

This factsheet tells about the health experts who may care for you at Huntsman Cancer Institute (HCI).

You are the center of your care team.

The health care experts on your care team will recommend the best care available for you. You listen, ask questions, and decide what is best for you.

Usually, our patients see their doctors in clinics. If you have chemotherapy, you will get it in our Infusion Center. You do not have to stay in the hospital to be treated.

Other patients may have hospital stays to get surgery or chemotherapy. They may need to stay in the hospital if serious problems happen with their cancer.

The care teams in the clinic and in the hospital are different.

Doctors

The doctors at HCI are experienced oncologists (cancer doctors). They direct your care. You will see one or more of these doctors during your clinic visits.

- A *medical oncologist* is the main cancer doctor for most patients. These doctors treat cancer with chemotherapy and other medicines.
- A *surgical oncologist* treats cancer by removing tumors from your body. Some patients may need only surgery to treat their cancer. The surgeon may be their main cancer doctor.
- A *radiation oncologist* treats cancer tumors with focused beams of x-rays.

Many patients see more than one of these types of cancer doctors. These doctors meet often to coordinate the best way to treat each individual patient.

If you stay in the hospital, you may have different doctors. The hospital doctors work closely with your clinic doctors to make sure you get the best care.

HCI is a teaching hospital. When your hospital doctor visits your room, other health care providers and students will come along:

- A *fellow* is a licensed doctor. Fellows have finished 3 years or more of specialty training.
- *Residents and interns* also have the title of doctor. They get specialty training at HCI.
- *Medical students* are still earning their medical degrees. They may help in your care, supervised by your hospital doctor.

Advanced Practice Clinicians

At your clinic visits, you may see a nurse practitioner (NP) or physician assistant (PA). They have completed advanced medical training. NPs and PAs work with your clinic doctor. They can do exams and procedures, order tests, and write prescriptions.

If you stay in the hospital, you may also see an NP or PA who works with your hospital doctor.

Nurses

All the nurses at HCI are registered nurses (RN). Many HCI nurses have extra training in cancer care. They are oncology certified nurses (OCN).

In the clinics and the hospital, nurses give treatments and make sure you are safe. Your nurse can answer many of your questions about your care. Nurses also help you cope with side effects.

If you have a problem or question, your nurse is the best person to contact first.

In the hospital, a *case manager* coordinates your cancer care plan. Usually, this nurse helps you prepare for leaving the hospital. The case manager makes sure you have the support and care you need after you go home, such as the following:

- Home care nurses
- Equipment such as oxygen, wheelchairs, and walkers
- Physical therapy

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Other Care Providers

At your clinic visits, *medical assistants* check your vital signs:

- Weight
- Temperature
- Blood pressure
- Heart rate

They guide you to the exam room. These assistants can also help your doctor and nurse with procedures.

When you stay in the hospital, *health care assistants* check your vital signs. They also help you with daily activities:

- Getting out of bed
- Bathing
- Grooming

In the clinics and the hospital, *pharmacists* work with your doctors and nurses to coordinate your medicines. They can give you a lot of information about the medicines you are taking.

In the infusion clinic, pharmacists prepare your medicines in the combination and dose you need.

HCI Services for All Patients

Social workers help you cope with the emotions and life changes that come from a cancer diagnosis. They teach ways to manage stress and find support groups. Services are open to patients and family.

Our *chaplain* can give spiritual support to patients and loved ones. The chaplain can help you find meaning and comfort in difficult times. Our spiritual care service includes many faiths.

Our *registered dietitians* can give you the best advice about diet and nutrition. Consultations are free for HCI patients.

Patient Financial Services can help you with these issues:

- Working with your insurance companies to get coverage for high-cost services before treatments begin
- Making sense of medical bills, insurance plan coverage, and claims
- Setting up payment plans
- Finding state and federal programs to help pay for care, medicine, or supplies if you are not insured

We offer many wellness services for patients and their caregivers:

- Acupuncture
- Massage
- Fitness classes
- Music, art, and writing classes

Learn more at huntsmancancer.org/wellness.

Welcome to the Infusion Center

Our staff promise to

- Treat you with kindness and care about you as a person
- Identify themselves and wear ID badges
- Keep you informed
- See you in a timely manner
- Ask for your ID each visit and ask you to verify medical information to assure accuracy and safety
- Educate you and answer your questions before you go home
- Provide exceptional care and act only in your best interest

We ask you to

- Have no more than **one visitor**
- Not bring children under 16. No children under 16 are allowed in the infusion center or waiting area
- Keep pets and therapy animals out of the infusion center
- Take care of your personal items
- Be as quiet as possible when speaking to others in person or over the phone. Keep volume low on televisions and other devices. Your nurse can provide you with headphones.
- Understand there are factors that may cause a delay to your visit such as lab results, calls to your doctor, or emergencies

Your safety is our top priority.

If you have any questions or concerns about your visit, please tell your nurse or call

Ryan Doering, Infusion Center manager, at 801-213-5708.

Chemotherapy Infusion

Your regimen is _____.

Your treatment will take about _____ hours.

What should I wear?

Wear comfortable clothes with easy access to your arms. If you have a port or central line, wear a top with a loose neck and no collar. The infusion nurse will need easy access to your chest.

Should I eat?

Yes. You should eat before and during your treatment. You may bring food from home. There is a microwave available to heat food.

Our volunteers also provide free drinks and snacks in the Infusion Center.

What should I bring with me?

- Any medications you will need while you are at the Infusion Center, especially pain medicines, nausea medicines, and insulin.
- Items to help you pass the time. Some treatments take several hours.
- Someone to drive you home.
- **Please bring no more than two guests.**

NOTE: Children under 14, sick visitors, and pets or therapy animals are not allowed in the Infusion Center or waiting area. Please do not wear perfume or cologne.

What is available in the Infusion Center?

- Pillows and blankets.
- Restrooms.
- A chair for visitors next to each infusion chair and bed.
- Free beverages and snacks.
- Wireless internet access.

What can I expect on the day of my treatment?

1. Check in where you see your oncologist. Sometimes you may see your doctor the day before. If this happens, go directly to the Infusion Center the day of your treatment.
2. The nurse will put a needle in one of your veins (IV) or access your central line and draw blood for lab tests. Results take about 1 hour.
3. You will visit with your doctor to review your condition and lab results.
4. You will go to the Infusion Center.
5. We will assign a nurse to you. For this reason, you will not be able to choose where to sit.
6. Your nurse and two pharmacists will check your lab results and verify your treatment orders before mixing your chemotherapy.
7. A third pharmacist mixes your chemotherapy. Your nurse and a second nurse check your chemotherapy before giving it to you. These steps take extra time, but are important for your safety.

During treatment, your nurse will give you information about the drugs you receive. Your nurse will also talk about the possible side effects and how to manage them.

After treatment, your nurse will give you information about the drugs you received. Your nurse will give you final instructions.

Questions?

- Contact your cancer care team by phone or via MyChart
- In an emergency, call 911 or go to your closest emergency department

Chemotherapy Safety at Home

The medicines you take to treat your cancer are called chemotherapy or chemo. They are strong chemicals that could harm others in your home. This factsheet has information to help you handle chemo safely.

Chemo treatment at home

Many things are safe to do while you take chemo, including touching, kissing, eating together and sharing a bathroom.

There are also important things you need to know:

- Only the patient who is on chemo should take or touch it.
- Chemo medicines take about a week to exit the body.
- Traces of chemo can be in your urine, stool, semen, vaginal fluid, and vomit.
- The chemo medicine stays on anything it touches until disposed of or properly washed away.
- Pregnant women and children should not handle these medicines.

Store chemo and equipment out of reach of children and pets. Do not store chemo in the bathroom. Check the medicine label to see if the chemo needs to be stored in the refrigerator or away from light. If you need to keep it in the refrigerator, put the medicine in a labeled plastic bag. Do not let the bag touch any food.

Oral Chemotherapy. Do not crush, cut, or open your chemo pills. Do not allow anyone else to handle them. Keep your medicine in its original container.

Here are three ways to get rid of empty or partial bottles of oral chemo, in order of preference:

- Take them to one of the drop-off locations listed here: <https://knowyourscrip.org/>.
- Ask the HCI pharmacy for a waste envelope to mail empty or partial bottles of oral chemo to a collection facility.
- Place empty containers in a sealable plastic bag and put the bag in the garbage can for pickup.

IV Chemotherapy. If you spill chemo, follow the instructions on the spill kit your cancer care team gave you.

If chemo gets on your skin, wash the area right away with soap and water. Pat dry. If redness or irritation lasts more than 1 hour, tell your cancer care team.

You may seal the used chemo container and tubing in the chemotherapy waste bag your cancer care team gave you. Put the bag in the garbage can for pickup. Before throwing medicine containers away, remove any labels that have your information.

Safety Steps

Whether you take chemo treatments at the hospital or at home, please take these steps for 7 days after chemo to protect yourself and your loved ones.

Handwashing

Handwashing is the best way to remove chemo from your skin. Wash your hands before and after doing these things:

- Eating
- Preparing food
- Going to the bathroom
- Handling body fluids
- Blowing your nose
- Coughing or sneezing on your hands

Handling body fluids and waste for patients and caregivers

- It is safe to share a bathroom with others while taking chemo
- Sit down to urinate to prevent splashing
- Follow these steps after you use the toilet:
 - Clean any splashes that might be on the toilet. Disinfecting wipes work well for this. Do not flush these wipes. Throw them away in a sealed bag.
 - Wash your hands with soap and water right away.
 - If urine or stool gets on your skin, wash the area with soap and water right away.

- When handling body fluids, always wear disposable gloves. Use the gloves only once. When removing gloves, pull them off inside out. Put them in a sealable plastic bag, then the trash. Wash your hands with soap and water after you take off the gloves.
- If a bedpan or urinal is used, wear gloves when emptying and cleaning out the waste. Slowly empty the contents into the toilet to prevent splashing. Rinse the container with water after each use. Wash the container with soap and water once a day.
- If you have an ostomy, wear gloves when you empty the bag. Wash the bag with soap and water once a day.
- If you do not have control of your bladder or bowels, use a disposable pad, diaper, or plastic-backed sheet to protect the bed or furniture. Change them right away when they are soiled. Wear gloves when handling the soiled items.
- Handle containers used for vomit with gloves. Slowly empty the contents into the toilet to prevent splashing. Flush the toilet twice. Wash the container with soap and water after use.

Handling laundry

You can wash clothing and bedding that has not touched chemo or body fluids as usual. If chemo or body fluids gets on clothing or bedding, follow these steps:

- Wear gloves when you touch laundry that has chemo or body fluids on it. Afterward, take off the gloves and put them in a sealable plastic bag. Wash your hands with soap and water.
- Wash this laundry right away, if possible. You may put it in a sealable bag if it must wait.
- Wash this laundry twice in a separate load. Wash two times with regular detergent in hot water.

Handling trash

- Wear gloves when handling anything that has touched chemo or body fluids.
- Put sharp objects such as needles in a hard-plastic container. Write the word “Sharps” on the outside.
 - You may use large, empty plastic bottles with a cap, such as a milk bottle. Your home care agency may provide a medical sharps container. When the container is full, tightly seal the cap. Put it in your garbage can for pickup.
- Put other trash that has touched chemo or body fluids in sealed plastic bags. This includes empty bags for IV chemo taken at home. Label the bags “chemotherapy waste.” Put the bags in your garbage can for pickup.

Sexual contact

- Wear a condom if you or your partner have received chemotherapy in the past 7 days.
- Most patients need to avoid pregnancy for 6 months to 1 year. The time may be shorter or longer, depending on your situation. Tell your doctor right away if you think you or your partner might be pregnant.
- To prevent pregnancy, use two reliable forms of birth control when you have sex.

Preventing Falls in the Infusion Room

Some medicines we give you can make you feel weak, sleepy, or dizzy. You can help prevent falls in the infusion room by following the tips listed here. Please tell us if you have had problems with falling or dizziness before. Let us know if you are concerned about the risk of falling here at the hospital or at home.

DO:

- Wear stable shoes or non-slip socks. We can provide socks if you need them.
- If you have a cane, walker, or other assistive device, use it.
- If you have been lying down, sit at the side of the chair or bed for a few minutes before standing up.
- Stay seated and tell a staff member if you feel light headed or dizzy.
- Tell staff about any liquid spills.

ASK:

- Ask a staff member for help if you do not know how to operate the chair.
- Ask for help when getting up.

DON'T:

- Do not lean on the pole holding your medicine to help you get up or as you walk.
- Do not stand up until the chair is all the way upright and the footrest is back in place.
- Do not walk until the machine that pumps your medicine is unplugged and the cord is off the floor.

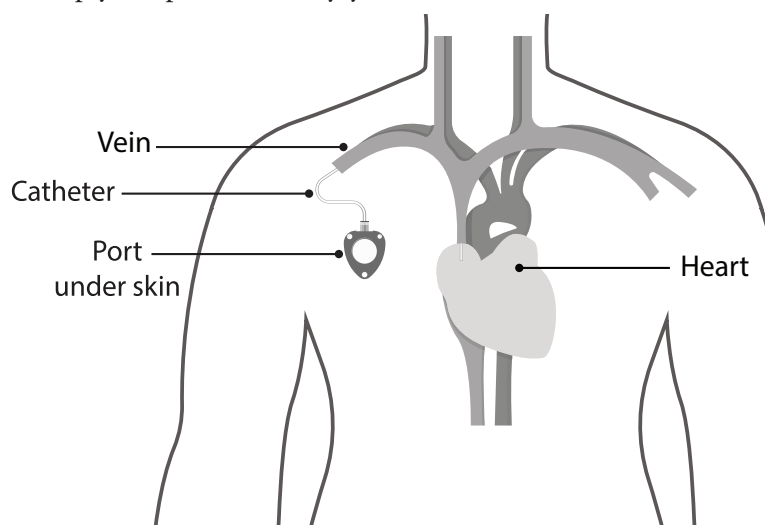
Remember: Call, Don't Fall.

Thank you for helping us prevent falls. Your safety is our greatest concern.

What is a port?

A port is a small, round disc that a surgeon places under your skin. Usually, the surgeon will place it in the upper part of your chest. The port connects to a small tube that goes into a large vein.

The port lets you get blood draws, chemotherapy infusions, and blood transfusions without having an IV needle in your arm every time. It can make the process easier for you and your care team. You can keep your port for many years if needed.



Port Placement in the Upper Chest

How is the port placed?

A surgeon will place your port in the hospital. It is a minor procedure and you do not need to stay overnight. You get medicine to numb the area or may get medicine to put you to sleep.

When the port is in place, the surgeon will test to make sure it is working. To do this, the surgeon will put a special needle called a Huber needle through your skin and into the port. A salt water solution is then flushed through the port and into the catheter.

After, a gauze dressing will cover two small cuts in your skin. The cuts are closed in one of these ways:

- With cloth tape such as Steri-Strips
- With clear surgical glue such as Dermabond

Your cuts are closed with _____

Your surgeon today was _____

How do I take care of my new port?

Follow the instructions below based on how your cuts were closed.

If You Have Cloth Tape

Take the gauze dressing off yourself **48 hours** after the procedure. After 48 hours, you do not need to cover the port area with a dressing if you keep it dry.

For showering, cover the port area with plastic wrap or something to keep it dry for 5 days. You may take a bath, swim in a pool, or soak in a hot tub once the cuts are healed.

Let the cloth tape fall off by itself. Do not pull it off. Do not use ointments or herbal remedies on the area unless your surgeon says it is OK.

If You Have Clear Surgical Glue

Take the gauze dressing off yourself **24 hours** after the procedure. After 24 hours, you do not need to cover the port area with a dressing.

It is OK to shower after 24 hours. You may take a bath, swim in a pool, or soak in a hot tub once the cuts are healed.

Carefully remove loose pieces of the clear glue. Do not pull pieces that are stuck to your skin. Do not use ointments or herbal remedies on the area unless your surgeon says it is OK.

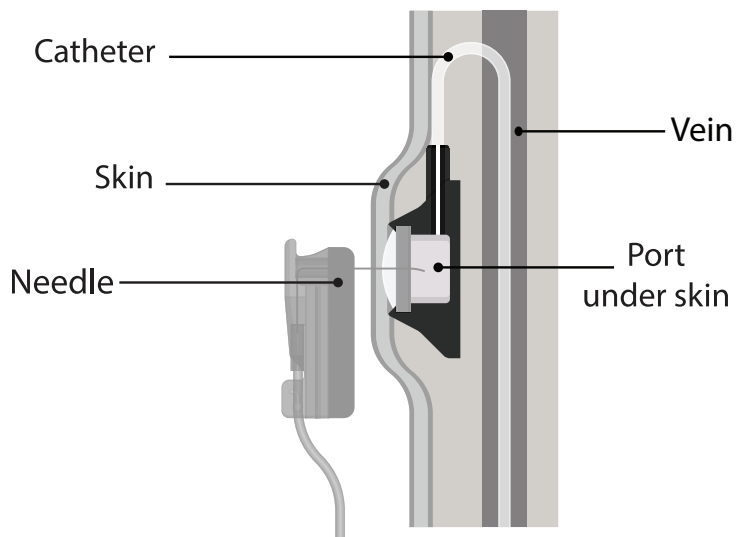
How is the port used?

Once your port is in place, it can be used right away. You don't have to wait for the cuts to heal unless your surgeon says to wait.

If you will get treatment the same day your port is placed, ask your surgeon to leave the Huber needle in for your treatment.

To access your port, your nurse will put a special needle called a Huber needle through your skin and into the port. The nurse will put a dressing over the area to keep it clean during treatment.

If you have pain when your port is accessed, your doctor can prescribe a cream called Emla cream that numbs the area.



Side View of a Port Access

How do I take care of my port?

Your port does not need special care once the cuts have healed. At your clinic visits, a nurse will flush your port and catheter with salt water and a drug called heparin at least once a month.

Heparin helps keep your port free of blood clots.

Let your care team know if you are allergic to heparin.

If you do not visit your clinic or have labs done at least once a month, you must make appointments to have your port flushed.

Without flushing, your port may not work properly and can cause issues.

Please make sure to have your port flushed at least once a month.

When and how is the port removed?

When your treatment is complete, you and your doctor decide the best time to have your port taken out. A surgeon will remove the port by numbing the area and making a small cut near the port to take it out. The cut is then closed and covered with a dressing.

Tips to Prevent Infection

Here are ways to take care of your port and help prevent infection:

- Do not leave the gauze dressing on longer than instructed above (48 hours if you have cloth tape and 24 hours if you have surgical glue).
- If you have cloth tape closures, cover them with plastic when showering. Wet tape can cause infection.
- If you have treatments or tests outside of Huntsman Cancer Institute, be sure the staff has experience with ports. If not, it is safer if they access your vein with an IV instead.
- Make sure medical staff who access your port follow sterile procedures:
 - Wash hands or use hand sanitizer right before caring for you
 - Wear a mask and gloves while getting ready to access your port
 - Scrub the access point with an alcohol swab for 15 seconds before inserting the special needle
 - Put a sterile dressing over your port area once the needle is in place (a mask and gloves are not required after the dressing is in place)

When should I call my doctor?

Call right away if you have any of these:

- Pain, redness, or swelling around the port
- Chills or fever above 100.3° F
- Dizziness or breathlessness
- Swelling, tenderness, or redness in your neck or arm

Contact Numbers

Doctor _____

Nurse _____

Phone _____

PA or NP _____

Phone _____

After hours or weekends: Call 801-587-7000 and ask for the cancer doctor on call.

Stereotactic Body Radiation Therapy

You are getting stereotactic body radiation therapy (SBRT) as part of your cancer treatment. This factsheet tells about the procedure.

SBRT sends narrow beams of radiation into your cancer. The beams can focus on a tumor of any size or shape. It causes little damage to nearby healthy cells.

Cancer care doctors use SBRT to treat patients who have cancer of the brain, head, neck, or spine. They also use it to treat some cancers where surgery is not an option.

Benefits of SBRT

- SBRT can destroy small tumors without surgery.
- SBRT is very precise. A tumor moves slightly when you breathe. SBRT's radiation beam locks on the moving tumor. It avoids nearby tissues and organs.
- With SBRT, you need only one to five treatments. Other radiation treatments may require 10 sessions or more.
- You do not need to stay in the hospital for SBRT.

SBRT Planning and Preparation

Before the SBRT treatment, you will have a planning session at Huntsman Cancer Institute (HCI) in the Radiation Oncology clinic. It is on the first floor of the HCI Hospital.

The planning session takes about 1 hour. After you arrive at the clinic, you change into a hospital gown. You cannot take jewelry, watches, keys, or personal items into the treatment room. You may want to leave these items at home.

In a CT scanning room, you will lie on top of a device called the body fix bag. The bag fits your shape exactly. It makes a mold that will hold you in place for each treatment. A plastic sheet covers your body up to your neck and holds you snugly to help you keep still.

If you have trouble being in tight spaces, tell the radiation team. They can give you medicine to help you relax. The radiation team will schedule your SBRT treatments before you leave.

SBRT Treatment

You may eat, drink, and bathe normally before SBRT treatments. During the treatment, you will wear only a hospital gown. You may not wear any jewelry or watches. The radiation technician will put you into the mold from your planning session. With the mold holding you in place, the technician will take you to the treatment room and leave. Only you can be in the room when the radiation beams are on. The radiation team keeps watch on you with video and intercoms.

The treatment is painless. You may feel mild nausea if you get radiation in the belly.

The treatment takes about 1½ hours. You can go home once the treatment is over.

Stereotactic Radiosurgery for Brain Tumors

You are getting stereotactic radiosurgery (SRS) as part of your treatment for a brain tumor. This factsheet tells about the procedure.

SRS sends narrow beams of radiation into your cancer. The beams can focus on a tumor of any size or shape. It causes little damage to nearby healthy cells.

If you have only one or a few brain tumors, SRS may be the first type of treatment you get. If you have many tumors, you may get radiation to the whole brain first. You may have SRS later if the cancer comes back in some parts of the brain, or if some tumors need more treatment.

Benefits of SRS

- SRS can reach tumors anywhere in the brain.
- SRS does not harm healthy brain cells near the tumors.
- SRS can treat people who would not do well with surgery.
- With SRS, you need only one to five treatments. Other radiation treatments may require 10 sessions or more.
- SRS causes no pain.
- You do not need to stay in the hospital for SRS.

SRS Planning and Preparation

Before the SRS treatment, you will have a planning session at Huntsman Cancer Institute (HCI) in the Radiation Oncology clinic. It is on the first floor of the HCI Hospital.

Please do not wear a high-necked shirt or jewelry to the planning and treatment sessions.

If you have trouble being in tight spaces, tell the radiation team. They can give you medicine to help you relax.

During SRS treatment, your head must stay completely still for up to an hour. To do this, radiation technicians make a mask that fits your face exactly. It attaches to the radiation treatment table.

After your mask is made, radiation doctors do a CT scan while you wear it. They use information from the scan to plan the SRS treatment. The planning session may take several hours.

The radiation team will contact you once your radiation plan is ready with a treatment date and time. This process can take up to one week.

SRS Treatment

You may eat, drink, and bathe normally before SRS treatments. About 30 minutes before the treatment, you will take steroid pills to prevent swelling.

You will wear your mask during the treatment. Remember to tell the radiation team if you have trouble being in tight spaces. They can give you medicine to help you relax.

The radiation technician will take you to the treatment room and leave. Only you can be in the room when the radiation beams are on. Your radiation team can see and hear you with a video camera and intercom system during the sessions. If you need help, wave your hand and the team will stop the radiation at once.

The treatment machine sends radiation to a precise point in the tumor. Then it turns so radiation hits the tumor from many angles. The treatment takes between 30 minutes–1½ hours.

You can go home when the treatment is over.

Radiation Therapy to the Lung

You are getting radiation to your lung as part of your cancer treatment. This factsheet is about side effects that could happen. It also tells you ways to manage the side effects.

Possible Side Effects

Skin changes. The effects of radiation on the skin depend on a number of things:

- Number of treatments
- Total radiation dose
- Sun exposure of the treated area before radiation therapy
- Overall health

Side effects to the skin occur only where the radiation enters and exits your body. If you are not sure where these areas are, ask your cancer care team. Take care of your skin from the first day of radiation, before side effects happen.

These skin changes may happen after a week or two of radiation treatment:

- Gets dry or itchy
- Turns darker, pink, or red
- Becomes sore and tender
- Peels or gets blisters

Radiation skin changes happen slowly over time. They may last for a while after radiation treatments end. Most effects go away after 2–4 weeks.

Here are some tips to help protect your skin:

- Wash gently with warm water. Do not scrub. Use your hands, not a washcloth. Pat dry with a soft towel.
- Use a mild soap without perfumes or deodorants.
- Avoid rubbing on treated skin. Wear loose-fitting clothing. Cotton fabrics are the least irritating.
- Do not use adhesive bandages or tape in the treated area.

- Avoid temperature extremes. Do not use heating pads, hot water bottles, or ice packs on the treated area.
- Keep treated skin protected from the sun. Use sunscreen with at least SPF 30 when outdoors. Wear a wide-brimmed hat and clothing with long sleeves and legs. Do not use tanning beds.
- Use only an electric razor if you shave the treated area.

These suggestions can help manage skin changes:

- Apply a moisturizing cream, lotion, gel, or oil to radiated skin. Do not use lotion right before your radiation treatments. Put it on at least 4 hours before.
- Choose products for sensitive skin. Avoid products with perfume or deodorant.
- If a product stings, stop using it.
- If your skin becomes tender or itchy, try using a 1% hydrocortisone cream from the drugstore. If necessary, your cancer care team may prescribe a steroid cream.

Hair loss. After about two weeks, you will start to lose hair in the area that was treated. It will usually begin to grow back within 3–6 months after radiation treatment ends. Use only an electric razor if you shave within the treated area. Hair loss may be permanent, depending on the amount of radiation you get.

Sore mouth, sore throat, and difficult swallowing. You may have a sore throat that makes it hard to eat and swallow. This usually starts 2–3 weeks after your first treatment. It should start going away 2–3 weeks after you complete treatments. If you have trouble eating, it may be hard to keep your weight up. A dietitian on your cancer care team can help if needed.

Heartburn. Sometimes radiation treatments can cause heartburn. You may feel as if you have a lump when you swallow or that food sticks in your throat.

These tips may help with heartburn:

- Avoid acidic and spicy foods.
- Include softer foods in your diet.
- Drink liquid supplements such as Ensure® or Carnation Instant Breakfast®.

Ask your cancer care team before using antacids or acid blocker medicines.

Lung problems. Normal lungs produce mucus. This mucus moves up into the throat so you can swallow or cough it out. Radiation treatment makes mucus thicker and harder to cough out. If this happens, gargle with club soda or a mixture of ½ teaspoon salt and ½ teaspoon baking soda in a quart of warm water.

You may also have a dry cough. A room humidifier may help. Your cancer care team may prescribe a medicine to help.

Nausea. A few people feel sick to the stomach during radiation treatment of the lungs. Your cancer care team can prescribe medicines to help with nausea.

Fatigue. Feeling tired, or fatigue, is a common side effect of radiation treatments. Take good care of yourself while you are in treatment. If you feel very tired, you may need extra rest.

Many patients find that mild exercise such as walking can improve energy levels. Keep a balance between exercise and rest. Do not exercise if it causes shortness of breath. Talk to your cancer care team before you begin exercise.

These side effects may go on after your last treatment. If you have concerns, please talk with your cancer care team.

Radiation Therapy to the Esophagus and Mid-Chest

You are getting radiation to your esophagus/mid-chest as part of your cancer treatment. This factsheet is about side effects that could happen. It also tells you ways to manage the side effects.

Possible Side Effects

Heartburn. Sometimes radiation treatments can cause heartburn. You may feel as if you have a lump when you swallow or that food sticks in your throat.

These tips may help with heartburn:

- Avoid acidic and spicy foods.
- Eat softer foods.
- Drink liquid supplements such as Ensure® or Carnation Instant Breakfast®.
- Ask your cancer care team before using antacids or acid blocker medicines.

Difficulty Swallowing/Sore Throat. You may have a sore throat and a difficult time swallowing. You may have a lump in your throat or a choking feeling. These problems can also cause you to cough when eating or drinking.

This may make it difficult to eat and get the nutrition you need. These tips may help with problems with your throat:

- Eat smaller amounts of food more often throughout the day. Cut foods into smaller pieces.
- Avoid foods that irritate your throat. Foods that are hot, spicy, acidic, or crunchy can make it worse. Avoid alcohol.
- Eat soft foods. Soften foods with dips, sauces, or other liquids. Cook foods until they are softer.
- You may need to increase your fluid intake when not eating as well. This can include various fluids including supplements such as Ensure, Boost, or Carnation Instant Breakfast.
- Avoid tobacco products.
- Sit upright while eating or drinking. Drink or eat pureed foods through a straw.

Let your cancer care team know if you are having these problems. You can meet with a dietician for some help, or your team can help you with therapy and medicines.

Nausea. You may feel sick to your stomach. This depends on the location and size of the treatment area and how much radiation you get. Nausea usually starts 2–6 hours after treatment. Tell your cancer care team if you feel sick. These tips may help with nausea:

- Eat small amounts of food several times a day instead of three large meals.
- Ask your cancer care team about eating something light before your radiation, such as crackers or toast.
- Avoid lying flat after eating.
- Ask your cancer care team about medicine to ease nausea before your treatment.

Eating well is important. Your cancer care team will check to make sure you are eating and drinking enough. They will check your weight every week.

Skin changes. The effects of radiation on the skin depend on a number of things:

- Number of treatments
- Total radiation dose
- Sun exposure of the treated area before radiation therapy
- Overall health

Side effects to the skin occur only where the radiation enters and exits your body. If you are not sure where these areas are, ask your cancer care team. Take care of your skin from the first day of radiation, before side effects happen.

These skin changes may happen after a week or two of radiation treatment:

- Gets dry or itchy
- Turns darker, pink, or red
- Becomes sore and tender
- Peels or blisters

Radiation skin changes happen slowly over time. They may last for a while after radiation treatments end. Most effects are temporary. They go away 2–4 weeks after treatments end.

Here are some tips to help protect your skin:

- Wash gently with warm water. Do not scrub. Use your hands, not a washcloth. Pat dry with a soft towel.
- Use mild soap without alcohol, perfumes, or deodorants.
- Avoid rubbing the treated skin. Wear loose-fitting clothing. Cotton fabrics are the least irritating.
- Do not use adhesive bandages or tape in the treated area.
- Avoid temperature extremes. Do not use heating pads, hot water bottles, or ice packs on the treated area.
- Keep treated skin protected from the sun. Use sunscreen with at least SPF 30 when outdoors. Wear a wide-brimmed hat and clothing with long sleeves and legs. Do not use tanning beds.
- Use only an electric razor if you shave the treated area.

These tips may help with skin changes:

- Apply a moisturizing cream, lotion, gel, or oil to radiated skin. Do not use lotion right before your radiation treatments. Put it on at least 4 hours before.
- Choose products for sensitive skin. Avoid products with perfume or deodorant.
- If a product stings, stop using it.
- If your skin becomes tender or itchy, try using a 1% hydrocortisone cream from the drugstore. If needed, your cancer care team may prescribe a steroid cream.

Fatigue. Feeling tired, or fatigue, is a common side effect of radiation treatments. Take good care of yourself while you are in treatment. Keep a balance between exercise and rest. If you feel very tired, you may need extra rest. Many patients find that mild exercise such as walking can improve energy levels. Talk to your cancer care team before you begin exercise.

These side effects may go on after your last treatment. If you have concerns, please talk with your cancer care team.

Radiation Therapy to the Bones

You are getting radiation to your bones as part of your cancer treatment. This factsheet is about side effects that could happen. It also tells you ways to manage the side effects.

Possible Side Effects

Pain. You may have some pain from the radiation treatments. The pain may get worse before it gets better. Relief from the pain can happen within a few days of starting treatment, toward the end, or one to three months after ending treatment.

Your cancer care team can suggest or prescribe medicines to help with pain. They will check often to make sure your pain is controlled. Please tell your cancer care team if your pain is too much.

Fatigue. Feeling tired, or fatigue, is a common side effect of radiation treatments. Take good care of yourself while you are in treatment. Keep a balance between exercise and rest. If you feel very tired, you may need extra rest. Many patients find that mild exercise such as walking can improve energy levels. Talk to your cancer care team before you begin exercise.

Skin changes. Usually, bone radiation treatments are so few in number that skin changes are minor. Your skin may turn slightly red toward the end of your treatments, or after they are complete.

Radiation therapy can cause skin dryness. Use a clear, white and unscented moisturizing cream, lotion, gel, or oil on radiated skin after you bathe or shower. Your cancer care team can help you choose products that meet your needs.

Do not use lotion right before your radiation treatments. Put it on at least 2 hours before.

Fractures. Having tumors in weight-bearing bones raises your risk of a bone fracture, or broken bone. You should avoid heavy lifting, pushing, or pulling. Take extra care when walking on slippery or uneven surfaces. Here are some signs of a possible broken bone:

- Sudden severe pain that may worsen with movement
- Difficulty moving or using a body part
- Swelling, tenderness, weakness, or numbness in a body part

Call your cancer care team right away if any of these signs happen.

These side effects may go on after your last treatment. If you have concerns, please talk with your cancer care team.

Radiation Therapy to the Brain

You are getting radiation to your brain as part of your cancer treatment. This factsheet is about side effects that could happen. It also tells you ways to manage them.

Possible Side Effects

Hair loss. After about two weeks, you will start to lose hair in the treated area. Hair usually starts growing back within 3–6 months after radiation treatment ends. Use only an electric razor if you shave the treated area. Hair loss may be permanent, depending on the amount of radiation you get.

Skin changes. Skin changes from radiation depend on a number of things:

- Number of treatments
- Total radiation dose
- Overall health
- Previous sun exposure of the treated area

Side effects to the skin happen only where the radiation enters and exits your body. If you are not sure where these areas are, ask your cancer care team. Take care of your skin from the first day of radiation, before side effects happen. These skin changes may happen after a week or two:

- Gets dry or itchy
- Turns darker, pink, or red
- Becomes sore and tender
- Peels or gets blisters

Radiation skin changes happen slowly over time. Most go away 2–4 weeks after treatments end. Here are some tips to help protect your skin:

- Wash gently with warm water. Do not scrub.
- Use your hands, not a washcloth. Pat dry with a soft towel.
- Use a mild soap without perfumes or deodorants.

- Avoid rubbing on treated skin. Do not wear tight-fitting hats or scarves. Cotton fabrics are best.
- Do not use adhesive bandages or tape in treated area.
- Avoid temperature extremes. Do not use heating pads, hot water bottles, or ice packs on treated areas.
- Keep treated skin protected from the sun. Use sunscreen with at least SPF 30 when outdoors.
- Wear a wide-brimmed hat.
- Do not use tanning beds.
- Use only an electric razor if you shave the area.

These suggestions can help manage skin changes:

- Apply a moisturizing cream, lotion, gel, or oil to radiated skin. Do not use lotion right before your radiation treatments. Apply at least 4 hours ahead.
- Choose products for sensitive skin. Avoid products with perfume or deodorant.
- If a product stings, stop using it.
- If your skin becomes tender or itchy, try using a 1% hydrocortisone cream from the drugstore. If necessary, your cancer care team may prescribe a steroid cream.

Ear changes. Sometimes radiation dries the ear canal. If your ears feel plugged, tell your health care team.

Upset stomach from steroid use. You may be taking steroids such as dexamethasone or prednisone. These medicines ease brain swelling. Follow your doctor's instructions for taking steroids exactly.

Steroid medicines may upset your stomach. Talk to your cancer care team about antacids or other medicines that can help.

Headache, nausea, or vomiting. Headache, nausea, or vomiting may happen during your treatment. Your disease or your medicine may cause these side effects.

Tell your cancer care team if you have headaches, nausea, or vomiting. They can help find ways to ease them.

Visual sensations. Some people report seeing blue or white lights when the treatment machine is turned on. This is a harmless effect of radiation on nerves in the eye.

Fatigue. Feeling tired, or fatigue, is a common side effect. Take good care of yourself while you are in treatment. If you feel very tired, you may need extra rest. Many patients find mild exercise such as walking can raise energy levels. Talk to your cancer care team before you begin exercise.

These side effects may go on after your last treatment. If you have concerns, please talk with your cancer care team.

Radiation Therapy to the Pelvis

You are getting radiation to your pelvis, the area around your hips, as part of your cancer treatment. This factsheet is about side effects that could happen. It also tells you ways to manage the side effects.

Possible Side Effects

Bladder irritation. Radiation to the pelvis irritates the bladder. After a few weeks of treatment, you may notice burning when you urinate. You may need to urinate more often than usual. Drinking clear liquids can help. Your cancer care team can prescribe medicine to relieve the burning. Your doctor may take a urine sample to check for an infection.

Radiation may cause swelling around the urethra (the tube that carries urine out of the bladder). You may urinate slower or have a smaller stream of urine. If you notice it is hard to urinate, contact your cancer care team. If you feel the urge to urinate and cannot, please contact your cancer care team right away or go to the nearest emergency room.

Diarrhea. You may have bowel movements that are more frequent or diarrhea, which is loose, watery stools, with possible mucus. This depends on the location of the treated area. Tell your cancer care team if you have diarrhea. They can suggest diet and medicines to help.

Soreness. The anal area may become sore. You could get hemorrhoids. These tips can help:

- Use alcohol-free baby wipes rather than toilet paper to wipe after bowel movements.
- Rinse the anal area with water using a squirt bottle after each movement.
- Treat the anal area if it becomes sore or if you develop hemorrhoids. Over-the-counter hemorrhoid products can help.
- Sitting in a warm bath with running water above the hips may also help.

Nausea. A few patients may feel sick to the stomach because of the radiation treatment. If this happens, tell your cancer care team. They may give you medicine to reduce nausea before your treatments.

Fatigue. Feeling tired, or fatigue, is a common side effect of radiation treatments. Take good care of

yourself while you are in treatment. Keep a balance between exercise and rest. If you feel very tired, you may need extra rest. Many patients find that mild exercise such as walking can improve energy levels. Talk to your cancer care team before you begin exercise.

Sexuality and Fertility. Male patients—Radiation can lower your sex drive or ability to have an erection. This may be short-term or long-term. Ask your cancer care team about medicine to help you keep an erection. If your testicles are in the treatment area, the number of sperm or their ability to be fertile may go down. The recommendation is to wait one year after the end of treatment before any planned pregnancy.

Pregnancy can still occur, so use effective birth control methods during this time. Talk with your cancer care team about sexuality and fertility **before** radiation treatments begin.

Female patients—Your periods may stop during radiation treatment. You may also have other symptoms of menopause. Your ability to have children may change. Talk with your cancer care team about possible changes to your fertility **before** radiation treatments begin.

You may have sex if it does not cause pain or bleeding, unless your cancer care team says not to. If you are not sexually active, you should use a vaginal dilator several times a week after 2-3 weeks after radiation treatment is complete. This keeps the vagina from shrinking and closing. It is important to keep the vagina open so your cancer care team can do pelvic exams to check for any problems. If needed, you will get a dilator at the end of treatment or on your first follow-up visit. See the “Vaginal Dilation after Radiation” factsheet for more instructions.

These factsheets have more information about sexuality and fertility for cancer patients:

- Fertility and Cancer
- Sexual Health during and after Cancer Treatment
- Sexual Health Counseling

These side effects may go on after your last treatment. If you have concerns, please talk with your cancer care team.

Communication Tips

When a loved one is coping with cancer, communication may be difficult for everyone involved. Stress, anxiety, and depression can make it hard to talk. These suggestions may help:

When Communicating

- Be patient with yourself and others. Allow for mistakes and be forgiving.
- Listen carefully. Be open to other points of view.
- Admit your thoughts and feelings. Be open to having some discomfort. If you feel uncomfortable, you can decide whether to talk about it or let it go.
- Avoid gossip. Speak first-hand and directly with family members.
- Ask permission to vent. If you need to express strong feelings about a situation, make sure those you speak with know you are not blaming them.
- Use “I” messages. Give specific examples such as “I feel... when...”
- Offer regular updates to family members about a loved one’s condition. Use tools such as e-mails, webpages, and the telephone to make information available to everyone.

When Making Decisions

- Include all who will be affected.
- Tell all the important information to help everyone make a good decision.
- Offer time frames when possible.
- Consider both group and individual needs.
- Assume every family member has good intentions.
- Trust family members and close friends.
- Respect each other and praise success.

When Dealing With Conflict

- Stay focused on the present. Let go of issues from the past.
- Listen carefully. Try to see other points of view. This is most important when there is conflict.
- Consider all sides of the problem. Let everyone involved feel their ideas and opinions are valued.
- Avoid judging and labeling right or wrong.
- Try to understand the feelings of people who judge or find fault.
- Take a time-out or suggest talking later if the conflict is getting worse.
- Don’t be afraid to ask for help.
- Look for a compromise. If you cannot find a solution, work on letting go.

The social workers of Huntsman Cancer Institute’s Patient and Family Support team are a resource for more information about communicating with loved ones.

Our team is available Monday-Friday
from 8 a.m.-4:30 p.m.

To learn more or make an appointment,
call 801-213-5699.

www.huntsmancancer.org/pfs

Caregiver Burnout

What is caregiver burnout?

Caregiver burnout is a normal response to caring for a loved one who is sick. The effects of burnout are similar to feeling depressed.

Taking care of a person who has cancer takes time, work, and effort. Caregivers often forget to take care of their own physical and emotional health. In fact, studies show more than 50% of caregivers experience burnout.

What are signs of caregiver burnout?

People feel burnout differently, but it often has physical, emotional, and spiritual aspects:

- A feeling that something bad is going to happen
- Anger
- Anxiety
- Fatigue
- Hard time concentrating
- Hard time making decisions or problem solving
- Headaches
- Feeling tense
- Sleep problems
- Shaking or trembling
- Feelings of sadness or grief

It is important to know about caregiver burnout so you can recognize any signs. The more you know, the better you will be able to care for yourself and your loved one with cancer.

What can I do?

You can take steps to relieve stress related to caregiver burnout. Here are some tips:

- Ask for help. Family members, friends, and neighbors may be able to step in.
- Let someone else take over duties when they offer so you get a break.
- Talk it out. Consider meeting with a social worker or support group.
- Let yourself grieve—to cry, to feel numb, to be angry, or to feel however you are feeling.
- Pay attention to your health. Eat well, exercise, and get enough rest.
- Take things one day at a time. Understand you will have good days and bad days.
- Educate yourself. Knowing all you can about your loved one's cancer may help you feel more in control and help you set realistic expectations.

Huntsman Cancer Institute's Patient and Family Support social workers can help people experiencing caregiver burnout. To learn more or make an appointment, call 801-213-5699.

The Linda B. and Robert B. Wiggins Wellness and Integrative Health Center offers classes and services for caregivers, including art, acupuncture, cooking, massage, group fitness classes, and meditation. For more information, call 801-587-4585.

Self-Care Tips for Caregivers

Make Self-Care a Priority

- Always take care of your own health. Always.
- Get plenty of sleep each night.
- Take regularly scheduled time to relax and recharge.
- Say “no” to unnecessary tasks.

Organize to Avoid Overload

- Complete one task at a time. Avoid multi-tasking when you can.
- Break big blocks of information into smaller chunks to understand them better.
- Create daily and weekly schedules. Check items off as you complete them.
- Organize information so you can find it when you need it.
- Write down your tasks and your concerns.

Let Others Help You

- Asking for help is a sign of strength and awareness, not a weakness.
- Find specific tasks for people who offer to help. Here are examples of things helpers can do for you:
 - Cover you for a night out with friends or quiet time alone at home
 - Clean house
 - Shop for groceries
 - Make household repairs
 - Mow the lawn or shovel snow
 - Prepare meals
 - Offer a shoulder to cry on

Get Support – You Are Not Alone

- Connect with other caregivers. Share stories and tips.
- Get professional counseling right away if you feel overwhelmed or depressed.
- Be open to resources and technology such as online help and social media support groups.

Keep a Healthy Attitude

- Give yourself credit for the 24-hour responsibility you have taken on. It is a tough job!
- Be present in the moment whenever possible.
- Look for the positive. Find a little joy in each and every day.

Caregiver Resources

Caregiver Education and Support Group

Wednesdays (except 5th Wednesday in month)

Noon-1 p.m.

Infusion Education Room, 2nd floor

HCI Cancer Hospital, light lunch served

Call 801-213-5699 to register

Linda B. and Robert B. Wiggins Wellness and Integrative Health Center

huntsmancancer.org/wellnesscenter

Call 801-587-4585

HCI Patient and Family Support

huntsmancancer.org/pfs

Call 801-213-5699

Monday–Friday, 8 a.m.–4:30 p.m.

Helping Kids Cope when a Loved One Has Cancer

When a parent or loved one has cancer, a common first worry is “How are my kids going to react?” As a parent, you are the expert when it comes to talking with your kids about cancer. The information here might help at this challenging time.

Why Kids Need to Know

Children are very quick to notice stress in the family.

Many times their imagined fears are worse than what is really happening. Studies show that children need accurate information that is right for their age when a parent or loved one has cancer.

When Kids Need to Know

Talk to your child as soon as you feel comfortable. Children often feel hurt if they learn about a loved one’s illness from someone else.

What Kids Need to Know

Children and teens need to know when someone in the family has cancer. Your child will want to know where the cancer is in the body. It is important to use the word “cancer,” because it is different from other illnesses.

- Make sure your child knows he or she did not cause the disease.
- Explain that you cannot “catch” cancer.
- Let your child know that many people survive cancer.

Kids can learn and grow from a loved one’s illness. This challenge may help everyone in your family be more sensitive and kind. Getting through this stressful time can also bring a feeling of pride and self-worth for kids and grown-ups.

Ways You Can Help

Here are some ways to help kids cope when a parent or loved one has cancer:

Talk to Them

- Encourage your kids to ask questions without pushing them to talk if they do not want to.
- Ask questions that need more than yes-or-no answers. Here are some examples:
 - What is the most confusing part of mom’s cancer?
 - What do your friends say to you about my cancer?

- Encourage your child to express thoughts and feelings.
- Share your own thoughts and feelings with your child.

Give Them Helpful Information

- Let your child know what to expect along the way. This will help your child prepare for changes that can happen because of the illness or side effects of treatment, such as hair loss.
- Help your child name grown-ups he or she can go to for support or to talk.
- Make sure your children know who will take care of them if you need to stay in the hospital.
- Avoid making promises you are not sure you can keep.
- Do not worry your kids with details they cannot do anything about such as money problems.

Manage Their Time

- Make simple changes to help focus on each other:
 - Sit down to meals together
 - Limit visitors
 - Turn off phones
- When the person with cancer is not feeling well, plan play dates or fun activities with others.
- Do your best to keep a regular structure and routine.
- Give your child options about extra chores or ways to help around the house.

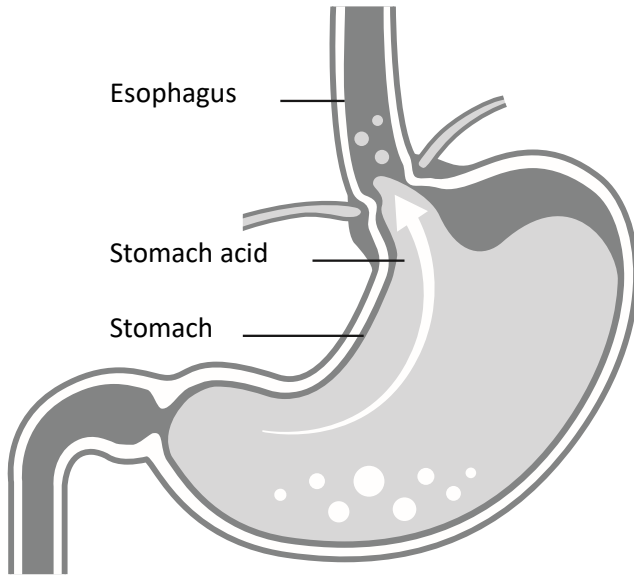
The social workers of Huntsman Cancer Institute’s Patient and Family Support team are a resource for information about talking to your children about cancer.

Available Monday-Friday from
8 a.m.-4:30 p.m.

Call 801-213-5699 or visit
huntsmancancer.org/pfs

Managing Acid Reflux

In some people, stomach acid may leak from the stomach into the throat and esophagus, the tube that leads from the mouth to the stomach. This is called acid reflux. It can cause pain and muscle spasms in the throat. It can also damage your esophagus.



Acid Reflux

Signs of Acid Reflux

You may have a combination of these signs:

- Burning feeling in your chest that may spread to your throat
- Sour taste in your mouth
- Difficulty swallowing
- Dry cough, hoarseness, or sore throat
- Bringing up food or sour liquid, especially when you are lying down
- Feeling of a lump in your throat

Tips for Managing Acid Reflux

Changing what you eat and when you eat can help ease acid reflux.

- Eat meals throughout the day. Do not skip breakfast or lunch. Avoid heavy meals in the evening.
- Avoid spicy foods.

- Stay away from foods that are very cold or very hot in temperature.
- Be sure to chew your food well before swallowing.
- Stop eating and drinking 2–4 hours before bedtime.
- Avoid foods that can make stomach acid worse:
 - Alcohol
 - Chocolate
 - Citrus juices
 - Coffee and tea
 - Fatty foods
 - Fried foods
 - Milk, 2% or whole
 - Nuts
 - Strong flavored candy, mints, gum, and breath freshener

Here some other changes that may help:

- After you eat, wait 2 hours before you lie down.
- Sleep with your head 4–8 inches higher than your heart.
- Wear clothes that fit loosely around your chest and belly.
- Limit the amount of stooping and bending over you do, especially when your stomach is full.
- Try doing “belly breathing” when you have signs of reflux. Push your belly outward gently while you inhale, and pull it inward while you exhale.
- Take time each day for activities that lower your stress levels. This could include walking, meditation, or hobbies you enjoy.

Talk with Your Cancer Care Team

Before you take any over-the-counter medicine for acid reflux or heartburn, talk with your cancer care team.

If acid reflux happens more than two times a week or interferes with your daily life, talk with your cancer care team about medicines that can help.

Being overweight can make acid reflux worse. Talk to your cancer care team before you start any weight loss program.

Bleeding Problems

Some types of cancers and cancer treatments can cause you to have too few platelets in your blood. Platelets are cells that clump together to clot blood, which stops bleeding when you are hurt. Not having enough platelet cells gives you a higher risk of bruising or bleeding, even without an injury.

What should I do if I have low platelets?

- Use a very soft toothbrush.
- Blow your nose gently with soft tissue. Your healthcare provider may ask you to not blow your nose at all.
- Take extra care to prevent cuts or nicks when using needles, knives, scissors, or tools.
- Switch to an electric razor to avoid the risk of shaving cuts.
- Protect your hands with gloves when gardening.
- Use extra caution near heat sources such as irons, stoves, barbecue grills, and heating pads.
- Tell your health care provider if you are constipated. He or she may recommend a stool softener to be taken orally. Avoid straining to have a bowel movement.

What should I avoid?

- Don't use dental floss or toothpicks.
- Don't pick pimples or scabs.
- Don't play sports that have a risk of getting hurt.
- Don't put anything in your rectum, not even a thermometer or medicine.
- Don't use tampons. Use pads for feminine hygiene.

Talk with your health care provider

- Ask if it is safe for you to take aspirin or products that contain aspirin. Aspirin interferes with the platelets' ability to stop bleeding. It should generally not be used if your platelet count is low.

- Ask if it is safe for you to use pain relievers such as ibuprofen and naproxen (products such as Aleve®, Advil®, Motrin®). Acetaminophen (Tylenol®) is usually safe if your platelet count is low, but ask first.
- Tell them all the vitamins, herbal supplements, and over-the-counter medicines you take.
- Check with them before drinking alcohol.

Talk to your doctor or nurse before taking any medicines, vitamins, or herbs.

How are bleeding problems managed?

- You may have more frequent blood tests to monitor the amount of platelets in your blood.
- Your chemotherapy treatment may be delayed while your body builds platelets.
- Your health care provider may prescribe a platelet transfusion to build your platelet level.

When should I call my doctor?

Call if you develop any of these symptoms:

- Black or bloody stools
- Bleeding from your gums
- Blood in the urine, or reddish or pink urine
- Changes in vision
- Easy bruising
- Nosebleeds that do not stop within 15 minutes
- Severe headaches
- Small red spots under the skin
- Vaginal bleeding that is new or lasts longer than your regular period

Doctor's Number: _____

How to Avoid Being Constipated

About Constipation

Constipation is when it is difficult to have a bowel movement and stool becomes hard and dry.

Why Constipation Happens

The normal function of the large intestine, which is also called the large bowel or colon, is to absorb liquid from the digestive tract.

Even when you don't have a bowel movement, the colon keeps doing its usual job of removing liquid. This makes the stool hard and difficult to pass.



Large intestine, or colon, in the human body

These are reasons the bowel may slow down:

- Taking narcotics or pain medicines
- Using some anti-nausea medicines
- Being dehydrated
- Eating or drinking less than usual
- Having surgery in the abdomen area

How to Keep From Getting Constipated

- Stay hydrated. Drink enough water, juice, sports drinks, soups, or other liquids to keep your urine a light yellow color.
- Avoid drinks that have caffeine or alcohol. They can make you more dehydrated.
- Be as active as you can. Ask your health care provider what is safest for you, or make an appointment with our cancer exercise specialists.
- Eat a healthy diet that includes fruits, vegetables, and fiber. Make an appointment with our dietitians to help figure out what's right for you.

The Linda B. and Robert B. Wiggins Wellness and Integrative Health Center at Huntsman Cancer Institute offers one-on-one fitness and activity plans, nutrition counseling, and more. Call 801-587-4585 or visit www.huntsmancancer.org/wellness.

Be sure to check with your nurse or doctor before taking any medicines for constipation, especially medicines that go in the rectum.

If You Do Get Constipated

Taking a stool softener or laxative and drinking prune juice or warm liquids can help.

- Stool softeners make bowel movements more comfortable. These are not laxatives. The medicine name is docusate sodium. There are many brand names, so check with your nurse or pharmacist to make sure you get what you need.
- Laxatives make the bowel move faster. Senna (sennosides) and/or Miralax® (polyethylene glycol) are commonly recommended.

Take 1 or 2 senna tablets up to 3 times a day

OR

Take ½ to 1 dose of Miralax® (or a generic brand) up to 3 times a day

- Senna-S is a combination of senna laxative and docusate sodium. Some people like the laxative and stool softener in one pill.

Everyone is different. The correct combination of softeners and laxatives is the one that helps you have a comfortable bowel movement every 1 or 2 days.

- Write down what you take.
- Be sure to tell your doctor and nurse what you take.

Preventing Constipation from Pain Medicines

Constipation

When your bowel movements are difficult or don't happen often, you have constipation. It is a common side effect of many pain medicines, including the following:

- Hydrocodone – in Lortab®, Norco®, or Vicodin®
- Oxycodone – in Oxycontin or Percocet
- Morphine
- Fentanyl patches

If you take one or more of these for pain, it is a good idea to take medicines that help prevent constipation.

Before you start taking pain medicine, talk to your doctor if you haven't had a bowel movement in more than five days. Also tell your doctor if you have nausea, vomiting, or very hard stool.

Medicines

There are two kinds of constipation medicines: stool softeners and laxatives. Stool softeners keep water in your colon, creating softer stools. Laxatives help move stool through your body.

Sennosides and docusate. Many medicines that help with constipation have ingredients called sennosides, or senna, and docusate in them. Sennosides are laxatives and docusate is a stool softener. Many products combine sennosides and docusate in one pill.

Polyethylene glycol. Medicines containing polyethylene glycol are potent stool softeners.

The column at the right has more information about constipation medicines and common brand names.

Finding the Right Dose

The amount of constipation medicine to take varies from person to person. Keep a record of your bowel movements and dosage of constipation medicine you have taken to learn what works best for you. If your pain medicine dose changes, you will probably also need to adjust your dose of constipation medicine.

Sennosides and Docusate. Start with a dose of 8.6 mg sennosides and between 50 mg and 100 mg of docusate. Take this amount once or twice a day. You may feel the effects after one to four doses. The goal is to have a normal, comfortable bowel movement at least every other day.

If you don't have a bowel movement by the end of the second day, increase your bedtime dose by one pill. If you still don't have a bowel movement, increase the morning dose by one pill the next day. If you don't have a bowel movement in more than five days or have nausea, vomiting, or very hard stool, call your doctor.

Polyethylene Glycol. If medicine with sennosides and docusate doesn't work for you, take 17 g (about 4¼ level teaspoons) of polyethylene glycol dissolved in a cup of juice or water. The bottle cap may be marked at 17 g so you can use it to measure.

Some people find that polyethylene glycol works better for them than sennosides and docusate.

At your next appointment, it is important to tell your doctor what constipation medicine you are taking and the dose.

Constipation Medicines

These constipation medicines are available at the Huntsman Cancer Institute Outpatient Pharmacy.

- Senna-S (8.6 mg sennosides, 50 mg docusate)
- Senna (8.6 mg sennosides)
- Docusate (100 mg)
- Senna - liquid form (8.8 mg/5 ml)
- Docusate - liquid form (50 mg/5 ml)
- MiraLax® (17 g polyethylene glycol)
- Polyethylene glycol (17 g)

The following brand name constipation medicines may be available at your local drug store.

- Colace® (100 mg docusate)
- Dulcoease® (100 mg docusate)
- Ex-Lax Regular Strength® (15 mg sennosides)
- Fleet Sof-Lax® (100 mg docusate)
- Phillips Liqui-Gels® (100 mg docusate)
- Peri-Colace® (8.6 mg sennosides, 50 mg docusate)

- Senna Lax® (8.6 mg sennosides, 50 mg docusate)
- Senokot-S® (8.6 mg sennosides, 50 mg docusate)

Note: Before buying a constipation medicine, read the product label. The medicine and dose may vary by brand name. Avoid products with bisacodyl or casanthranol (cascara). They may cause cramping. Some Dulcolax products with senna and docusate also contain bisacodyl.

Diarrhea

What is Diarrhea?

Diarrhea means having more than four or five liquid bowel movements in a 24-hour period. Diarrhea that happens during cancer treatment has many causes:

- Bowel or stomach surgeries
- Infections
- Medicines such as chemotherapy, antibiotics, antacids, some anti-inflammatory medicines, and laxatives
- Radiation to the abdomen and pelvis
- Stress and anxiety

Things to Eat and Drink

- Drink plenty of water, clear broths, sport drinks, ginger ale, or teas without caffeine.
- Eat small meals that include applesauce, rice, toast, and pasta.
- Choose foods high in potassium such as potatoes, oranges, and bananas.
- Add fiber to your diet. Fiber absorbs the extra water and adds bulk to the stool. Try using fiber pills such as Fibercon and FiberChoice, but ask your doctor or nurse before taking anything.
- Ask your doctor or nurse if you should follow a clear liquid diet to give your bowels a rest for a day or two.

Things to Avoid

- Fruit juices with a lot of sugar
- Very hot or very cold liquids
- Caffeinated drinks such as coffee and cola
- Milk and milk products
- Alcohol
- Spicy foods
- Foods that cause gas such as broccoli and cabbage

How is Diarrhea Treated?

Some medicines can help with diarrhea caused by radiation or chemotherapy. They may not be safe to use with diarrhea caused by an infection. The treatment changes depending on the cause.

- Talk to your cancer care team before taking any medicine to treat your diarrhea.
- Do not take over-the-counter medicines such as Imodium® unless your cancer care team says to.

Skin Care and Comfort

These tips can help keep diarrhea from causing chapped skin:

- Keep your rectal area clean and dry. Wash with mild soap and water. Dry gently with a towel.
- Use alcohol-free baby wipes instead of toilet paper.
- Put on zinc oxide cream (products such as A&D® or Desitin®) to soothe your skin.

When should I call my doctor or nurse?

Call right away if any of these happen:

- Bloody diarrhea
- Diarrhea that lasts more than 24 hours
- A lot of pain or cramping in your stomach
- Fever greater than 100.3°F
- Sores or cracks on your rectum
- Signs of dehydration:
 - Dark-colored urine
 - Less urine than usual
 - Dizziness
 - Dry mouth
 - More thirst than usual

Contact your cancer care team via MyChart or call _____.

In an emergency, call 911 or go to your closest emergency department.

Eating Well During Cancer Treatment

Eating well is important when you are being treated for cancer. Good nutrition helps you feel better, raises your energy level, and can help lower the side effects from your cancer treatment.

Getting enough fluid is part of eating well. Try to drink at least 64 ounces (8 cups) of liquids without caffeine every day.

Getting enough liquid is an important part of good nutrition. Try to get at least 64 ounces (8 cups) of liquids without caffeine each day unless your cancer care team gives other directions. These things can count as part of the 64 ounces:

- Juice
- Soup
- Milk
- Sports drinks
- Popsicles
- Other drinks

Managing Side Effects

Some cancer treatments can make it hard to eat. You may have nausea. Foods may taste different. Your mouth and throat may be sore. You may feel too tired to make meals. Here are some tips that can help.

Nausea and Vomiting

- Have several small meals each day. Set timer for every 2-3 hours. Eat slowly.
- Relax after meals to help food digest, but do not lie down. Loosen your clothes. Breathing fresh air can help ease nausea.
- Avoid or limit foods with strong odors. Limit fried or spicy foods.
- Eat foods cold or at room temperature.
- When you have nausea, eat dry, bland foods such as crackers or toast.
- Do not eat your favorite foods when you have nausea. Eat them when you feel well.

Taste Changes

- Brushing your teeth or rinsing your mouth before eating may help.
- Use different seasonings, herbs, and spices.
 - Try adding basil, onion, garlic, and other flavors.
 - Try different flavors such as sour, bitter, tart, or sweet to see what tastes best. Try adding vinegar, lemon, lime, and orange to meals.
- Some foods may taste bitter or like metal. Sugarfree lemon drops, gum, or mints may help.
- If food tastes like metal, try using plastic or wood utensils.
- See the factsheet *Taste Changes during Cancer Treatment* for more ideas.

Sore Mouth or Throat

- Drink plenty of liquids. If your mouth is sore, use a straw.
- Choose soft, moist foods. Add extra gravies, cream sauces, or butter to meals. Cook food until it is soft and tender.
- Eat cold foods to help soothe your mouth and throat.
- Avoid citrus fruits and juices, spicy or salty foods, and rough, coarse, or dry foods.
- Rinse your mouth often. Ask your dentist about gentle cleaning products for your teeth and gums.

Fatigue

- When you have the energy, make and freeze meals to eat later.
- Let friends or family members cook for you.
- Keep snack foods on hand.
- Use plates and dishes you can throw away to save clean-up time.
- Make sure to keep hydrated and drink adequate fluids to help prevent dehydration which can lead to more fatigue.

Constipation

- Eat plenty of high-fiber foods such as whole grains, fruits, and vegetables.
- Eat at least five servings of fruits and vegetables every day.
- Add fiber to your diet slowly over 8 weeks with a goal of eating 25-38 grams of fiber each day.
- Drink plenty of liquids. Prune juice may help.
- Take walks and do light exercise often. *Check with your doctor before starting any exercise program.
- Ask your cancer care team before you take any stool softeners or laxatives.

Diarrhea

- Eat less high-fiber food such as whole grains, fruits, and raw vegetables.
- Eat several small meals each day.
Eating certain foods can help:
 - Applesauce
 - Potatoes
 - Bananas
 - Rice
 - Pasta
 - Toast
- Limit foods that can give you gas such as gassy vegetables, greasy, fried, or spicy foods.
- Drink plenty of liquids between meals.
- Try eating less milk and milk products such as ice cream, cheese, and yogurt.
- Ask your cancer care team if a soluble fiber supplement such as Metamucil® would help.

Weight Loss

- Try to eat four to six small meals each day. Set an alarm for every 2-3 hours.
- Plan ahead and keep snacks in your car, purse, or backpack.
- Eat slowly and take breaks during meals.
- If you get full too fast at meals, don't drink at mealtime. Drink liquids between meals instead.
- When you have a good appetite, make the most of it. Appetite is often best in the morning, so try to eat more at breakfast.

- Add protein to your diet with foods such as cheese, yogurt, milk, cottage cheese, nuts, seeds, peanut butter, meats, and beans.
- Put extra calories in food you already eat by adding one or more of these:
 - Butter or margarine
 - Mayonnaise
 - Honey
 - Peanut butter
 - Creamer
 - Powdered milk
- Be creative. Try making milkshakes or smoothies packed with protein and calories. See the factsheet *High-Calorie, High Protein Recipes* for ideas.
- Use a supplement such as Carnation Breakfast Essentials, Boost, or Ensure.

Call your cancer care team or Registered Dietitian if these tips do not help your nausea, constipation, diarrhea, or weight loss.

For More Information

Patient Education Resources

hci-portal.hci.utah.edu/sites/factsheets

Click on the Food and Nutrition icon to find the factsheet *High-Calorie, High-Protein Recipes*. The National Cancer Institute booklet "Eating Hints" is also here.

Linda B. and Robert B. Wiggins Wellness and Integrative Health Center

801-587-4585

The Wellness Center offers free counseling with registered dietitians for patients with all types of cancer. Call for more information or to make an appointment.

G. Mitchell Morris Cancer Learning Center

Visit the 6th floor of the cancer hospital

Call 1-888-424-2100

Email cancerinfo@hci.utah.edu

Text 801-528-1112 (text only)

The Cancer Learning Center has free cancer resources in their lending library and cancer information specialists who can help find what you want to know.

Sugar and Cancer

What is Sugar?

Carbohydrates are an essential part of a diet and include foods such as grains, fruits, vegetables, dairy, desserts, and candy. When carbohydrates break down in the body, a simple sugar called glucose forms. Glucose is the simple sugar in your body that gives your cells energy.

Does sugar feed cancer?

No. Sugar “feeds” all the cells in your body. Cancer cells need sugar to grow just like healthy cells do, but sugar does not feed cancer cells any more than it feeds the other cells in your body.

Can I Eat Sugar?

Yes. Avoiding all foods with carbohydrates can be unsafe during cancer treatment. When you avoid all carbohydrates, you can weaken your body and make it harder to fight cancer. Avoiding all sugars can also cause stress. Stress can raise the amount of sugar in your blood and decrease how well your immune system works.

Even if there is no sugar in your diet, your body will still make sugar from the protein and fat you eat. Although sugar doesn’t feed cancer, it is a good idea to limit the amount of added sugar you eat. Foods and beverages with added sugar include soda, sweet tea, candy, and baked goods. Eating a lot of added sugar can cause your body to produce more insulin. Insulin is a hormone your body produces to absorb glucose. Your body needs insulin to function, but it is unhealthy if you make too much of it.

Sugar can occur naturally in complex carbohydrates or be added to food. Eating a balanced diet with complex carbohydrates, protein, fiber, and fat will help your body process sugar in a healthy way. Complex carbohydrates such as fruits, vegetables, whole grains, beans, and lentils are broken down by the body slowly into simple sugars, which reduces the amount of insulin your body needs to absorb the simple sugars.

Tips to Manage Sugar in Your Diet

Read food labels. Avoid foods that have added sugar, brown sugar, corn syrup, high fructose corn syrup, or other sweeteners near the top of the ingredient list. Food labels

have been updated and now include a row that provides the amount of added sugars.

- Limit sugary drinks. Watch for soda, sports drinks, lattes, or sweetened teas with more than 10 grams of added sugar per serving. Choose water most often.
- Eat fruit instead of drinking fruit juice. If you drink juice, limit it to six ounces of 100% fruit juice once a day.
- Eat whole, unprocessed foods. Vegetables, fruit, whole grains, beans, legumes, nuts, and seeds have more fiber and are healthier for you.
- Limit desserts. If you eat dessert, stick to small servings a couple of times a week.
- Ask for advice. If you have a hard time getting enough nutrition during cancer treatment, talk to your doctor or dietitian.

Snacks that Help Manage Blood Sugar

These ideas help balance carbohydrates, protein, fat, and fiber.

- Almond butter and banana
- Fruit smoothie with milk and yogurt
- Greek yogurt and strawberries
- Hummus and whole wheat pita bread or veggies
- Nuts and dried fruit
- Peanut butter and crackers
- String cheese and vegetables
- Tuna salad and whole grain toast
- Turkey and avocado wrap
- Turkey chili soup and a baked potato
- Yogurt and apple slices

Dietitians from Huntsman Cancer Institute’s Linda B. and Robert B. Wiggins Wellness and Integrative Health Center offer personalized nutrition counseling for patients and their families. To make an appointment or for more information, call 801-587-4585.

Eating for Healthy Weight Gain

Cancer and its treatment can make you lose weight. It can lower your appetite and make it hard to get back to your previous weight.

Everyone needs calories from food. Calories give energy needed to stay alive, heal, and do physical work. To gain weight, you need to eat more calories than you use each day.

Tips to Help You Gain Weight

Eat often

- Schedule small meals every 2–3 hours. Aim for six meals and snacks each day.
- Be consistent. Eat at the same times every day.
- Keep a list of all the food you eat each day. This can help you make sure you eat enough.

Choose low-volume, high-calorie foods.

- Eat hearty, dense breads:
 - Oat bran
 - Rye
 - Pumpernickel
 - Whole wheat
- Have nutritious cereals for breakfast or snacks:
 - Cracklin' Oat Bran®
 - Muesli
 - Granola
 - Shredded wheat
 - Grape-Nuts
 - Wheat Chex™
- Pick high-calorie fruits:
 - Apples
 - Dried fruits
 - Bananas
 - Pears
 - Canned fruits in heavy syrup
 - Pineapples
- Include starchy vegetables:
 - Beets
 - Potatoes
 - Corn
 - Sweet potatoes
 - Peas
 - Winter squash
- Use healthy oils and high-fat foods:
 - Avocado
 - Nuts and seeds
 - Canola oil
- Choose hearty soups high in protein:
 - Barley
 - Lentil
 - Black bean
 - Minestrone
 - Chili
 - Split pea

- Use healthy carbohydrates and proteins to add calories to other foods:
 - Beans
 - Honey and jam
 - Dried fruit
 - Wheat germ
 - Whole fat or 2% dried milk powder
 - Soy, rice, or whey protein powder

Try not to eat anything plain.

- Add toppings to all the foods you eat. Try nuts, seeds, dried fruit, or granola in salads, casseroles, or desserts.
- Spread peanut butter or other nut butters on toast or fruit. Choose low-volume, high-calorie foods.
- Put butter, peanut butter, honey, or jelly on toast, pancakes, and bagels.

Make Beverages Count.

- Eat your meals first, then drink your beverages.
- Replace calorie-free beverages like water, coffee, and tea with beverages that have calories:
 - Fruit juices and nectars
 - Homemade milkshakes and smoothies
 - Milk
- When you drink coffee or tea, add whole milk or creamer.

Use supplements to add extra nutrition to your diet.

- Liquids such as Boost®, Ensure®, or Carnation Breakfast Essentials®
- Protein bars
- Calorie enhancers such as Benecalorie®

Talk with your doctor or dietitian to see if these are right for you.

- Olive oil
- Peanut butter

High-Calorie, High-Protein Snacks

Below are ideas for high calorie, high protein snacks. We hope that these snacks will help you gain or maintain your weight. Try to eat every 2 to 3 hours if you fill up quickly. Setting an alarm can be helpful to remind you to eat often.

Salty snack options

Crunchy

String cheese/cheese with popcorn
 Hummus with crackers or pita bread
 Cheese with crackers
 Graham crackers with nut butter
 Nuts with dried fruit
 Sunflower seeds/pepitas or pumpkin seeds
 Guacamole and/or beans with chips
 Tuna salad/chicken salad/egg salad with crackers
 Corn tostada with beans

Soft, Smooth or Creamy

Jerky
 Hard-boiled eggs
 Sandwich
 Creamy soup
 Greek yogurt, add ranch packet with veggies or chips
 Cottage cheese with tomatoes
 Avocado toast with egg (may add beans)
 Small portion of left-overs
 Quesadilla (tortilla with cheese and beans)
 Pita bread pizza (pita, marinara sauce, cheese)
 Rice and beans

Sweet snack options

Crunchy

Apple/banana with nut butter
 Greek yogurt with fruit, granola/nuts
 Trail mix
 Whole milk* with graham crackers
 Graham crackers with nut butter
 Granola bar with nut butter or drink with milk*
 Cocoa dusted almonds
 Protein bar

Soft, Smooth or Creamy

Fruit smoothie with protein powder
 Carnation Instant Breakfast
 Cottage cheese with pineapple or peaches
 English muffin/waffle with nut butter and jelly
 Oatmeal made with milk*, honey, nut butter
 Ensure Enlive or Boost Plus
 Pudding with protein powder or milk powder
 Weight gainer protein powder with milk*
 Pudding or rice pudding, with protein powder or milk powder

*May use cow or plant-based milk of choice

The registered dietitians at Huntsman Cancer Institute's Linda B. and Robert B. Wiggins Wellness and Integrative Health Center provide personalized nutrition counseling for patients with all types of cancer.

For more information or to make an appointment, call 801-587-4585.

High-Calorie, High-Protein Recipes

These recipes boost the calorie and protein content of foods to help keep you from losing weight during cancer treatment.

Enriched Milk

1 quart (4 cups) whole milk

1 cup skim milk powder

Put ingredients in blender and blend until milk powder is dissolved. Makes 5 cups.

Nutrition information per cup: 184 calories, 15 grams protein

High-Calorie Carnation Shake

½ cup half & half

¾ cup ice cream

1 package Carnation Instant Breakfast®

Blend in blender until smooth. Serves 1.

Nutrition information per serving: 505 calories, 14 grams protein

High-Protein Milkshake

1 cup enriched milk (see first recipe)

1 generous scoop of ice cream

½ teaspoon vanilla

1 tablespoon butterscotch sauce, chocolate sauce, malt powder, or your favorite fruit

Mix all ingredients in a blender on low speed about 10 seconds or until smooth. Serves 1.

Nutrition information per serving: 657 calories, 21 grams protein

Milk-Free Double Chocolate Pudding

2 squares baking chocolate

1 tablespoon cornstarch

¼ cup granulated sugar

1 cup liquid non-dairy creamer or soy milk

1 teaspoon vanilla

Melt chocolate in saucepan or microwave. Measure cornstarch and sugar into a separate medium-size saucepan. Add the creamer bit by bit, stirring until mixture is smooth. Cook this mixture over medium heat until warm. Stir in the melted chocolate and continue cooking until thick. Remove from heat. Blend in vanilla and cool. Serves 2.

Nutrition information per serving: 397 calories, 3 grams protein

Fruit Mousse

6 ounce package flavored gelatin

1 cup boiling water

¼ cup sugar

1 cup crushed ice

1 cup ricotta cheese

1 cup frozen fruit

Mix gelatin and boiling water; place in blender. Add water to ice to make 1 cup and place in blender. Add ricotta, sugar, and fruit. Blend. Pour into dishes. Makes six ¾-cup servings.

Nutrition information per serving: 233 calories, 11 grams protein

Apple-Cinnamon Pancakes

- 1 egg
- 1½ cups enriched milk (see first recipe)
- 1 tablespoon canola oil
- ½ cup applesauce
- 1 cup wheat flour
- ½ teaspoon cinnamon
- ½ teaspoon salt
- 1 tablespoon baking powder

In a mixing bowl, beat egg until yellow. Add milk, oil, and applesauce, and stir until blended. Measure flour, cinnamon, salt, and baking powder on top of the liquid mixture. Stir until dry ingredients are moistened. Mixture will be slightly lumpy. Cook on griddle. Top with your favorite topping. Makes 4 pancakes.

Note: You can also use pancake mix, adding enriched milk and applesauce instead of water.

Nutrition information per pancake: 180 calories, 7 grams protein

Creamy Potato Salad

- 1/3 cup plain yogurt (low-fat or whole)
- 1/3 cup mayonnaise
- ¼ cup finely minced onion
- 1 sprig parsley, finely chopped
- ¼ cup chopped celery or green pepper
- 2 potatoes, boiled and diced
- Salt to taste

Stir together yogurt, mayonnaise, onion, parsley, celery, and pepper. Stir in diced potatoes. Cover and refrigerate for several hours. Serves 4.

Nutrition information per serving: 210 calories, 3 grams protein

Macaroni and Cheese

- 1 to 2 tablespoons butter or margarine
- 1 tablespoon flour
- 1 cup enriched milk (see first recipe)
- 1 cup shredded cheddar cheese
- 1 teaspoon minced onion
- 1 teaspoon dry mustard
- 2 cups cooked macaroni
- Salt and pepper to taste

In a medium-size saucepan, melt the butter over medium heat. Add the flour, stirring constantly with a whisk until the butter is completely absorbed and the mixture starts to bubble slightly. Add the milk all at once, and stir constantly until the sauce thickens enough to coat the back of the spoon. Add cheese, mustard, and onion, stirring until cheese is melted. Stir in the cooked macaroni. Add salt and pepper to taste. Place mixture in a greased one-quart casserole dish. Bake uncovered at 400 degrees for 15 minutes or until top is slightly browned. Makes 6 servings.

Nutrition information per serving: 285 calories, 14 grams protein

Mushroom Sauce

- 1 can condensed cream of mushroom soup
- ½ cup evaporated milk
- Dash of garlic powder

Mix all ingredients in saucepan and heat just to boiling point. Remove from heat immediately. Serve over meats, fish, chicken, pastas, potatoes, or cooked vegetables. Makes three ½-cup servings.

Nutrition information per serving: 136 calories, 4 grams protein

For more information about good nutrition during cancer treatment, call the dietitians at the Linda B. and Robert B. Wiggins Wellness and Integrative Health Center:

801-587-4585

Fatigue

It is very common to feel tired and weak during treatment for cancer. Feeling fatigue can lead to distress, as it may lower your ability to do the things you are used to in daily life. If you have fatigue, you may feel you need to rest more than seems normal or reasonable.

Symptoms of Fatigue

- General weakness or limb heaviness
- Lower concentration or attention
- Problems with memory and thinking clearly
- Less interest in usual activities
- Hard time doing daily tasks
- Sleep problems such as unable to sleep or still feeling tired after waking up

Cancer-related fatigue is different than other types of fatigue. It can be overwhelming. Resting doesn't always help it go away, and it can take a while for fatigue to get better, even after treatment ends.

FEELING WEAK AND TIRED IS A COMMON SIDE EFFECT OF CANCER TREATMENT. TALK TO YOUR HEALTH CARE TEAM IF IT IS TOO MUCH.

If you feel overwhelmed, it may help to remember

- Fatigue is normal during cancer treatment.
- Fatigue does not mean the cancer is getting worse.
- Fatigue does not mean the treatment is not working.
- Fatigue is not caused by a lack of willpower. It is OK to ask for help if you need it, and tell your care team.

How Your Doctor or Nurse Can Help

Your health care team will review your overall health to find out if other factors are making your fatigue worse:

- Anemia
- Emotional distress or depression
- Infection
- Nutrition problems
- Pain
- Other illnesses
- Sleep problems

Your health care team can recommend medicines to improve your energy level or help you sleep. Be sure to talk to your care team before taking any over-the-counter medicines, and keep them updated about how you feel, especially if you notice any sudden changes.

Ways to Help Manage Fatigue

Walking and other exercise can help you feel better. Ask your health care team what level of exercise is right for you.

The Linda B. and Robert B. Wiggins Wellness and Integrative Health Center at Huntsman Cancer Institute (HCI) offers many services that can help with fatigue.

These include one-on-one exercise programs with a cancer exercise specialist, group fitness classes, acupuncture, dietitians, and more. Call 801-587-4585 or visit www.huntsmancancer.org/wellnesscenter.

More Tips to Manage Fatigue

Save Your Energy

- Set priorities and give tasks to others who offer to help.
- Take short naps and rest often. Avoid sleeping too much during the day, which makes it hard to sleep well at night.
- Use a cane or walker for assistance if you need it.

Find Relaxing Activities

- Get together with small groups of friends and family for short periods of time.
- Share your feelings and experiences by keeping a journal or joining a support group.
- Listen to music.
- If it is hard to concentrate, read short stories and articles.
- Stay connected with friends and family through e-mail and social media websites.
- Go outside to bird watch or visit a park.

Other Ideas

- Meet with a dietitian from the HCI Wellness Center who can suggest dietary changes to help with fatigue.
- Go to bed and wake up at the same time each day.
- Avoid caffeine.
- Exercise early in the day instead of before bed.

HCI Resources to Help You Feel Better

The Linda B. and Robert B. Wiggins Wellness and Integrative Health Center: 801-587-4585 or www.huntsmancancer.org/wellnesscenter

Patient and Family Support Social Workers:
801-213-5699 or www.huntsmancancer.org/pfs

G. Mitchell Morris Cancer Learning Center:
1-888-424-2100 or www.huntsmancancer.org/clc

Fever During Chemotherapy Treatment

Cancer patients need to be extra careful when they get a fever. Fever is a higher than normal body temperature. It can be a sign that you have an infection. Often it is the only sign. An infection that happens when you are taking chemotherapy (chemo) can be life-threatening.

What to Do

Keep a fever thermometer nearby and know how to use it. You can buy a thermometer at any drugstore.

Take your temperature every 2–3 hours any time you feel any of these things:

- Warm
- Flush
- Chilled
- Unwell

Write down your temperature each time you take it. This information can help your cancer care team.

If your temperature is 100.4°F (38°C) or higher, call your cancer care team right away and follow their instructions.

Do not take any medicine to lower your temperature unless your cancer care team says it is OK.

If you cannot reach your cancer care team or the Huntsman Cancer Institute oncologist on call, go to the emergency room right away. Be sure to tell the person checking you in that you are a cancer patient taking chemo.

Other Signs to Watch For

You may also notice other changes that could be signs of infection:

- Feeling more tired than usual
- Headache
- Sore throat
- Body aches
- Rashes on skin
- New redness or swelling
- Pus or yellow fluid coming from a wound
- New cough or shortness of breath
- New belly pain
- Pain when urinating

If you have any of these signs along with fever, tell your cancer care team.

Reaction to Chemotherapy

Some patients get fever and other flu-like signs such as body aches and headaches as a side effect of chemo. Your cancer care team cannot tell whether your fever comes from an infection or a side effect without seeing you. **Be sure to call your team any time you have a temperature 100.4°F (38°C) or higher.**

If your temperature is

100.4°F (38°C) or higher,

call your cancer care team right away—day or night.

Contact your cancer care team via MyChart or call _____.

In an emergency, call 911 or go to your closest emergency department.
Tell them you are a cancer patient taking chemotherapy.

Hair Loss

Hair loss is a common side effect of chemotherapy and radiation therapy. These treatments target cells in the body that grow very quickly- which include cancer cells as well as hair cells.

Hair loss can happen anywhere on the body. It usually begins two to three weeks after your treatment.

The amount of hair you lose depends on the type of chemotherapy you get and the amount and location of radiation. Some treatments may cause thinning only you will notice, while others can cause total hair loss. Chemotherapy causes more hair loss on the head and in the pubic area. Radiation therapy causes hair loss in the area that gets treatment.

What you should know about hair loss

- Your scalp may be tender before your hair begins to fall out.
- Your hair should start to grow back within four to six weeks after the last dose of chemotherapy. Hair may take longer than six weeks to grow back after radiation therapy.
- Most methods of trying to prevent hair loss are difficult, costly and not always effective. We do not generally recommend them. Discuss options with your care team.
- After treatment, your hair may grow back with a different color and/or texture.

What can I do before my hair falls out?

- Visit a hair stylist or wig store before treatment begins. This may help you feel more prepared to manage hair loss.
- Use a soft-bristle brush or wide-toothed comb.
- Avoid braiding or pulling your hair into a ponytail, which can increase hair loss.
- Consider asking your kids or loved ones to help you cut or shave your hair. This can help you all adapt to the change.

Other helpful suggestions

- Use a head covering for protection from sun, wind and cold.
- Use sunscreen on your scalp.
- Use a soft, satiny pillowcase.
- Avoid hair treatments or chemicals on the scalp.
- If loss of eyelashes causes irritation in your eyes, talk to your treatment team about eye drops.
- Share your thoughts and feelings with a loved one or in a support group.

For more information

Ask your doctor or nurse, or visit the Cancer Learning Center, to get a copy of our [Wig and Head Cover Resources](#) handout.

Wig and Head Cover Resources

This information is meant to assist our patients. Huntsman Cancer Institute does not endorse any business listed.

American Cancer Society

Hair loss resources
 1-800-227-2345
cancer.org

Beautiful Cancer Wigs Program

Specially designed wigs for patients
 1-800-395-4420
beautifulcancerwigs.com

Paula Young Wigs

1-800-364-9060
paulayoung.com

Heavenly Hats

Free new hats
 920-362-2668
heavenlyhats.org

SALT LAKE COUNTY

Apollo Hair Systems

5525 South 900 East
 Salt Lake City, UT 84117
 801-262-8870
apollohairslc.com

Carol's Mastectomy Shoppe

3165 South Main Street Salt Lake City, UT 84115
 801-483-1262
carolsmastectomyshoppe.com

Creative Wigs

Staff beautician, 10% patient discount, wigs and wig care
 1063 East 3300 South
 Salt Lake City, UT 84106
 801-486-4604

10318 South Redwood Road
 South Jordan, UT 84095
 801-553-0669
creativewigs.com

Hats with Heart

530 West 9460 South, Ste. A
 Sandy, UT 84070
 801-567-0066
hatswithheart.com

Head Covers by Joni

Staff beautician, 20% patient discount
 2286 East 3300 South
 Salt Lake City, UT 84109
 801-467-5665 or 1-866-700-5664

Jean Paree

4041 South 700 East, Ste. 2 Salt Lake City, UT 84107
 801-328-9756
jeanparee.com

Steve's Wig Boutique

2039 East 3300 South Salt Lake City, UT 84109
 801-486-2611

UTAH COUNTY

Creative Wigs

Staff beautician, 10% patient discount, wigs and wig care
 208 East University Parkway
 Orem, UT 84058
 801-224-5070
creativewigs.com

Feminine Forms

Wigs, scarves, and caps
 345 South 500 East
 American Fork, UT 84003
 801-770-0600
feminine-forms.com

Lynne's Wig Boutique

194 North West State Road
 American Fork, UT 84003
 801-763-1693
lynneswigboutique.com

K's Wig Shop

1090 East 30th Street
 Ogden, UT 84403
 801-388-4944
kswigshop.com

Robert's Wigs and Fresh Hair

1170 West Riverdale Road
 Riverdale, UT 84405
 801-393-9003

WASHINGTON COUNTY

Carol's Post-Mastectomy

1490 E Foremaster Drive Ste 320
 St. George, UT 84770
 435-688-0452
carolsutah.com

Creative Wigs

Staff beautician, 10% patient discount, wigs and wig care
 900 South Bluff Street
 St. George, UT 84770
 435-652-1181
creativewigs.com

OTHER RESOURCES

Look Good...Feel Better

Skin and makeup techniques to help with cancer side effects
 1-800-395-5665
lookgoodfeelbetter.org

TLC Catalog-ACS

Wigs, hair loss products, how-to info
 1-800-850-9445
tlcdirect.org

Insomnia

What is insomnia?

Most adults need between 7 and 8 hours of sleep each night. Anyone can have 1 or 2 sleepless nights. When you can't fall asleep or stay asleep most nights, you may have insomnia. Not getting enough sleep can cause problems including:

- Stress
- Memory and decision-making issues
- Increased pain
- General poor health

Who gets insomnia?

Insomnia is common or likely to occur in people with one or more of these traits:

- Female
- Age 50 or older
- History of sleep problems

Other issues contributing to sleeping difficulties:

- Irregular sleep schedule or napping during the day
- A partner who snores or noise
- Consuming caffeine 4-6 hours before bed
- Alcohol or tobacco
- Mental problems such as stress or anxiety
- Medical conditions such as cancer

Cancer can make it hard to sleep. Pain, anxiety, night sweats, and problems with digestion or breathing may keep you awake.

Some cancer treatments can also create sleep problems:

- Chemotherapy
- Steroids
- Seizure, nausea, and thyroid medications
- Antidepressants
- Stimulants

If you have trouble sleeping, talk to your health care team. They can help.

Tips for Sleeping Better

- Go to bed at the same time each night, and wake up at the same time each morning.
- Avoid napping or limit naps to 30 minutes or less during the day.
- Get regular exercise.
- Spend some time outdoors in the sunlight every day. Remember to protect your skin with clothing and sunscreen.
- Try to keep your eyes closed when in bed, even when you're not sleeping.
- Avoiding negative thoughts, use guided relaxation, breathe with purpose or talking positively to yourself to help overcome these negative thoughts.
- Meditation, practicing mindfulness activities.
- Get acupuncture or a massage to help you relax.

Changes in your bedroom can also help you sleep better:

- Use curtains to block light from your bedroom.
- Make sure your bedroom is quiet and at a comfortable temperature.
- Put the alarm clock somewhere you can't look at it.
- Use your bed only for sleep. Do not lie in bed and watch TV or read.

If sleeping problems become serious, your doctor may prescribe a sleep medication for a short time. Other medications may also help. For example, if pain keeps you awake, pain medicine may help you sleep.

Over-the-counter medicines and herbal remedies may interfere with your cancer treatments. Do not use them without talking to your health care team first.

The social workers on HCI's Patient and Family Support team can teach meditation and relaxation skills to help you sleep better. To learn more or make an appointment, call 801-213-5699.

HCI's Linda B. and Robert B. Wiggins Wellness and Integrative Health Center offers acupuncture and massage. To learn more or make an appointment, call 801-587-4585.

Mucositis

What is mucositis?

Mucositis is sores or swelling inside the mouth. This is a common side effect of chemotherapy, radiation therapy, and bone marrow transplant.

It is important to eat well during cancer treatment and have good oral hygiene to help prevent mouth sores.

What should I do if I have mucositis?

- Ask your health care provider about medicine you can apply directly to the sores to ease the pain.
- Drink at least 8 to 10 cups of liquid each day.
- Brush your teeth three times a day with a soft toothbrush. If the toothbrush is too hard on your gums, try using swabs or gauze.
- Rinse your mouth with a salt water solution (see below) four times a day.
 - Salt Water Solution
 - 1 cup warm water
 - 1/8 teaspoon salt
 - 1/8 teaspoon baking sodaSwish and spit small amounts and then rinse your mouth with plain water.

How is mucositis treated?

Your health care team can help decide the best treatment, which may include some of these:

- Pain medicine
- Antifungal medicine
- Changes in your chemotherapy or radiation treatment

IF YOU FEEL SICK, TAKE YOUR TEMPERATURE. CALL YOUR DOCTOR OR NURSE IF YOU HAVE A TEMPERATURE OVER 100.3°F.

Helpful Suggestions

- Eat foods cold or at room temperature.
- Eat soft foods such as ice cream, eggs, custard, mashed potatoes, bananas, rice, and pasta.
- Eat well-cooked protein such as chicken.
- Use fluids to soften hard foods.
- Use a mouth moisturizer such as Biotene®, which is available at many pharmacies.
- Use lip balm.
- Avoid things that can irritate the mouth such as alcoholic beverages, spicy or acidic foods, tobacco products, and mouthwashes.
- Carry a water bottle with you. Drinking plenty of water helps keep the mouth moist.

If you are neutropenic and at risk of infection, make sure to ask your doctor or nurse about the foods that are best for you. Registered dietitians in the Linda B. and Robert B. Wiggins Wellness and Integrative Health Center can also help you make a diet plan. Call 801-587-4585 to make an appointment or for more information.

When should I call my doctor or nurse?

Call if any of the following things happen:

- If you have difficulty breathing.
- Your mouth does not heal or gets worse.
- You have white patches on your lips, gums, or tongue.
- You have a fever over 100.3°F

Doctor's Number: _____

Nausea and Vomiting

How is nausea treated?

Nausea is treated with medicines called antiemetics. Sometimes it takes more than one medicine to get relief. Your health care team will help you find the best medicine for you. There are many types of antiemetics, so tell your doctor if your nausea is not under control within 24 hours.

What should I do if I have nausea?

- Fill your prescription for antiemetics.
- Take your antiemetics as prescribed.
- Eat five or six small meals during the day instead of one or two large meals.
- Choose foods that are low in fat.
- Choose cool foods rather than hot.
- Take medicine to control pain as prescribed.
- Breathe deeply and slowly to help ease nausea.
- Use distraction techniques such as walking, listening to music, watching a movie, or doing other activities you like.
- Turn lights low.
- Try fanning cool air on your face.
- Drink plenty of fluids.
- Take good care of your mouth. Brush your teeth three times a day and rinse with salt water solution.
 - Salt Water Solution
 - 1 cup warm water
 - 1/8 teaspoon salt
 - 1/8 teaspoon baking soda
 - Swish and spit small amounts and then rinse your mouth with plain water.

YOUR DOCTOR CAN PRESCRIBE MEDICINE TO HELP EASE YOUR NAUSEA. BE SURE TO TELL YOUR CARE TEAM IF YOU NEED RELIEF.

When should I call my doctor or nurse?

Call your doctor if any of these happen:

- You can't keep down fluid for 24 hours.
- You have vomited more than six times in 24 hours.
- You still have nausea and vomiting after you take antiemetics.
- Your symptoms of nausea or vomiting do not follow their usual pattern.

Helpful Suggestions

- Keep track of when your nausea occurs, what seemed to start it, and what helps make it better.
- Give your health care provider a list of all medications you take. Some medicines can cause nausea.
- Have someone with you the first time you take your antiemetic. Some medicines to control nausea can make you feel sleepy.

The Linda B. and Robert B. Wiggins Wellness and Integrative Health Center at Huntsman Cancer Institute offers acupuncture, massage, and other services that can help control nausea and other cancer-related symptoms. Call 801-587-4585 for more information.

Medicines to Prevent or Treat Nausea

Your chemotherapy regimen is called: _____

You received these chemotherapy drugs today: _____

| Take anti-nausea medicines as scheduled or as needed. Your nurse has marked the medicines you are taking. | | | |
|---|-----------------------------------|---|--|
| ✓ | Medicine Name | Possible Side Effects | Schedule/Other Instructions |
| | Zofran® (ondansetron) | constipation, headache, fatigue, dizziness | If you received Aloxi® after your infusion, do not take Zofran® for three days. |
| | Aloxi® (palonosetron) | constipation, headache, fatigue | You received this in the infusion room today. It lasts about 3-5 days. |
| | Decadron® (dexamethasone) | sleeplessness, heartburn when taken by mouth, increased appetite, hiccups | This helps other anti-nausea medicines work. |
| | Cinvantia® or Emend® (aprepitant) | diarrhea, fatigue, hiccups, constipation, headaches | |
| | Ativan® (lorazepam) | drowsiness, dizziness, fatigue | Swallow the pill or put it under your tongue. You can cut the pill in half for a smaller dose. |
| | Compazine® (prochlorperazine) | drowsiness, constipation, dry mouth, jitters | |

Other important information

- Wash your hands often, especially before eating. Everyone around you should also wash their hands often.
- Drink enough fluids to keep your urine light yellow in color.
- Ask your care team if you want more information about ways to help with side effects of chemotherapy.
- Visit the Linda B. and Robert B. Wiggins Wellness and Integrative Health Center to learn about services such as acupuncture that can help with nausea. Stop by the first floor of the HCI Cancer Hospital North or call 801-587-4585.

When to call for help

- You are still sick to your stomach or throwing up after taking your medicine.
- You can't keep fluids down.
- Call RIGHT AWAY if your temperature is higher than 100.4°F (38°C).
- Call anytime you feel sick, even if your temperature is normal.

Monday-Friday 8 a.m.-5 p.m.

Call 801-585-0100. Ask for your doctor's nurse.

After hours, weekends, and holidays

Call 801-587-7000. Ask for the doctor on call.

Nerve Pain

What is nerve pain?

Nerve pain happens when a nerve has damage or does not work right. Nerve pain can develop without a specific cause. The best treatment depends on the severity and causes of the pain, treatment side effects, and your overall health.

What medicines help nerve pain?

Several medicines help treat nerve pain. Not all medicines listed below are right for every type of pain.

Anticonvulsants. These drugs are often a first choice to treat nerve pain. They were first made to control seizures. Their effects on the nervous system also help dull pain. Side effects may include dizziness and drowsiness.

Antidepressants. Some drugs first made to treat depression now treat nerve pain. There are two major types:

- **Tricyclic antidepressants** have been used for decades. Many studies show they can help nerve pain. However, these drugs can cause side effects like dizziness, urinary problems, blurred vision, and upset stomach. They may not be safe for some patients such as those with heart problems.
- **SSRIs/SNRIs** (serotonin and norepinephrine reuptake inhibitors) are newer drugs that have fewer side effects than tricyclics. They might be safer for some patients. Side effects include nausea and drowsiness.

Using these medicines for nerve pain can improve pain and mood. Pain and depression often happen together. Chronic pain can make a person depressed, and depression often makes pain worse.

Some patients worry that taking antidepressants implies the pain is just “in their heads,” but that’s not the case at all. These medicines just happen to help both depression and pain.

Topical treatments. These are applied on the skin over the painful area. Gels and patches are two examples. These work best for small, local areas of pain. They have very few side effects.

Opioid pain medicines. For severe nerve pain, opioids are sometimes used. They have many side effects. Doctors prescribe opioids only when other methods don’t work. Opioids pose some risk of addiction and abuse. It is very important to take opioids as prescribed.

Other painkillers such as NSAIDs (nonsteroidal anti-inflammatory drugs) can help. However, NSAIDs don’t seem to work as well for nerve pain as they do for other types of pain.

Combination treatments. Your doctor might prescribe more than one medicine. Combining certain drugs is sometimes better at treating nerve pain than using one alone.

What other treatments help nerve pain?

While medicines are often the first choice for nerve pain, these methods may also help:

Electrical stimulation. You feel nerve pain because a damaged nerve sends an electrical signal to your brain. Some treatments for nerve pain work by sending out electrical impulses that interrupt or block the pain signals.

One example is TENS (transcutaneous electrical nerve stimulation). This involves a small device that sends a mild electric current through your skin. TENS is painless and has very low risks.

Other methods are more complex and require surgery. Most often, doctors use surgical approaches only when no other methods work.

Lidocaine. This medicine numbs an area of the body. A doctor injects it through a vein (IV).

Acupuncture. This therapy uses fine needles placed through the skin at specific points on the body.

Supportive Oncology and Survivorship (SOS) Service

The SOS Service at Huntsman Cancer Institute (HCI) provides support for cancer patients, including help with pain management and other symptoms or concerns.

Specialists from several HCI clinics and programs are part of the SOS Service:

- Supportive Oncology Clinic
- Linda B. and Robert B. Wiggins Wellness and Integrative Health Center
- Patient and Family Support (social workers)
- Spiritual Care Services (chaplain)

Call the SOS Service at 801-213-4246, with questions or concerns, Monday - Friday from 8 a.m. to 4 p.m.

Neutropenia

What is neutropenia?

Neutropenia means that a person has a low amount of neutrophils, a special white blood cell. White blood cells help your body fight infection. Chemotherapy or radiation therapy may cause neutropenia. Your risk of infection is higher if you have a low amount of white blood cells.

What is febrile neutropenia?

Febrile neutropenia is having a fever when you have a low amount of white blood cells in your body. This is very serious. Febrile neutropenia needs immediate medical attention. Do not take any medicine to treat your fever until you have been directed by your treatment team. This includes over-the-counter pain or fever reducing medicine.

Important Facts

- You are neutropenic when the amount of white blood cells in your body is low.
- When you have neutropenia, a simple infection is dangerous to your health.

Preventing Infection During Neutropenia

- Wash your hands often with soap, especially before eating, after using the bathroom, and after sneezing, coughing, or blowing your nose.
- Keep up your daily personal hygiene habits—bathing, showering, brushing teeth—even when you feel tired or sick.
- Do not put anything in the rectum—no enemas or suppositories.
- Women should not use tampons, vaginal suppositories, or douches.
- Avoid constipation. Ask your doctor or nurse if you should use a stool softener.
- Take your temperature if you feel sick.

Other Ways to Help Prevent Infection:

- Avoid large crowds and sick people.
- Talk with your doctor about getting yearly flu vaccines (avoid nasal spray vaccines).
- Stay away from children who recently had live virus vaccines such as the chickenpox vaccine.
- Wash fresh fruit and vegetables before eating.
- Avoid being near fresh-cut flowers or other sources of standing water that can have bacteria.

When should I call my doctor or nurse?

- If your fever is greater than 100.3°F, call your doctor or nurse right away.
- Call your health care provider if you have any of these symptoms:
 - Shaking chills or feeling like you have the flu
 - Sore throat or coughing
 - Burning or pain when you pee
 - Red or swollen area on the body

When you are neutropenic, you may get a fever even without an infection. Medical tests can tell if you have an infection or not.

If you do have an infection, your health care provider may give you antibiotics to treat it, and may also give you a medicine to boost blood cell growth.

If you are very sick, you may need to stay at the hospital to receive antibiotics through a vein in your arm.

Peripheral neuropathy is damage to the nerves in the arms and legs. Some chemotherapy drugs can cause it. It may take as long as 18 months after chemotherapy for peripheral neuropathy to get better. Sometimes, it does not go away completely.

Signs of Peripheral Neuropathy

Peripheral neuropathy happens in the fingers, hands, toes, and feet. Here are signs to watch for:

- Burning
- Tingling
- Numbness
- Feeling like walking on clouds
- Unsteadiness when you stand or walk
- Dropping things from your hands
- Less ability to feel heat and cold

If you have any of these signs, talk with your care team.

Sometimes certain medicines taken together may cause peripheral neuropathy. Tell your care team about all the medicines you take. Be sure they know about herbal and over-the-counter products, too.

Helpful Tips

Protect your hands and feet from very hot and very cold temperatures. Burns or frostbite can happen when you cannot feel heat and cold.

Wear gloves to protect your hands when you wash dishes or garden. Also wear gloves to keep your hands warm in cold weather.

Use a thermometer instead of your hand or foot to check the temperature of your bath water.

Wear socks and shoes with closed toes to protect your feet.

Choose shoes with soles that do not slip.

Be extra careful when using knives, scissors, nail clippers, or tools.

Use nonslip bath mats in the tub or shower to prevent falls.

Keep rooms well-lit.

Keep loose rugs, toys, and other items that might cause you to fall off your floors.

Treatment

Your care team may recommend one or more of these ways to help:

- Exercise, massage, and relaxation
- Creams to put on your skin
- Acupuncture
- Prescription medicines
- Changes in your cancer treatment

When Should I Call My Care Team?

Call your care team if any of these things happen:

- You have trouble tying your shoes, buttoning your clothing, or other tasks for daily life.
- You trip, fall, or feel unstable on your feet.
- You notice changes in how your hands or feet work.
- Your signs of peripheral neuropathy get worse.

Helpful Huntsman Cancer Institute Services

Massage, acupuncture, fitness, and exercise classes

Linda B. and Robert B. Wiggins Wellness and Integrative Health Center

Call 801-587-4585

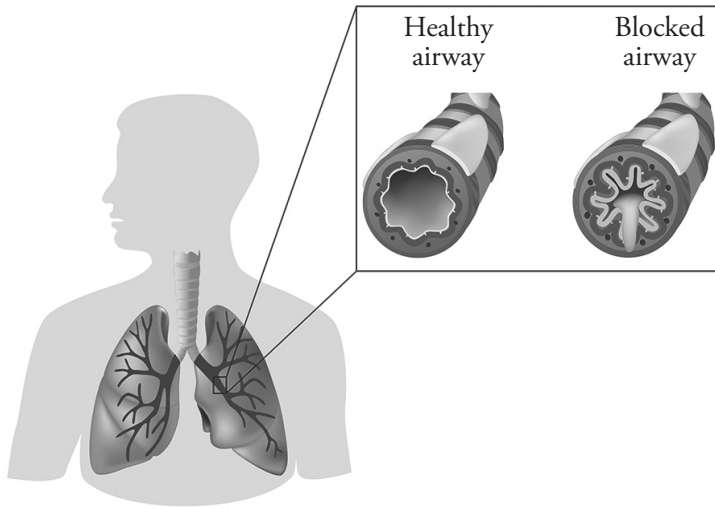
Visit www.huntsmancancer.org/wellnesscenter

Help with relaxation, meditation, and other coping skills from our social workers

Visit www.huntsmancancer.org/pfs

What is pneumonitis?

When your lungs are irritated, the passages that air goes through when you breathe can swell partly closed. This is called pneumonitis (*new-mo-night-is*). It can make breathing hard, cause coughing, and make you feel weak.



Here are some possible causes for pneumonitis:

- Infection such as pneumonia
- Radiation therapy
- Bad reaction to medicine
- Breathing in harmful things
 - Chlorine fumes
 - Mercury fumes
 - Some kinds of mushroom spores
 - Some other chemicals
 - Tobacco smoke

What are the signs?

These are signs of pneumonitis:

- Cough
- Feeling weak and uncomfortable
- Chest tightness
- Shortness of breath
- Fast, shallow breathing
- Feeling very tired
- Headache
- Weight loss

Many other things can cause these signs. If you have any of them for more than 2 weeks, call your doctor. Long-lasting pneumonitis can cause permanent lung damage.

How is it diagnosed?

Your doctor can check for pneumonitis with some tests:

- Blood test
- Chest x-ray
- Chest CT scan
- Lung function tests

How is it treated?

Your doctor can give you medicines to help you feel better.

When you have cancer, you need to protect yourself and your partner during sex. Taking precautions helps in these ways:

- Protects you from infections. Some cancer treatments can weaken your immune system.
- Protects your partner. It keeps traces of cancer medicines from passing to your partner.
- Prevents pregnancy. Cancer treatment can harm a developing baby.

Protecting Yourself

Follow these precautions when you receive any type of cancer treatment:

- Wash your hands and genitals before and after all types of sexual activity.
- Use a condom to prevent infections and diseases that are passed on by sex.
 - Condoms are available for both males and females.
 - Never use both a male and female condom together.
 - Never reuse condoms.
- During male oral sex, use a male condom. During female oral sex, use a plastic film or dental dam.

Follow these precautions for specific types of cancer treatment.

When receiving chemotherapy. Some treatments make you more likely to get infections. You could get urinary tract or bloodstream infections. Ask your doctor whether having sex raises your risk for infection.

When receiving radiation therapy. Having sex is OK for men who get radiation. For most women who get radiation, it's OK unless you have genital bleeding.

For women, radiation to the lower belly can make sex hurt. If you get radiation in this area, wait to have sex for 2–4 weeks after treatments end.

After surgery. Some women have their uterus removed. This surgery is called a hysterectomy. If you had this operation, you need to heal for 4–6 weeks before having sex.

Protecting Your Partner

Your body fluids may contain traces of the cancer medicines you take. This can pose a risk to your sexual partner. You or your partner may want to think about using a barrier device for 1 week after each treatment. The table on page 2 gives examples of barrier devices. Talk with your doctor to learn if the medicines you take create this risk.

Protecting against Pregnancy

Talk to your doctor about how long after your treatment you should avoid getting pregnant. Most patients need to avoid pregnancy for 6 months to 1 year. The time may be shorter or longer, depending on your situation.

The table on page 2 shows methods of birth control. Most doctors recommend using TWO methods when you must avoid pregnancy. One of the methods should be a male or female condom.

You may not be able to use some types of birth control such as birth control pills. Talk to your doctor to find the best and safest methods of birth control for you.

If you become pregnant in spite of your precautions, talk to your doctor right away.

For information about cancer and having children, contact the Utah Center for Reproductive Medicine at the University of Utah.

Call 801-581-3834

Visit healthcare.utah.edu/ucrm

continued on page 2

Effective Birth Control Methods

| Method | Examples | Comments |
|--------------------------------|--|--|
| Total abstinence | Avoiding sex entirely | This is the most effective method of birth control. |
| Hormonal methods for women | <ul style="list-style-type: none"> • Birth control pills • Birth control shots or injections • Birth control implants • Birth control patches • Hormonal intrauterine devices, or IUDs • Vaginal rings | Hormonal methods may not be best for you. Talk with your doctor about the best method for you. |
| Non-hormonal methods for women | <ul style="list-style-type: none"> • Birth control sponges • Cervical caps with spermicidal (sperm-killing) foam, jelly, or cream • Copper IUDs • Diaphragm with spermicidal foam, jelly, or cream • Female condoms | Female condoms may lower the risk of infections. Do not use them together with a male condom. |
| Female sterilization surgeries | <ul style="list-style-type: none"> • Fallopian tubal ligation, or having tubes tied • Removal of BOTH ovaries • Hysterectomy, or removal of the uterus | Removal of one ovary does NOT protect you from pregnancy. |
| Barrier devices for men | Condoms, preferably latex | Condoms may lower the risk of infections. Do not use them together with a female condom. |
| Male sterilization surgery | Vasectomy, or having tubes cut to keep sperm from leaving the body | |

Withdrawing before ejaculation, or “pulling out,” is NOT an effective form of birth control.
 Avoiding sex during ovulation (calendar method) is also NOT effective.

Side Effects of Steroids

Steroids are like the hormones your body makes at times of stress. When given as medicine, steroids can help reduce swelling and fatigue, improve appetite, and more.

There are many types of steroids. These are some common names: dexamethasone, prednisone, methylprednisolone, and hydrocortisone.

Steroids may have side effects based on how long you take them. Your doctor will try to give steroids for the shortest time possible to help with your symptoms.

The lists below show the most common side effects from steroids given over a short amount of time (one month or less) and a long amount of time (more than one month).

| Side Effects | Self-Care Tips |
|---------------------------------------|---|
| Common Short-Term Side Effects | |
| More hungry | Continue to eat a healthy, well-balanced diet. |
| Trouble Sleeping | If you take a steroid once a day, take it in the morning. If you take a steroid twice a day, take one in the morning and then one in the afternoon, no later than 5 p.m. |
| Heartburn | Take with a snack or food. Your doctor can also prescribe a drug to help prevent heartburn. |
| Hiccups | Your doctor may decrease your dose or prescribe a drug to relax the muscle that causes hiccups. |
| High blood sugar | Your care team may check your blood sugar during each clinic visit. If you have diabetes, your doctor may need to change the dose or type of drugs you take to control your diabetes. |
| High blood pressure | Your care team will check your blood pressure during each clinic visit. If you already have high blood pressure, your doctor may need to change the dose or type of drugs you take to control it. |
| Changes in mood | Steroids can make you feel restless or moody. Being active such as going for a walk can help. Let your doctor know if changes in mood seem to be too much. |
| Common Long-Term Side Effects | |
| Infection | Steroids can make your immune system weak over time, which increases risk of infections. Your doctor may recommend you get a flu shot every year. You may also be prescribed a drug to help prevent a type of lung infection. |
| Osteoporosis (weak bones) | Your doctor may recommend you take an over-the-counter calcium and vitamin D supplement daily. |
| Changes in vision | You should make an appointment with your eye doctor once a year while on steroids. |
| Muscle weakness | Major muscle weakness can happen if you are on steroids for a long time. Stay as active as you can each day. Exercising 30 minutes each day can help keep your muscles and bones strong. |
| Round “moon face” | Your face may develop a moon-like shape due to extra fat buildup. Tell your doctor if this bothers you. |
| Swelling in legs or feet | Your doctor may recommend wearing compression stockings. Tell your doctor if you have swelling that bothers you. |

Skin Care During Chemotherapy

Some chemotherapy drugs can cause changes to your skin or nails. These changes can include the following:

- Itching, dryness, redness, rashes, and peeling
- Acne-like rash
- Increased sun sensitivity
- Darkened, yellowed, brittle, and cracked nails
- Darkened veins in the area where the chemotherapy goes, if the chemotherapy is given through your vein

Let your doctor or nurse know if you have any of these changes.

Here are some suggestions to help relieve skin problems caused by chemotherapy.

Itching, dryness, redness, rashes, and peeling

- Drink plenty of water.
- Avoid long, hot showers. Limit tub baths to less than 30 minutes. Use lukewarm water and mild soap. Gently pat skin dry with a soft towel.
- Avoid soaking in hot tubs or spas. They can increase the risk of infection from bacteria.
- Use a moisturizing lotion for sensitive skin over your entire body. Put it on while your skin is damp from a bath or shower, and reapply often.
- Choose body care and cleaning products (soap, shampoo, lotion, and laundry detergent) that are free of dye, alcohol, and perfume.
- Do not wear perfumes, colognes, and aftershaves.
- Choose loose-fitting clothes and bed sheets made of soft cotton.

Acne-like rash

- Do not use acne skin care products. They can make the rash worse.
- Do not pick at or pop the pimples the rash. This can make it worse or cause an infection.
- Keep your face clean. Use gentle cleaners for sensitive skin. Your doctor may recommend medicated creams or soaps.
- Use lotions for sensitive skin. Avoid creams with mineral oil, petrolatum, or lanolin.
- Use SPF 30 or higher sunscreen when outside.
- If you wear makeup, be sure it is for sensitive skin.

- Use a mild shampoo if the rash is on your scalp.
- Do not shave areas that have the rash.
- If your doctor prescribes an antibiotic, it is important to take it as directed.

Sun sensitivity

- Avoid direct sunlight. Stay in the shade as much as possible when outdoors.
- Wear protective clothing outdoors, including long pants or skirts, long-sleeved shirts, and a wide-brimmed hat.
- Do not use a tanning bed.
- Use SPF 30 or higher sunscreen every two hours when outdoors. Remember to put it on the back of your neck, the tops of your feet and ears, and the top of your head if you have no hair.
- Use SPF 15 or higher lip balm.

Dark, yellowed, brittle, or cracked nails

- Wear protective gloves when washing dishes, gardening, or doing housework.
- Keep fingernails and toenails clean and trimmed. You may use products that strengthen nails as long as they do not cause irritation.
- Do not bite your nails.
- Do not use artificial nails.
- Do not wear tight-fitting socks and shoes.
- Moisturize your hands and feet often with a lotion or cream for sensitive skin.
- Tell your cancer care team if you have painful, red areas on your fingers or your toes. This may be a sign of infection.

Skin Care During and After Radiation

You are getting radiation therapy as part of your cancer treatment. Radiation can cause changes in your skin. This factsheet talks about these changes and ways to manage them.

Skin Changes

The effects of radiation on the skin depend on a number of things:

- Number of treatments
- Total radiation dose
- Sun exposure of the treated area before radiation
- Overall health

Skin changes happen only where the radiation enters and exits your body. If you aren't sure where these areas are, ask your radiation therapy team.

These skin changes may happen after a week or two of radiation treatment:

- Gets dry or itchy
- Turns darker, pink, or red
- Becomes sore and tender
- Peels or gets blisters

Radiation skin reactions happen slowly over time. They may last for a while after radiation treatments end. Most effects go away after 2–4 weeks. Take care of your skin from the first day of radiation, before side effects happen.

Hair loss. After about two weeks, you will start to lose hair in the area that was treated. It will usually begin to grow back within 3–6 months after radiation treatment ends. Hair loss may be permanent, depending on the amount of radiation you get.

Skin Care Hints

Here are some tips to help protect your skin:

- Wash gently with warm water. Do not scrub. Use your hands, not a washcloth. Pat dry with a soft towel.
- Use a mild soap without alcohol, perfumes, or deodorants.
- Avoid rubbing on treated skin. Wear loose-fitting clothing. Cotton fabrics are the least irritating.
- Do not use adhesive bandages or tape in the treated area.
- Avoid temperature extremes. Ask your radiation care team before using heating pads, hot water bottles, ice packs, or hot tubs.
- Keep treated skin protected from the sun. Use sunscreen with at least SPF 30 when outdoors. Wear a wide-brimmed hat and clothing that covers arms and legs. Do not use tanning beds.
- Use only an electric razor if you shave the area.

Managing Skin Changes

These suggestions can help manage skin changes:

- Use a moisturizing cream, lotion, gel, or oil on the treated area. Choose products for sensitive skin. Avoid products with alcohol, perfume, or deodorant.
- If a product stings, stop using it.
- If your skin becomes tender or itchy, try using a 1% hydrocortisone cream from the drugstore. If necessary, your cancer care team may prescribe a steroid cream.

Don't use lotion right before your radiation treatments. Put it on at least 4 hours before.

Taste and Smell Changes During Cancer Treatment

Cancer and its treatments may change your sense of taste and smell. How foods taste can change from day to day. This can affect your appetite. Choose foods that look and smell good to you. Try experimenting with new foods, marinades, spices and ways of preparing what you eat. Here are some hints that can help your food taste and smell better.

First, you may want to try rinsing your mouth before each meal with the following solution: Dissolve $\frac{3}{4}$ teaspoon salt and 1 teaspoon baking soda in 1 quart of water.

It is also important to practice good oral hygiene.

If Food Has No Flavor

- Use herbs such as mint, basil, oregano, tarragon, and rosemary. Spices such as cinnamon, nutmeg, and paprika can also add flavor.
- Add onion, garlic, ginger, or other seasonings.
- A small amount of butter or other fat can help food taste better.
- A few drops of lemon juice can also brighten the taste of your food. Try marinating your meat in acids such as orange juice or vinegar.
- Use condiments such as barbecue sauce, ketchup, and mustard.
- Try recipes that include vinegar and cooking wine.
- Add fruit to meals or smoothies. Tart fruits may have a better flavor such as citrus fruits and berries.
- Try eating frozen fruit to enhance your taste buds.

If Food Tastes Too Sweet

- Citrus can make foods taste less sweet. Start by adding 5–10 drops of lemon or lime juice. You can add more until the sweet taste is less noticeable.
- Eat salty foods with sweet foods. You can also add a dash of salt to food that is too sweet.
- Add buttermilk, plain yogurt, extra milk, or instant coffee powder to milkshakes or prepared nutritional drinks.

If Food Tastes Too Bitter

- Eat sweet fruits such as melons, mango or cherries with meals.
- Add small amounts of molasses, maple syrup, or agave nectar to your food.
- Use fresh fruits and vegetables in recipes.
- Try cold dishes. They may taste better than hot foods.

If Food Tastes Too Salty

- Try adding $\frac{1}{4}$ teaspoon lemon juice.
- Adding a little sugar may make some foods taste less salty.
- Limit processed, high-salt foods such as chips.
- Use salt-free seasonings and spices.

If Food Tastes Metallic

- Use plastic utensils instead of metal.
- Add fats such as butter or nut butter.
- Try adding sweetener such as molasses, agave nectar, or maple syrup.
- Adding a few drops of lemon juice to your foods may also help.
- If meat doesn't taste the way you remember, try other protein foods such as cheese, cottage cheese, yogurt, beans (examples: black, pinto, lima, red, navy), fresh fish, poultry, nuts, and eggs.
- You can also try water flavoring drops or infusing your water with fresh fruit, mint or combination of both.

If Food Leaves an Aftertaste

- Clean your mouth with a soft toothbrush and gentle toothpaste.
- Use gum, candy, or mints after eating. This will help with aftertastes and keep your mouth moist.
- Sip on orange juice, pineapple juice, lemonade, or limeade after meals.
- Drink plenty of water.

If Food or Drinks Smell Unpleasant

- Choose foods that don't need to be cooked such as cold sandwiches, yogurt and fruit, or cold cereal and milk.
- Serve foods cold or at room temperature. Hot foods can smell stronger.
- Cover drinks with a lid and drink through a straw.
- If possible, stay out of the kitchen while food cooks.
- Use a kitchen fan when cooking.
- Try cooking outdoors.
- Eat in a cool, well-ventilated place where no food is cooking.

The registered dietitians at Huntsman Cancer Institute's Linda B. and Robert B. Wiggins Wellness and Integrative Health Center provide personalized nutrition counseling for patients with all types of cancer.

For more information about taste changes or to make an appointment, call 801-587-4585.

Thinking and Memory Changes During Cancer Treatment

Changes in the way you think can happen during cancer treatment. This factsheet tells about these changes and ways to help manage them.

What are these changes?

You may find it harder to do these things during your cancer treatment:

- Think fast
- Pay attention
- Find the right words
- Do more than one thing at a time
- Remember things
- Learn new things

Sometimes the changes can last for months after your cancer treatment is over.

Talk with your care team if the changes make it hard for you to do these things:

- Take care of yourself
- Take care of your family
- Do your work

Also talk with your care team if the changes get worse over time. They may need to do tests or give you medicines that help.

Think about joining a support group for people with cancer. Talking with others who have gone through these changes may help you.

What can I do about these changes?

Get organized.

- Keep a record of important dates and tasks. You can use a planner, calendar, or cell phone app. Record these types of things:
 - To-do lists
 - Times and locations of appointments
 - Phone numbers
 - Names and descriptions of people you want to remember
- Decide which tasks are most important and do them first.

- Take time every day to update your lists. Cross things off when you finish them.
- Ask other people for help.
- Break big tasks into smaller parts. Take breaks when you feel tired or lose focus.
- Set alarms on your phone or computer to remind you when to do things on your list. You can also set alarms to remind you when it is time to take your medicines.
 - If you don't have a cell phone or computer, write down your daily routine. Post it in a place you will see it often such as the refrigerator or bathroom mirror.
- Pick a certain place to keep things you use a lot such as your car keys or glasses.

Train yourself to focus.

- When people tell you things, write them down. Then repeat them back out loud.
- When you read things, underline or use a highlighter to mark important information.
- Make mental pictures of what you need to remember.
- Keep a quiet, tidy space to do work and talk with others.
- Learn the thoughts or emotions that distract you from what you want to do. Attend to them before starting your activity. When these thoughts come into your head, notice them and then return to your work.

Take care of your brain.

- Keep your mind active with puzzles, reading, or a new hobby that interests you.
- Do these things to keep your memory working at its best:
 - Exercise
 - Eat well
 - Get plenty of sleep
 - Reduce stress with meditation or guided imagery. The social worker on your care team can help you learn these methods.

Tips to Save Your Energy

When you are recovering from cancer treatment, you are likely to get tired very easily. This is called fatigue. It is important for you to use the energy you have wisely. Here are ideas to help you get more done and still have energy for things you enjoy.

Plan your day.

- Decide what really needs to be done today and what can wait. Choose the two or three most important tasks. Set realistic goals that match your energy levels.
- It's OK to say no to tasks and activities that will tire you out too much. Think about whether you are the best person to do a job.
- Ask for help when you need it.
- Break large jobs into smaller tasks. Think about the steps needed to complete a job.
- Think about ways to make activities easier—for example, changing your body position and organizing your work area.
- Switch between rest and activity through the day.
- Your body tires faster in extreme temperatures. In hot weather, avoid activity at the hottest part of the day. In cold weather, layer clothing to stay warm.

Pace yourself.

- Work slowly. Move in a comfortable rhythm.
- Limit activities that require quick bursts of energy.
- Stop an activity that makes you tense, angry, or frustrated. Try again later.
- Do some gentle stretches to warm up before you start an activity. Stretch again to cool down afterward.

Rest when you start to feel tired.

- Listen to your body. Learn to match activities to your energy level.
- Take short naps of 15–20 minutes.
- Rest after meals, exercise, and strenuous activities.
- Stress drains your energy. Learn skills such as meditation or guided imagery to help you relax.

Organize your work area.

- Set up your kitchen and other work areas so things you need are easy to reach.
- Work while sitting as much as you can.
- Keep your work area tidy so you don't have to spend energy looking for things you need.

Tips for Daily Activities

Showering

- Use a hand-held shower head. Sit on a shower stool.
- Use warm water. Hot water will tire you faster.
- Use a bath sponge with a long handle to reach your legs and back.
- Put on a terry cloth robe after your shower to save the effort of drying with a towel.
- Try showering at bedtime instead of during the day.

Housework

- Keep sets of cleaning supplies in different parts of the house so you don't have to carry them from place to place.
- Use a cart on wheels to move laundry, or tie a rope to the laundry basket to pull it.

Shopping

- Make a list ahead of time. Organize it by where the items are located in the store.
- Shop in familiar stores so it is easier to find what you need.
- Go when stores are not crowded.
- Use a shopping cart instead of a basket.
- Ask the bagger to put things that need to stay cold in the same bag. When you get home, put those things away first. You can put away the other things after a rest.

Using Pain Medicine Safely

Take your medicines exactly as your doctor directs.

Mistakes, misuse, or overdosing can cause serious health problems or death.

Pain medicines can help you live comfortably day to day. They manage pain, but they cannot always take it away entirely.

Prescription pain medicines are very strong drugs. Taking too much can cause serious side effects or death. Lowering your dose too quickly may make you feel very sick. This is withdrawal.

Pain Medicine Side Effects

- Drowsiness
- Confusion
- Dry mouth
- Nausea
- Vomiting
- Constipation

Prevent Side Effects

- Take your pain medicine with food.
- Drink plenty of water.
- Take a stool softener if needed.

Avoid Overdose and Accidents

Overdose is when you take too much of a medicine. Overdose with pain medication can be dangerous.

- Watch for the signs of pain medicine overdose:
 - Severe sleepiness
 - Difficulty waking up
 - Trouble breathing
 - Confusion
 - Blue lips or fingernails
 - Cool, moist skin
- When you are taking prescription pain medicines, do NOT drink alcohol. Mixing the two can be deadly.
- When you are taking prescription pain medicines, do NOT drive or operate machines.

- Never take more than 3,000 mg of acetaminophen in 24 hours. Taking more than that may damage your liver. Many medicines have it. These include Tylenol®, Lortab®, Vicodin®, Percocet®, as well as many over-the-counter products, especially those for colds. If you are not sure if a medicine is safe for you, ask your doctor or pharmacist. **Take your medicines exactly as your doctor directs.**

Avoid Misuse

- Keep all your medicine in a safe, secure place. Make sure small children cannot get to it. They often think pills are candy. Other people may be tempted to steal or abuse your medicines.
- Never share your medicines. Never take someone else's medicines. This is illegal, and it can be deadly.
- Never take medicines after the expiration date on the label.
- University of Utah Health Pharmacies have 12 areas where you can get rid of your medicines that you no longer need. Bring any medications to our drop off bins to get rid of them safely. For more details and locations visit <https://healthcare.utah.edu/pharmacy/medication-disposal.php>. Your local police station can also tell you how to get rid of them safely. NEVER pour medicines down the drain or toilet.
- Tell your doctor all the supplements, vitamins, and medicines you take. Pain medicines can be dangerous when mixed with other medicines or supplements.
- Use the same pharmacy for all your prescriptions. Your pharmacist can tell you more about medicines you should not combine. They can explain how to take your pain medicine safely.

If you suspect an overdose, call 911 immediately!

Massage Therapy

Massage therapy uses touch to help relax muscles. It can lower stress and help you feel calmer. Massage can be part of treating specific injuries and conditions. Many patients and their caregivers can benefit from massage therapy.

Oncology massage is safe and beneficial before treatment, during treatment, and after treatment. Massage should not replace traditional medical care. However, your cancer care team may recommend massage as part of your treatment plan. Please see your healthcare provider for any health issues.

Conditions Massage Can Help

- Anxiety
- Scars
- Headache
- Pain
- Muscle
- Injury
- Backache
- Stiffness
- Stress
- Lymphedema
- Relaxation
- Inflammation

Types of Massage

Massage therapists at Huntsman Cancer Institute (HCI) provide these types of massage:

- Oncology—individual massage plans for people going through cancer and cancer side effects
- Lymphatic—very light, rhythmic touches on the skin to help drain lymph fluid, help reduce inflammation, achiness and pain
- Swedish—long, slow, kneading strokes for relaxation, easier movement, and better circulation
- Craniosacral—light touch to skull, spine, and pelvis to release tension and improve movement
- Reflexology—pressure on specific areas of feet, hands, or ears to ease many kinds of symptoms
- Energy-based therapies, including Jin Shin Jyutsu® and Reiki—hand movements above the body to promote healing

Studies about these therapies that meet clinical trial standards are limited, but many patients report they can improve quality of life.

Before Your Massage

When you check in for your appointment at the Wellness Center, the staff will ask you to sign a consent form. You will also fill out a form to show where you would like the massage to focus and areas to avoid. You can also choose the type of massage and how much pressure you would like.

Be sure to mention these things:

- If you take blood-thinning medicines
- If you have blood clots in your legs
- If you have tumors
- If you have osteoporosis or disease in your spine
- If you have weak skin
- If you are taking hormone replacements (pills, injections or creams)
- If you have ports or other medical devices in or on your body

The Massage Session

The massage therapist will **take you to the massage room**. The therapist will talk with you about techniques he or she will use and what they should feel like. The therapist adjusts the massage to meet your needs.

For the massage, you may **undress to your level of comfort**. If you do not want to undress, please wear comfortable, loose clothing. You may choose to leave underwear on or remove all clothing. The therapist will leave the room while you undress and **lie on the massage table**. If you undress, you will be under a blanket during the massage. The therapist will uncover only the part of your body he or she is working on. You may lie on your back, front, or side when the massage starts. If you lie on your front, a headrest with a hole in the center lets you breathe without turning your head. Once you are on the table under the blanket, just relax. **The therapist will knock before returning** to start the session. During the massage, the therapist may ask you to turn over or switch sides.

During the massage, be sure to let your therapist know what you are feeling. If something he or she does feels wonderful, say so. You could feel something hurts in a good way as a tense muscle releases. But if you have any pain that does not feel good, let your therapist know right away.

Massage sessions last about 50 minutes. The lights are dim, and soft music plays to help you relax. When the session is over, the therapist will leave the room while you dress. Including check-in, the appointment takes about an hour.

To schedule an appointment, call the Wellness Center at 801-587-4585.

For more information, visit
www.huntsmancancer.org/wellness

Acupuncture

Acupuncture can help ease many side effects of cancer and its treatment. It does not take the place of the care you get from your cancer team, but it can help you feel and heal better.

Acupuncture can help with these conditions:

- Anxiety and fear
- Appetite
- Constipation
- Depression
- Diarrhea
- Dizziness
- Dry mouth
- Fatigue
- Headache
- Hot flashes
- Insomnia
- Nausea and vomiting
- Neuropathy
- Night sweats
- Smoking cessation
- Stress

It can also help with many types of pain:

- After surgery
- Arthritis
- Cancer
- Carpal tunnel
- Face
- Fibromyalgia
- Headache, including migraine
- Jaw and teeth
- Kidney
- Low back
- Neck and shoulder
- Rheumatoid arthritis
- Sciatica
- Sprains

Preparing for Acupuncture

Eat and drink plenty of fluids before the treatment.

Wear clothing that is loose and comfortable.

The acupuncture appointment takes about 1 hour.

The Treatment

All acupuncture providers at Huntsman Cancer Institute (HCI) have years of training and experience. They follow the same safety standards as the other providers on your cancer care team.

You will lie down on a padded table in the treatment room. The provider cleans your skin with alcohol and puts in the needles. The Food and Drug Administration approve the needles. The very thin, sterile needles are used only once. The number of needles and the places they go in depend on the conditions being treated.

Many patients do not feel anything when the needles go in. Some people may feel a tiny prick or a tickle. If any needle hurts or feels uncomfortable, ask the provider to change the needle position or remove it.

The needles stay in place for about 30 minutes while you relax on the table. You can ask for a blanket if the room is too cool. The provider will dim the lights and turn on soft music. Most people fall asleep.

Some people say they feel something like a warming, circulating, or wave-like feeling going through the body. This is normal; it is actually a good thing.

The provider will leave a call button within reach, so you can ask for help. Use it if you become uncomfortable or any other problem comes up.

After the treatment, the provider will remove the needles. Providers count the needles to make sure all are collected and thrown away.

Treatment Schedule

Each patient's needs are different, so the treatment schedules will vary. Many patients plan their acupuncture treatment the same day as other appointments at HCI.

Payment

We ask for payment at the time of service. We accept cash, checks, and credit cards.

We do not bill insurance for acupuncture treatments. It is best to ask your insurer if your policy covers acupuncture before you start treatment. We can give you documents to make a claim with your insurance company.

Acupuncture is covered as a medical expense under these programs:

- Health savings account (HSA)
- Health reimbursement account (HRA)
- Flexible spending account or Flexcard (FSA)

To schedule an appointment, call the Wellness and Integrative Health Center at 801-587-4585.

For more information, visit
www.huntsmancancer.org/wellness

Genes

Genes are in every cell in our bodies. They are made of DNA, which tells cells how to grow and work together. You have two copies of each gene in each cell—one from your mother and one from your father. When genes work properly, they help stop cancer from developing.

Gene Mutations

Sometimes changes to genes can happen. These changes are called *mutations*. Mutations can make the genes stop working and raise the risk for certain types of cancer.

Some gene mutations raise the cancer risk a lot. Others cause a small increase in cancer risk.

Hereditary Cancer Syndromes

Some mutations can pass through families. When this happens, family members who have the mutation have a *hereditary cancer syndrome*. Hereditary cancer syndromes are rare. Only about 1 in 10 cancers come from them.

If you have a cancer syndrome, you still may not get cancer. But your odds of getting cancer are higher than for someone in the general population.

Here are some signs that a family may have a hereditary cancer syndrome:

- Several members on the same side of the family with the same kind of cancer
- Family members with cancer at a young age
 - Breast, colon, or uterine cancer before 50
- Family members with more than one kind of cancer
 - Breast **and** ovarian cancer
 - Colon **and** uterine cancer
- Family members with rare cancers
 - Ovarian cancer
 - Pancreatic cancer
 - Male breast cancer

If your family has any of these signs, ask your doctor for a referral to genetic counseling.

Do you have a personal or family history of cancer?
Genetic testing and counseling may be right for you.

We can help find the cancer
screening plan you need.

Call Huntsman Cancer Institute's Family Cancer
Assessment Clinic to learn more: 801-587-9555.

Here are two common examples of hereditary cancer syndromes and the gene mutations that cause them:

- Hereditary breast and ovarian cancer—*BRCA1* or *BRCA2*
- Lynch syndrome: hereditary colon and uterine cancer—*MLH1*, *MSH2*, *MSH6*, and *PMS2*

For many cancers, mutations in any of several genes can raise the risk. For example, mutations in any of these genes can raise the risk for breast cancer:

BRCA1 *BRCA2* *ATM* *PALB2* *CHEK2*

A single gene mutation can also raise the risk for more than one type of cancer. For example, mutations in *CHEK2* raise the risk for both colon and breast cancers. Families with a history of colon cancer who have a *CHEK2* mutation may also be at higher risk for breast cancer.

Who Should Be Tested

Genetic testing is not right for everyone. Genetic counselors and doctors can talk to you about whether genetic testing could be helpful. If your family has any of the signs above, you should consider genetic testing. You always have the final decision about whether to be tested.

Genetic tests can look at one kind of gene at a time or many at once. A test for many genes at the same time is called a *multigene panel test* (MPT). An MPT can help find a hereditary cancer syndrome in a family more quickly than testing one gene at a time.

A genetic counselor will use the test results to calculate your risks for cancer. The counselor will also recommend the best screening schedule for you.

The **Genetic Information Nondiscrimination Act** (GINA) does not allow health insurance companies and employers to discriminate based on your genetic information. Genetic information cannot be considered a pre-existing condition. GINA does not apply to life, disability, or long-term care insurance.

