



Systemic Treatment:

Chemotherapy, Targeted
Therapy and Hormone Therapy

Information for Patients and Families



Living Your Best Life During Cancer Treatment







Access an electronic copy of the book or watch the class or video series at:

www.cancercarealberta.ca - Find the page by clicking:
Patients & Families > In Treatment > Systemic Treatment

This book will help you, and your family and friends understand basic information about living your best through cancer treatment.

Read about:

- types of systemic treatments used to treat cancer
- what to expect on your treatment days
- · how to recognize side effects
- how to manage the possible side effects with the help of your health care team

You don't have to read the whole booklet — pick and choose the sections you want to know more about when you need them.



Chemotherapy, Targeted Therapy and

Hormone Therapy Class - Attend in person (where available) or watch it online before you start your treatment. This will help you prepare for common side effects, know who and when to call, and what to do in emergency situations.

Watch it on www.cancercarealberta.ca- Then click:

Patients & Families > In Treatment > Systemic Treatment

Bring this booklet to:

- The chemotherapy/targeted therapy treatment class
- Your first treatment appointment
- And then as you need it

Write your questions down in the book. If there's any information you do not understand, ask your health care team to review it with you.

For more information:



This book, along with other Albertata cancer care resources are available at your cancer centre or online

Ask for the Newly
Diagnosed With
Cancer book if you
don't already have it



www.cancercarealberta.ca



Find community support resources with Alberta 211

www.ab.211.ca

211

My Plan:



I will have (name and type of drug):



Write phone numbers or notes here.

 \square IV

☐ Injection

☐ Oral (pill)

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

Just Diagnosed

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Just Diagnosed



Types of Systemic Cancer Treatments



What is cancer?

Our body is made up of many cells. **Healthy cells** follow the "rules" when they divide and they know when to die.

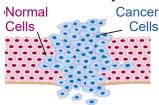
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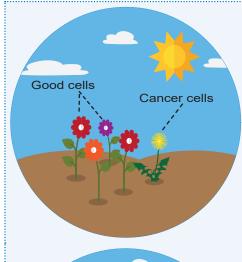
Healthy cells dividing:





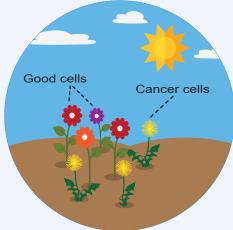
Cancer happens when cells start to grow out of control. When these cells grow and divide, they can form a lump called a **tumour**. Not all tumours are cancer. Some are non-cancerous (also called **benign**).

It might help to use the example of a garden:



A Healthy Body

Imagine your body as a garden. The soil is your immune system, the good plants are your good cells, and the weeds are the cancer cells. When you're healthy, the good plants grow and the soil helps keep the weeds away. When the odd weed starts to grow, the body is able to get rid of it by itself.



A Body with Cancer

Cancer cells are like weeds in your garden. Sometimes the body cannot get rid of the weeds and needs help.

Systemic Cancer Treatments

There are different types of systemic cancer treatments including: chemotherapy, targeted therapy, hormone therapy and immunotherapy. This book deals with **chemotherapy**, **targeted therapy** and **hormone therapy**.

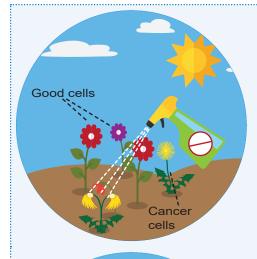
Find out about all types of cancer treatment in the Newly Diagnosed With Cancer Book





Systemic treatment is any medication that travels through your body in the bloodstream to find, damage and destroy cancer cells. This medication can also reach and affect healthy cells in your body. Systemic treatment can be used alone or combined with other treatments. It can be given by IV (intravenous), injection or in pill form (orally).

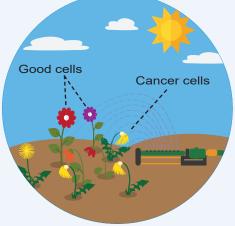
Types of systemic treatment include:



Targeted Therapy

Weeds are directly sprayed with weed killer. Good plants may still be damaged.

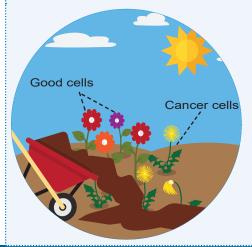
(page 9).



Chemotherapy

Chemotherapy is like spraying a weed killer on the whole garden. The goal is to kill the weeds, but sometimes some of the healthy plants are also affected

(page 11)



Hormone Therapy (Endocrine Treatment)

Hormone therapy is like spreading mulch on the garden. The mulch blocks the sunlight and air that the weeds need to grow. It also helps stop more seeds from taking root.

(page 13)

The Immunotherapy. Book gives detailed information about that form of systemic treatment





Things You May Want to Know About Your Treatment



The Basics of Systemic Treatment

What are the goals of systemic treatment?

The goals for systemic treatment are different for everyone and can change over time.

The 3 goals for treatment are to:

- Become cancer-free to get rid of the cancer from your body
- Get control to stop the cancer from growing and spreading to other parts of your body
- Relieve or reduce symptoms the cancer may cause such as pain, or shortness of breath

How are treatment decisions made?

You and your health care team will talk about your treatment options together. The options depend on the type of cancer you have and where it is in your body. Research has shown us which treatments work best for different types of cancer. Other things we look at include your overall health, if you had treatment before, and what you would like to do.



Terrie's Tip ~ cancer survivor:

"Feel secure and cared for in the treatment plan that has been created with you."







You can use the free AHS **My Care Conversations** app to prepare for your next appointment and to record conversations with your health care team. You can listen to your recordings at home and share with family or trusted friends.

Download it from the App Store or Google Play.

Consenting to treatment

Your Medical Oncologist (cancer doctor) may recommend systemic treatment as part of your cancer treatment, but **you need to decide if you want** to have the treatment. To help make your decision, you need to know the:

- Goals for treatment
- Risks and benefits to getting the treatment
- Other possible treatment options other than systemic treatment
- Possible outcomes if you do not have treatment

How will I get my systemic treatment?

Systemic treatment can be given many ways. You may get:

- An IV (intravenous) the medication is put directly into a vein.
 - Most patients get a temporary IV inserted and at the end of the treatment appointment, the IV is taken out.
 - A central line. This is inserted into a vein and stays in until you no longer need treatment.
 Your doctor will prescribe this for you if needed.
- Pill form, either tablets or capsules or sometimes a liquid that you swallow by mouth.
 These are called oral medications.

• A needle — the medication is injected into a muscle or just under the skin.



Before the nurse starts your treatment, or even after treatment has started, you can say stop at any point if you have concerns.

If the nurse has any concerns, he or she may also stop the treatment. We want you to feel safe.





How often will I get my treatment?

Every treatment is different. Some people may:

- Get all of their medications in 1 day
- Come for several days in a row, or on different days. They may get different medications each day



Outpatient means you get your treatment without being admitted to the hospital.

Inpatient means that you're admitted to the hospital to get your treatment.

• Get their medications continuously as an outpatient or inpatient



How long will my treatment appointments be?

Each treatment is different. Some treatments take a few minutes, while others can take several hours. Your nurse will tell you how long your treatment will take. Preparing you for the treatment takes time, so you will be at the treatment appointment longer than just the amount of time it takes to give you the medication.



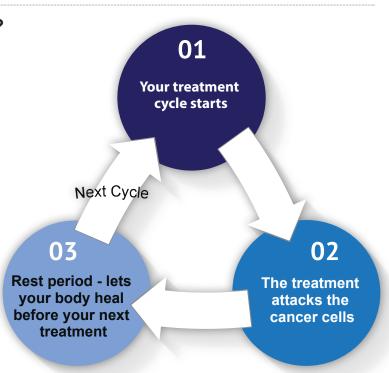
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How often will I get my treatment?

In general, treatments are given in cycles. This allows the treatment to attack the cancer cells and then gives your body time to recover from the treatment and side effects before you move on to the next cycle. Your doctor will recommend the number of cycles you need.



Systemic treatment may be a single drug or a combination of drugs. Either way, the systemic treatment is considered a "protocol" or "regimen."



Where will I go to get my systemic treatment?

It will depend on the type of treatment you get.

- Most patients go to their local cancer centre. After your treatment is done, you can usually go back home or to work and continue with your day.
- Some systemic treatments take several hours and a nurse needs to monitor you. In these cases, you would be admitted to the hospital for your treatment.
- Some patients have a pump they take home. The medication inside the pump slowly infuses (flows) into your vein for a day or several days.

Is systemic treatment painful?

There is usually no pain other than a needle prick at the start. Sometimes your vein may get irritated or discoloured. If you feel any burning, redness or swelling while you get your treatment, tell your nurse right away.



After you leave your appointment, if you notice pain, redness or swelling in the arm that received the treatment, call the contact numbers your health care team gave you.



Can I take other medications or supplements when I'm on systemic treatment?

Tell your doctor about any other pills, injections, or medicines you take, including vitamins, or herbal remedies. Some systemic treatments do not mix well with other medications and they may make the treatment less effective, and some can make the side effects worse. Tell your health care team if you have any changes to your medications.

(See page 57)

Pregnancy



If you think you are pregnant talk to your medical oncologist **before** you start your treatments. Systemic treatments can affect the unborn baby.

Both men and women should use some form of **birth control** before and during treatments.

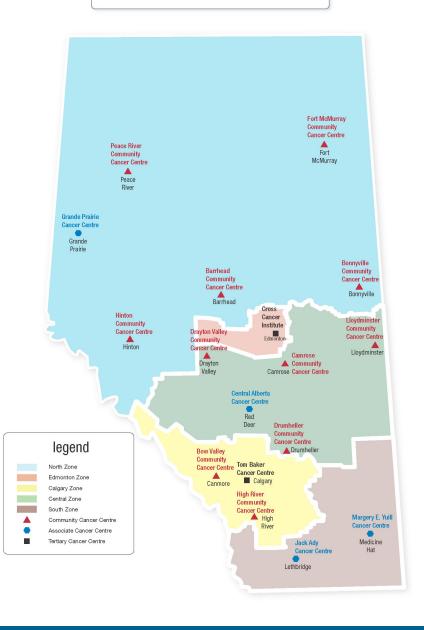
Ask your oncologist when it would be safe to try to become pregnant or father a child after treatment.



Alberta Health Services Cancer Care Centres

Care Closer to Home

There are 17 cancer centres in Alberta. Depending on where you live, you may be able to receive some or all treatment or support services closer to home. For example, some patients start their chemotherapy in Calgary or Edmonton, and complete it at a cancer centre closer to home. Talk to your doctor or clinic nurse at your next visit to see if this is an option for you.

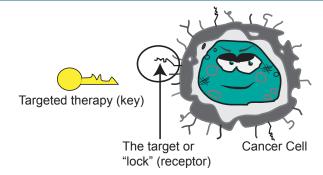




Targeted Therapy

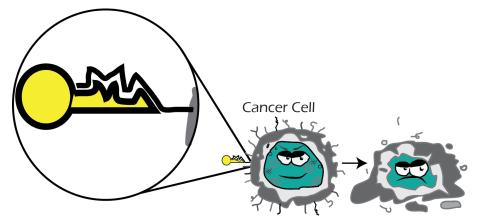


Targeted therapy uses medications to target a specific part of the cancer cell. This target may be inside the cancer cell or on the outside of the cancer cell.



The drug acts like a key and can only fit into a specific lock on the cancer cell. The key blocks messages that tell the cancer cells when to grow, divide and spread to other areas of the body.

There are many types of targeted therapies and each work on different targets of the cancer cell.



Cancer cell dies

The "key" fits into the lock and blocks messages to the cancer cell.

Why was this treatment chosen?

Targeted therapy medications will only work on cancer cells that have the target. Your cancer cells were checked in the lab to see if they have the targets the drug can attach to.



For more information about targeted therapy, visit: bit.ly/targetedtherapy

How do the side effects happen?

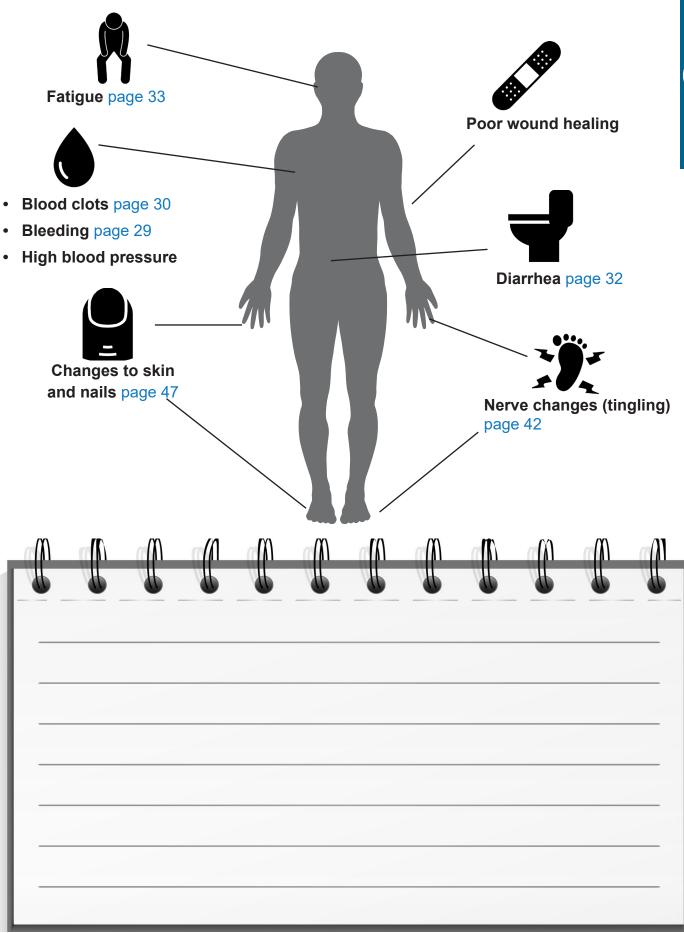
Sometimes the targets on cancer cells are the same targets found on healthy cells. Side effects happen when the treatment blocks messages for the healthy cells to grow and divide.

Each medication has different side effects. Your health care team will review the possible side effects with you.



As soon as you notice any changes or side effects, let your health care team know. They may have to change your dose or stop the treatment for a bit to let your body heal.

Targeted side effects may include:



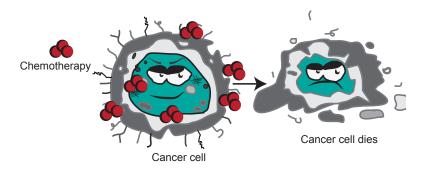


Chemotherapy



Chemotherapy treatment can be made up of a single drug, or a combination of drugs. It's used to destroy cancer cells or to prevent new cancer cells. It is also known as "chemo."

Chemotherapy finds the cancer cells and attacks them, or keeps them from dividing and making more.



How do the side effects happen?

Chemotherapy works on the fast dividing cells in our bodies. Cancer cells divide quickly, but so do some of the healthy cells in our body.

The parts of the body that include fast dividing cells are:

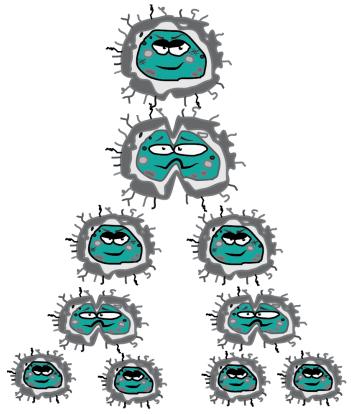
- hair
- reproductive cells sperm
- skin
- blood

nails

- and eggs
- gastrointestinal tract mouth, throat, stomach and intestines

Chemotherapy cannot tell the difference between cancer cells and healthy cells, so side effects can happen when the chemotherapy attacks the healthy cells.

Side effects are usually temporary — your health care team will explain what side effects you may have. There are some great medications available to help manage or prevent the side effects.

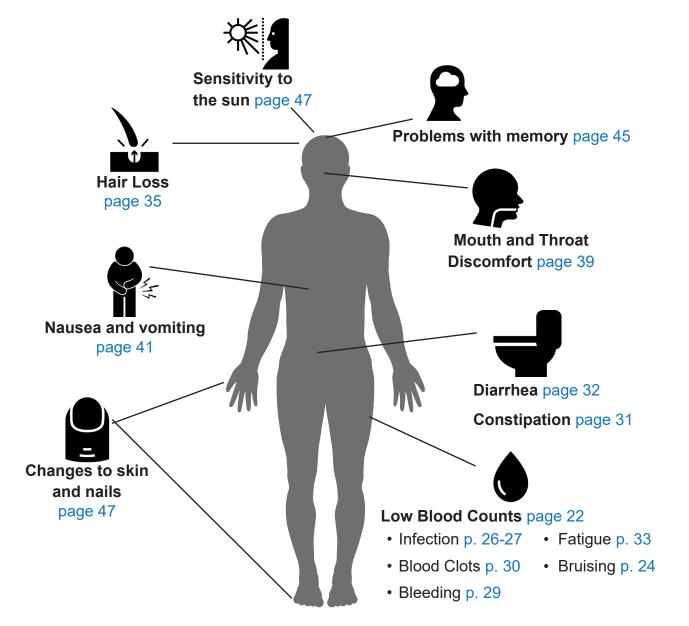


Cancer cells dividing to make more and more cancer cells.



We have information sheets to help explain the different chemotherapies available and their possible side effects. Ask your health care team about where to get these.

Chemotherapy side effects can include:





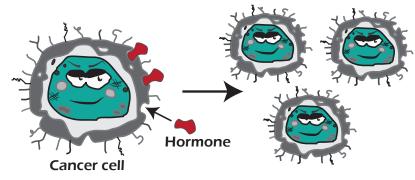
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Hormone Therapy

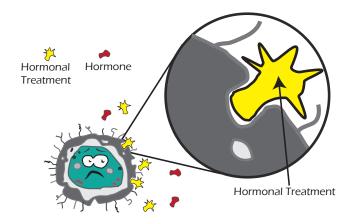


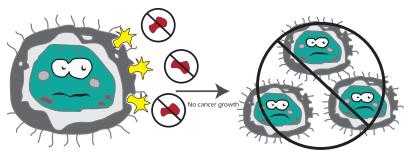
Hormones are chemical messages that tell cells in our body to do things like grow. These hormones are made in different parts of our body. Some cancers use these hormones to tell the cancer cells to make more cells.

Hormonal treatment blocks the messages from reaching the cancer cells or stops the hormones from being made in the body. This type of treatment does not work on all cancers.



The hormones tell the cancer cells to make more cancer cells.





The hormonal treatment stops the cancer cell from making more cancer cells.

What are the side effects for hormonal treatment?

There are side effects with hormonal treatment, but they will depend on the type of hormonal treatment used. The medication teaching sheets your health care team gives you will have more information on what to expect.



If you notice anything not normal for you, talk to your health care team.

Women may have:

- Fatigue
- Headaches
- · Memory problems
- Weight gain
- Menopausal symptoms hot flashes, sweating, and decreased sex drive
- Mood swings, depression
- Bone and joint problems
- Constipation, diarrhea, or nausea
- Hair thinning
- Increased risk for developing a blood clot

Men may have:

- Fatigue
- Problems with getting an erection
- Weight gain
- Mood swings, depression
- Pain

- Hot flashes and sweating
- Bone problems
- Increased risk of having a heart attack
- Memory problems

In Treatment



Your Treatment Appointment

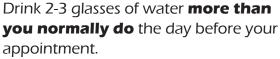
The Day Before Your Appointment

☐ Check your appointment slip to see if there <u>are any special instructions and to check your</u> appointment time

Tip!

 □ Pick up your anti-nausea medications or other pre-medications from your local pharmacy

☐ Have your questions ready, secure your ride, confirm who is coming with you — you might not feel up to driving yourself home



Drinking water helps "plump up" your veins making them easier to find, and may mean less pokes when you get your bloodwork done or an IV started.



The Day Of Your Appointment

Food:

☐ Eat a meal – your body needs nutrition and you will feel much better if you have something in your stomach



Medications:

- ☐ Take your regular medications as you normally would, unless you were told not to
- ☐ Take your anti-nausea medications or "pre-meds" as instructed (some may need to be taken during your appointment)
- ☐ Bring all your medications to your appointment

What to bring:

- ☐ Money or a way to pay for food or parking. You can also bring food to your appointment
- ☐ This book if you have any questions about the information
- ☐ Identification and your health care card
- ☐ A book or an electronic device (tablet/iPad) to help pass the time
- \square Questions you have written down to ask your health care team
- ☐ All your medications





- Wear comfortable clothes
- Do not schedule other activities or appointments for the first treatment day

Can I bring family or friends to my appointment?

Family and friends are important but we have limited space. If you plan to bring more than 1 person, check with your health care team before your appointment to see if there are any limits with how many people you can bring.

Can I bring children?

We recommend that children 15 years of age or younger should not come for safety reasons. If you have difficulty getting childcare, call your cancer centre and ask to speak with a social worker to see what resources are available in your community.



For more information, check "Your Systemic Treatment Appointment" pamphlet that came with this booklet.



After Your Appointment

- Continue to take your anti-nausea medications as directed by your health care team
- Follow any special directions your health care team gave you
- Keep track of how you feel using your symptom tracker (Keeping Track of Your Symptoms)
- Call your cancer centre if you have any questions or concerns



Information about Your Medications

Keep a Medication List

Carry a current list of your medications. Some medications do not work well with other medications and can affect your treatment. Your health care team can review your list to make sure this does not happen.

Let your health care team know if your medications change, including those prescribed outside of the cancer centre, such as from your family doctor.



- Keep your list up to date
- Share your list with your health care providers at your appointments
- Know what time of day you take each medication, how much (dose) and how often
- Make sure you understand your medications and how to take them safely



If you need refills on prescriptions **not related** to your cancer treatment (such as high blood pressure pills, or allergy medications), **talk to your family doctor**.

What do I put on my medication list?

Anything prescribed for you such as:

- Pills
- Liquids
- Patches
- Inhalers
- · Eye/ear/nose drops
- · Creams, lotions, and ointments
- · Samples of medication

Anything you buy over the counter, such as:

- Pain killers
- Cold medications
- Laxatives
- Vitamins, supplements, or minerals

Others:

- · Homeopathic, natural, or herbal remedies
- Any recreational drugs, such as alcohol or marijuana (cannabis)



If you are taking systemic treatment at home that is oral (pills or tablets) or you inject with a needle:

- Take them how and when you have been directed
- Review the "Safety at Home" section (page 17)
- Call your cancer centre pharmacy for refills at least 2 business days (48 hours) before you need to pick them up
- Call at least 2 weeks ahead if you need your refills mailed to you



Pharmacy Services at Your Cancer Centre

The pharmacy at your cancer centre only provides cancer treatment medications. You need to pick up all other medications at your local pharmacy like those that treat or prevent nausea, hypersensitivity or allergic reactions, or pain medications.

Remember to tell the pharmacist and health care team if you have any allergies to medications. We also want to know what kind of reaction you had — was it a rash, or did you have difficulty breathing?



- Do not stop or change the dose of any medication unless you talk with your doctor.
- Take only the medications that have been prescribed or approved for you.
- If you have any questions or concerns, about any medications, talk to your health care team or a pharmacist.
- Tell your health care team if you have any allergies to medications.



You can find information and resources to help you learn more. https://myhealth.alberta.ca/Alberta/Pages/know-your-medications.aspx





Safety at Home

Most systemic treatments (page 5) are very strong medications, so there are some special things you or your caregiver need to do to keep you and the people (and pets) around you safe.

Why do I need to be careful at home?

Systemic treatments leave your body through fluids and wastes like urine, stool or vomit. When people or pets come in contact with affected waste or fluids, it can be harmful and they could also get side effects.

Generally, it can take up to 48 hours for systemic treatments to leave your body. It's important to follow these safety precautions while you are taking your treatment and for 48 hours after you finish your treatment. Some treatments stay in your system longer than 48 hours. Ask your health care provider if this applies to you.



Is it safe to have contact with others when I am taking these treatments?

Yes. Being with your loved ones is important. Eating together, enjoying favourite activities, hugging and kissing are all safe.

Is it safe to be sexually active?

Most often, yes. There may be some medication in vaginal fluid and semen up to 48 hours after treatment, so use a condom to keep you and your partner safe. If you need to do this longer than 48 hours, your nurse will tell you. You and your partner should also avoid getting pregnant during treatment.



If you are worried about whether or not you can have children after treatment.

Handling Body Fluids and Waste at Home

How do I handle my body fluids or wastes?

Using the toilet:

- It is safe to use the same toilet (septic or city sewage) as other people
- Men should sit when using the toilet to avoid urine from splashing
- Flush the toilet 2 times (with the lid down) after you use it
- Wash any skin that touched urine or stool
- Wash your hands well with soap and water
- Use your own hand towel or paper towel if possible
- Clean any waste on the toilet with soap and water including the lid and handle

If you do not have control of your bladder or bowels:

- Use a plastic-backed pad, diaper or sheet that's disposable to absorb urine or stool
- Change the diaper or pad as soon as it gets soiled
- Wash any skin that comes in contact with the urine or stool with soap and water
- Wear disposable gloves when you handle the waste

If you have an ostomy:

- You or your caregiver should wear disposable gloves when you empty or change the bags
- Wash your hands with soap and water after you remove your gloves

If you vomit (throw up):

Try to vomit in the toilet if possible for easier clean up. Flush the toilet 2 times (with the lid down) after you use it.

If you use a bucket to vomit in:

- · Wear gloves when you empty the bucket
- Wash the bucket with soap and water after each use
- Wash your hands with soap and water after you remove your gloves

What if my body wastes spill?

- Always wear disposable gloves
- Use paper towels, toilet paper or disposable absorbent pads to soak up as much of the spill as possible
- Wash the area well with soap and water 3 times.
- Put all of the materials in a bag and doublebag. Tie tightly.

What do I do with soiled laundry?

- Wear disposable gloves when handling the soiled laundry
- Wash them separately from other clothes and linens
- · Wash through 2 complete washing machine cycles before you wear or use them again

What do I do with the garbage?

- Anything that may have come in contact with your body fluids must be handled with care.
 Wear gloves when you handle anything soiled.
- Put things you cannot flush down the toilet in a garbage bag, and tie it tightly.
- Put this bag in a second garbage bag. Remove and throw away your gloves into the second garbage bag also. Tie it tightly. Wash your hands well with soap and water.
- Once the garbage is double-bagged, you can throw it out with your regular garbage.
- Keep garbage out of reach of children and pets.

If you use a bedpan, urinal or commode:

- Wear gloves when you empty it
- Wash it with soap and water after each use
- Wash your hands with soap and water after you remove your gloves



Disposable nitrile gloves offer the best protection when you're handling body fluids and waste. You can buy them at your local pharmacy.



Handling Cancer Medications at Home

You may need to take some of your treatment at home — this could be in the form of an injection, pills, or maybe liquids. Whatever the form, you need to make sure you know how to handle them safely, and what to do if some of it spills.

Oral systemic treatments (taken by mouth, pill form)

You may get systemic treatments that you'll need to take by mouth (oral). It's important that you and your caregiver handle these medications safely.

- Pour the oral medication into a medication cup or the lid of the pill bottle to pour into the patient's mouth. Wash the cup with soap and water
- If you do not have a medication cup, wear displosable gloves
- Always wash your hands with soap and water after you are done





To stay safe:



- Do not chew, cut, crush or dissolve your medication unless you have spoken to the cancer centre pharmacist first.
- If the pills or capsules are damaged, do not breathe in the particles. If you accidentally get some in your eyes or nose, see page 20 for what to do.



 If you like to use pill boxes to help you remember when to take your medications, you will need to use one just for your cancer medications. If you notice the pill box or pill vial has powder inside it from the cancer medications breaking, call your cancer centre pharmacist on how to handle it.



 Do not throw the medications into your garbage. If you have any extra oral medications, bring them back to your cancer centre pharmacy for proper disposal. Most local pharmacies are not able to dispose of cancer medications.

Injection systemic treatments

You may need to inject the treatments into a muscle or under the skin using a needle

- If you use a needle for your medications, you will get instructions from your nurse or pharmacist on how to safely handle the injection
- Wash your hands with soap and water after you're done
- Put all used cancer medication supplies such as syringes, tubes, cassettes, vials and bottles in a hard plastic container like a bleach or pop bottle and return them to your cancer centre



Can I travel with my systemic medications?

Yes, you can travel with them, but check with your pharmacist or health care team for more information.

Sometimes you need to make special arrangements. For example, some medications need to be stored in the fridge.

When you travel, always seal the medications in a plastic bag.

If you are flying, keep your medications in:

- their original containers
- your carry-on luggage so you always have them with you

Handling Systemic Treatment Spills at Home





A spill is not just a liquid — it could be the powder from a tablet cut in half or a broken capsule.

The spill came in contact with:		What you can do:			
6	My eyes	 Wash your eyes under running water for at least 10 to 15 minutes. Keep your eyes open when you do this. Get medical attention right away. 			
	My skin	 Wash the area with soap and running water for at least 10 to 15 minutes. Tell your health care team as soon as possible. 			
	My clothes or linens	 Wear disposable gloves Wash your hands with soap and water after removing your gloves Wash them separately from other clothes and linens Wash through 2 complete washing machine cycles before you wear or use them again. 			
1 88 1	A surface like the floor or table	 Put on disposable gloves. If it's a liquid, absorb the spill using a paper towel before wiping up. Wash the area well with soap and water 3 times. Put all of the materials in a bag and doublebag. Tie tightly. 			
	Paper materials (for example Kleenex, books, magazines)	If you spill medicine on paper items you cannot clean, add them to the bag of garbage.			

If you have a special pump for your treatment, use the spill kit the cancer centre gave you to clean up any spills from the pump.



Possible Side Effects

How does systemic treatment cause side effects?

Systemic treatment adds the chemotherapy, targeted therapy, or hormone therapy to the bloodstream, which travels around the body. While it works to attack the cancer cells, sometimes it affects the healthy cells too and this is what causes side effects.

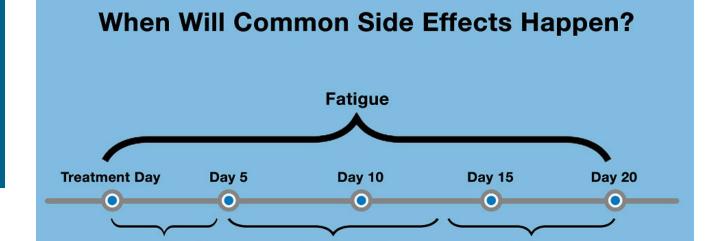
This section will talk about some of the common side effects that can happen and what you can do about them.

Side effects are different for everybody. You may get a lot of side effects, or just a few. Sometimes the side effects may be severe, or you might not notice them at all.

Hair Loss

When will the side effects happen?

Side effects can happen anytime during treatment. You should know what side effects are possible so you can recognize them. Always talk to your health care team if you notice anything different.





If I have to go to the emergency room, what information is important?

Low Blood Counts

Mouth Sores

If you ever have to go to the emergency room:

Nausea & Vomiting

- tell the triage nurse what type of treatment you are on and the name of the medication.
- if you have a fever, make sure you give your emergency letter to the triage nurse. It tells the health care providers what tests and treatment to start.

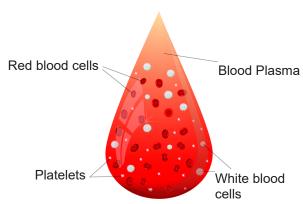
Recognizing and Managing Your Side Effects

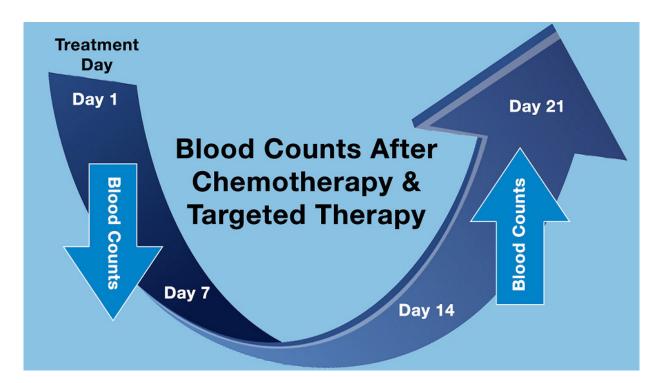
Blood is made up different cells, but the most important are the white blood cells, platelets and red blood cells.

Low Blood Counts

Chemotherapy and targeted therapy can affect the blood cells, and can cause you to have low blood counts from days 7-14 after your treatment. Your blood count will start to slowly increase 2 weeks after your treatment.

Blood is made up of:





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If your blood counts become too low, you may need a blood transfusion. This may decrease the side effects you get with low blood counts. Platelets and red blood cells can be transfused but white blood cells cannot.

Remember low blood counts are:

- temporary side effects from a drug or drugs you are getting to treat your cancer
- most patients' blood counts will start to improve with time once the drug effects wear off around 14 days after you received it



You'll get a blood test 1 or 2 days before each treatment (or more often if needed) to check and see if your blood counts have increased enough to give you your next treatment.

White Blood Cells

White blood cells help your body fight off infection. There are many different types of white blood cells but the ones we watch closely are called neutrophils. They help fight infection in your body. If your neutrophils are low, you will not be able to fight infection as easily.

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Your neutrophil count should be at its lowest 7 to 14 days after treatment.

If your body's neutrophil count is too low, your treatment may be delayed so your body can heal first.

What are the signs and symptoms of a low neutrophil count?

A high temperature may be the first or only sign of a possible infection. Infections can be serious so make sure you remember to monitor your temperature.



To get more information on how to prevent and manage symptoms of fever and infection.

Fever:

 A temperature of 38.3°C/100.9°F or higher at any time

OR

- A temperature of 38.0°C/100.4°F to 38.2 (100.8°F) for at least 1 hour
- · Chills or shakes

Infection:

- · areas of redness or tenderness
- sore throat
- · mouth sores
- productive cough
- · itching or burning in the genital area
- pain or burning when you pee
- the need to pee often



Tell your health care team right away or go to your nearest emergency centre if you have any of the above signs or symptoms of fever or infection.

Red blood cells

Red blood cells have a very important job to do in your body. They carry the oxygen around your body to keep it working. The red blood cells also carry carbon dioxide to your lungs so when you breathe out, it gets rid of that waste.

If your red blood cell count is low, you may:

- feel more tired than usual (fatigue)
- become short of breath with minimal activity
- look pale
- feel cold
- feel dizzy
- become irritable

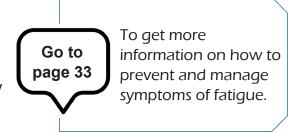


Tell your health care team if you have any of these symptoms.



Here are a few tips you can do to manage these symptoms:

- Eat a healthy diet to help your body heal itself (see page 54)
- To get up from a lying flat position, sit up slowly and take a minute for your body to adjust, then stand up slowly. This may help with dizziness
- Take rest periods
- Do not try to do too much listen to what your body is telling you
- Try to build in regular walks as you are able. Adjust your walking pace and distance based on how you feel — more brisk, further distances on days when you feel best, and slower, shorter walks when you have less energy

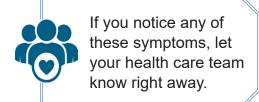


Platelets

Platelets help to clot blood or stop the bleeding when you cut yourself.

If your platelet count is low:

- you may have bruises on your body or small purple spots called petechiae (p-tea-key-eye)
- your nose and gums may bleed more easily
- · you may have blood in your urine or stool





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Fever

Some systemic treatments can put you at risk for developing an infection, and a fever may be the first or only sign of an infection. Infections can be life-threatening and need to be taken seriously.

What are the signs and symptoms?

A fever is a temperature of:

- 38.3°C/100.9°F or higher at any time

 OR
- 38.0°C/100.4°F to 38.2 (100.8°F) for at least 1 hour

Why does it happen?

Some systemic treatments can lower your blood counts. One type of blood cell that treatment can affect are your white blood cells (see page 23), which help fight infection.



What can I do to monitor it?



You must have a **thermometer** at home when you are on systemic treatment. Use this to monitor your temperature as directed by your clinic nurse, or whenever you feel unwell.



We recommend a digital thermometer because they give you an accurate temperature reading quickly.



Do not take any medications that help lower your temperature.

Some medications, such as acetaminophen or Aspirin® (A.S.A.), or ibuprofen can hide a fever. If you need to take a medication that contains this product, talk to your health care team first.



If you have a fever, call your health care team right away, or go to your nearest emergency centre.

Remember to take your emergency letter with you to give to the health care team.



Carry your emergency letter with you, or take a picture of it with your phone so you always have it with you.

Here is a partial list of these medications:

Acetaminophen Lowprin®
Advil® Methoxisal
Alka-Seltzer® (plain and flavoured) Midol®
Anacin® Oxycodan (Ratio brand)
A.S.A. Phenaphen
Aspercreme® Robaxisal®
Aspirin® Tecnal
Bufferin® Tylenol®

Dodd's Extra Strength® 282 or 292 Tablets

Ibuprofen

There are many other things that may lower your temperature like cold and flu medications, and cough syrup.

This is not a complete list, so always check with your pharmacist to see if a medication you are buying contains A.S.A., acetaminophen or ibuprofen.

What can I do to help prevent infection?



Cleaning your hands removes or kills germs so you do not spread them to yourself or other people. This is the most important thing you, your family and friends can do to protect you from infection.

Clean your hands:

- · after you cough, sneeze or blow your nose
- · when you can see your hands are dirty or soiled
- · after you use the bathroom
- before you prepare or eat food, or feed someone
- · after you have contact with blood or body fluids
- · when you enter and leave a health care facility

To clean your hands, use one of the following:

- use plain soap and water
- · do not use anti-microbial soap

Soap and water

- wash and lather the soap for 15 seconds
- · scrub fingertips, between the fingers, back of the hands and wrists
- rinse well
- use soap and water when you can see or feel that your hands are dirty, or you are vomiting or have diarrhea

Hand sanitizer

- · make sure it has an alcohol base to be the most effective in killing germs
- contains skin softeners, so it is gentler on your hands than soap and water
- rub the sanitizer over all the surfaces of your hands, including fingertips, in between the fingers, the back of hands and wrists.
- Use enough to keep your hands wet for 15-20 seconds to help kill all the germs



Other things that will help prevent infection:



Avoid sick people and crowds, influenza or other infections



Ask your doctor if you should have seasonal or routine vaccines



Bathe or shower daily



Keep your lips moist



Keep your skin moist and healthy — use non-perfumed lotions



Wear sunscreen if outside — we recommend SPF 50 or higher



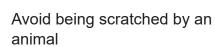
Use an extra soft toothbrush to brush your teeth and keep your mouth clean

Clean your dentures with a toothbrush nightly



Do not empty the cat litter box

— bacteria from the waste could increase risk of infection





Wear gloves when gardening



Keep wounds/scratches clean and dressed



Practice good respiratory hygiene:

Cover your cough and sneezes with a tissue



Sneeze or cough into your sleeve if

you don't have a tissue
Clean your hands often

Avoid eating meats or fish that are raw or not cooked properly

Wash all fruits and vegetables before you eat them



Appetite Changes

A poor appetite that lasts longer than a few days can lead to a loss of weight, muscle and strength. You also will not have the nutrition your body needs to heal and repair itself to fight the cancer. Things that can cause you to lose your appetite:

If you have a poor appetite and are eating only small amounts or not eating at all, let your health care team or a dietitian know.

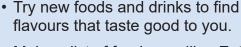
- Changes to how your body breaks down your food and uses it for energy
- · Advanced cancer
- · A buildup of fluid in the abdomen (ascites) that may make you feel full
- Other medications, such as medications to treat pain

These side effects from cancer treatment can also decrease your appetite:

- Nausea and vomiting (see page 41)
- Dry mouth
- · Difficulty chewing
- Constipation (see page 31)
- Fatigue (see page 33)

- Mouth sores and mouth pain (see page 39)
- Difficulty swallowing
- Changes in taste and smell
- Pain (see page 43)
- Depression (see page 50)

What can I do to maintain or improve my appetite?





- Make a list of foods you like. Eat them often, even if you eat the same foods over and over for awhile.
- Choose soft foods that need less chewing.
- Don't eat foods that taste bad to you.



 Brush your teeth and tongue with a soft toothbrush before and after each meal.

Wait 10-15 minutes after you brush to eat — this will help "wake up" your taste-buds.



Try not to use tobacco products
— they can make food taste bad
(page 56).



 If your mouth is dry, try to increase the amount of fluids you drink to 8 cups (2 litres) each day. This will help keep your mouth moist and improve your appetite. If you have been told to limit your fluids, speak with your doctor or dietitian.



Christine's Tip ~ cancer survivor:

"Sweet was super sweet and salty was super salty. Then I couldn't taste anything. Find foods neutral in taste when your taste buds change and go from there. When you can't taste anything it's hard but I stuck to meal times and healthy foods so I knew I was getting what I needed even if I didn't feel like chewing, never mind swallowing".



Bleeding

What are the signs and symptoms?

- Cuts that will not stop bleeding
- A nose bleed that will not stop
- Blood in your vomit it can look like coffee grounds
- Black or bloody bowel movements
- · Red or pink in your urine
- · Bleeding gums
- · Bruises but you're not sure what caused them
- Small purple or red spots under the skin.
- Dizziness, headaches, or changes in your vision
- Coughing up blood or blood in your saliva or phlegm



Some systemic treatment can cause a low platelet count and bleeding can happen when you have low platelets.



What can I do to help prevent or manage the bleeding?



Do not take A.S.A. (Aspirin®), any products containing A.S.A., or other non-steroidal anti-inflammatory drugs such as naproxen, or ibuprofen, unless you have spoken with your oncologist



Blow your nose gently

If you get a nose bleed, apply pressure to your nostrils. This should stop the bleeding

If you have any of these symptoms, please call your health care team right

If your cancer centre is closed, go to your nearest emergency centre.

away.

If the bleeding does not stop after 10 minutes go to your nearest emergency centre



Use an extra soft toothbrush, sponge stick or waterpic on low setting to brush your teeth

Avoid flossing if you do not usually floss. If you do usually floss, be gentle.



Prevent constipation (see page 31). You should not strain when you are passing a bowel movement



Use water-based lubricants during sexual intercourse



Do not play any contact sports like hockey or football

If you are riding your bike, skateboard, scooter, etc – wear a helmet

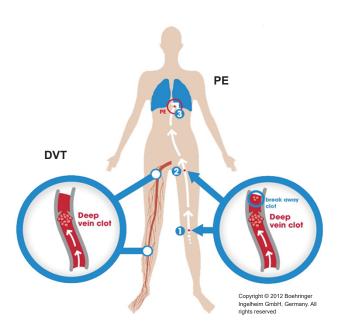
Blood Clots

Blood clots are also called **Venous Thromboembolism (VTE)**. VTE is a blood clot that forms in the veins of the body or in the lungs. People with cancer are 4 times more likely to develop a clot than someone who does not have cancer.

The most common vein blood clots are:

Deep Vein Thrombosis (DVT):

- A blood clot forms in a vein of the leg or pelvis
- It may partially or totally block the flow of blood

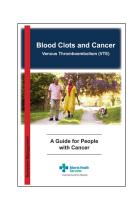


Pulmonary Embolism (PE):

A blood clot forms in the lungs

Or

 A blood clot forms somewhere else in the body. It then travels through the bloodstream to the lungs. Once it gets to the lungs, it can get stuck there and cut off the blood supply to the lungs



Get more tips from the booklet Blood Clots and Cancer (Venous Thromboembolism) at your cancer centre.



What are the signs and symptoms of a clot?

Deep Vein Thrombosis (DVT)

- Pain or tenderness in the calf, behind the knee, along the inner thigh to groin
- Swelling
- A change in the colour of your skin (a blue, purple or red colour) in the area around the site of the clot
- The area feels warm to touch

Pulmonary Embolism (PE)

- Shortness of breath or trouble breathing
- Chest pain or upper back pain, especially when you breathe
- · Coughing up blood
- Unexpected rapid heart rate
- · Dizziness or feeling faint



If you have any of these symptoms, please go to your nearest emergency centre right away.

Constipation

Bowel movements are different for everyone. Some people have 1 or 2 movements daily, while others have them less often. It is important you know what is normal for you. Even if you are eating very little, you should still have small and regular bowel movements.

What is constipation?

Constipation means either:

- having less bowel movements than you usually do
- or bowel movements that are difficult or painful because the stool is hard and dry

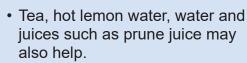
What causes constipation?

- Taking certain pain medications
- Taking other medications used with your cancer treatments
- Other factors like being inactive or dehydrated (not enough fluids)

What can I do to help prevent constipation?



 Increase your fluids — 8 to 10 cups (2 L - 2.5 L) of non-caffeinated fluids each day.





 Increase the amount of fibre in your diet: add high-fibre foods such as whole grain cereals, bran breads, fruits and vegetables, dried beans, peas and even popcorn.

Ask for the Cancer and

Constipation booklet

at your cancer centre.

 Stop using all bulk forming laxatives. These are fibre supplements like Metamucil®.



- Use the laxatives and stool softeners your doctor or nurse recommends.
- We recommend a bowel routine to help prevent constipation. Ask your health care team or pharmacist what they suggest would be best for you.



Keep moving and stay active. Physical activity such as walking will help a lot (see page 55).



- Constipation that will not go away
- Nausea with vomiting
- Blood in your bowel movements
- Not had a bowel movement for 3 days
- Not been passing gas
- Small amounts of liquid stool with bloating, gas pain, nausea, or vomiting

Do not try to treat the problem on your own.



Christine's Tip ~ cancer survivor:

Tip!

"Fresh poured water tasted like it had been left on the counter for a week. Sparkling water or club soda were my go to fluids as it did not have that stale taste."





Diarrhea

Diarrhea can be a side effect of your cancer treatment. Diarrhea is defined as an increase of 2 to 3 watery stools above your normal number of bowel movements. You may have cramps, pain, or feel bloated. Diarrhea is serious because you can lose a lot of fluid and nutrients, which can cause you to become dehydrated and tired.

Use Vaseline, zinc oxide cream or K-Y Jelly[®] if you feel sore from using the washroom.

Tip!

If you are also getting radiation treatment, talk to your health care team or radiation therapist before you apply anything to your skin.

How can I help manage my diarrhea?

Drink fluids slowly — 1 cup (250 ml) over 1 hour



Drink fruit juices mixed with water, or noncarbonated fruit drinks to help slow your digestion down

Limit caffeinated pop, teas and coffee — they can dehydrate you even more

Eat small meals throughout the day

Eat foods like chicken, fish, eggs, white bread, bananas, applesauce or low fibre cereals



Avoid fatty and fried foods, rich sauces, caffeine, alcohol, and chocolate

Avoid really hot or cold foods

Stop eating dairy products if you develop diarrhea



Keep activity to a minimum after meals



Take anti-diarrhea medications as directed by your health care team



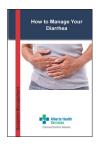
Avoid smoking and tobacco products

Call your cancer centre if:



- your diarrhea does not go away after more than 24 hours (1 day)
- you notice blood in the diarrhea or bleeding in your rectal area
- you have severe cramps





Get more information from the **How to Manage Your Diarrhea**booklet available at your cancer centre.

Fatigue

Fatigue (or tiredness) is a very common side effect related to treatment and cancer. It is best treated with regular exercise and good nutrition.

Fatigue may make you feel:

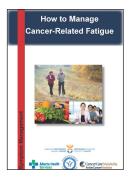
- worn out, tired/sleepy, no energy
- can't concentrate/think
- lack of interest in doing anything with friends or family
- no interest in sex or being intimate with your partner
- depressed, disconnected or not interested in anything
- · short of breath



For more information visit myhealth.alberta.ca/Alberta/Pages/cancer-fatigue.aspx

What can cause fatigue?

- low red blood cell count red blood cells are responsible for carrying oxygen all over your body
- · weight loss
- stress
- poor nutrition or getting enough calories and protein
- changes in your daily schedule or interrupted sleep schedule
- cancer treatment



Get more tips from the booklet "How to Manage Cancer-Related Fatigue" at your cancer centre.

How can I manage my fatigue?



- Stay as active as possible before and during treatment.
 Exercise may be a simple walk once or twice daily. See Physical Activity (page 55) for more ideas
- Pace yourself day by day.
 Prioritize and plan your activities according to how you feel that day.



 You may not be able to do everything on your list so decide what's most important for you and ask for help from others to complete the remaining tasks.



 Set a goal of 8 hours night time sleep. A good sleep is more likely when you go to bed at the same time every night and follow a routine.



- Eat smaller, more frequent meals and snacks
- Eat a balanced diet, with protein rich foods
- Ask to speak to a registered dietitian to learn how nutrition can help manage fatigue



Christine's Tip ~ cancer survivor:

"I booked appointments with myself to go for walks. This really helped, especially when I was exhausted and knew it was the only thing that would help get my energy back. I couldn't break a date with myself!"



Fertility

Fertility is the ability to get someone pregnant or to get pregnant and carry a child to a healthy birth. Cancer and cancer treatment can sometimes damage the reproductive organs such as the ovaries and testicles. These changes can have short-term or long-term effects on your fertility.

Cancer treatment can cause changes to the reproductive organs like:

- decreased sperm quality, number, and motility
- irregular periods, or it may stop women from having periods
- premature menopause



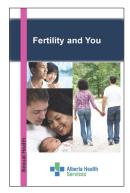
Before you start your treatment,

check with your health care team to find out what your options are for preserving your fertility.



Questions to get the conversation started:

- ☐ How will my cancer treatments affect my fertility?
- ☐ What are my fertility preservation options?
- ☐ How will I know if I am fertile after treatment?
- ☐ If I don't preserve my fertility before treatments, what are my options after treatment?
- ☐ Do I have a type of cancer that can be passed on to my children?
- ☐ After my cancer treatments finish, how long do I need to wait before becoming pregnant or fathering a child?

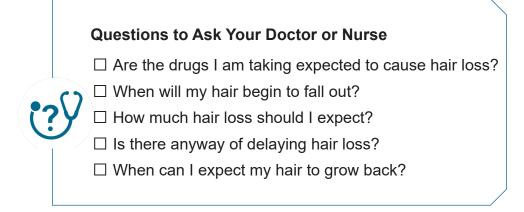


Get more information from the "Fertility and You" booklet available at your cancer centre.



Hair Loss

Not every cancer treatment causes hair loss. It depends on the amount or type of medication.



Why does it happen?

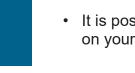
Some chemotherapy and targeted therapies can cause hair loss. In most cases hair loss is only temporary.

- You will probably begin to lose your hair between
 14 and 21 days after the start of your treatment
- Some people notice an increase in sensitivity to their scalp before losing their hair
- If complete hair loss is expected, it usually takes
 3 7 days, but may take up to a few weeks
- It is possible you will lose hair from other places on your body such as eyebrows or pubic hair



When the hair grows back, it can be a bit different. Most of the time these changes are just temporary, but it may become:

- finer or coarser in texture
- darker or lighter in colour
- curly or straight





What can I do to help manage my hair loss?

Before Treatment:

Be gentle with your hair:

- Do not colour, bleach or perm it.
- Try to limit your use of blow dryers, curling irons, or hot rollers.
- Limit your use of styling products, particularly those with alcohol or heavy perfumes.
- · Avoid hair bonding or gluing.

Consider cutting your hair:

- · Short hair tends to look fuller
- It may make the transition to total hair loss a little easier



Plan ahead and get something to cover your head like a scarf or hat.

During and After Treatment:

Be gentle with your remaining hair:

- Use a satin pillow case to decrease friction (rubbing).
- Use a soft brush or a wide tooth comb.
- Wash hair only when you need to.
- · Use a gentle shampoo.

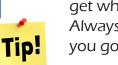
Consider shaving your head:

- This may give you a sense of control during this difficult time.
- It prevents losing your hair bit by bit.
- Your hair will grow back evenly and at the same length. This might allow you to go without a wig sooner.
- This will help decrease scalp tenderness some people have before hair loss.
- Remeber to protect your scalp from sun and cold air.

Hair regrowth:

- Your hair may regrow between treatments and this is normal — this hair is usually very fine and soft in texture.
- In most cases, hair loss is temporary.
 Your hair should start to grow back about 4 to 6 weeks after your treatments stop.
- Most people can expect about 1/4 inch of growth each month. Your hair may take up to 1 or 2 years to grow back completely.

Christine's Tip ~ cancer survivor:



"I had no idea how cold you can get when you don't have hair. Always have a soft hat for when you go to bed, even in summer!

I had drastic temperature changes so I would tuck it under my pillow if I got too hot. Trust me, later when I woke half asleep and freezing, it was no fun trying to find it. I knew where it was and it was easier to go back to sleep."



Hand and Foot Syndrome

Hand and Foot Syndrome is a side effect that can happen with some cancer treatments. It involves the palms of the hands and the soles of the feet.



Tell your health care team if you notice any redness or pain on the palms of your hands or soles of your feet. They can help you manage the symptoms.

Why does it happen?

A lot of friction or pressure, like rubbing your hands or walking longer distances can sometimes cause the medication to come out of the small veins in your hands and feet.

What are the symptoms?

- It begins with dry, red skin on your hands or feet
- It may start to blister, especially on areas you use a lot
- Sometimes it may happen on other parts of the body such as arms, arm pits, groin or backs of the knees
- You may also have numbness, tingling or pain
- Peeling and splitting of the skin



What can I do to prevent or manage the symptoms?

Do:

- · Wash your hands, bathe and shower using warm water
- Pat your skin dry after washing or bathing



Avoid:

- Hot water
- Putting your hands and feet in water for a long time, such as washing dishes, long showers or baths.
- Hot tubs and pools



Do:

 Use an unscented lotion that's gentle on your hands and feet, especially in the creases of your skin. See the box below for some examples

Avoid:

 Rubbing too hard when you apply cream

Gentle creams are:

- Bag Balm®
- Glaxal Base®
- Aveeno®
- Lubriderm®
- George's Cream®
- · Lanolin creams

Other products may also be effective — talk with your health care team.



Do:

 When possible, sit or lie on padded surfaces of chairs or mattresses, and elevate legs with cushions



 Place a pillow between your knees, or wear soft pajamas to prevent your legs from rubbing together during sleep



Do:

- Keep your hands and feet uncovered when you can
- Wear loose-fitting cotton socks or gloves at bedtime. This may help your body absorb the cream
- Wear loose-fitting clothes and comfortable, well-ventilated shoes with cushion soles

Avoid:

• Tight dressings and adhesive tape if possible

Avoid:

Tight-fitting clothing

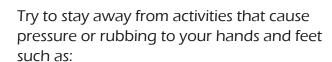
Do:



 Wear sunscreen SPF 50 or higher on exposed skin

Avoid:

direct sunlight





- washing roughly
- gripping tools or appliances
- typing
- jogging

- clapping
- playing musical instruments
- driving
- vigorous exercises



Mouth Sores or Throat Care

Why does it happen?

Treatment can sometimes cause mouth sores, which can lead to an infection if your blood counts are low. You may have mouth or throat pain that starts about 5 to 7 days after your treatment.



Before you start treatment, talk to your health care team about any dental work, including teeth cleaning you need. Your dentist and oncologist may need to work together to figure out when to do your dental care.

What can I do to help manage my mouth sores?



Brush your teeth with an extra soft toothbrush after you eat



Check your mouth in a mirror if you have pain or tenderness in your mouth



Do not use mouthwashes that contain alcohol – these can dry your mouth and irritate it

If you have dentures or partials:

Remove your dentures when you do your mouth care

Brush and rinse your dentures after every meal



Floss your teeth gently and only if you already floss. Your health care team may ask you not to floss at all



At bedtime, clean with a denture toothpaste and a denture brush before you soak them overnight

Store your dentures in a denture cup with clean water

If your mouth is sore, leave your dentures out or use them only when you eat

Tell us at your next appointment if you have a dry or sore mouth, but call your cancer centre right away if you develop:



- Mouth sores (ulcers)
- Fever
- Difficulty swallowing
- White patches in your mouth
- Bleeding gums that do not stop after 2 minutes



Dental services are not insured in Alberta, but some people have dental coverage through their work or private insurance.

If you do not have dental coverage, you may qualify for funding based on your financial need. If you need coverage, Cancer Care Alberta Social Workers can help you and your family look at the financial supports available.





For a dry mouth or throat:

- · sip water, juices, and other fluids throughout the day
- · suck on sugar free candy or ice chips
- chew sugarless gum
- use a mouth moisturizing spray or gel, such as Biotene® oralbalance gel®, Biotene Moisturizing Mouth Spray®, Mouth Kote®, or Moi-Stir®. You can buy these at your pharmacy. Talk with your pharmacist if needed
- rinse your mouth often with homemade mouthwash (see the tip box below)

Homemade Mouthwash



Rinse your mouth with homemade mouthwash to help keep it clean and healthy. Rinse after you eat and as needed.

You can either use:

- 1 tablespoon (tbsp) of baking soda mixed in 2 cups (16 ounces or 500 ml) of water. Store the mixture in the fridge and throw it out at the end of each day
- · Or you can use club soda



For dry lips:

- apply lip balm it will help keep your lips moist
- try not to lick your lips— it will dry them out more



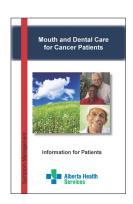
To prevent your lips from getting dry and cracked, use water-based or aloe-based lip care products like:

- Glaxal Base[®]
- Dermabase[®]
- Blistex[®]



Healthy eating for a dry or sore throat:

- Fruits that are soft, and have low acid such as all melons, canned fruits, or fruit nectars such as pear, peach or apricot
- Food that is moist, soft and easy to chew and swallow. Try adding extra gravies, sauces, butter and oil
- Foods that are high in protein and calories, such as yogurt, cottage cheese or cream soups
- Nutritional supplement drinks such as Boost Plus® or Ensure Plus®, or puddings
- You can also speak with a dietitian for helpful tips to keep up your nutrition



Get more information from the Mouth and Dental Care for Cancer Patients booklet available at your cancer centre.



Nausea and Vomiting

Not everyone will get nausea. Only some systemic treatments cause this and you will get medication to help prevent it. Fill your prescription at your local pharmacy before treatment starts.

How can I manage my nausea and vomiting?



- Eat a small, low-fat meal before your treatment avoid eating a heavy meal right before or after treatment.
- Eat small meals 6-8 times a day rather than eating 3 meals a day.
- Eat non-greasy, low fat foods that are not spicy or fried.
- Eat cool foods without a strong smell such as: Jello[®], custards, dry cereals, crackers, toast, plain cookies, or smoothies.
- Eat slowly and chew food well.



- Drink fluids before you eat.
- Drink 8-10 cups of fluid to keep hydrated (try diluted juices, popsicles[®], fruit drinks, weak tea and gingerale).



Try not to lie down for at least 2 hours after you eat.



Anti-nausea medications help prevent nausea, so it's important to take them **before** your treatment as prescribed — **do not wait** to become nauseated before you take them.

Some anti-nausea medication can cause side effects such as:

- Drowsiness (so you may need to have someone drive you home from the hospital)
- Constipation (see page 31)
- Muscle spasms
- Restlessness
- Tremors



If the nausea or vomiting lasts longer than 24 hours (even though you are taking your anti-nausea medications), or you have side effects from the anti-nausea drugs, call the contact number your health care team gave you.

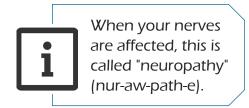


Nerve Changes (Peripheral Neuropathy)

There are many nerves in your body that help control:

- · How your body moves
- What your body senses hearing, tasting, touching, smelling, and seeing
- · Your heart, bowels, lungs and other organs

Cancer treatments can affect these nerves, which may decrease your ability to feel sensations. These symptoms can be temporary or permanent.



What are the possible side effects?

Cancer treatments can affect the smaller nerves in your hands, feet, and other parts of your body.

The more common symptoms are:

- Burning feeling or pain
- A feeling that your hands and feet are being squeezed
- Tingling in your fingers and toes
- Numbness or less sensation (feeling).
 For example, you may not feel cold or hot temperatures, have difficulty picking up coins, or be unable to do up buttons on your clothes



The nerves in your hands and feet are called "peripheral nerves" because they are the farthest from your spinal cord and brain.



What can I do to manage these symptoms?

You and your health care team will decide how to manage these symptoms. You may get:

- · medications to help with the symptoms
- a referral to a physiotherapist or occupational therapist to help maintain your muscles, improve your movement, or balance if it's affected
- speech therapy if your speech is changed by the cancer or the treatment

There is nothing you can take to prevent the damage to the nerves. What you can do is keep a healthy lifestyle — eat healthy, exercise, and decrease how much alcohol you drink. If you are diabetic, keep your blood sugar levels in a normal range — diabetes can cause neuropathy too.

Pain

Cancer can sometimes cause pain or discomfort. You may feel pain all of the time or only some of the time. Only you know how much pain you feel and how it affects you. Getting relief from your pain is important.

Treating your pain will help you:

- Sleep and eat better
- Enjoy time with family and friends
- Do your work and hobbies

You do not have to accept uncontrolled pain as a normal part of living with cancer. Tell your health care team if you have pain so they can help you manage it properly.

Pain is different for everyone but depending on where it is coming from, the symptoms can be similar. If you can tell your health care team how it feels, it will help us figure out how to treat it quicker.

Bone pain — a deep throbbing pain that can be sharp at times. It may get worse when you move around.

Visceral pain — might feel like a dull, deep squeezing pain. It is caused from damage to the organs inside your body. It can be hard to tell exactly where the pain is coming from.

Neuropathic pain — may feel like a burning, shooting, piercing, stabbing or like an electric current. It might feel like pins and needles or tingling. It is caused from damage to your nerves. It can hurt when things like clothing, water or wind touch your skin.



What causes cancer-related pain?

- cancer tumour or symptom
- cancer treatments
- other symptoms like constipation or nausea
- stress or anxiety
- medical procedures and tests
 other health factors
- medications
- emotional, social and spiritual impact of cancer

What can I do to manage my pain?

Take your medications as prescribed. Sometimes it may take more than 1 type of medication to help decrease and control your pain.



Talk to your pharmacist if you have a hard time remembering what medications to take and when — they can help you find a way to remember.

Keep track of when you take your pain medications — this will help to see if the dose is the right amount for you or if it needs to change.



Be active and exercise. Even a small amount of exercise, such as walking up and down your hallway, will help with your pain.



Find support. It is normal to feel upset and frustrated when you are in pain. You can find support in your community, with family and friends, and through your health care team.



Relaxing activities and managing stress may help to control your pain.



There may be other treatments to help you but it is important to speak with your health care team before you try them. (page 57)

It is normal to feel nervous about taking pain medications?

Some people do not take pain medications because they worry about getting addicted. If you take your medication as your doctor prescribed, you should not worry. Addiction happens when a person takes medications for reasons other than pain.

Side effects of pain medications:

- Nausea and vomiting (see page 41)
- Drowsiness
- Constipation

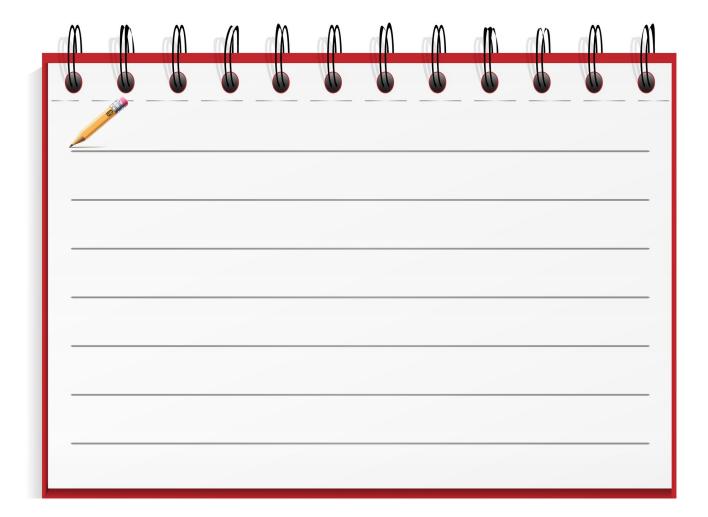


Constipation caused by pain medications will not go away on its own. You will need to take laxatives while on pain medication.



Some people think they should save their pain medication in case the pain gets worse later. Pain should be treated early, so make sure you take the medication as prescribed.

Your doctor can change your dose of pain medication, or the type of medication you take if you need.





Problems with Memory

It is common for people with cancer to have problems remembering things, or taking a longer time to understand information. This is called **"brain fog"**. Often it's temporary, but sometimes it can last months to years after treatment is done.

Things that can sometimes cause brain fog are:

- Medications
- Treatments such as radiation or surgery to the head or neck
- Low red blood cell counts (see page 22)
- Dehydration not drinking enough fluids

- Fatigue
- Depression
- Anxiety
- Impaired sleep

What are the signs and symptoms of brain fog?

Difficulty:

- focusing, concentrating, and paying attention
- remembering names, phone numbers, or words
- understanding information
- · understanding directions
- problem solving like doing simple math or balancing a check book

Feeling:

- like your thoughts are jumbled and words are difficult to find when you are speaking
- confused



If you notice any of these symptoms, please tell your health care team.

What can I do to help with brain fog?



- Write things down in a journal.
- Make lists.



Complete a task before you start another one.



 Keep a calendar of when you have appointments and important events.



Get adequate sleep.



 Drink enough fluids and eat a healthy diet (page 54).



Physical Activity (page 55).



 Put things back in the same spot you always do, for example keep car keys in a dish by the door.



Sexuality and Intimacy

Sexual health affects people of all ages, genders, sexual orientations, cultures and beliefs. It can be an important part of your personal identity. Cancer and the treatments can alter your sexuality and the intimacy you have with your partner in different ways. Sexuality can mean something different for each person and can change over time.

What are some common concerns for cancer patients?

- · Vaginal symptoms pain with sexual activity, vaginal bleeding, dryness or discomfort
- Erectile dysfunction difficulty getting or maintaining a firm erection
- · Hormonal changes hot flashes, changes in body, fatigue
- Body image changes in how you feel or think about your body
- Loss of libido less interest in sex, loss of sexual fantasy or thoughts
- Difficulty with arousal or orgasm —
 feeling like your body is not responding
 sexually like it used to
- Relationship changes changes in roles, not connecting with your partner
- Anxiety or fear related to sexual activity, loss of sexual confidence, uncertainty about being sexual

To get more information or help:

Edmonton: 780-432-8260 **Calgary:** 403-355-3246



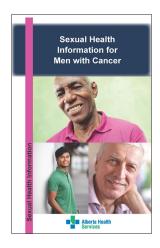
www.cancercarealberta.ca > Patients & Families

> In Treatment

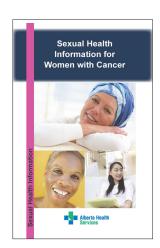
> Managing Side Effects



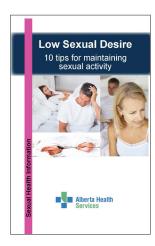
Ask for these booklets at your cancer centre:



"Sexual Health Information for Men with Cancer"



"Sexual Health Information for Women with Cancer"



"Low Sexual Desire: 10 tips for maintaining sexual activity"

Skin and Nail Changes

Chemotherapy, and targeted therapy can cause side effects to the skin and nails.

What are the symptoms?

- Rash
- More sensitive to sunlight
- Redness, sores around the edges of the nails
- Remember to check around moist areas that are red — especially around the skin folds (under the breast, armpits, groin, behind the knees, elbows, around the bra line, and behind the ears)



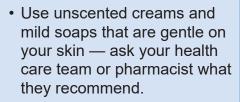
Pedicures and manicures are not a good idea during treatment — if you have too much skin removed or get a small cut, you could get an infection.

- Dry, itchy, redness, and/or cracked skin
- Nails can change in colour and texture
- Nails can become infected or lift away from the skin



Changes to your skin or nails can lead to infection. Call your health care team right away if you notice any changes.

How can I prevent or manage these symptoms?





- Apply cream after you dry off from a shower, while your skin is still slightly damp, — it will help to keep your skin moist and soft.
- Avoid creams, soaps, and other hygiene products with alcohol or perfume. These can dry or irritate your skin.



 Keep your nails clean and cut short, but not too short.



- Take short showers or baths in lukewarm, not hot, water.
- Pat your skin dry rather than rubbing it dry.



 If your lips are dry, apply lip balm (see page 40 for some suggestions).



 Shave less often and use an electric razor or stop shaving if your skin is sore.



- Use sunscreen we recommend SPF 50 or higher when you go outside.
- · Wear a hat with a wide brim.



 Protect your skin – do not use heating pads, ice packs, or bandages.



• Eat a healthy diet (see page 54).



 Drink plenty of fluids to help keep your skin moist and healthy.



Wear gloves when you work in the garden.



Sleep Pattern Changes

Getting enough sleep helps improve your health. It can help with things like healing, digestion, emotional well-being, and brain function like memory and problem solving.

What is a sleep pattern change?

- Difficulty falling asleep
- · Difficulty staying asleep
- Sleeping more than usual but not waking up feeling rested
- Waking up earlier than you normally do

Why does this happen?

There are many things that can cause changes to your sleep, such as:

- The cancer itself
- Insomnia (where you can't seem to fall asleep, or stay asleep)
- Side effects from the cancer treatment, such as diarrhea, or nausea
- Pain (see pages 43-44)
- Fatigue (see page 33)
- Depression (see page 50)
- Mood

What can I do to help improve my sleep pattern?



Take your medications as prescribed to help manage pain or nausea and vomiting.



If you feel depressed let your health care team know. They can refer you to a psychologist.

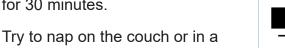
Speaking with a psychologist can give you a chance to talk about your concerns in a safe and caring environment.



at night.

If you nap during the day, try and nap between 1 and 3 pm and only for 30 minutes.

recliner. Save the bed for sleeping





Turn off all electronic devices 1 hour before you fall asleep — this includes televisions, cell phones, and laptops.



Exercise, even if it is just a short walk (page 55).



Create a calm, quiet environment to sleep in.



Living Your Best



Emotional Self Care and Awareness

Difficult emotions often arise during cancer and its treatments. Psychosocial Oncology experts can offer counselling to patients and family members to help reduce emotional distress and explore coping techniques. They help with things such as communication, stress, coping with treatment side effects, mood changes, quality of life, body image or loneliness. Patients and family members are welcome to call and ask for an appointment or information.



or for contact details look in the Newly Diagnosed With Cancer Book

Anxiety

What is anxiety?

Anxiety is a feeling of worry, fear, or being nervous and is a normal feeling for patients and families to have when going through a cancer diagnosis.



- Feeling restless, worried, or not able to relax
- Feeling moody or stressed



People who learn about their cancer and treatment options may feel more in control and have less anxiety.

Be ready for your appointments with a written list of questions, and bring a support person if you can.

- Tense muscles
- Trouble sleeping

Some people have strong anxiety which can cause anxiety attacks. You may feel:

- · Feelings of doom
- Shortness of breath

- Dizziness and nausea
- Chest pains
- Heart palpitations (your heart feels like it is fluttering or pounding)



What causes cancer-related anxiety?

- Finding out you have cancer
- Waiting for test results
- Dealing with an anxiety disorder before you had cancer
- · Medications, like steroids or some anti-nausea medications
- · Fear of cancer coming back, suffering, or
- Having new symptoms that scare you

- · Worrying about your family, especially if you have kids
- Feeling like you have no control over your life
- · Worrying about money, your job and other practical things
- Feeling badly from side effects like nausea and pain
- Depression

Depression

Depression is different from sadness. It lasts longer and has more symptoms. Depression can make it difficult to live your life in a way that is healthy, enjoyable and meaningful.

Some people experience depression before, during or after treatment while others do not experience depression at all. It can depend on your:

- · type of cancer
- stage of disease
- · symptoms and how severe they are
- · support systems and how good they are
- · history of mental health issues



If you are thinking of suicide or harming yourself call 911 or go to your nearest emergency department right away.

What causes cancer-related depression?

- Learning you have cancer or your cancer has returned
- · News your cancer cannot be cured
- Feeling a loss of what your life was like before cancer
- Depression or addiction before your cancer diagnosis
- Feeling isolated

- Some chemotherapy medications or hormonal treatments
- · Pain or fatigue
- Side effects like hair loss, nausea, or sexual problems
- Changes in your body, like losing a breast



If you feel depressed, let your health care team know. With professional counselling, you can learn about different ways to help you cope.

If your depression does not get better or gets worse, you may need medications to feel better.



What are the symptoms of depression?

People can have both physical and emotional or mental symptoms when they have depression. Some of the symptoms are:

Physical symptoms:	Emotional and mental symptoms:
 Low energy Feeling sluggish or restless and agitated Sleeping and eating more than before 	 Feeling hopeless or worthless Not enjoying the things you used to enjoy Feeling of guilt or regret Wanting to die Worsened anxiety Have trouble thinking or remembering things

What can I do to help my anxiety or depression?

Find support:

Talk to someone you trust and who is a good listener — friends, family or co-workers.



Talk to a social worker about support programs at your cancer centre and in your community.

Get professional help. Professional counsellors can help you learn new ways to manage your anxiety and worry.



Focus on things that make you feel better.

Think about the positive parts of your life and the things you can control.

Spend time with people who make you laugh and avoid those who are negative.



Get a good sleep — this can give you more energy and help you feel better emotionally.



Exercise and take care of your body. It's a good way to help you feel better and improve your mood.



Some people find writing in a journal or expressing their feelings through art can help.



Try to limit or avoid alcohol because it can lower your mood.



Try relaxation activities like listening to music, yoga, or deep breathing.



Maintaining and Improving Quality of Life — What Palliative Care Can Offer

Palliative care is often misunderstood and can be seen as a negative or scary thing. In fact, it can provide many benefits to both patients and families.

Improves

such as pain and nausea

quality of life by

managing symptoms

addressing anxiety,

spiritual concerns

depression or

Palliative care can be:

- an added layer of support for you and your family
- appropriate at any age and at any stage of cancer

 provided along with treatment for the cancer or by itself

 needed to help with a one time issue, needed from time to time. or needed as a longterm form of support

Helps with practical concerns by providing support with goals of care decision making and advance care planning

> coordinating referrals

Supports people around the end of life by:

- explaining what to expect at end of life
- · connecting to grief support

What can palliative care do?

Palliative care can help patients and families live life to the fullest.

Palliative care:

Who provides palliative care?

Your current care team can provide some palliative care. There are also specialized palliative care teams (doctors, nurses, pharmacists, social workers and other professionals) who work together with you, your cancer doctor and your family doctor to focus on issues important to you. This team works with you to make care plans based on your values, preferences and wishes.

How do I get palliative care?

Palliative care is available in the home, community, nursing homes, outpatient clinics and hospitals. If you think palliative care may help you ask your care team for more information.

For more information:

- Talk to your health care team
- · Find out more about palliative care in Alberta or find programs and services in your community - https://myhealth.alberta.ca/palliative-care (ALBERTA)
- Check out www.virtualhospice.ca and livingmyculture.ca (CANADA)





Improving Your Health and Lifestyle

Taking care of yourself is important during treatment. Listen to what your body is telling you and don't push it – do what you can for that day. Every day is a new day and how you feel, physically and emotionally, depends on the day.

Here are some tips to help you achieve living your best through treatment:

- Carry on with everyday activities if you feel up to it
- Ask for help or accept it when it's offered
- Explore what works best for you not everything is going to work for everybody
- Surround yourself with people who can help and support you



For more information about living well during treatment, visit: https://www.albertahealthservices. ca/cancer/Page16317.aspx

Alcohol

With some drugs, you may need to limit the amount of alcohol you drink or avoid it altogether. Ask your clinic nurse, doctor, or pharmacist.

If you find you have questions or need help, let your health care team know. There are resources available to support you and your loved ones during your cancer treatment.



Tips from the Canadian Cancer Society to help you reduce your alcohol intake:

- Plan ahead and set a limit on the amount you will drink.
- Choose the smallest serving size.
- Dilute alcoholic drinks, or choose low-calorie or low-alcohol alternatives.
- Do not drink alcohol when you are thirsty. Have a glass of water or a soft drink first.
- Keep at least a few days each week alcohol free.
- Avoid salty snacks such as potato chips or nuts while drinking alcohol.
- Drink alcoholic beverages slowly and space out your drinks.
- Eat before and while you are drinking.
- Do not use alcohol to cope with stress.



Nutrition

Nutrition will improve your treatment outcomes and quality of life. Eat a healthy diet to give your body the energy to heal and to do your everyday activities.

Choose from the 4 food groups:

- · vegetables and fruit
- grain products
- · milk and alternatives
- meat and alternatives

Eat foods with protein to help you:

- meet your protein needs
- · maintain strength
- keep your immune system healthy

Eat enough so you do not lose weight:

If your appetite is poor, it may help to eat smaller meals more often, and eat snacks between meals. It may also help to eat foods that are higher in energy (calories).

Higher energy foods with protein:



beef, pork, poultry, fish, and eggs



milk, cheese, and yogurt



beans, lentils, nuts, nut butters, seeds and tofu



protein powders and nutrition supplement drinks

Higher energy foods without protein:



avocado, dried fruit, granola, cream and wheat germ



margarine, butter, vegetable oil, salad dressing, mayonnaise, creamy sauces, gravy, and coconut milk



sugar, syrup, jam, candy, and desserts

Wash your vegetables and fruits with water before you eat them

This will help to remove any germs that are not visible. Proper handling, storage, and cooking of meat is also important. Raw meat can have bacteria that can make you very sick if you don't cook it or store it properly. Keep raw meat and fresh fruit and vegetables separate.



If you want more information on what to eat, drink, or both, ask your health care team to speak with a dietitian. A dietitian can give you guidance and tips for healthy eating during your treatment.

If you have lost weight, or have no appetite, talk to your dietitian or nurse.



Physical Activity

Regular exercise before and during treatment has been shown to reduce how severe the side effects can be.

Exercise and physical activity while receiving systemic treatments can help you:

- · reduce fatigue and improve energy levels
- · reduce your risk for blood clots
- · reduce nausea
- boost your immune system
- lower your risk for falling by keeping you stronger
- improve your mood and help you feel better as treatment progresses



Studies show that exercise helps patients feel better — even something as short as a 10-15 minute walk.



Always talk to your health care team before you start a new exercise program.



Exercise is safe and good for you. If you have other health issues, check with your health care team before you start a new exercise program. For example, if you have trouble walking, it might help to have a referral to occupational therapy or physiotherapy.



Tips on how to keep active:

- Choose more vigorous exercise/physical activity on days when you have more energy and lighter exercise when you have less energy.
- Find an exercise video to do with a family member or on your own.
- Create stations around your house: do heel raises at the bathroom sink; put cans of soup on your coffee table and use them as weights while you watch TV; straighten your knee, one leg at a time when sitting in a chair before meals. Some exercise is better than none — use your imagination.
- When your friends or family ask what they can do to help, ask them to make a walking date with you. Good company helps keep us motivated to stay active. In the winter, you can walk in the mall — protect yourself from infection (pages 26-27).

Tobacco Products

We know stopping the use of tobacco can be difficult and often takes several tries. By stopping your tobacco use after a cancer diagnosis, you can improve your health and body's response to treatment, whether it's surgery, radiation treatment or systemic treatment.

Studies show many important benefits of quitting the use of tobacco after a cancer diagnosis, including:

- A better chance of successful treatment
- · Fewer serious side effects
- Faster recovery from treatment
- Decreased risk of the cancer coming back, or getting another cancer diagnosis
- Lower risk of infection
- Easier breathing
- More energy
- · Better quality of life

Cancer patients who quit tobacco say they **feel better physically**, **emotionally**, and **have a better quality of life!** Now is the best time to be tobacco free.



For tobacco cessation support or for more information: Visit www.AlbertaQuits.ca or call 1-866-710-QUIT(7848)



Complementary and Integrative Medicine

Complementary medicine includes different healing approaches and therapies not considered to be standard medical treatments. Sometimes they are used alongside or as a "complement to" mainstream medical care.

- Standard medical treatments are scientifically tested and researched and include treatments such as radiation, surgery, and systemic treatment (such as chemotherapy or hormone therapy). These treatments are used by doctors to treat people with cancer.
- Complementary medicine is used along with standard medical treatments. It is meant to help relieve symptoms or side effects, or boost emotional or physical health.

It is your choice to use or not to use these treatments. But it's important to talk to your oncologist if you are thinking about using complementary medicine or if you have any questions or problems. Check with your pharmacist or registered dietitian to see if there are possible interactions with medications or supplements.



Does my health care team need to know if I am using or plan to use complementary medicine?

Yes. Tell your doctor or nurse about anything you are taking or planning to take.

Some complementary medicine may make your treatment less effective. It's always best to talk to your health care team before you start anything.

Complementary medicine can include things like:

- pills
- vitamins
- massage
- hyperbaric oxygen treatment
- injections
- · herbal remedies
- acupuncture
- cannabis



Are there natural health products I can take during treatment?

- You can take a regular strength multiple vitamin and mineral supplement. Choose a brand that is made for your age group. The supplement should have small doses of a wide variety of nutrients (high doses are not recommended).
- We recommend that you do not use other natural health products for 1 month after you finish your treatments, and when possible, for 1 month before you start treatment.

To find out more, visit:

CAMEO website: cameoprogram.org

Canadian Cancer Society's website:

www.bit.ly/CCS-complementary-and-alternative-therapies



Emergencies

When Do I Go to an Emergency Centre?



If you are having chest pain or difficulty breathing at any time, call 911.

Concern	Action Follow the directions on your emergency contact card	Go to Emergency (if needed, call 911)
Fever (page 25)	More than 38.3°C (100.9°F) at any time or 38.0°C–38.2°C for more than 1 hour	
Vomiting (page 41)	Vomited 2-10 times in 24 hours	Vomited more than 10 times in 24 hours
Nausea (page 41)	Can drink half or less than usual, but still able to eat	Cannot eat or drink
Fatigue/ Tiredness (page 33)	In bed/chair for part to most of the day due to fatigue	Cannot get out of bed or take care of self
Mouth Sores (page 39)	Mouth sores are red or white, swollen and hurt and either may or may not be able to eat	Mouth sores are preventing me from eating or drinking
Shortness of breath	Hard time catching my breath with light activity	Cannot breathe well even when I sit or lie down
Diarrhea (page 32) (rating is above your usual if diarrhea is normal for you)	Diarrhea 5-9 times a day, or I have stools during the night	Diarrhea 10 or more times a day
Constipation (page 31)	No bowel movement in 3 days	No bowel movements in 4 days
Diet (page 54)	Eating and drinking half or less than usual	Cannot eat or drink
Coping	Difficulty coping rated at 6 or higher out of 10	Thoughts of self-harm
Pain Level	Pain rating on a scale from 4-7 out of 10	Pain rating 8-10 out of 10



My Notes	





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The information is to be updated every 3 years, or as new clinical evidence emerges. If there are any concerns or updates with this information, please email cancerpatienteducation@ahs.ca.

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Charlotte Rebecca Jay Linda Karen Marlene Doug Shannon Gerry Karly Mary-Beth Terrie Neil Gwen Kiley Tracy

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