Living Your Best During Radiation Treatment

Please bring this booklet to the class and your appointments.



Tell us what you think about the radiation education resources.

What: Online Survey



Who: Patients, family and friends How to access: http://bit.ly/RTEducationSurvey

(link is case sensitive)

When: Starts January 2018 and closes May 31, 2018



This booklet will help you, and your family and friends understand basic information about living your best during radiation treatment.

Read about:

- How radiation is used to treat cancer
- The steps involved in preparing for radiation treatment
- How to recognize side effects
- How to manage possible side effects with the help of your health care team



You may be able to attend a radiation treatment class at your cancer centre **before you start or during** your treatment. Ask reception when the next radiation class is.

Bring this booklet to your appointments.

Write your questions down — there is space throughout the booklet. If there's any information you don't understand, ask your health care team to review it with you.

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

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

For more information, pick up a copy of these resources at your cancer centre:

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Patient Guide (information and phone numbers for your cancer centre)

Sources of Help (supports and resources)

www.albertahealthservices.ca/cancer/Page9613.aspx

For more information on radiation treatment, watch our video series: https://myhealth.alberta.ca/alberta/cancer-radiation-treatment

What You Will Find In This Booklet:

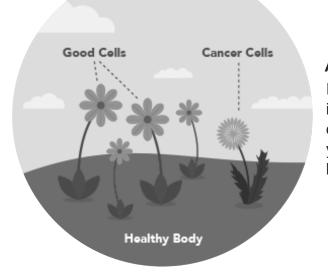
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Types of Cancer Treatments

There are many different types of treatments used to treat cancer including: surgery, radiation, and systemic treatment. To explain the different types of treatment, we'll use the example of a garden.

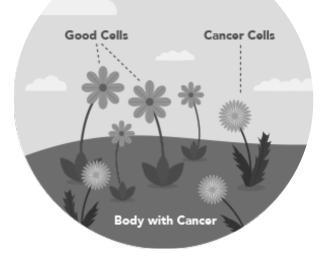


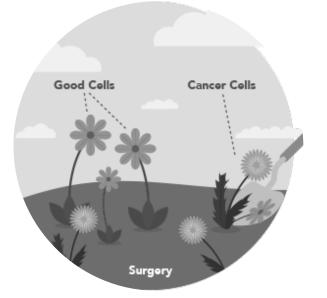
A Healthy Body

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.

A Body with Cancer

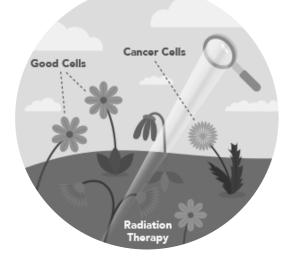
Cancer cells are like weeds in your garden. Sometimes the soil lets the weeds grow and spread.





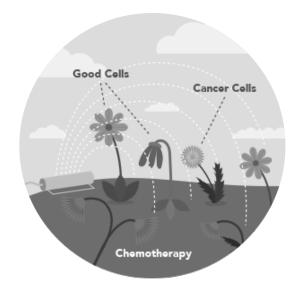
Surgery

Surgery takes out the weeds and some of the healthy plants and soil around them.



Radiation Treatment

Radiation treatment is like increasing the power of the sun with a magnifying glass and aiming at the weeds to kill them. Sometimes other healthy plants nearby might get damaged as well.



Chemotherapy (systemic treatment)

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.

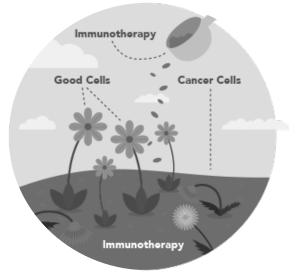
Good Cells Targoted Therapy

Targeted Therapy (systemic treatment)

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

Immunotherapy (systemic treatment)

Instead of targeting the weeds, Immunotherapy is like adding fertilizer to the soil. It boosts your immune system like it enriches the soil and helps to control the weeds. Sometimes there is too much fertilizer which can damage healthy plants.





Radiation Treatment

General Information

What is radiation treatment?

It is a cancer treatment that:

- Uses high energy x-rays to kill cancer cells and shrink tumours
- Treats many types of cancer as well as some conditions that are non-cancerous.
- Can be used alone or combined with other treatments such as surgery, or chemotherapy.

When radiation passes through our bodies to kill cancer cells, it also causes damage to nearby healthy cells.

Healthy cells are usually able to repair the damage from the radiation. The damage done to the healthy cells is what causes side effects (see more on page 14).

How is radiation treatment given?

External Beam:

The radiation is produced by a machine and aimed at the tumour, so the radiation source comes from **outside** of the body. (page 5)

Internal Radiation:

The radioactive source is placed inside the body, either **inside** the tumour, or close to it. This is called brachytherapy. (page 6)



How is Radiation Treatment Given?

https://myhealth.alberta.ca/alberta/cancer-radiation-treatment

What are the goals of radiation treatment?

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

Possible goals of treatment are to:

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



How does my health care team decide what treatment they should recommend for me?

It really depends on the type of cancer you have and where it is in your body. Research has shown us which treatments work best for which cancer. Other things we consider include:

- · Your overall health
- · If you've had radiation treatment before
- Your concerns and wishes

How much radiation will I get and how many treatments?

Your cancer doctor (Radiation Oncologist) will decide on a **total dose** of radiation (total amount) for you. Usually the total dose is divided so you only get a part of it each treatment (called **fractions**). The Oncologist will also decide over how many day(s) you will get this radiation treatment.

The total dose and number of treatments depends on:

Your type of cancer:	Some cancers are more sensitive to radiation and need less radiation to kill the cancer cells, while other cancers might need more.
The treatment goal:	If the goal of treatment is to get rid of the cancer, the radiation amount will likely be greater than if the goal is to control the cancer, or to relieve symptoms.
Where the cancer is in your body:	If the healthy cells around the cancer are very sensitive to radiation, your Radiation Oncologist might give you a different total dose, a different number of treatments, or both to help prevent side effects.

Where can I have my radiation treatment?

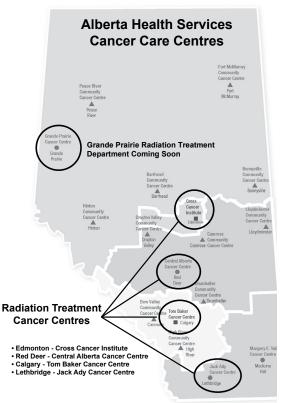
This depends on where you live and the type of cancer you have.

- Most patients go to the Cross Cancer Institute in Edmonton, or the Tom Baker Cancer Centre in Calgary for their radiation treatment.
- Some kinds of radiation treatment are offered at the regional cancer centres (Central Alberta Cancer Centre in **Red Deer**; Jack Ady Cancer Centre in Lethbridge; and in the future, the Grande Prairie Cancer Centre in Grande Prairie).
- Sometimes people who live out of town choose to have their radiation treatments in a city where they have friends or family to stay with.
- If you live out of town and do not have a place to stay, talk to your health care team to find out what your options are.

Who is part of my health care team?

Here are some of the people who play a role in your care:

- Clerk will schedule your appointments
- Medical Physicist checks your treatment plan
- Nurses may teach you about cancer, tests, treatments and help you manage symptoms
- Radiation Oncologist (cancer doctor for radiation treatment) prescribes your treatment and helps you manage your side effects
- Radiation Therapists see you when you come for treatment, give you your CT Simulation, calculate and plan your treatment, deliver your radiation treatment, and help you manage side effects
- Supportive Care Specialists such as dietitians and counsellors



External Beam Radiation Treatment

External beam is the **most common type** of radiation treatment, but there a few different types of machines.

Linear Accelerator (or Linac)

- Most common type of treatment machine
- Rotates around you while you lie down in your treatment position
- Can treat any part of the body
- Used to treat cancer and non-cancerous conditions



You may hear some different sounds from the Linac:

- An X-ray machine attached to the Linac moves in and out of position.
- Sheets of metal slide in and out and block some of the radiation to help protect some of your healthy tissues
- A buzzing noise happens when the radiation is turned "ON".
- The Linac makes noises as it moves around you.



Gamma Knife

- Special machine used to treat the brain
- Provides "surgery" using radiation called "radio-surgery"
- One machine currently in Alberta at the University of Alberta Hospital in Edmonton.
- A similar treatment is available at the Tom Baker Cancer using a specialized Linac



Orthovoltage

 Uses low energy radiation to treat skin cancer, cancer that has spread to the bones, and some non-cancerous conditions

Internal Radiation

Internal Radiation is also called **Brachytherapy**, which means "short distance" radiation therapy. This means the radiation source is **close to**, **or inside** your body.

There are different types of brachytherapy:

- High Dose Rate (HDR)
- Low Dose Rate (LDR)
- Intracavitary (in a body cavity)
- Interstitial (in a body tissue)
- Permanent Seed Implant
- · Superficial (on the surface of your skin)



Brachytherapy treatments are not covered in this booklet.

If you need brachytherapy, your health care team will give you more information about the treatment.

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Preparing for Your Radiation Treatment

There are many steps to help prepare you for radiation treatment. The next few pages talk about what you can expect.

When you meet your Radiation Oncologist, you will talk about:

- Your cancer diagnosis and treatment goals
- How we can use radiation to treat your cancer
- · What your basic treatment schedule will look like



Consenting to treatment

Your Radiation Oncologist may recommend radiation treatment as part of your cancer treatment, but **you need to decide** if you want to have radiation 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 radiation
- · Possible outcomes if you do not have treatment

Pregnancy and Fertility

If you think you are pregnant talk to your radiation oncologist **before** you start your treatments. Radiation treatment to a pregnant woman can affect the unborn baby.

Treatment to the pelvic area can affect your ability to have children later on — this is for **both men and women**. Talk to your doctor about fertility preservation options **before** you start treatment.

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

Ask your radiation oncologist when it would be safe to try to become pregnant after treatment.

Your CT Simulation

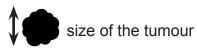
A CT simulation is a planning session that happens before you get your first external beam treatment. It helps us see:



where the tumour is in your body



shape of the tumour



Tattoo

At your CT simulation, the radiation therapists will put you in your treatment position and take a 3D image of the area you need treated.

The images are used to develop a treatment plan just for you.

What is a treatment position?

It is the position you need to be in **every time** you get your treatment. The radiation therapist chooses your position based on the area being treated.

You may get a permanent tattoo on the treatment area the size of a small freckle. The tattoo helps us get you into your position every treatment.

Some positions include:

- Lying on your stomach
- Lying flat on your back
- Having your arms up above your head
- Wearing a mesh mask over your head, neck, or other body part







The CT simulation helps us be as accurate as possible.

When you come in for treatment, we can aim the radiation at the **same spot every time**, which means that less of your healthy tissues and organs are affected.



Is there anything I need to do to prepare for the CT simulation?

You might get special instructions to help you prepare. They may include:

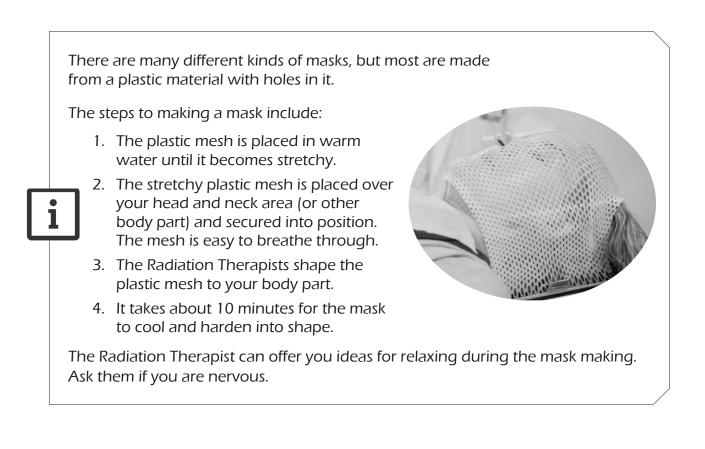
- Breathing how to practice holding your breath for your CT scan and treatments
- Bowels having a bowel movement before your CT scan and each treatment
- Bladder how much to drink to have a full bladder for your CT scan and treatments

If you are getting treatment to the area of your head or neck, you will see the **Hospital Dentist** before your CT simulation.

Will I need to wear a mask?

Not everyone needs a mask for treatment, but if you do, we create the support especially for you. This ensures that it will fit the body shape it is meant to support such as your head, hips or foot.

A mask is used to help your body stay in position, since it's very important for you to stay still during your treatment sessions,



Planning your Treatment

Who plans my treatment?

Your Radiation Oncologist, a Radiation Therapist and a Medical Physicist will all be involved in planning the best way to treat your cancer.

Treatment planning takes time. There are many things your health care team looks at when they make a treatment plan for you such as:



- The shape of your body
- Where the cancer is in your body
- · Organs or tissues near the tumour so they can help protect them

Quality Assurance and Safety We make sure your quality of treatment is the best possible. At many points during the treatment process, we double check our work and our processes. This includes: A careful review by the Medical Physicist of the treatment plan and machine settings. A discussion by the Radiation Oncologist, Radiation Therapists, and Medical Physicist about your treatment plan. A careful review before every treatment by the Radiation Therapists to prepare for your treatment.

Your Radiation Treatment Days

Common Questions

When you come for your first radiation treatment, you may be nervous and wonder what is going to happen during your treatment. It's important to know that:

- You cannot feel the radiation.
- Most treatment appointments take 10 to 15 minutes most of this time is spent getting you into position.
- You need to stay still for your radiation treatment.
- You will not be radioactive after your treatment.

Should I take my medications while I get radiation treatment?

- $\hfill\square$ Take your regular medications as you normally would, unless you were told not to
- □ If it's needed for your treatment, take your anti-nausea, anti-anxiety, or pain medications as instructed

What should I bring to my appointments?

- □ This booklet
- $\hfill\square$ Photo id, health care card and cancer care card
- Any questions you have written down to ask your health care team
- $\hfill\square$ Your Goals of Care found in the "green sleeve" to every appointment



Can I still have my treatment if I am sick?

It depends, but usually yes. If you are not feeling well, you may be able to see our nurses to find out what is going on. If you have cold or flu-like symptoms, we will ask you to **wear a mask and wash your hands well** when you come for treatment so that others do not get sick too.

Come to all your radiation treatments if you can. If you do miss a treatment, we will have to add another treatment day to your schedule.



Why do I have to spell my last name and say my birth date before every treatment?

Safety is our priority. Your name and birth date helps us confirm that you are the person who is supposed to have that radiation treatment.



Will I have to change into a hospital gown or pants for my treatment? We may ask you to change your clothing for your radiation treatment. This can make it easier for us to position your body and see the marks or tattoos on your skin.



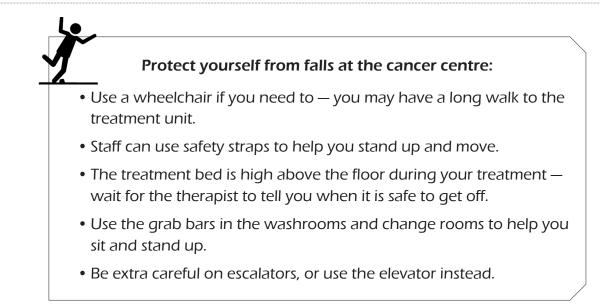
Tell your Radiation Therapist **before every appointment if you are or might be pregnant**.

Your first treatment appointment is the longest — for most people, it will take about 30 minutes.



How can I Prepare for Radiation?

https://myhealth.alberta.ca/ alberta/cancer-radiationtreatment



Who gives me my radiation treatment?

Often people think it is the Radiation Oncologist who delivers the treatment but it is actually trained Radiation Therapists who do this.

Radiation Therapists are trained in:

- **CT Simulation** help to figure out the best treatment position for you
- **Planning** use computers to plan your treatment (called **dosimetry**)
- **Treatment** put your body in the right position, and operate the machines to deliver your radiation treatment(s)
- **Patient Care** give you information about your treatment, possible side effects, and help you manage side effects during your treatment



What is a "Machine Maintenance Day?"

Our Linacs need routine maintenance every 6 weeks. During a maintenance day you may or may not have your radiation treatment. If you do have treatment, it may be on a different machine or very early in the morning before our specialists take the machine apart.



When will I see my doctor or nurse?

You may see your Radiation Oncologist or Nurse at a regular weekly visit, or it may be scheduled as needed. If you need help managing a side effect, or if you have a concern, you or your radiation therapist can ask to arrange an appointment.

- Remember to ask for prescription refills at this appointment if you need them.
- If you are getting treatment to the area of your head and neck, you may also see a dietitian at this visit.

What Will Happen at My Treatment Appointments?



The therapists will:

- · bring you into the treatment room
- uncover the area of your body being treated.

To help position you the therapists may:

- Use the tattoos or marks from your CT simulation
- · Move your body on the treatment bed
- · Use lasers to help straighten and level your body

The treatment bed can also reposition you, so it may move.



Sometimes as a last step, you **may get an X-ray or a CT scan** to see if your body still needs to be moved. We do this if we think:

- Your body is in the wrong position
- Your gown or clothing is causing you to lie down differently
- You've lost or gained weight

When you are in position:

- You will hear a beeping noise when the Radiation Therapists leave the treatment room.
- When the radiation is "ON", you will be alone in the treatment room but the therapists have a camera and microphone so they can see and hear you and talk to you if needed.

Once the therapists leave the room and you are in the right position:

- The radiation machine will rotate around you until it reaches a starting position.

You will not feel the radiation

• The radiation treatment will begin.



Possible Side Effects

Are there side effects from radiation treatment?

There are **possible** side effects. Your health care team will talk to you about them, but it does not mean you will have all or even any of them.

Everyone is different. Your treatments are planned just for you, so we can try to limit your side effects as much as possible.

Why do you get side effects from radiation treatment?

If you are getting other treatment such as chemotherapy **at the same time** as your radiation treatment, your chances of getting side effects increase.

These side effects may show up sooner, and may be more severe.

The body is made up of billions of cells. Side effects happen when radiation treatment damages the healthy cells in our bodies. Over time, the healthy cells are able to fix themselves which is when the side effects go away.

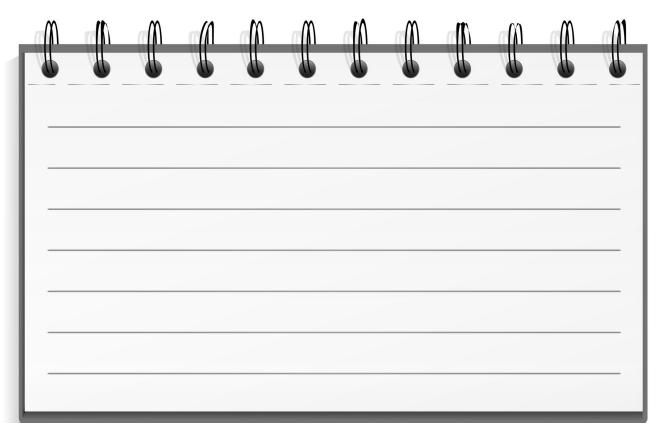
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When will the side effects happen?

Early side effects can start during your treatment, or shortly after. These side effects should go away and usually:

- Take 2 to 3 weeks (14 to 21 days) to develop before you notice anything
- · Last 1 to 2 weeks (7 to 14 days) after treatment until they start to get better

Late side effects may develop weeks, months, or years after treatment. These side effects are sometimes permanent. Talk to your Radiation Oncologist about late side effects that you could get.



Types of Side Effects

- Common may happen when you get radiation treatment to any part of your body
- Area being treated these side effects happen only in the area of the body being treated

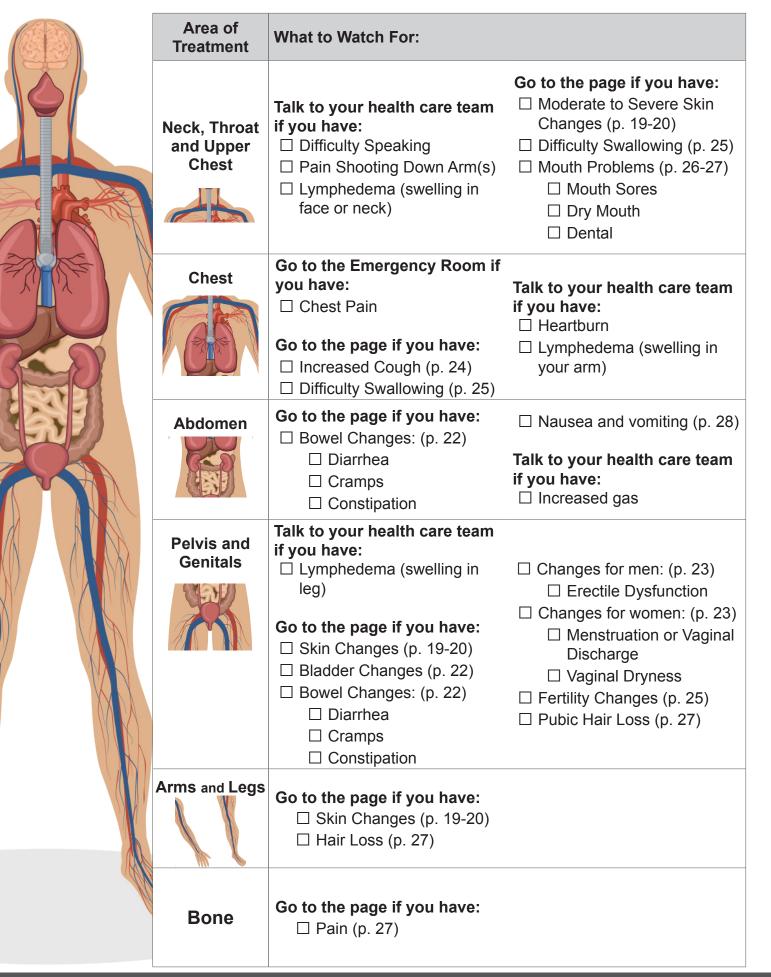
Use this chart when talking to your radiation oncologist to identify the side effects you need to watch out for.

Common Side Effects for Everyone

- Fatigue (cancer-related) (p.17)
- Skin changes (p. 19-20)
- Sleep pattern changes (p. 18)
- Sexuality and intimacy changes (p. 21)

Specific Side Effects

Area of Treatment	What to Watch For:	
Brain	 Talk to your health care team if you have: Vision changes Headaches Problems with balance or walking A change in sensation in your face, body, arms, or legs such as numbness, tingling, loss of feeling, or weakness 	Go to the Emergency Room if you have: Seizures/blackouts Go to the page if you have: Hearing changes (p. 27) Hair loss (p. 27) Nausea and vomiting (p. 28)
Sinuses and Mouth	Go to the page if you have: ☐ Difficulty Swallowing (p. 25) ☐ Mouth Problems (p. 26-27)	 ☐ Hearing changes (p. 27) ☐ Taste Changes (p. 29)
	☐ Dry Mouth ☐ Mouth Sores ☐ Dental	Talk to your health care team if you have: □ Difficulty Speaking □ Pain



F

Managing Common Side Effects

Fatigue

Fatigue is a very common side effect related to treatment and cancer. Fatigue can make you feel like you:

- · are worn out, tired or sleepy, or have no energy
- · can't concentrate or think
- · lack interest in doing anything with friends or family
- · have no interest in sex or being intimate with your partner
- are depressed, disconnected or uninterested in anything

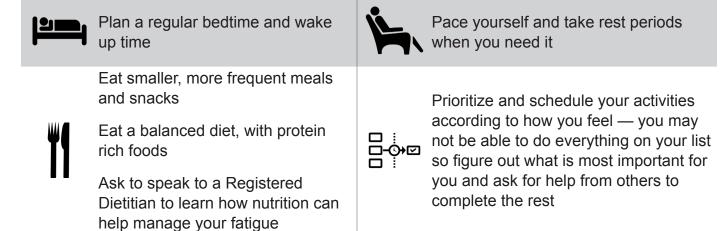
What can cause fatigue?

- cancer treatment
- · poor nutrition or not enough calorie and protein intake
- weight loss
- stress
- changes in your daily schedule or interrupted sleep
 schedule
- low red blood cell count red blood cells are responsible for carrying oxygen in your body



Get more tips and check out the booklet "How to Manage Cancer-Related Fatigue" — available at your cancer centre.

How can I manage my fatigue?





Exercise (page 34)



Accept help from others when they offer and ask for help when you need it



For more information on how to manage cancer-related fatigue, visit https://myhealth.alberta.ca/Alberta/Pages/cancer-fatigue.aspx

Sleep Pattern Changes

Getting enough sleep helps with healing, digestion, emotional well-being, and cognitive functions like memory and problem solving.

What is a sleep pattern change?

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

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)
- Side effects from the cancer treatment, such as diarrhea, or nausea
- Pain
- Fatigue
- Emotional changes

Stress

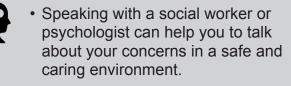
What can I do to help improve my sleep pattern?

- If you nap during the day, try and nap between 1 and 3 pm and only for 30 minutes.
- Nap on the couch or in a recliner. Save the bed for sleeping at night.
- R
- Take your medications as prescribed to help manage pain or your nausea and vomiting.



• Exercise – even if it is for a short walk (page 34).

 If you feel depressed – let your health care team know.





- Turn off all electronic devices 1 hour before you fall asleep — this includes televisions, cell phones, and laptops.
- Create a calm, quiet environment to sleep in.

Changes to Your Skin

Radiation treatment can cause skin irritation during or after treatment. This depends on the:

- Dose of radiation given each day
- Area of the body being treated

What are the signs and symptoms?

- Dry, itchy or cracked skin
- · Redness, warmth, or swelling
- Tenderness
- More sensitive to sunlight, wind and cold

The skin in some areas of the body is more likely to get irritated from the radiation treatment.

This can happen because of the shape of our bodies, or from the skin rubbing together in areas such as:

- Under the breast fold
- NeckArmpit
- · Behind your ears

Groin

How will I know if I have skin irritation?

There are different levels of skin irritation and different signs and symptoms:

Skin Changes	Mild	Moderate	Severe
_	Slightly pink colour	Darker pink colour	Red colour
Signs and Symptoms	Warm	Dry with flaking	Blistering
	Itchy	Itchy	Weeping (fluid from the wound)

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How can I prevent or manage my skin irritation?

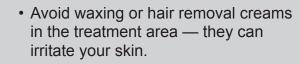
- Use unscented creams and mild soaps that are gentle on your skin.
- Apply cream after you dry off from a shower, while your skin is still slightly damp — it will help to keep your skin moist and soft.



• Avoid creams, soaps, and other hygiene products with alcohol, perfume, lanolin or AHA (Alpha Hydroxy Acids). These can dry or irritate your skin.

• Ask your health care team what products **they recommend**.

- Wash the treated area daily
- Take short showers or baths in lukewarm, not hot, water.
- Pat your skin dry rather than rubbing it dry.
- Use a soft washcloth and towel.
- If your lips are in the treatment area and are dry, ask your doctor what to use to help keep them moist.
- Do not shave in the treatment area.





• Keep your nails clean, cut short, and avoid scratching.



Wear a hat with a wide brim.

Keep your skin covered up.

• Avoid sunscreen during radiation treatments in the area being treated.



Protect your skin by not using heating pads, or ice packs in the treated area.



• Eat a healthy diet (p. 33).



 Check with your radiation oncologist to see if you can use deodorant (if your armpit is in the treatment area).

- Swimming in pools is fine as long as your skin changes are no more than mild (p. 19). Rinse well after and apply cream.
- Avoid using a hot tub or sauna during treatment.



Avoid using tape or bandages in the area being treated.



- Wear loose fitting clothes so they do not rub the treated area.
- Use a mild detergent to wash clothes.

Skin and Tissue Tightening (Fibrosis) in the Radiation Treatment Area

Signs and symptoms of tissue tightening in the area treated can include:

- Pulling sensation of the skin
- Reduced stretch in the skin
- Reduced flexibility in your joints such as in your hips after pelvic radiation

Regular, gentle stretching can help. If you notice your range of motion is getting worse, tell your doctor. A physiotherapist can help you improve.



Sexuality and Intimacy Changes

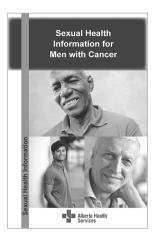
Sexual health affects people of all ages, genders, sexual orientations, cultures and beliefs. It can be an important part of your personal identity. Cancer and the treatments can alter your sexuality and the intimacy you have with your partner in different ways. Sexuality can mean something different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

What are some common concerns for cancer patients?

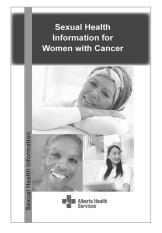
- Vaginal symptoms pain with sexual activity, vaginal bleeding, dryness or discomfort
- Erectile dysfunction difficulty getting or maintaining a firm erection
- Hormonal changes hot flashes, changes in body, fatigue
- Body image changes in how you feel or think about your body
- Loss of libido less interest 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
- Relationships changes in roles, not connecting with your partner
- Anxiety or fear related to sexual activity, loss of sexual confidence, uncertainty about being sexual



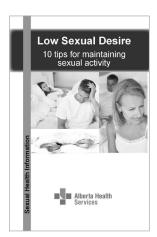
Ask for these booklets at your cancer centre:



"Sexual Health Information for Men with Cancer"



"Sexual Health Information for Women with Cancer"



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

G)Managing Side Effects Specific to the Treatment Area

Bladder Changes

During your treatments, you may pee (urinate) more than usual. You may also have some discomfort when you urinate. There may be medicine that can help.

What can I do to manage bladder changes?

- Drink enough fluid during the day to keep your urine light yellow.
 - Drink less fluid in the evenings so you don't need to get up as often during the night.
- Drink unsweetened cranberry juice to help prevent a bladder infection.
- Do not drink alcohol or caffeine these can cause you to pee more often.

Bowel Changes

Radiation treatment can cause changes to your bowels.

What can I do to manage bowel changes?

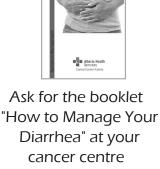
Talk to your doctor about the best medicine for you.

Do not take any home remedies or over-the-counter medicine without speaking to your health care team first.

- Try not to eat foods that are fried, greasy, or spicy.
- Try not to eat foods that cause gas.
- Eat small meals every few hours instead of eating 3 large meals a day.
- Drink enough fluids to keep your urine light yellow.



• Your health care team may ask you to use a fibre supplement daily to help make your bowel movements more regular. Your health care team may also ask you to use an over-the-counter medicine to help stop diarrhea.





Ask for the booklet "Cancer and Constipation" at your cancer centre

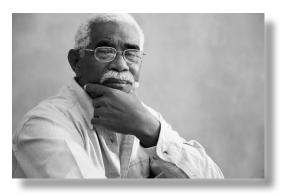
Tell your radiation health care team if you notice:

- pain
- burning
- your urine turning dark brown
 or red

- Talk to your health care team if you have any of these side effects during your treatments:
 - cramps
 - constipation
 - diarrhea

Changes for Men

Radiation to the pelvis **may** cause long lasting damage to the blood vessels and nerves in the penis. This can result in men needing more stimulation to get an erection. Erections may not be as firm as before. These changes will not happen right away but may slowly develop over the months and years after your treatment



Your doctor may recommend a pill (oral medicine) to help with erections. In some cases, these medications may not be very effective.

There are other options for treating erectile dysfunction such as vacuum therapy or injection therapy.

Talk to your doctor or nurse, or check the resources on page 21.

Changes for Women



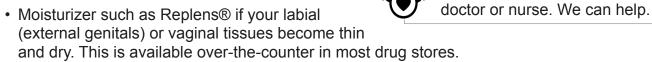
Radiation therapy may:

- Cause early menopause which can lead to vaginal dryness and less interest in sex.
- Increase vaginal yeast infections and bladder infections. These can be treated easily with medication but intercourse might be uncomfortable.
- Cause women to have less natural lubrication when sexually aroused, which may cause pain with intercourse. Use a water-based lubricant to help make intercourse more pleasurable.

If you are feeling pain during intercourse, please talk to your

To help make intercourse and pelvic exams more comfortable, your radiation oncologist or nurse may recommend that you use a:

• "Dilator" or "insert" to help keep the vaginal tissues healthy.



Menstruation or Vaginal Discharge

Depending on the area being treated, you may find your periods become irregular or stop. Also, a small amount of vaginal discharge is normal.

Cough

Radiation treatments to your chest may cause you to cough. If you already had a cough before your treatments started, your cough may get worse.

The cough can be either dry and hacking or moist and produce mucus. You can speak to your doctor about possible medicines to help reduce your cough or mucus.

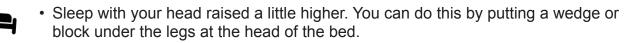
What can I do to help with a cough?

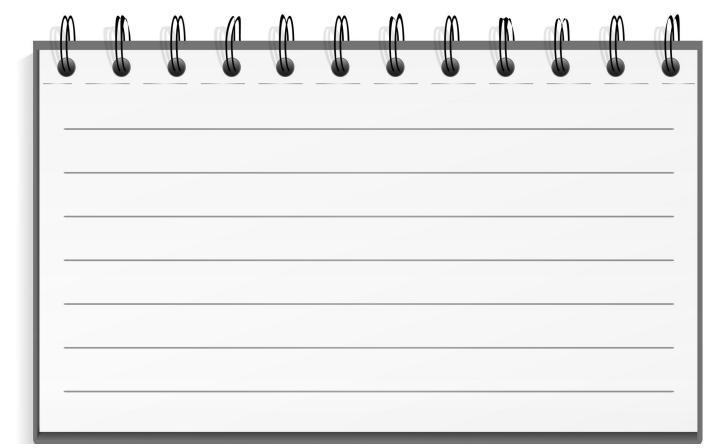


Increase the humidity in your home if you have a dry cough.



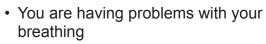
- If you have a **moist cough**, talk to your doctor about possible medicines or therapies to help with your cough.
- Drink enough fluids to keep your urine pale yellow. This will also help to loosen mucus.
- Try drinking club soda (no or low sodium) it can help break up the mucus.





Tell your radiation health care team if:

Your cough changes



It hurts to breathe

Difficulty Swallowing

You may find you have a sore throat, trouble swallowing, or feel like you have a lump in your throat. This can make it harder to eat or drink, and sometimes to speak. You need to eat a diet that has a lot of protein and calories during your treatments.



If you are having trouble swallowing your food, call a dietitian or get a referral to a speech language pathologist for more help.

To increase your protein when you are having trouble swallowing:

- Drink nutrition supplements such as Ensure® or Boost®.
- Mince or puree your meat.
- Add unflavoured protein powders to liquid or food.
- Talk to your radiation health care team or dietitian if you need more help.

What do I do if I have a sore throat or trouble swallowing my food?

- Eat soft, bland foods spicy, acidic or citrus things such as tomatoes or foods with vinegar might irritate your throat.
 - Keep food moist and easier to swallow by adding sauces, gravies, butters or oils.
- Eat foods served at room temperature.
- Choose drinks that are not acidic or citrus.
- Take sips of a liquid while eating.



• Try not to drink alcohol.

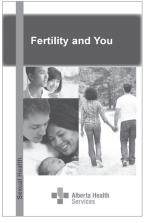


• Try not to smoke or use tobacco products.

Fertility

Men and women who have radiation treatment to the pelvis area may not be able to have children since radiation treatment can damage sperm or eggs. These changes may gradually go away after treatment, or they may be permanent.

If fertility is important to you, be sure you talk with your doctor about fertility preservation options for men and women, **before** you start your treatment.



For more information, ask your cancer centre for the booklet "Fertility and You".



Tip!

Mouth Problems

Dental Care

Radiation in the area of your mouth can cause problems with your teeth. If you need dental care and your jaw is in the treatment area, you will need to see the hospital dentist **before** your treatments start.

During and after your treatments, take good care of your teeth and mouth to decrease your discomfort and prevent infection. If you need other types of care for your mouth or jaw, your health care team will speak with you about your needs.

2

How can I keep my mouth clean?

- Brush your teeth and tongue 4 times a day with a soft toothbrush and mild toothpaste. Use toothpaste for sensitive teeth.
- Do not use mouthwashes with alcohol in them since they can dry your mouth.
- Rinse and gargle your mouth at least 2 times in the morning, afternoon and evening with club soda or a mixture of baking soda and water (1 tbsp of baking soda in 2 cups of water, made fresh daily).

Dry Mouth

Radiation treatments to your head and neck area may cause you to have less saliva or thicker saliva. With less moisture, it may hurt to wear dentures.

What can I do to help with a dry mouth?



Tell your radiation health care team if you have a dry mouth.

- Keep foods moist and easier to swallow by adding sauces, gravies, butters, and oils.
- Eat small meals every few hours instead of 3 large meals per day.
- Try eating soft, bland foods spicy, acidic, or citrus things such as tomatoes, or foods with vinegar can irritate your mouth and throat.

Tip!

• Choose easy-to-swallow foods packed with energy:

Milk-based: milkshakes, smoothies, creamed soups, greek yogurt, cottage cheese, whipping cream or meal replacement drinks such as Boost® and Ensure®.

No milk: fruit smoothie with protein powder, broth-based soups with meat/beans, high protein oatmeal, stew, soft or canned fruit, casseroles, soft cooked eggs, applesauce, mashed vegetables, flavoured dessert tofu

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- Aim for at least 6-8 cups (1.5-2 litres) of fluids to keep hydrated.
- Take sips of a liquid while eating to keep foods moist.
- Try sipping club soda (no or low sodium) between bites/sips of milk products it can help wash away mucus build up.
- If milk products still cause more mucus for you, choose food and drinks without milk.



• Use a humidifier to keep the air moist, especially at night when you are sleeping.



Try not to drink alcohol — it can make your mouth more dry.



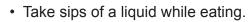
Try not to smoke or use tobacco products.

Sore Mouth and Throat

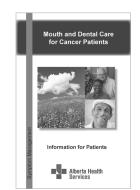
Dealing with a sore mouth or throat is similar to dealing with a dry mouth.

What can I do to help with a sore mouth and throat?

- Take your time eating, eat in a relaxed environment and choose foods that need less chewing.
- Keep your foods moist and easier to swallow by adding sauces, gravies, butters, and oils.
- Eat soft, bland foods that won't irritate your throat.
- Try not to eat spicy, citrus and acidic things.
- Do not eat foods that are too hot or too cold.



• Try not to drink spicy, citrus and acidic things.



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



 Try not to drink alcohol — it can make a sore mouth and throat hurt more.

Hair Loss

If you do lose hair, it will only be on the part of your body being treated — it could be the hair on your head, arms, chest or even pubic hair. If you lose hair, it may or may not grow back. If it does grow back, it will start about 3 to 6 months after radiation treatments are done. Speak with your radiation health care team if you have any questions or concerns about hair loss.

Hearing Changes

If your ear is close to the treatment area, you may have swelling in the ear. This swelling could cause you to have an earache. These symptoms will go away after your treatments are done. Tell your health care team if you have pain or trouble hearing.

Pain

What effect will the radiation have on my pain?

If you had bone-related pain before starting radiation treatments, it may get worse after your treatments start. For 3 to 7 days after treatment, you may notice a little to a lot more pain or discomfort in the treatment area. The goal is to eventually reduce your pain.

What can I do if I do have pain?

Keep taking your pain medicine. If you don't have any pain medicine and you need some, speak with your radiation oncologist.

How long does this side effect last?

This increase in pain usually goes away within days to 1 or 2 weeks after you finish your radiation treatments.

Nausea and Vomiting

Nausea and vomiting are common side effects for patients who are treated in the abdomen area. You may feel sick to your stomach during your radiation treatments. This is called nausea and it may lead to vomiting.

What can I do to manage nausea and vomiting?

- Eat small meals every few hours instead of eating 3 large meals a day.
- Choose foods that can be served cold or at room temperature. Hot foods sometimes have strong smells that can make your nausea worse.
- Have someone else prepare your food when possible.
- Try not to eat greasy, fried, or spicy foods.
- Eat foods high in protein and calories (see page 33-34 for more information)
- Drink fluids before you eat
- Drink fluids between your meals to keep you from becoming dehydrated.
- Drink only a small amount with your meals.
- 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.

Å

 If you do not feel hungry, light exercise may help to build your appetite.



 Don't wear clothing that is tight around your waist or stomach. If your doctor prescribes medicine for you, start taking it when your doctor tells you to. Some medicine works to prevent nausea before it starts.



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 numbers your health care team gave you.



Ask for the booklet Managing Your Nausea and Vomiting" from your cancer centre

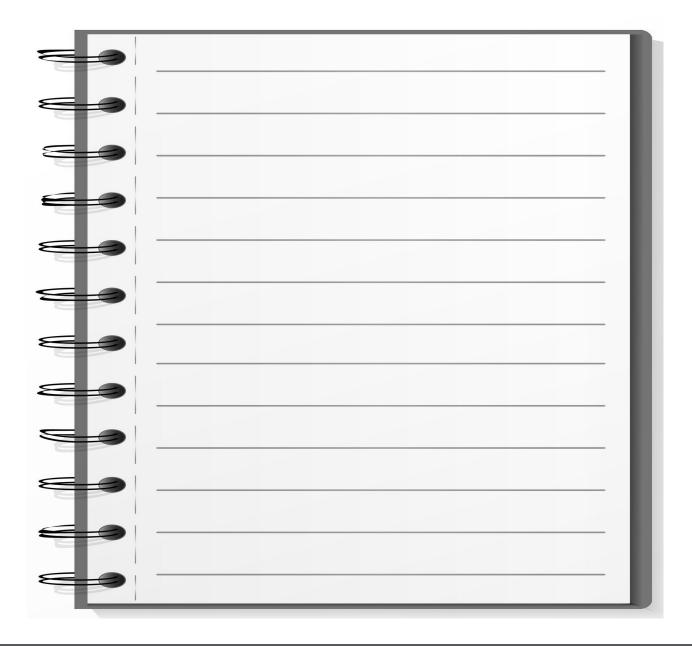
Taste Changes

Radiation treatments may cause changes in the way food tastes. Taste changes and difficulties eating may cause you to feel less hungry.

What can I do to help with taste changes?

Here are some tips you can use that might help you eat enough to keep up your strength.

- Try new foods, or foods that you have not tasted for a while.
- Try using plastic spoons, forks, and knives if the food seems to taste like metal.
- Eat small meals every few hours instead of eating 3 large meals a day.
- Eat foods that are high in protein and calories (page 33-34).



H

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.

Mon-Fri (business hours) (Calgary (South) 403-355-3207 Edmonton (North) 780-643-4303

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 and treatment.

What are signs and symptoms of anxiety?

- Feeling restless, worried, or not able to relax
- Tense muscles
- Trouble sleeping

Chest pains

Dizziness and nausea

Feeling moody or stressed

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

- Feelings of doom
- Shortness of breath
- · 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
- Worrying about your family, especially if you have kids
- Dealing with an anxiety disorder before you had cancer
- Fear of your cancer coming back, suffering, or dying
- Medications, like steroids or some anti-nausea medications
- Depression
- Having new symptoms that scare you

- · 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





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.

Depression

Depression is when feelings of sadness are strong and will not go away for weeks or months. A person who is depressed cannot just "snap out of it" or "cheer up". It can cause physical and emotional symptoms and may make it harder to cope with cancer and enjoy other aspects of your life. It is normal to feel sad when you have cancer.

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

What are the symptoms of depression?



If you are having thoughts of self-harm or ending your life, call 911 or go to your nearest Emergency Room right away.

- 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

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 hopeless or worthless
 Feeling sluggish or restless and agitated 	 Not enjoying the things you used to enjoy
Sleeping and eating more or less than before	 Feeling of guilt or regret
	Wanting to die
	Worsened anxiety
	 Having trouble thinking or remembering things

What can I do to help my depression or anxiety?

Find support:

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



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

 Get professional help. Professional counselors 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 is 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



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

In addition to counselling support, it may also help to see other specialists such as resource counsellors for practical concerns or psychiatrists.

Living Your Best Through Your Cancer Treatment

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 helpful tips to help you achieve living your best through treatment:

- Carry on with everyday activities if you feel up to it
- Ask for help, and 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

When possible, attend the classes offered at your cancer centre. Not only is there good info, but you'll learn about great resources and likely find a fellow patient you can relate with. - C.K.

Nutrition

Nutrition can improve your treatment outcomes and quality of life. Adopt a high calorie and protein diet to provide your body the energy to heal.

Choose foods from the 4 food groups:

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

Eat enough so you don't 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



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

Eat foods with protein to help you:

- · heal and recover
- meet your protein needs
- maintain strength and muscle health
- · keep your immune system healthy

During cancer treatment, **protein and water are very important**. Protein helps your body rebuild healthy cells, and water helps flush away waste, cushions your joints, and helps regulate your bowels.



milk, cheese, yogurt and cottage cheese



protein powders, nutrition supplement drinks and soy beverage

Higher energy foods with calories:



avocado, dried fruit, granola, whipping cream, sour cream and wheat germ



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

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.



www.albertahealthservices.ca/nutrition/Page11115.aspx

Exercise

Cancer and treatments can sometimes make you feel very tired or fatigued. This is a common side effect for people getting treatment. You might find you lack the energy to do much, but even a little bit of light exercise can help you feel better. Always talk to your health care team before you start a new exercise program.

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

"Get moving any way you can. If you feel like you are just not up to it, get dressed anyway, get out the door and take a few steps. You may just find you make it further than you thought you could." - C.K.

Keeping active can help you:

- Have more energy, and less fatigue
- · Maintain or build muscle
- Improve your coordination and balance this may lower your risk for falling and injuring yourself
- · Have less nausea
- · Have greater independence in your daily activities
- Improves your memory and helps you sleep

Rehabilitation Oncology

Rehabilitation (also called "**rehab**") aims to help you return to normal activities as soon as possible and is very important for patients with some types of cancer and cancer treatments. You may need a referral for this service, so ask your health care team

For more information, look in **Sources of Help**

Rehab can include physiotherapy, occupational therapy, and speech-language pathology.

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:

- 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.
- Don't 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.
- Don't use alcohol to cope with stress.

Tobacco Products

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

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

- A better chance of successful treatment
- Fewer serious side effects

 Lower risk of infection Easier breathing

Faster recovery from treatment

- More energy
- Decreased risk of the cancer coming back, or getting another cancer diagnosis
- · 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.

Programs for tobacco reduction or cessation support:

Cancer Wellness Clinic a free tobacco cessation service available for cancer patients and their families across Alberta

Edmonton and Northern Alberta

Calgary and Southern Alberta

Alberta Quits 🕀 www.AlbertaQuits.ca 🛞 1-866-710-QUIT(7848)

- (💭 780-432-8236 Ѽ 403-476-2988

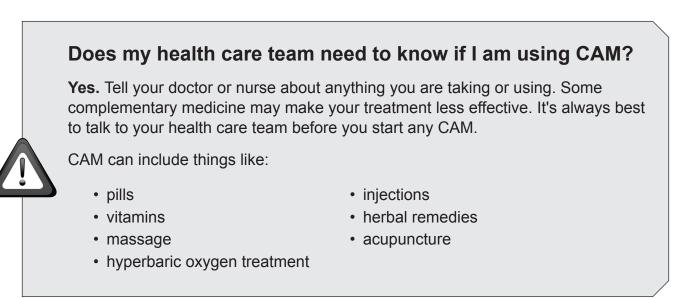
Complementary and Alternative Medicine

What is complementary and alternative medicine (CAM)?

Complementary and alternative medicine includes different healing approaches and therapies that are not considered to be standard medical treatments.

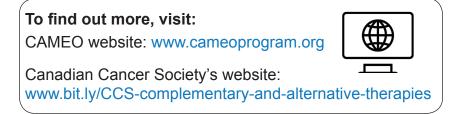
- **Standard medical treatments** are scientifically tested and researched and include treatments such as radiation, surgery, and systemic treatment. These treatments are used by doctors to treat people with cancer
- **Complementary medicine** is used along with standard medical treatments. It is meant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

It is your choice to use or not to use CAM. Talk to your oncologist or family doctor if you are thinking about using CAM 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.



Are there any natural health products I can take during treatment?

- Ask your oncologist if you can take a multivitamin.
- You should not use other natural health products during your treatments.



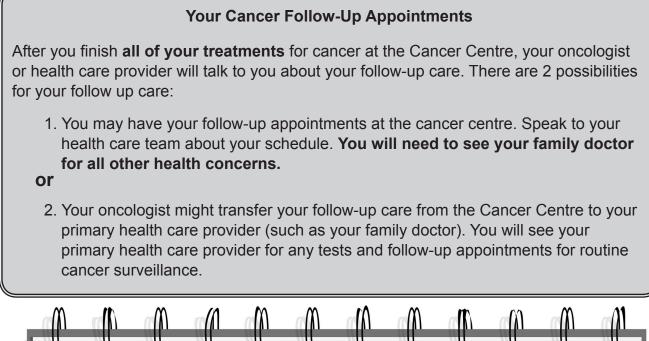


Completing Your Treatment

After your treatment is done, continue to manage your side effects until you start to feel normal. Most short-term side effects should clear in about 6 to 8 weeks. If you are on other treatment such as chemotherapy, you may feel the side effects for a longer time. If you need help managing the side effects, contact your cancer centre.

Most people will have a follow up appointment 6 to 12 weeks after radiation treatment is complete.

- This gives your body time to heal from treatment.
- You may need to do some tests before coming for this follow up appointment your health care providers will let you know.





CCA Patient Education would like to acknowledge all of the contributors to this resource. Special thanks to our Patient and Family Advisors who helped shape its development with their insight and experience:

Carol	Christina	Elaine	Susan
Charlotte	Eileen	Sharon	

Thanks to the Alberta College of Medical Diagnostic and Therapeutic Technologist for sharing many of the pictures found in this booklet.

© Alberta Health Services The information is to be updated every 3 years, or as new clinical evidence emerges.

This book is meant to support the information your health care team gives you. It does not replace any information that your health care team gives you.



