fluids can be given; often called a Hickman apheresis catheter.
<b>Platelets</b>	Cells that are needed for blood to clot.
<b>Red Blood Cells</b>	Cells that pickup oxygen from the lungs and take it to tissues throughout the body.
<b>Regimen</b>	A defined system of treatments.
<b>Reinfusion</b>	The return of your stem cells to your bloodstream.

<b>Remission</b>	Complete or partial disappearance of symptoms of a disease in response to treatment.
<b>Restaging</b>	The process of evaluating how well your cancer is responding to treatment.
<b>Sitz Bath</b>	A bath in which one sits, covered with water up to the hips. Typically used to relieve lower-body pain.
<b>Stem cells</b>	“Parent” cells in bone marrow from which all blood cells develop; also known as progenitor cells.
<b>Stem cell collection (Harvest)</b>	The process of taking stem cells out of the blood; see apheresis.
<b>Subcutaneous Injection</b>	Injection into the fatty layer under the skin.
<b>White Blood cells (WBC)</b>	The blood cells that fight infection.



**Front Mural: “*Riding the Dragon*”  
by Conrad Furey**

*Riding the Dragon* is a 30 foot mural created in 2006 by renowned Hamilton Artist Conrad Furey. The images in the mural reflect Conrad's personal experience with cancer, his valued relationships with the staff who cared for him, and pays special tribute to the Knot-a-Breast dragon boat team. The mural hangs in the atrium of the cancer centre and provides, comfort and reflection to patients, staff and visitors.



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