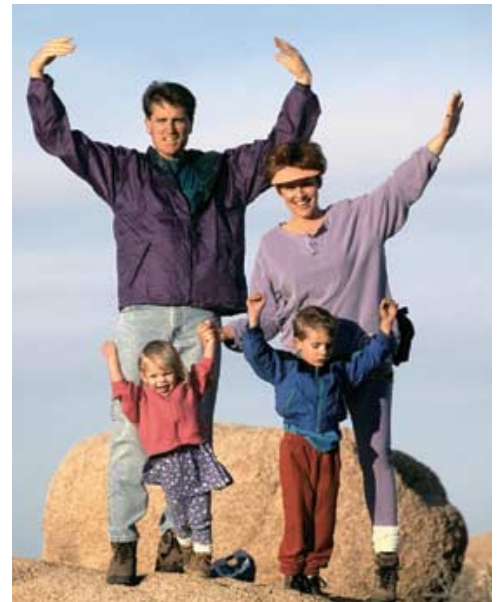


**Anemia** is when you do not have enough red blood cells. If you have this problem, you are **anemic**.

Your red blood cells contain **hemoglobin**, which carries oxygen from your lungs to your tissues and cells. Your body needs oxygen to survive and give you energy.

When you do not have enough red blood cells, you have less hemoglobin to carry oxygen throughout your body. This means that the tissues in your body do not get enough oxygen to do their work. This can make you feel tired or weak, and you may look pale.



## What causes anemia?

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The cause of your anemia could be your cancer or your cancer treatment. When you are having cancer treatment, your bone marrow might not be making enough red blood cells. This makes you more likely to become anemic.

## How do I know if I have anemia?

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At first, you may not notice the signs of anemia. But as it gets worse, you may feel tired and look pale. If you have anemia, you might:

- feel very tired (**fatigue**)
- feel weak
- feel confused or have trouble concentrating
- feel short of breath, especially when you are more active than usual
- have chest pains
- get headaches
- feel dizzy or faint
- have trouble sleeping

If you have a severe case of anemia, your heart may beat very fast or not be regular. The reason this happens is that your heart has to pump more blood to try to provide enough oxygen to all your cells and tissues.

The only way to know for sure if you have anemia is to have a blood test. This test measures how much oxygen your red blood cells carry. It will tell your doctor if you are anemic. Not everyone will feel the signs of anemia, even if they have the same hemoglobin level.

## How will my doctor treat anemia?

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Sometimes, your doctor will treat anemia with a blood transfusion. Or, you might need to take a medicine to help your body make more red blood cells.

Your doctor will decide which treatment is best for you.

## How can I cope with anemia?

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- Ask your doctor or nurse about your red blood cell count and your hemoglobin level. If your hemoglobin is low, ask about treatment for anemia.
- Eat a balanced diet made up of many small meals.
- Try to eat foods that have iron in them, to help you make red blood cells. Some foods with iron are eggs, red meat, liver, and spinach.
- Try to eat, even when you are tired. Eating small amounts of food more often may give you extra energy.
- Get lots of rest. Sleep more at night and take naps during the day.
- Don't try to do too much each day. Do the most important things, and leave the other things for tomorrow. Ask family and friends to help you with things like shopping, housework, or cooking.
- **If you feel dizzy**, lie flat for a few minutes. Then slowly change your position from lying down to sitting up.
- Ask your doctor, nurse, or dietitian about taking vitamins, minerals, and supplements.

## Questions to ask your health care team

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- Why do I have so little energy?
- Is it my cancer or the cancer treatment that is making me so tired?
- What is my hemoglobin level? What does that mean?
- What is the normal hemoglobin level?
- How often do you measure my red blood cell count and hemoglobin level?
- How can I keep track of my hemoglobin?
- How can I cope with my anemia? Can medical treatment help?
- Can you give me a list of foods that are high in iron?

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Bone marrow is the soft part in the centre of the major bones in your body. If you cracked a bone open, you would see the bone marrow inside – it looks like a sponge.

Most of your blood cells are made in your bone marrow. New blood cells grow from a **parent cell** (also called a **stem cell**).

People with certain kinds of cancer may need to have:

- A **bone marrow transplant** – this is when you get new bone marrow full of healthy stem cells. The bone marrow may be donated by a relative, or may come from someone else.
- A **stem cell transplant** – this is like a bone marrow transplant, except that you **only** get the stem cells themselves. Your own stem cells may be collected and stored, or they may come from someone else.

### Why is a transplant best for me?

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A bone marrow or stem cell transplant can cure certain kinds of cancer.

Your health care team will explain why a transplant is the best treatment for you.

### How does the transplant work?

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1. Bone marrow or stem cells are taken out of your body or another person's body and stored.
2. You will have high-dose chemotherapy and/or radiation therapy to kill the cancer cells. These treatments will also destroy your body's own bone marrow but it will grow again.
3. To replace your bone marrow, you will be hooked up to a needle that has a tube leading to a plastic bag. This is called an intravenous (IV) infusion. You will need to lie still for an hour or two while the liquid bone marrow or stem cells drips into your body. You will not have an operation to open up your bones to put bone marrow or stem cells in.
4. After one or two weeks, the new bone marrow or stem cells will settle in your body and start to make red blood cells, white blood cells, and platelets.

If the bone marrow or stem cells you get in the transplant are your own (saved and frozen from before), this is called an autologous transplant. If the bone marrow or stem cells are donated by someone who has healthy bone marrow, this is called an allogeneic transplant. Your doctor will decide which kind of transplant is best for you.

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## What are the side effects of a bone marrow or stem cell transplant?

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Bone marrow or stem cell transplants (and the high-dose chemotherapy or radiation therapy that goes with them) can cause side effects. No one can know for sure exactly which side effects you might have.

The most common side effects are:

- feeling very tired (fatigue)
- hair loss
- low blood cell levels, such as anemia or neutropenia (low white cell count)
- feeling like you might throw up (nausea)
- feeling numb or tingling in the hands or feet

- a sore mouth and sore throat
- not wanting to eat
- changes in how you feel about sex
- for women, changes in their period (menstrual cycle)
- diarrhea
- pain

Your health care team will give you more details about the side effects that you might have and how to cope with them.

**Please keep in mind that side effects are not a sign of how well the treatment worked against your cancer.**

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## How can I cope with my cancer and treatment?

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It is normal for you and your family to have many feelings at this time. Talk with your doctor, nurse, or someone else on your health care team about your feelings.

Your doctor and nurse are there to answer your questions and to help you.

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## Questions to ask your health care team

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- Why is a bone marrow or stem cell transplant the best treatment for me?
- What are the benefits and risks of the transplant for me?
- Where will the bone marrow or stem cells come from?
- Can someone in my family donate their bone marrow?
- How and where will the transplant take place?
- Who can be with me during my treatment?
- How long will I be in the hospital?
- How will we know if the treatment worked?
- Will I be able to go to work?
- Can I keep doing the things that I used to do? What should I not do?
- Will the transplant affect whether or not I can have children?
- Can I travel or take a vacation after the transplant?
- What happens after the transplant is over?

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Combination therapy uses more than one cancer treatment to treat your cancer. This means that you may have:

- surgery and radiation therapy
- surgery and chemotherapy
- radiation therapy and chemotherapy, or
- surgery, chemotherapy, and radiation therapy.

### How does combination therapy work?

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To understand combination therapy, you first need to know how each kind of cancer treatment works:

- **Surgery** and **radiation therapy** treat cancers that affect one part of your body (such as your breast).
- **Chemotherapy** treats cancer cells that have spread throughout your body (such as leukemias) or cancer cells that have moved from one place (such as your prostate gland) to another place (such as your bones).

Sometimes, your doctor will suggest that you have radiation therapy and/or chemotherapy to shrink the cancer **before** you have surgery. In other cases,

doctors will suggest that you have chemotherapy and/or radiation therapy **after** surgery to kill any cancer cells that may have been left behind.

Combination therapy can:

- Cure your cancer.
- Control your cancer for awhile.
- Reduce the risk of cancer coming back.
- Help you get rid of or cope with cancer symptoms, such as pain.

*(Please see the fact sheets on **Chemotherapy, Radiation Therapy, and Surgery** to learn more about each of these treatments.)*

### Why is combination therapy best for me?

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For some cancers, combination therapy is the best treatment. Your health care team will explain why and what kind of combination therapy is best for you.

### How is combination therapy given?

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How and where you get your treatments depends on the kinds of treatments that you will be having.

## What are the side effects of combination therapy?

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Some cancer treatments may cause side effects. Some people do not have any side effects; other people may have a few or many side effects. No one knows exactly which side effects you might have until you begin your treatment.

Your health care team will give you details about the side effects that you might have and how to cope with them.

**Please keep in mind that side effects are not a sign of how well the treatment worked against your cancer.**

## How can I cope with my cancer and treatment?

---

It is normal for you and your family to have many feelings at this time. Talk with your doctor, nurse, or someone else on your health care team about your feelings.

Your doctor and nurse are there to answer your questions and to help you.

## Questions to ask your health care team

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- What combination of cancer treatments is best for me and why?
- What are the benefits and risks of these treatments to me?
- How and where will I get the treatments?
- Who can be with me during my treatments?
- How will we know if the treatments worked?
- Will I be able to go to work when I'm having these treatments?
- Can I keep doing the things that I used to do? What should I not do?
- Will the treatments affect whether or not I can have children?
- Can I travel or take a vacation when I'm having the treatments?
- How often will I see my cancer doctor during my treatments?
- What happens when the treatments end?

---

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Hair loss is often the most noticeable side effect of cancer treatment. It can be very hard to deal with. Hair loss is also called **alopecia** (pronounced 'al-o-pee-sha'), Chemotherapy is the treatment that will most often make you lose your hair, but it can also happen if you have radiation therapy.



## Why am I losing my hair?

Some of the drugs used in chemotherapy do more than get rid of cancer cells. They can also kill the healthy, fast-growing cells like those found in your hair.

Radiation therapy only affects the hair in the area of your body that is being treated. How much hair

you lose depends on the part of your body that is being treated and on the amount of radiation that you get.

Your scalp may start to feel sore or tender if you lose your hair because of the cancer treatments. If this happens, tell your health care team.

## Will I lose all of my hair?

The amount of hair that you lose depends on your cancer treatment. You may lose all of your hair, or your hair may become thin and patchy, or you may not lose any hair at all.

Hair loss can happen on all parts of your body. It can happen slowly over time, or all of a sudden.

## Will my hair grow back?

In most cases, your hair will grow back after your cancer treatment ends. If you have radiation therapy, your hair may not grow back - this

depends on how much radiation you receive. There are no medicines that will make your hair grow back faster.

## How can I cope with hair loss?

- Prepare yourself for the feelings of sadness that you may feel if you lose your hair. Let your family, friends, and the people you work with know that it may happen.
- Talk with your doctor, nurse, or other members of your health care team about your feelings and concerns. Your health care team is there to help you. Feel free to ask questions or talk with them.
- Buy a wig before you lose your hair so that you can find one that matches your real hair colour.
- Get a short haircut before you start cancer treatment.
- Make sure to treat your hair and scalp gently.
- Use mild shampoos. Use a hair conditioner to keep from getting tangles in your hair.
- Don't use hair sprays, blow dryers, perms, or dyes.
- Protect your scalp from the sun by wearing a hat.



## Questions to ask your health care team

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- Is my cancer treatment likely to make me lose my hair?
- How can I prepare myself for losing my hair?
- Will my hair grow back?
- When can I perm or dye my hair after treatment?
- Where can I get a wig?

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Immunotherapy is a way of treating cancer, by using your body's immune system to fight cancer cells. It is sometimes called **biological therapy**.

Immunotherapy may be used alone or with other cancer treatments such as surgery, chemotherapy, and radiation therapy.

### How does immunotherapy work?

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Everyone's body is designed to protect itself against diseases, including cancer. One of your body's main defense systems against disease is the immune system. It is a complex system of cells and organs working to protect your health, by finding and killing things that might threaten your body. The immune system can attack germs (bacteria), viruses, and some types of cancer.

Immunotherapy uses substances to boost your body's immune system, so it will attack and kill the cancer cells. These substances are similar to those in your own immune system.

They are called **BMRs** (Biologic Response Modifiers). They can help:

- Cure your cancer.
- Stop cancer cells from growing.
- Help healthy immune cells control cancer cells.
- Reduce the risk of cancer coming back.
- Reduce the side effects caused by some cancer treatments.

### Why is immunotherapy best for me?

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Immunotherapy can provide good results for some types of cancer. Your health care team will explain why it is the best treatment for you.

### How is treatment given?

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How and where you get immunotherapy depends on the type of BMRs that your doctor will suggest for you. Treatments are usually given by injection into a vein (called intravenous) or under the skin (called subcutaneous).

Some of the BMRs used are: interferons (IFN); interleukins (IL); tumour necrosis factor (TNF); colony-stimulating factors (CSFs); monoclonal antibodies (MOABs); and, tumour vaccines.

## What are the side effects of immunotherapy?

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Like other cancer treatments, immunotherapy can cause side effects. Some people do not have any side effects; other people have some or many side effects. No one knows exactly which side effects you might have until you begin your treatment.

Your health care team will give you more details about the side effects that you might have and how to cope with them.

**Please keep in mind that side effects are NOT a sign of how well the treatment is working against your cancer.**

## How can I cope with my cancer and treatment?

---

It is normal for you and your family to have many feelings at this time. Talk with your doctor, nurse, or someone else on your health care team about your feelings.

Your doctor and nurse are there to answer your questions and to help you.

## Questions to ask your health care team

---

- Why is immunotherapy the best treatment for me?
- What type of immunotherapy will I get?
- What are the benefits and risks of immunotherapy for me?
- How and where will I get immunotherapy?
- Who can be with me during my treatment?
- How will we know if the treatment worked?
- Will I be able to go to work when I'm having this treatment?
- Can I keep doing the things that I used to do? What should I not do?
- Will this treatment affect whether or not I can have children?
- Can I travel or take a vacation when I'm having this treatment?
- How often will I see my cancer doctor during my treatment?
- What happens when the treatment ends?

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When you are having cancer treatments, you may feel sick to your stomach (like you want to throw up). This is called **nausea**.

Your cancer treatment may also make you **vomit**, or throw up. You may have nausea without vomiting. Or you may vomit, after a few hours, a day, or even longer after you have cancer treatment.

Your cancer, the drugs you are taking to control the pain, or being constipated (if you cannot have a bowel movement) may also cause nausea and vomiting.



## What should I do if I have nausea or vomit after my treatment?

You should tell your health care team. Your doctor may prescribe a medicine, or tablets to get rid of your nausea and vomiting. This medicine is called an **anti-emetic**.

It can help to control or get rid of your nausea and vomiting.

## How can I cope with nausea and vomiting?

- Talk to your doctor, nurse, or pharmacist about medicines (anti-emetics) to control your nausea and vomiting.
- If your doctor prescribes medicine for you, take it when you are supposed to.
- Change the time of day that you receive treatments to see if it helps how you feel after treatment.
- Wear clothes that are loose around your stomach.
- Eat slowly. Eat many small and light meals.
- Avoid hot, fatty, and spicy foods.
- Drink lots of fluids.
- If the smell of certain foods makes you feel sick to your stomach, try to have someone else cook the meal.
- Try to focus on things other than eating, such as reading, listening to music, and other things that help you relax.
- Get lots of rest.

## Questions to ask your health care team

- Will the treatment upset my stomach?
- What medicine should I take?
- If I have nausea and/or vomiting, should I tell you about it right away? Or should I wait until my next appointment?
- Can I meet with a dietitian or nutritionist to discuss what kinds of food I should eat?



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If you have cancer, you may worry about pain. Your doctor and nurse will help you control pain.

There are reasons why people with cancer have pain, such as when the cancer presses on bone, nerves, or organs inside your body. Sometimes, cancer treatments can be painful. You may also have pain from other medical problems that have nothing to do with your cancer or cancer treatment (such as pain from arthritis).



## How will my doctor treat pain?

Your doctor will treat most types of cancer pain with medicine. Cancer treatments such as chemotherapy, radiation therapy, or surgery may also help to reduce your pain.

Below is a table of the types of medicine used to treat different types of pain.

Type of pain	Medicine
Mild Mild-to-moderate pain	<ul style="list-style-type: none"><li>• Acetaminophen (such as Tylenol®)</li><li>• Non-steroidal anti-inflammatory drugs (such as Naprosyn®)</li></ul>
Moderate-to-severe pain Severe pain	<ul style="list-style-type: none"><li>• Opiates (such as morphine, fentanyl, Tylenol No. 3®, and Dilaudid®)</li></ul>
Tingling and burning pain Pain caused by swelling	<ul style="list-style-type: none"><li>• Anti-depressant and other medications (such as Elavil® and steroids).</li></ul>

You should know that:

- You will **not** become hooked (or addicted) to pain medicine, when taken as your doctor prescribes.
- You should never keep quiet about your cancer pain – tell your health care team.
- You should never think that nothing can be done to reduce the pain.

- Your doctor can control or reduce most types of pain by using one medicine or a mix of pain medicines.

## How can I deal with pain?

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- Tell your doctor or nurse right away about any pain that you feel. Don't wait for your doctor or nurse to ask you about pain.
- If your doctor prescribes pain medicine for you, take it when you are supposed to. You should also keep track of what kind of pain medicine you are taking.
- Keep a record of your pain. Try to think about your pain by writing down the answers to these questions:
  - what type of pain is it (tingling or burning pain; throbbing pain; sharp pain)?
  - when did the pain start?
  - where is the pain?
  - how bad is the pain (mild, moderate, or severe)?
  - what makes the pain worse or better?
  - does the pain move to other places in my body (such as into my legs)?
- Try to do deep breathing or find other ways to relax. Having tense muscles or feeling tense and worried may make you feel more pain.
- Take as much pain medicine as your doctor prescribes. Taking the pain medicine will not affect the way your treatment works or make your cancer worse.

## What are the side effects of pain medication?

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Some people do not have any side effects. Other people have a few or many side effects. Your health care team will give you more details about the side effects that you might have, and how to cope with them.

## Questions to ask your health care team

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- Is the pain I am feeling caused by my cancer or my cancer treatment?
- What medicines will help reduce my pain?
- What other pain treatments might help?
- How quickly can I expect to get relief from my pain?
- What should I do if the pain medicines don't help me?
- If I get side effects from the pain medicine, how can I get rid of them?
- Are there certain kinds of pain that I should tell you about right away? When is it okay to wait until my next appointment?

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Everyone should eat healthy food. This is especially true for people with cancer. You should eat foods that are high in protein and calories before, during, and after your treatment. This will help you heal, feel better, and stay stronger.

Your doctor or nurse may send you to a **dietitian** or **nutritionist**. They are trained to work with people who have cancer and can suggest healthy foods for you. They can also help you cope with weight loss, not wanting to eat, or other nutrition (food) problems.



## What are high protein and high calorie foods?

Some high protein foods are eggs, cheese, dairy products, cold meats, nuts, tofu, and dried peas and beans.

Some healthy foods that are high in calories are muffins, puddings, cookies, dried fruit, granola, and sandwiches.

## What other kinds of food should I eat?

When you plan your meals and snacks, choose foods from the four main groups from *Canada's Food Guide to Healthy Eating*.

The four main food groups are:

- fruits and vegetables
- poultry, fish, meat, and meat alternatives
- cereals, breads, and pasta (grain products)
- milk and milk products

## How can I make healthy eating part of my life?

- Eat a healthy breakfast. Many people feel more like eating in the morning, so try to eat a good meal at this time of day.
- Try to eat many small meals and snacks during the day.
- Keep healthy snacks handy.
- Eat more at times of the day when you are most hungry.
- Cook foods that you like, so that you will want to eat.
- Plan meals ahead. Try cooking a large meal and breaking it up into four or five portions that you can put in the freezer. This will save you from cooking every day. It also means that you will have food in your freezer when you are too tired to cook.
- Accept offers from family and friends to shop for you or make meals.
- Find out if you can get home delivery of meals, such as Meals on Wheels.
- Drink at least 8 glasses of liquid a day, such as milk, juice, soup, milkshakes, and eggnog.
- Keep in mind that eating well is very important during your treatment. If you don't feel like eating, try walking before meals to make you more hungry.



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## Questions to ask your health care team

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- Do you think I should meet with a dietitian or nutritionist?
- Should I take vitamins or supplements?
- Are there any special foods that I should eat?
- Are there any foods that I should not eat?
- Is it okay if I drink beer, wine, or liquor?
- What if I lose or gain weight during treatment?

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Having an operation, or **surgery**, was the first treatment used for many types of cancer. It is still the most common way to treat many cancers.

Some people only have surgery. Other people have surgery and **chemotherapy** or **radiation therapy**.

### Why is surgery best for me?

---

We know that for certain types of cancer, surgery is the best treatment. The type of surgery depends on the type of cancer you have and where it is.

You might need surgery to:

- find out what type of cancer you have.
- see if the cancer has spread. Your doctor may do a **biopsy** (a short operation to remove some cells so they can be looked at and studied).

- remove cancer that has not spread.
- remove as much of the cancer as possible, if your cancer is very severe.
- help you get rid of or cope with cancer symptoms, such as pain.

### Where do I go for surgery?

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Most people have surgery in a hospital. How long you stay in the hospital depends on the type of surgery you have and how much care you need afterwards.

### What are the side effects of surgery?

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The side effects of surgery depend on the type of cancer and type of surgery. Some people have no side effects; other people have some or many side effects. No one can know for sure exactly which side effects you might have until after your surgery.

Your health care team will give you more details about the side effects that you might have and how to cope with them.

**Please keep in mind that side effects are not a sign of how well the treatment worked against your cancer.**

### How can I cope with my cancer and surgery?

---

It is normal for you and your family to have many feelings at this time. Talk with your doctor, nurse, or someone else on your health care team about your feelings.

Your doctor and nurse are there to answer your questions and to help you.



## Questions to ask your health care team

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- Why is surgery the best treatment for my cancer?
- What are the benefits and risks of surgery for me?
- What type of surgery will I need?
- When will I have surgery?
- How long will the operation last?
- Will I have any side effects from the surgery?
- Will my body change (or look different) as a result of the surgery?
- How long do I have to stay in the hospital?
- How long will it take me to get better?
- How will you know if you removed all of the cancer?
- What happens after the surgery?
- When will I see my cancer doctor after the surgery?

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Cancer is not a single disease. There is no single thing that causes cancer. There are more than 100 types of diseases that we call cancer.



## What is cancer?

Cancer develops when cells in your body become abnormal and grow out of control. These abnormal cells don't let your healthy cells and organs do their normal job, and affect the way your body normally works.

When cells grow in ways they shouldn't, we call these cells **abnormal**. As a group, they can spread out of control. Sometimes, they form a mass, or lump, called a **tumour**.

## Who gets cancer?

Doctors can't say for sure who will or will not get cancer. They do know that some people are more likely to get it than others. If you are more **likely** to get a type of cancer, doctors say that you are in a **high-risk group** for cancer. If you are in a

There are 2 types of tumours:

- **Benign** tumours are not cancer. They do not spread to other parts of the body.
- **Malignant** tumours are cancerous. The cancer cells in these tumours can spread to other parts of the body.

In some types of cancer, such as leukemia, abnormal cells start to grow in many places at the same time.

When cancer cells break away from the tumour and travel through your blood or lymph system to other parts of your body where they start to grow, this is called **metastasis** (pronounced 'met-ass-ta-sees).

high-risk group, it doesn't mean that you will get cancer; it just means that you should follow your doctor's advice. For example, your doctor might suggest that one of the many reasons to quit smoking is to reduce your risk of getting lung cancer.

## What are the different types of cancer?

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There are four main types of cancers:

- **Carcinomas** are the most common type of cancer. They may start in the bowel, breasts, cervix, lungs, kidneys, ovaries, prostate gland, or in the skin.
- **Leukemias** are cancers of the white blood cells.
- **Lymphomas** are cancers of the lymph system. This is the system in your body that is made up of the spleen, lymph nodes, and lymph vessels. The lymph system carries food, oxygen, and water to the cells in your tissues.
- **Sarcomas** are cancers that start in muscles, bones, and cartilage. Cartilage is at the ends of your bones and grows to form new bone.

## How do doctors know what type of cancer I have?

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Cancers are most often named after the part of the body where the cancer started. Some examples are breast cancer, lung cancer, or prostate cancer.

The cancer is also named for the type of tissue where it started. To find out what kind of cancer cells you have, your doctor may want to do a biopsy. This involves taking out a small sample of the cells, looking at them under a microscope, and doing special tests on them. The purpose of this is

to find out as much about the cancer cells as possible, so that the doctor can decide what treatment you need.

For most types of cancers, your doctor will want to do tests to find out:

- the **stage** of your cancer
- the **grade** of your cancer
- **both the stage and grade** of your cancer.

### *Grade of cancer*

The grade of your cancer describes how different your cancer is from normal cells. Your doctor might describe your cancer as:

- **Low-grade** – this means that the cancer cells are less active and may not spread.
- **Medium-grade** – this means that some of the cancer cells may break away and spread to other parts of your body.
- **High-grade** – this means that the cancer cells are growing more actively, and are more likely to spread to other parts of your body. Some high-grade cancers do not spread to other parts of your body.

### *Stage of cancer*

Staging tells you where the cancer was when you were diagnosed with cancer. This helps your doctor plan your treatment and tell you the likely outcome of your cancer.

In order to find out the stage of your cancer, you will need to have tests to find out:

- where your cancer is
- how big your cancer is
- if your cancer is growing into other parts of your body near the cancer, and
- if your cancer has spread into other parts of your body.

The kinds of tests that your doctor might do are:

- mammograms
- bone scans
- CAT scans
- chest x-rays
- ultrasound scans
- blood tests
- exploratory surgery
- ...and many others.



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## What do cancer treatments do?

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The goals of cancer treatment depend on the type and stage of your cancer. They can be to:

1. Cure your cancer.
2. Remove or shrink the cancer.
3. Kill cancer cells that may have spread.
4. Reduce the risk of cancer coming back.
5. Help you cope with cancer symptoms, such as pain.

You may need one or more types of cancer treatment. Your health care team will develop a plan with you. Some types of treatment are:

- chemotherapy
- radiation therapy
- surgery
- combination therapy
- immunotherapy
- bone marrow or stem cell transplants

## Does cancer treatment work?

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Many factors will affect how well your treatment works. It is important for you to talk to your health care team about your treatment and how well you can expect it to work.

## Questions to ask your health care team

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- What caused my cancer?
- At what stage or grade is my cancer?
- What tests will I need to find out the stage or grade of my cancer?
- When will I get the results of these tests?
- What treatment will I have for my cancer?
- What other treatment options do I have?
- When will I begin treatment?
- When and how will I know if the treatment worked?
- Should I get a second opinion?



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Chemotherapy is one of many ways to treat cancer. Often called **chemo**, it uses one or more drugs to kill cancer cells. Sometimes chemo is used alone, and sometimes it is used along with other treatments such as surgery or radiation therapy.

## How does chemotherapy work?

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Our body is made up of many types of cells. Each cell works in a special way to keep us healthy. Cancer forms when a group of cells that are not normal grow and spread out of control. These abnormal cells can affect the way your body normally works.

Because your body can't stop or control the growth of the cancer cells by itself, your doctor may suggest that you have chemo to kill the cancer cells.

Chemo drugs travel through your bloodstream and are carried to the cancer cells. The chemo drugs can:

- stop cancer cells from growing and spreading
- control or slow the growth and spread of cancer cells
- shrink the size of the cancer.

There are about 50 kinds of drugs used in chemotherapy. Your doctor will decide which chemo drugs will work best for you.

## Why is chemotherapy best for me?

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Chemo is the best treatment for some kinds of cancers. It may:

- Cure your cancer.
- Control your cancer for awhile.

- Reduce the risk of cancer coming back.
- Help you get rid of or cope with cancer symptoms, such as pain.

Your health care team will explain why chemo is the best treatment for you.

## How will I get chemotherapy?

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There are several ways that chemo is given:

- by mouth in a pill, capsule, or liquid form
- by needle (liquid drugs will go right into your skin or muscle)
- by needle into a vein (liquid drugs will drip into a vein). This is called an intravenous (IV) infusion.

Chemotherapy is given in cycles. A cycle means you will have chemo for a period of time, such as

a few weeks, and then take a break from chemo. Then you will begin again, followed by a break, and so on. Most cycles are 3 or 4 weeks long. Your health care team will tell you how many cycles you need.

As the chemo drugs leave your body, you will need to follow your doctor or nurse's advice for a short period of time. Your doctor or nurse will give you more details about this, depending on your treatment.

## Where do I get treatment?

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Some people get chemo in the hospital. Others have it at a cancer clinic, in their doctor's office, or at home. Your doctor or nurse will discuss the choices with you.

## How long will my chemotherapy last?

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How long you have chemo depends on:

- the type of cancer you have
- what chemo drugs you will be taking
- how your cancer responds to the drugs
- how well you feel when you are getting chemo.

Most people have chemo for a set period of time, such as 4 to 6 months. Your doctor will discuss this with you. You will get your treatments once a day, once a week, or, once a month. Your doctor and nurse will see you during your treatments to make sure you are able and willing to continue.

## What are the side effects of chemotherapy?

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The chemo drugs are supposed to kill the cancer cells, but they can also damage your healthy cells (such as hair and blood cells). This can cause side effects. Some people do not have any side effects. Other people have a few or many side effects. No one knows exactly which side effects you will have until you begin your chemo.

Your side effects depend on the type of chemo drugs you get and how your cancer affects your body.

The most common side effects are:

- feeling very tired (fatigue)
- losing hair
- low blood cell levels, such as anemia or neutropenia (low white cell count)
- feeling like you might throw up (nausea)
- throwing up (vomiting)
- a sore mouth or sore throat
- not feeling hungry OR feeling very hungry

- changes in how you feel about sex
- for women, changes in their period (menstrual cycle)
- not being able to have a bowel movement (constipation)
- having diarrhea
- feeling numb or tingling in your hands or feet
- pain

Most of your healthy cells will go back to normal after chemo. In fact, for most people, the side effects of chemo go away soon after the treatment ends.

While you are having chemo, your doctor will likely prescribe medicine to reduce your side effects.

Your doctor, pharmacist, or nurse will give you more details about the side effects that you might have, and how to cope with them.

**Please keep in mind that side effects are NOT a sign of how well the drugs are working against your cancer.**



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## What is the difference between chemotherapy and other cancer treatments?

The main difference is that chemotherapy treats the whole body rather than just one part of it. Chemo is also used to destroy cancer cells that have spread through your body.

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## How can I cope with my cancer and chemotherapy?

It is normal for you and your family to have many feelings at this time. Talk with your doctor, nurse, or someone else on your health care team about your feelings.

Your doctor and nurse are there to answer your questions and to help you.

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## Questions to ask your health care team

- Why is chemotherapy the best treatment for me?
- What are the benefits and risks of chemo for me?
- How and where will I get chemo?
- Can I have someone with me during my treatments?
- How will we know if the chemo worked?
- Will I be able to go to work when I'm having chemo?
- Can I keep doing things that I used to do?  
What should I not do?
- Will chemo affect whether or not I can have children?
- Can I travel or take a vacation when I'm having chemo?
- How often will I see my cancer doctor during my chemo?
- What happens when chemo ends?



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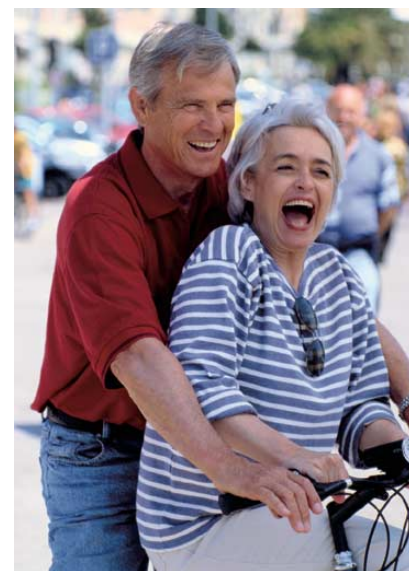
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Most people with cancer must cope with their disease and with the side effects of their cancer treatment. **Fatigue** is a side effect of many cancer treatments.



## What is fatigue?

While most people know what it's like to feel tired, fatigue is much more than the normal feeling of being tired at the end of the day. Fatigue is when you feel so tired that even sleep does not make you feel better.

Fatigue is when you get tired very quickly, just from doing normal things. Sometimes, you may feel tired even when you are not doing anything. You may feel tired all the time.

You may have a hard time doing things you used to do each day, such as housework, taking a shower, or cooking. You may find it hard to walk or talk –

or even to think! You may not be able to make decisions. Sometimes, you just don't feel like yourself. Other things that may make you feel very tired and weak are:

- any change to your normal routine
- any change to your sleep patterns
- any change in your eating habits
- depression
- worry (or anxiety)
- stress
- a low hemoglobin level (anemia).

## What causes fatigue?

1. Many people with cancer say that they feel very, very tired. Cancer and cancer treatments can cause fatigue.

In fact, fatigue is one side effect of cancer treatments that is very hard to treat. This may be because so many things may add to your feelings of fatigue, such as:

- being under a lot of stress, due to cancer and the cancer treatments
- being worried
- feeling sad
- dealing with conflict, and
- feeling tension within your family.

2. One of the most common causes of fatigue is **anemia**. Anemia is when you do not have enough red blood cells. If you have this problem, you are **anemic**.

Your red blood cells contain **hemoglobin**, which carries oxygen from your lungs to your tissues and cells. Your body needs oxygen to survive and give you energy.

When you do not have enough red blood cells, you have less hemoglobin to carry oxygen throughout your body. This means that the tissues in your body do not get enough oxygen to do their work. This can make you feel tired or weak, and you may look pale.



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## How can I cope with my fatigue?

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- Talk with your doctor or nurse about how you feel. Find out if there are ways to get rid of your fatigue.
- Ask your doctor or nurse about your red blood cell count and your hemoglobin level. If your hemoglobin is low, ask about treatment for anemia.
- Eat food from the four main food groups. Eating small meals often may make you feel better.
- Try to eat grains, vegetables, and foods that have a lot of iron in them. Some foods with iron are eggs, red meat, liver, and spinach. Make sure you drink plenty of water, and other fluids, every day.
- Plan your day so that you have time to rest.
- Rest as often as you need to, by taking short naps and breaks. Short periods of rest are better than long ones. Naps can be helpful as long as they don't cause you to have trouble falling asleep at night.
- Exercise if you can. For example, take short walks or do some light exercise. Check with your doctor about the best type of exercise, and how long and how often you could do it.
- Think about what is causing your stress and ask your family, friends, or health care team for help to deal with it.
- Try to keep your normal sleeping routine. You may still feel tired even if you are getting lots of rest. Try not to get frustrated because this can be a normal part of getting over treatments.
- Keep a record of how you feel each day. Try to reduce or stop doing things that make you feel tired. Keep doing things that make you feel good. Take your daily record with you when you see your doctor. It can help remind you what you want to say when you talk with your doctor.
- Try not to waste energy. Make a plan for each day and follow the plan one step at a time. Keep in mind that you don't have to do everything. Know your limits and listen to your body.
- Find things to keep your mind off how tired you are. For example, reading, listening to music, going to work, taking car rides, or meditating.
- Make sure your body temperature is comfortable. When you are too hot or too cold, you may get tired more quickly.
- Try to keep your social life. Do the things that you really want to do and that make you happy. If you feel very sad or lose hope, talk to your health care team.

## How can my family and friends help me?

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- Ask family and friends to help clean the house, do the laundry, go shopping, and drive you where you need to go.
- Try to involve your family so that they can understand better what you are going through. Ask them to be flexible with plans and take one day-at-a-time.
- Remind them how much your fatigue affects your life. For example, if you are moody, it is most likely because of the fatigue.



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## Questions to ask your health care team

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- Why do I have so little energy?
- Why am I having a hard time thinking and being focused? Is this because of fatigue?
- Is it the cancer or my cancer treatment that is making me so tired?
- What is my hemoglobin level? What does that mean?
- Do I have anemia?
- Are there foods that I should eat to boost my energy level?
- Are there any treatments to help my fatigue?



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<b>Allogeneic transplant</b>	A transplant that uses bone marrow or stem cells that are donated by someone else.
<b>Alopecia</b>	When hair on your body or head falls out because you had chemotherapy or radiation therapy. Your hair will most likely grow back.
<b>Anemia</b>	A medical term that means you do not have enough red blood cells or hemoglobin (which is part of red blood cells). Hemoglobin carries oxygen from your lungs to your tissues and cells. Your body needs oxygen to produce energy.
<b>Anti-emetics</b>	Medicine that you might take to reduce or prevent nausea (feeling like you will throw up) and vomiting (throwing up).
<b>Autologous transplant</b>	A transplant that uses your own bone marrow or stem cells.
<b>Benign</b>	Non-cancerous or non-malignant (no cancer).
<b>Biopsy</b>	A short operation to remove a small piece of tissue, which is then sent to a lab to see if it contains cancer cells.
<b>Bone marrow</b>	The soft part at the centre of your major bones. It creates red blood cells, white blood cells, and platelets.
<b>Bone marrow transplant</b>	A type of cancer treatment. It is when you get new bone marrow full of healthy stem cells.
<b>CBC</b>	<b>Complete Blood Count.</b> A set of tests that counts red blood cells (including hemoglobin), white blood cells, and platelets.
<b>Cancer</b>	A general term for more than 100 diseases. Cancer is when abnormal cells grow out of control in your body's organs or tissues.
<b>Carcinoma</b>	The most common type of cancer. They may start in the bowel, breasts, cervix, lungs, kidneys, ovaries, prostate gland, or in the skin.
<b>Chemotherapy</b>	The cancer treatment that uses drugs to kill cancer cells or stop them from growing.
<b>Cobalt</b>	A type of radiation used to give external radiation therapy.
<b>Combination therapy</b>	When more than one cancer treatment is used to treat your cancer. For example, you may have surgery and radiation therapy; or surgery and chemotherapy.
<b>Constipation</b>	Not being able to have a bowel movement.

<b>Cure</b>	When all signs of the cancer are gone and there is no chance that it will come back.
<b>Diagnosis</b>	When your doctor finds out what your health problem is. Doctors will <b>diagnose</b> a disease by listening to what signs & symptoms you have, doing a physical check-up and sometimes, doing tests to provide more details.
<b>Diarrhea</b>	Diarrhea means that you have more than three bowel movements per day and that what comes out is watery (not solid).
<b>Dietitian</b>	A person who is trained to give you advice about food and nutrition.
<b>Fatigue</b>	Feeling very tired or weak. It is a common side effect of cancer and cancer treatments.
<b>Gynecological oncologist</b>	A doctor who has special training in treating women with tumours of the ovary, womb, or cervix.
<b>Health care team</b>	A group of health care professionals that treat and support people with cancer. The team includes your doctor, nurse, dietitian, pharmacist, radiation therapist, social worker, and others.
<b>Hematologist</b>	A doctor who has special training in treating blood diseases, such as leukemia.
<b>Hemoglobin</b>	The protein found in red blood cells, which carries oxygen from your lungs to the rest of your body.
<b>Hormone therapy</b>	A cancer treatment that uses hormones (given as drugs) to treat some kinds of cancer.
<b>Hormones</b>	Proteins produced by your body, which move around in your blood. Hormones control how you grow, how you burn up the food you eat, and how you reproduce.
<b>Immunotherapy</b>	A cancer treatment that uses your body's immune system to fight cancer cells.
<b>Injection</b>	Also called a needle or shot. An injection is when you use a needle to put fluids into your body.
<b>Intravenous (IV)</b>	An injection that allows fluids to go right into a vein. The IV system includes: a needle that goes into your hand, arm, or chest, connected to a thin tube, which is connected to a bag that contains a liquid.
<b>Leukemia</b>	Cancer of the white blood cells.

<b>Lymphoma</b>	Cancer of the lymph system. This is the system in your body that is made up of the spleen, lymph nodes, and lymph vessels. The lymph system carries food, oxygen, and water to the cells in your tissues.
<b>Malignant</b>	Cancerous – with cancer.
<b>Medical oncologist</b>	A doctor who diagnoses and treats people with cancer, mainly using chemotherapy (drugs), or hormone therapy.
<b>Metastasis</b>	The spread of cancer from one part of the body to another through the bloodstream or lymph system.
<b>Nausea</b>	Feeling like you might throw up. Having an upset stomach that makes you feel like you will throw up.
<b>Neutropenia</b>	A medical term that means you do not have enough white blood cells, and that you might have trouble fighting off infection.
<b>Nutritionist</b>	A person who is trained to give you advice about food and nutrition.
<b>Oncologist</b>	A doctor who has special training in treating cancer.
<b>Oncology nurse</b>	A nurse who is trained to support you and your family and help you understand about your cancer and treatment. The nurse may give you your treatments, and can help you cope with any side effects or other problems.
<b>Pathologist</b>	A doctor who looks at cells and tissues under a microscope to see whether or not they are normal.
<b>Platelets</b>	Cells that help you form blood clots, to stop bleeding.
<b>Prognosis</b>	The likely outcome of a disease. Your prognosis provides answers to questions like: Will I be able to live a normal life? Will I be cured? Will I die?
<b>Radiation oncologist</b>	A doctor who has special training in treating people with cancer using radiation therapy.
<b>Radiation therapist</b>	A health care professional who is trained to give radiation therapy, and to support you during your radiation treatments.
<b>Radiation therapy</b>	The use of high-energy radiation from x-ray machines, cobalt, radium, or other sources to control or cure cancer.
<b>Red blood cells</b>	Blood cells that contain hemoglobin, which carries oxygen from your lungs to the rest of your body. Red blood cells also carry carbon dioxide (a waste product) from your body back to your lungs so you can breathe it out.

<b>Remission</b>	When the signs and symptoms of cancer disappear, and no more active cancer cells can be found.
<b>Sarcoma</b>	A type of cancer that starts in muscles, bones, and cartilage.
<b>Stem cell transplant</b>	A type of cancer treatment. It is like a bone marrow transplant, except that you get the stem cells themselves.
<b>Subcutaneous injection</b>	An injection where a needle enters your body just under the skin. (Not the same as <b>intravenous</b> , where the needle goes into a vein.)
<b>Surgical oncologist</b>	A doctor who has special training to operate on people with cancer.
<b>Surgery</b>	An operation.
<b>Transfusion</b>	When blood or blood products go into your body through an intravenous (IV) system (see intravenous injection).
<b>Treatment protocol</b>	A set of instructions that gives all the details about how you will get cancer treatments.
<b>Tumour</b>	A lump or group of cells. A tumour can be either benign (without cancer) or malignant (with cancer).
<b>White blood cells</b>	The body's defense system. White blood cells fight infection by catching and killing germs (bacteria) that get into the blood. <b>Neutrophils</b> are the most common type of white blood cell.
<b>X-rays</b>	A type of radiation used to find out about (or diagnose) medical problems. When x-rays are used at high levels, they can treat some kinds of cancer. This is called radiation therapy.

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Radiation therapy is a cancer treatment that uses high-energy radiation from x-ray machines to kill cancer cells. Many people call it **radiation**. It is also known as **radiotherapy, x-ray therapy, or irradiation**.

Radiation is one of many ways to treat cancer.

## How does radiation therapy work?

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Our body is made up of many types of cells. Each cell works in a special way to keep us healthy. Cancer forms when a group of cells that are not normal grow and spread out of control. These abnormal cells can affect the way your body normally works.

Because your body can't stop or control the growth of the cancer cells by itself, your doctor may suggest that you have radiation to kill the cancer cells.

Radiation therapy works to kill cancer cells in a certain part of your body. For this reason, it is called a **local** treatment.

Radiation can:

- stop cancer cells from growing and spreading
- control or slow down the growth and spread of cancer cells
- shrink the size of the cancer.

## Why is radiation therapy best for me?

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For some kinds of cancers, radiation is the best treatment. It may:

- Cure your cancer.
- Control your cancer for awhile.
- Reduce the risk of cancer coming back.
- Help you get rid of or cope with cancer symptoms, such as pain.

Radiation therapy is sometimes used with surgery and chemotherapy. Your doctor might suggest that you have radiation to shrink the cancer **before** you have surgery to remove it. Sometimes, doctors suggest that people have radiation **after** surgery, to kill any cancer cells that were left behind when the cancer was removed.

Your health care team will explain why radiation is the best treatment for you.

## How long will I need to have radiation?

---

How long you have radiation depends on:

- the type of cancer you have
- the kind of radiation treatment you are having
- how well your cancer responds to the radiation
- how well you feel when you are having radiation.

## How and where will I get my radiation treatment?

There are two main ways that radiation treatment is given: with External beam radiation, or with Brachytherapy. The way that you get radiation depends on the kind of cancer you have.

Where?	How?
<b>From outside your body</b> - this is called <b>External beam radiation</b>	The x-ray machine will be set up above, behind, or beside you. The machine may move around you during the treatment. You will need to go to a hospital or cancer clinic on the days when you have treatment. <b>External beam radiation</b> is usually given as a series of treatments every day. You may only have one treatment or you may have several weeks of treatments. Your doctor will explain what is best for you.
<b>From inside your body</b> - this is called <b>Brachytherapy</b> (pronounced brack-ee-ther-a-pee)	<b>Brachytherapy</b> is when a small instrument that gives off radiation is put inside your body, on or near the cancer. In most cases, you will have this done in an operating room at the hospital. You may need to stay in the hospital for a few hours or a few days afterwards.

## How often will I need to have radiation?

If you are having external beam radiation, you will likely have it each day, Monday to Friday. The number of treatments you get depends on how much radiation you need.

With brachytherapy, you will need to be in the operating room or hospital as long as it takes to

get the exact amount of radiation that your doctor thinks you need.

Your radiation therapist will watch you closely when you are having treatments, to make sure you are able and willing to continue.

## How will I get ready for external beam radiation?

- You will meet with a **radiation oncologist** (a cancer doctor who treats patients with radiation) to talk about the treatment that is best for you.
- Then you will go to the hospital or cancer clinic for **simulation**. This is a time set aside to help you get ready for the treatment. Here's what will happen:
  - A **radiation therapist** (a health care professional at the hospital or cancer clinic who gives radiation treatments) will take x-rays of the part of your body that needs radiation.
  - Based on where your cancer is, you may have a cast or mask made for you. The purpose of the cast (or mask) is to help you stay still during the treatment.
  - The radiation therapist will make marks on your skin to show where you will get the treatment. These marks may be in ink or they may be very small tattoos.
- After simulation, you will need to wait a week or two while the cancer clinic or hospital staff plan your treatment.

## What happens during external beam radiation?

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Your radiation therapist will give you the treatment. During the treatment, you will not see or feel the radiation. Most people do not feel any pain when they are having the treatment.

You may need to change into a hospital gown so that the radiation therapist can get to the part of your body that is being treated. Although the treatment itself may last only a few minutes, it can take up to 20 minutes to get set up for it. You should plan to be there for about 30 minutes. Sometimes it takes less time than this.

You must be in exactly the right place and the

machine must be set up perfectly. Once this is done, you will need to stay **very** still. If you have to move or cough, just tell or signal to the therapist. He or she will turn off the machine before you move.

Although you will be alone in the room when the treatment machine is turned on, the radiation therapist will watch you all the time on a TV screen. In most hospitals, you can talk to staff through a two-way speaker.

The staff working with you will explain what is going on, step-by-step. If you have any questions, feel free to ask.

## Will I see my doctor during the treatment?

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Once a week, after your treatment, you will have an appointment with your doctor and nurse. In the meantime, your health care team is there to answer

your questions or to talk about any problem you may have with the treatment.

## What are the side effects of radiation?

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Radiation is aimed at the cancer cells. But it can also damage healthy cells near the cancer. This may cause you to have **side effects**. Some people do not have any side effects. Other people have a few or many side effects.

No one knows exactly which side effects you will have until you begin radiation.

The side effects you may have depend on the part of the body that is being treated. Some of the most common side effects are:

- feeling very tired (**fatigue**)
- losing hair in the part of your body that is being treated
- having skin rashes on the part of your body that is being treated.

Most of your healthy cells will go back to normal after radiation. For most people, the side effects go away soon after the treatment ends.

While you are having radiation therapy, your doctor may be able to prescribe something to reduce the side effects.

Your health care team will give you more details about the side effects that you might have and how to cope with them.

**Please keep in mind that side effects are NOT a sign of how well the radiation is working against your cancer.**

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## What is the difference between radiation and other cancer treatments?

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Like surgery, radiation only affects (or kills) cancer cells in the part of the body that is being treated. Chemotherapy (also called chemo) treats cancer cells in the whole body.

The main difference between radiation and chemo is that radiation uses high-energy x-rays and other kinds of radiation to treat cancer. Chemo uses drugs to treat cancer.

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## How can I cope with my cancer and radiation therapy?

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It is normal for you and your family to have many feelings at this time. Talk with your doctor, nurse, or radiation therapist about your feelings.

Your health care team is there to answer your questions and to help you.

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## Questions to ask your health care team

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- Why is radiation the best treatment for me?
- What are the benefits and risks of radiation for me?
- How and where will I get radiation treatments?
- Who can be with me during the treatment?
- How will we know if the radiation worked?
- Will I be able to go to work when I'm having radiation?
- Can I keep doing things that I used to do? What should I not do?
- Will radiation affect whether or not I can have children?
- Can I travel or take a vacation when I'm having radiation?
- How often will I see my cancer doctor during my radiation?
- What happens when the radiation ends?

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This fact sheet is meant to support the information that your health care team gives you. It is also meant to encourage you to ask questions to your health care team. This fact sheet does **not** replace any information that your healthcare team gives you.

Living Well With Cancer is a partnership among several people living with cancer, health care professionals, people who represent cancer and professional organizations, and Janssen-Ortho Inc. The LWWC partnership gratefully acknowledges the input of the QEII Health Sciences Centre in Halifax, NS in this fact sheet.

Living Well With Cancer Information Centre

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