

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.

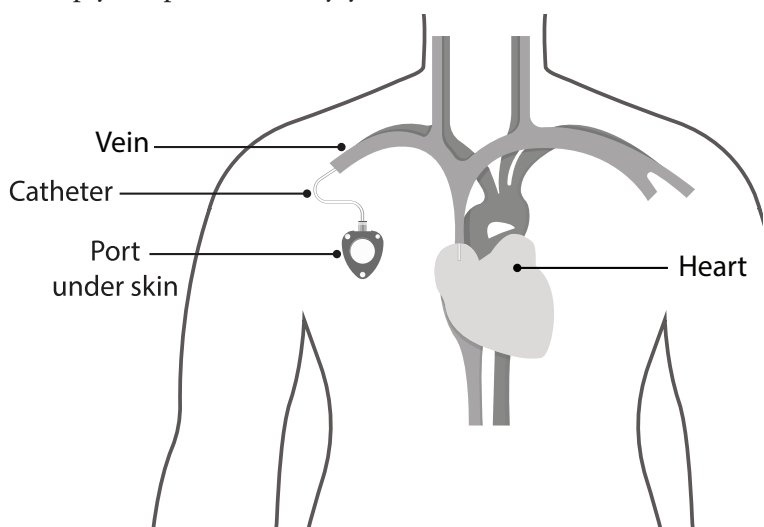
If you have any questions or concerns about your visit, please tell your nurse or call

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

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.

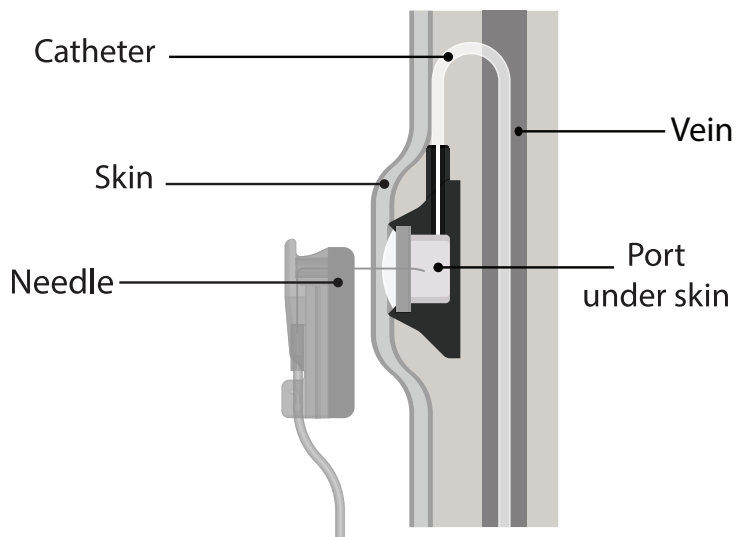
How is the port used?

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.

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.

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 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 Head and Neck

You are getting radiation to your head and neck 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

Sore mouth, sore throat, and difficult swallowing. You may have a sore mouth and 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. Your cancer care team will give you a mouth rinse to ease the pain. Tell your cancer care team about any discomfort you have.

Weight loss. Eating well may be hard while you have treatments. Your cancer care team will check your weight at least once a week. They will also check how much fluid and food you take in. You may need liquid food supplements such as Sustacal®, Boost®, or Ensure®. If you cannot eat enough food to maintain your weight, you may need a temporary feeding tube. Talk about your concerns with a dietitian and your cancer care team.

Irritants. Avoid hot liquids, fresh citrus juices, and spicy foods. These may irritate the treatment area and delay healing. Avoid tobacco and alcohol. These will dry and irritate your throat.

Dry mouth and problems with teeth and gums. If your saliva (spit) glands are in the treatment area, you will produce less saliva. The saliva may be very thick. You can gargle or drink club soda to help get rid of the thick mucus.

Signs of mouth dryness may begin during the first week of radiation. They can continue for many months. To increase saliva, suck on sugar-free hard candy, popsicles, or gum.

A dry mouth can raise your risk of tooth decay and other dental problems. Visit your dentist before you start radiation treatment.

Careful hygiene is very important to help you keep a healthy mouth during and after treatment. These tips can help:

- Gently clean and floss your teeth twice each day. Do not use water picks. The pressure may damage sensitive tissue.
- Rinse and gargle at least four times a day with a salt and soda mixture. Mix ½ teaspoon baking soda and ½ teaspoon salt in 1 quart of water. Do not gargle with hydrogen peroxide or mouthwashes that contain alcohol. They can irritate your mouth lining.
- Drink at least eight cups of liquid each day. Some people find it helpful to carry a water bottle with them throughout the day.
- Try breathing through your nose rather than your mouth.
- To keep the air moist at night, use a humidifier near your bed.
- Use lip balm to keep your lips moist. This may help your mouth feel less dry.
- If you wear dentures, swelling in your gums may change the fit. You may need to stop wearing your dentures until treatments are finished.

If these ideas do not help with dry mouth, talk with your cancer care team about using artificial saliva or a prescription medicine.

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 the treated area. Hair loss may be permanent, depending on the amount of radiation you get.

Ear problems. For a few patients, peeling skin and wax may plug the ear canals after the treatments are complete. If your ears feel plugged, tell your cancer care team. They can safely loosen and remove the wax.

Taste changes. If your tongue is in the treatment area, you may notice changes in your sense of taste. This happens within the first two weeks of treatment. Usually, your sense of taste will start to return slowly within months after treatment ends. It can keep improving for years.

Swollen glands. Some patients have swollen, tender salivary glands after the first few days of treatment. It can cause mild pain, but usually goes away by itself. Your cancer care team can recommend medicine to ease pain if needed.

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. 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. Do not wear tight-fitting hats or scarves. 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.

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 Abdomen

You are getting radiation to your belly, or abdomen, 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

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.

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.

Diarrhea. You may have bowel movements that are more frequent or diarrhea, which is loose, watery stools. 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.

These tips may help ease pain in the anal area that diarrhea can cause:

- 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 bowel movement.
- Treat the anal area if it becomes sore or if you get hemorrhoids. Over-the-counter hemorrhoid products can help. Sitting in a warm bath with water above the hips may also help.

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 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 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. 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.

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.

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 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.

Preparing for a CT Scan with Oral Contrast

You have an appointment for a computed tomography (CT) scan with oral contrast. Oral contrast is a liquid you drink before the scan. It makes the scan easier for your doctors to read.

This factsheet contains instructions to help you prepare for the CT scan.

Before the Scan

Get two bottles of oral contrast liquid from the radiology clinic on the 3rd floor of the Huntsman Cancer Institute hospital. The clinic staff will mark the bottles with times and amounts according to your scan time.

- You can pick up the bottles any day before your scan appointment. Keep them in the refrigerator until it is time to start drinking the contrast.
- If you pick up the bottles the same day as your scan, check with the radiology clinic 2 hours before the scan time.

Day of the Scan

- Do not eat or drink anything for 3 hours before the scan time.
- Start drinking the oral contrast 1½ hours before the scan time. Follow the schedule the radiology staff marked on the bottles.
- Check in at the radiology clinic 15 minutes before your scan time if you picked up the oral contrast before your scan day.

If You Have Questions

Call the radiology clinic at 801-587-4480. You can also call your cancer care team:

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://knowyourscript.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.

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.

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.

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

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.

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.

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

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

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.

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.

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.

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

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.

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.

