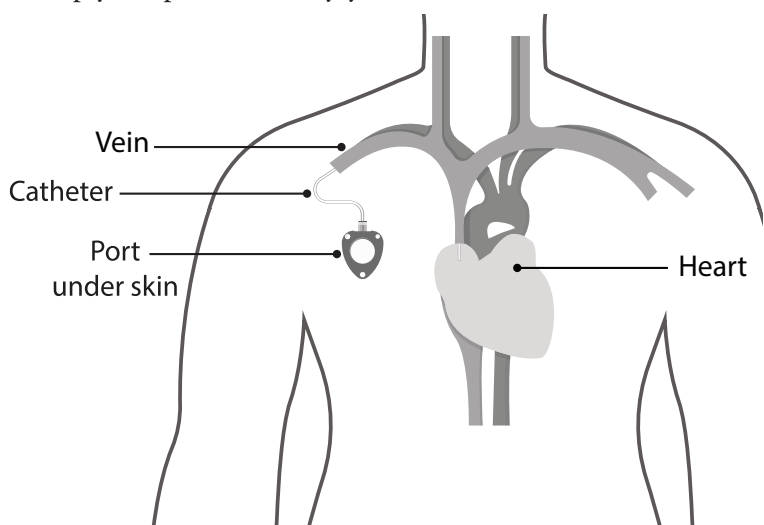


What is a port?

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.

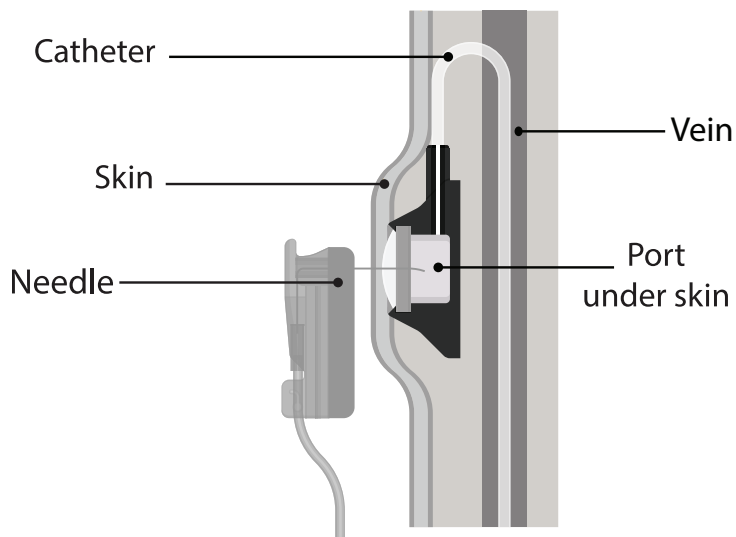
How is the port used?

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.

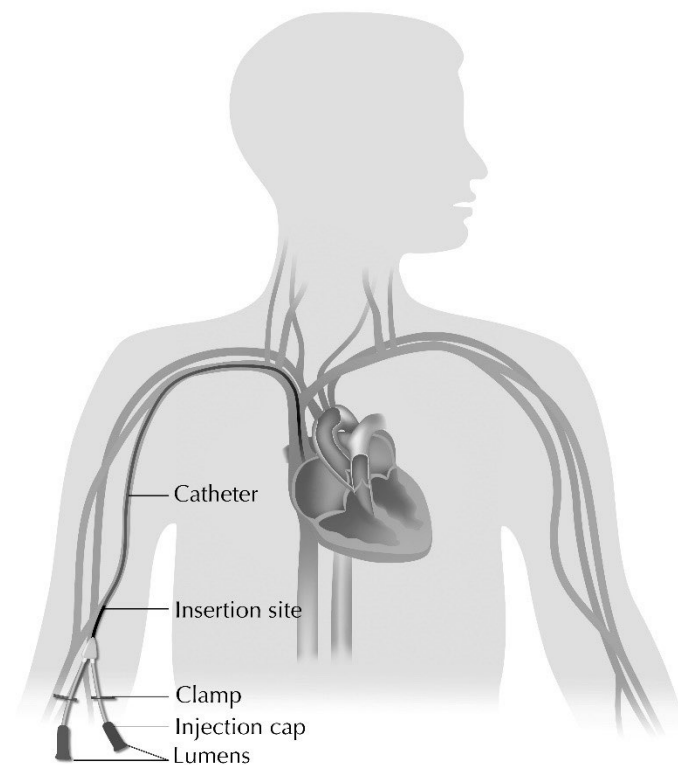
Peripherally Inserted Central Catheter (PICC)

What is a PICC?

A peripherally inserted central catheter (PICC) is a thin, flexible tube about 20 inches long that your care team inserts into a vein in your arm. You may hear your cancer care team call it a “pick” line.

Why do I need a PICC?

A PICC allows your care team to give treatments such as antibiotics, high-calorie liquids, chemotherapy, and blood transfusions, and as a way to get samples of your blood. This is easier on you than getting an IV or needle poke each visit.



A specially trained team places your PICC. They insert a needle into a vein in your arm above the bend of the elbow. The PICC goes through the needle into the vein, and then the team removes the needle. The end of the PICC sits in a large vein just above the heart. After the PICC is in place, we will check to make sure the end of the catheter is in the right place in your body. Once we know for sure, we can use the PICC to draw blood and give treatments.

One or more tubes called lumens come out of your arm. Each lumen has an injection cap where your team puts medicine into the catheter or draws blood. A PICC can stay in place for weeks.

Care of the PICC Dressing

A clear dressing and an anchor device hold the PICC in place. Your health care team or home health nurse will change the dressing every 7 days or when it gets soiled or loose.

Only a trained professional should change the dressing. You should NEVER touch the insertion site or PICC under the dressing. Call your health care team if your dressing gets soiled or loose, or if moisture appears under the clear dressing.

How can I keep my PICC from getting infected?

- Make sure your hands are clean before touching the exposed part of your PICC. You can use soap and warm water or an alcohol-based hand gel.
- Be sure anyone touching the PICC has clean hands.
- BEFORE using the injection cap, scrub it well for 15 seconds with an alcohol wipe.
- When showering, wrap the insertion site with plastic wrap and tape to keep it dry. NEVER let the insertion site be underwater. When you take off the plastic wrap and tape, be careful not to remove the dressing or lift the edge of it.

Watch for These Signs

Some side effects may happen in the arm with the PICC in the first 10 days after placement:

- Bruising
- Pain or tenderness
- Redness
- Slight swelling

Put a warm pad on your arm as soon as these signs appear. For the next three days, apply heat for about 30 minutes four to five times daily. Your arm should feel better within one to two days. If the symptoms get worse, call your cancer care team.

If you have any of the following signs, call your cancer care team right away at the number below:

- Bleeding, drainage, or leaking where the PICC goes into your arm
- Chills
- Fever of 100.4° F (38°C) degrees or higher.

Activity Limits

- Avoid activities with repetitive arm motion such as golf, tennis, or pushing a vacuum. These motions could move the catheter out of place.
- Do not let the arm with the PICC be under water. Avoid swimming and soaking in hot tubs or saunas. The PICC dressing must stay dry.
- Do not lift anything heavier than 10 pounds. A gallon of milk weighs about 8 pounds.
- Avoid any activity that causes you to sweat.

Showering

You may shower with your PICC in place. Wrap the insertion site with plastic wrap and tape to keep it dry. NEVER let the insertion site be underwater.

When you take off the plastic wrap and tape, be careful not to remove the dressing or lift the edge of it.

If the PICC Comes Out

If your PICC comes completely or partly out of your arm, do not panic. Cover the area with gauze and apply gentle pressure until bleeding stops. Put a bandage over the area and call your cancer care team.

If your PICC pulls out during an infusion, stop the pump or infusion. Cover the area with a clean towel if the sterile dressing has moved or torn. Call your cancer care team.

Questions?

Contact your cancer care team via MyChart or call

_____.

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

Home Care for a Peripherally Inserted Central Catheter (PICC)

You have a tube placed in your arm called a Peripherally Inserted Central Catheter or PICC. You may hear your cancer care team call it a “pick” line. It is important to take proper care steps for your PICC line at home.

Flushing the PICC

When to do it. You will need to wash out or “flush” your PICC every day with a heparin solution. Heparin is a medicine that keeps blood clots from blocking the tube inside your body. Nurses will show you how to do this. Tell your cancer care team if you are allergic to heparin.

How to Flush the PICC. Home health care will provide you with pre-filled syringes. Follow these steps:

1. Wash your hands with soap and warm water.
2. Scrub the injection cap well with an alcohol wipe for 15 seconds.
3. Remove the cap from the syringe. Twist the syringe tip into the injection cap at the end of the PICC.
4. Unclamp the PICC and push all of the saline or heparin into the PICC using the “push and pause” method—your nurse will show you how to do it. NEVER USE FORCE to flush it.
5. Re-clamp the PICC after flushing. You always need to close the PICC clamps when the line is not in use to prevent air getting in or blood leaking out.

If the PICC has more than one lumen, repeat the flushing steps for each one. Use a new syringe for each lumen.

If you use your PICC to take medicines, you also need to flush it with normal saline before and after each dose. Normal saline is a liquid that helps keep the PICC line clean.

1. Flush with 10 mL of normal saline BEFORE each dose.
2. AFTER your dose of medicine, flush the catheter with 10-20 mL of normal saline.
3. THEN flush with a pre-filled syringe of heparin.

If Your PICC Will Not Flush

Check to make sure the PICC clamp is open.

If the clamp is open, your PICC may be plugged. Call your cancer care team. They can use medicine to unblock the line.

Questions?

Contact your cancer care team via MyChart or call

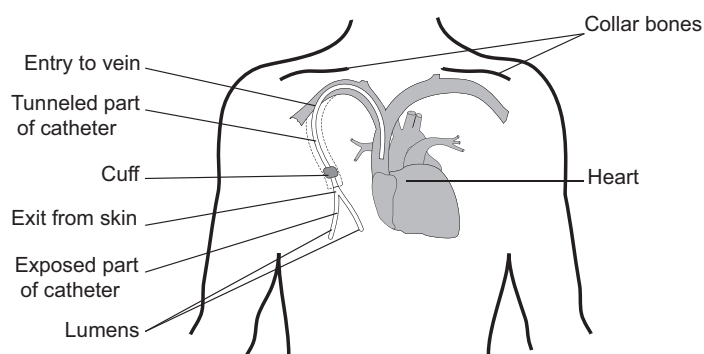
_____.

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

A tunneled venous catheter is a long, flexible tube that goes under the skin of your chest into a vein. The tip of the tube sits in a large vein just above the heart.

The tube may branch into two or three ends outside your skin. The branches are called lumens. Each lumen has a clamp and a cap to close it when it is not in use.

A clear bandage covers the area where the tube comes outside your skin. The bandage keeps air and water out so the area stays clean and dry. It is clear so your nurses can check for redness and infection without taking off the bandage.



Location of tunneled venous catheter

Why do I need a tunneled venous catheter?

The catheter lets your care team access your veins without needles. They use the lumens to give treatments such as antibiotics, high-calorie liquids, chemotherapy, and blood transfusions. They also use it to take blood for your lab tests.

How is my catheter put in place?

Your care team will place your catheter. First, they clean and numb the area on your chest where the catheter goes in. They make a small cut in your skin and push the tube into a large vein near your heart. Once in place, the catheter can be left in for weeks or months.

What keeps my catheter from coming out?

A cuff surrounds the catheter tube. You can feel it as a small lump under your skin. Stitches hold the tube in place until the skin around the cuff heals. Your care team will take out the stitches 7-10 days after they place your catheter.

When Should I Call My Doctor?

If you have any question about your catheter, call your care team. Call right away if you have any of these things:

- Redness, swelling, or oozing around the catheter
- A fever higher than 100.3° F
- Swollen, sore, or red area in your neck, chest, or arm
- Wet, dirty, or loose bandage
- Damaged catheter

Monday–Friday, 8 a.m.–5 p.m.

Monday–Friday after 5 p.m., weekends, holidays
Call 801-587-7000. Ask for the cancer doctor.

How do I care for my catheter?

Bathing. You may shower with your catheter in place. First, cover the clear bandage and at least 2 inches more around it with plastic wrap. Tape all the edges to keep the area dry when you shower. NEVER let the catheter area get wet.

Dressing. A nurse will do the first bandage change 24-48 hours after your catheter is placed. This will happen during one of your clinic or infusion appointments. After that, your clinic or home care nurse will change the bandage every 7 days.

Flushing. Your nurses will flush the catheter with saline solution and heparin after each use or at least every 7 days when they change the bandage.

Activity. You can do most everyday activities such as going to work or school, exercise, and having sex.

- Avoid strenuous activity for 7 days after the catheter is placed to allow the cut to heal.
- Do not lift more than 10 pounds for 7 days. A laundry basket filled with towels weighs about 10 pounds.
- Avoid contact sports such as football, basketball, or lifting weights.
- Do not take a tub bath, swim, or do any other activities that may get the bandage or the area under it wet or dirty.
- Never use scissors or sharp objects near your catheter.

How is the catheter taken out?

Your care team will take out the catheter when you no longer need it. Usually, this only takes a few minutes.

Communicating in a Conflict

Conflict can happen in any relationship. It is not always a bad thing, but the ways people handle it can bring them together or push them apart. Next time you are dealing with conflict, keep these tips in mind.

The Basics

Speak up early. Some people stay quiet about a conflict for a long time and then speak out in an angry, hurtful way later. Instead, talk about conflict when it happens.

Stay focused. Try not to bring up past hurts or other topics. Avoid saying things like “You always...” or “You never...” Stay focused on the present, your feelings, coming to an understanding, and finding a solution.

Communicating Means Talking and Listening

Listen carefully. Hear the person out. Say back what you have understood so the other person knows you value what has been said. It is not respectful to interrupt or roll your eyes while others are speaking. If you are thinking about what you want to say next, you are not listening.

No one knows what another person is thinking and feeling unless they tell us. Ask the other person about their thoughts and feelings, and listen to the answers.

Try not to get defensive. When someone comes to you with what feels like criticism or disapproval, it is easy to feel on guard. Listen to the other person and try to understand his or her perspective.

It can be tempting to blame the other person. Instead, try to consider the situation fairly. Think about the needs of both people to come up with a solution.

Own what is yours. Admitting when you are wrong is important. It often helps the other person do the same. This will lead you both closer to understanding each other and finding a solution.

Use “I” messages. Avoid saying things like “You really messed up here.” Instead, begin statements with “I,” and make them about yourself and your feelings: “I feel frustrated when this happens.”

Reach for Agreement

Try to see the other person’s point of view. When you really try to understand the other side, you can better explain your own. If you do not understand, ask more questions. It is easier to listen after you feel heard.

Look for whatever is true in what the other person says.

Try to think about the situation fairly, where you consider the needs of both people.

Look for compromise. Aim for solutions that meet everybody’s needs. There is not always a right and a wrong. Two points of view can both be valid, and sometimes it is best to agree to disagree.

Let go of winning. Try to find the things on which you both agree, and then you can work toward solving the conflict.

When the Going Gets Rough

Take a time-out. You may feel yourself or the other person starting to get too angry to make any progress. That is a good time to take a break from talking.

Knowing when to take a break is important. Be sure to tell the other person you need a time-out. That way, he or she will not feel rejected.

Do not give up. If you take a break from the discussion, always come back to it. You can make progress toward resolving the conflict using these attitudes:

- Respect for the other person
- Willingness to see the other’s point of view
- A mindset that together you can fix the conflict

Ask for help if you need it. If the conflict seems not to be getting better, it can help to get someone else involved.

- Remember, the goal is to find a solution on which both people can agree. It is not about winning or being right.
- When the conflict happens in a romantic relationship, it can help to hold hands or touch as you talk.
- It is important to respect other people, even if you do not like the other person’s actions.

Huntsman Cancer Institute’s social workers can help you talk with loved ones and work toward understanding.

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

Call 801-213-5699

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

Taking Care of Yourself after a Traumatic Event

Anyone involved with a frightening event may feel shock or distress. These reactions are often called trauma. You might feel trauma if any of these things happen:

- You saw or were involved in the event.
- You arrived on the scene of the event.
- You had a “near miss” or were almost involved.
- You knew or know others who were killed, harmed, or involved in some way.
- You know family or friends of victims.
- You have heard a lot about the event through media or friends.
- The event reminds you of other upsetting events in your life.

Trauma is a normal response to very uncommon events. You can’t predict how you will react after a disaster or other scary event. Let yourself have your responses and feel your emotions. Ask for help when you need to.

Getting Help

- Call a friend or loved one who can listen.
- Call 801-213-5699 to speak with one of our Patient and Family Support social workers.
- Think about calling a crisis line or going to a crisis center. You can call the Crisis Lifeline at 988 or 801-587-3000.

Common Reactions to Trauma

Not everyone responds in the same way. Here are some reactions you might notice.

Thoughts

- Hard time concentrating
- Feeling confused or distracted
- Slower thinking than usual
- Blaming yourself for escaping the tragedy
- Feelings of danger, even in normally safe situations
- Reliving the event:
 - Thoughts or images you can’t control
 - Bad dreams or nightmares
 - Flashbacks about the event

Emotions

- Anxiety or fear, even long after the event
- Irritable, restless, or over-excited
- Sad or moody; crying more than usual
- Helpless or hopeless feelings
- Numbed or detached emotions
- Feeling isolated from others

Physical Sense

- Headaches
- Nausea or upset stomach
- Easily startled at loud noises
- Fatigue or feeling slowed down

Behaviors

- Changes in activity levels, higher or lower
- More irritable behavior than usual
- Withdrawal, social isolation
- Avoiding things or places that remind you of the event
- Trouble sleeping
- Strong need to talk or read about the event

If you notice you are having some of these reactions, remember your response is normal. Right after a traumatic event, you will probably feel shaken, dazed, and confused. You may notice you are not acting as you usually would.

It is important to take care of yourself as best you can. Here are suggestions.

Taking Care of Yourself

You’re Okay

- Remind yourself that you’re having a normal response to a stressful situation.
- Give yourself permission to do whatever you need to do to take care of yourself. Your body and mind will tell you what you need to do.
- Get plenty of rest when you’re tired. Don’t force yourself to be active if you don’t have the energy.

Talk It Out

- Talk to people as much as you need to. Reach out.
- You may feel a need to talk about the event over and over again. Call a friend or loved one who can listen. If you feel there is no one you can talk to, think about calling a crisis line or going to a crisis center. Other community resources may also be available. They are all there to help you.
- Let yourself cry, rage, and express feelings when you need to.
- Try not to numb your feelings with alcohol or drugs. This will only make things harder.
- Spend time with others, even if you don't feel like talking. It can be comforting to know you're not alone. Try to find someone or someplace that feels safe and comforting to you, and spend time there.

Take It Easy

- Do things that feel good to you—take baths, read, exercise, watch television, spend time with friends and family, fix yourself a special treat— whatever feels right.
- Try not to make any major life decisions or big life changes right now. This is not a time to put pressure on yourself to do anything out of the ordinary. Focus on taking care of yourself.

The Process of Recovery

- Recovering from a scary event may take a long time. Feeling shaken or numb may last days, weeks, or longer. Reactions might last longer than you expect or want. It is impossible to know how long they will go on, but usually the reactions go away over time.
- If another stressful event happens while you are still recovering, your reactions may reappear for a while. This is perfectly normal.

When to Call for Help

Help from a counselor or mental health professional could be useful any time after the event. Get professional help right away if any of these happen:

- You think about killing yourself.
- You cannot carry out normal life tasks.
- Your fears keep you from returning to places or situations that remind you of the event.

If you or someone you know needs help, please call the You can call the Crisis Lifeline at 988 or 801-587-3000.

For more information about self-care after a traumatic event:

- Call 801-213-5699 to speak with one of our Patient and Family Support social workers
- Visit huntsmancancer.org/pfs

*Adapted from "Taking Care of Yourself after a Traumatic Event,"
University Counseling Center, University of Iowa*

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.

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.

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.

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.

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 soda
- Swish 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.

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

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.

Planning for life after cancer can be an important part of healing. Some types of cancer and cancer treatments can change your ability to have children. The ability to get or make someone pregnant is called fertility.

Before cancer treatment begins, talk to your health care team about ways to protect your fertility. Knowing what to expect can help you prepare for and manage many issues.

It is very important to talk with your doctor about fertility BEFORE you start treatment or have surgery for your cancer.

Will cancer affect my ability to have children?

It depends on your age and details of your treatment:

- The type and amount of cancer medicines you take
- Radiation to the pelvis or certain areas of the brain
- Surgery that removes all or part of the organs involved in having children (such as the uterus, ovaries, or testicles)

Will my treatments make me unable to have sex?

Cancer and its treatments sometimes cause side effects that make it hard to have sex.

Men: You may have trouble getting or keeping an erection. Having sex could become painful.

Women: You may have discomfort from being too dry. Radiation can cause scars that make having sex painful. You may bleed during or after sex. You may have an abnormal flow of fluids from the vagina.

Talk to your health care team if any of these things happen. Your team can find ways to help.

What questions should I ask my care team?

Here are some helpful questions to ask about fertility:

- What are my options?
- How much time do I have before I start treatment?
- How will I know if I am fertile after my cancer treatment?

- How do I know when it is safe to try having a baby?
- Will there be any health risks to me or my future children?
- What can be done to help protect my fertility?

Huntsman Cancer Institute works with the Utah Center for Reproductive Medicine (UCRM) at the University of Utah to help people with cancer who want to have children after treatment. Here is how the process works.

Men: The UCRM collects your semen and freezes it before cancer treatment begins. They can store semen for many years. They use it later to make your partner pregnant.

Women: The UCRM collects some of your eggs before cancer treatment begins. The eggs may be frozen right away or first fertilized and then frozen. Fertilized eggs are called embryos. Frozen eggs or embryos can be stored for years. You can use them when you are ready for pregnancy.

For some women, doctors can give medicines that may protect fertility during cancer treatment.

Experts at the UCRM will work with you and your health care team to find the best fertility plan for you.

For more information

Utah Center for Reproductive Medicine at the University of Utah

- Call 801-581-3834
- Visit healthcare.utah.edu/ucrm

G. Mitchell Morris Cancer Learning Center

- Call 1-888-424-2100
- Email cancerinfo@hci.utah.edu
- Drop by the 6th floor of Huntsman Cancer Institute Hospital

Sexual Health Counseling for Cancer Survivors

Cancer and its treatments can affect how you look and how you feel about yourself. It is normal to respond in different ways. Some people focus on physical changes and loss. Others worry about changes in their sex life or fertility. Others may think about how things will be with their partner now or about meeting a partner in the future.

This factsheet tells about possible changes and how working with a sexual health counselor can help.

What kinds of changes can happen?

You may have one or more of these issues:

- Less desire for sex
- For men, hard time getting or keeping an erection
- Pain during sex
- Trouble having an orgasm
- For women, dryness of the vagina

These changes in your sex life may go away over time. Changes with sex can make you feel less close to your partner. They can make you feel unhappy or bad about yourself.

Why am I having these issues?

Sexual issues often have more than one cause. Any of these things can be reasons:

- Cancer makes you too tired, stressed, depressed, or worried.
- Cancer treatment causes changes that make you feel bad about your body and yourself.
- Some cancer treatments can lower the amount of the chemicals that control sex in your body.
- Other conditions such as diabetes can also lead to issues.

How does sexual health counseling help?

Counseling can make your quality of life better:

- Help you be more confident and hopeful
- Help you feel better about your body and yourself
- Connect you to helpful resources

Your counselor will look at all possible sources of sexual issues. You and your counselor can work together to solve them. Your counseling plan may include these things:

- Showing you ways to feel better about your body and yourself
- Helping you and your partner find ways to feel close again
- Working with your care team to solve issues about your physical health

Because sex is such a personal issue, a good treatment plan will fit your personal needs—and your partner's.

How do I find a sexual health counselor?

The social worker on your care team can help you with the resources you need.

For more information

To learn more about social workers at Huntsman Cancer Institute and their Body Image Clinic, visit www.huntsmancancer.org/pfs

The G. Mitchell Morris Cancer Learning Center (CLC) is your source for free cancer information. Visit www.huntsmancancer.org/clc

To learn more about fertility issues and cancer, please see the factsheet *Fertility and Cancer*. The Utah Center for Reproductive Medicine at the University of Utah works with Huntsman Cancer Institute to help cancer patients with fertility issues. Call or visit: 801-581-3834 healthcare.utah.edu/fertility

Complete Blood Count (CBC)

One of the most common lab tests you will have during your medical care is called a complete blood count, or CBC. This test measures the number of different cells in a small amount of blood. Your care team will watch closely for these results:

- White blood cell (WBC) count
- Absolute neutrophil count (ANC)
- Hemoglobin (HGB) count
- Platelet count

White blood cell (WBC) count

White blood cells help protect your body from infection. A normal white blood cell count varies from 3.5 to 10 k/ μ L.

A white blood cell count of less than 1 k/ μ L may make you more likely to get an infection. A high white blood cell count may be a sign that your body is already fighting infection.

Contact your care team if you have a low white blood cell count and develop a fever of 100.4°F (38°C) or higher.

Absolute neutrophil count (ANC)

Neutrophils are the most common type of white blood cells and are the first to respond to bacteria and viruses. The amount of these cells in your blood sample is listed on the lab report as the neutrophil # or absolute neutrophil count (ANC).

A normal neutrophil count is between 1.3 and 7 k/ μ L. Your neutrophil level may drop very low during your treatment. It comes back up as you recover.

Your risk of infection is higher if your neutrophil count is less than 0.5 k/ μ L. Let your care team know right away if you have a low neutrophil count and develop a fever of 100.4°F (38°C) or higher.

Hemoglobin (HGB) count

Hemoglobin in your red blood cells carries oxygen to other cells in your body. A normal hemoglobin count is between 12 and 16 g/dL. A low hemoglobin level is called anemia. When you have anemia, you can tire easily and may feel dizzy or weak.

If your hemoglobin drops too low you may need a blood transfusion. Talk to your care team if you start to feel dizzy, weak, or too tired to do your normal daily tasks.

Platelet count

Platelets are fragments of blood cells that help stop bleeding by forming a clot over an injury. A normal platelet count is between 150 and 450 k/ μ L.

If your platelet counts are too low, you can bleed or bruise easily. Take extra care with sharp objects and try to avoid activities where you could get hurt. Let your care team know if you have any bleeding or bruising.

Questions?

Talk with your care team for more information about your blood test results and what they mean.

1



WHAT IS MINIMAL/MEASURABLE* RESIDUAL DISEASE (MRD)?

After a patient achieves complete remission based on standard test results, there may be cancer cells that remain in the body, known as MRD. For this reason, more sensitive tests will be done to detect whether the patient is negative or positive for MRD.

*These terms may be used interchangeably.

2



TESTS USED

- MRD testing uses highly sensitive methods that can look for a small amount of cancer cells in a very large sample of cells.
- The most widely used tests are **flow cytometry**, **next-generation sequencing (NGS)**, and **polymerase chain reaction (PCR) assays**.
- These tests use samples of bone marrow cells (taken by aspiration) and/or peripheral blood cells (taken through a vein).

3



POSITIVE VS. NEGATIVE

A patient can have a positive or negative MRD result.

- **Positive Test Result:** There are still residual cancer cells detected in the body after treatment—called "MRD positivity."
- **Negative Test Result:** There aren't any residual cancer cells detected in the body after treatment—called "MRD negativity."

It is encouraging when these sensitive tests cannot find any cancer cells.

4



HOW MRD TESTING CAN BE USED

MRD testing can help doctors to:

- Determine how well the cancer has responded to treatment
- Confirm and monitor remissions
- Find cancer recurrence sooner than with other tests
- Identify patients who may be at a higher risk of relapse
- Identify patients who may need to restart treatment
- Identify patients who may benefit from other treatments

5



MRD TESTING IN SPECIFIC BLOOD CANCERS

The type of MRD testing used varies depending on the type of blood cancer.

- **Acute Lymphoblastic Leukemia (ALL):** Flow cytometry, polymerase chain reaction (PCR) and next-generation sequencing (NGS)
- **Acute Myeloid Leukemia (AML)/Advanced Myelodysplastic Syndromes (MDS):** Flow cytometry, PCR, NGS
- **Chronic Lymphocytic Leukemia (CLL):** Flow cytometry, PCR, NGS
- **Chronic Myeloid Leukemia (CML):** PCR
- **Lymphoma:** Flow cytometry, PCR
- **Myeloma:** Flow cytometry, NGS and imaging tests
- **MDS:** Specific testing has not been determined but is being explored to better understand the disease in clinical trials.
- **Myeloproliferative Neoplasms (MPNs):** PCR

6



INSURANCE COVERAGE

MRD tests are considered specialized tests and can be expensive. Patients need to be aware that:

- MRD testing may require prior authorization from an insurance provider.
- The blood or bone marrow sample for the test may be sent to an out-of-network laboratory which can result in out-of-network fees for patients.

Ask your treatment team to inform you if an MRD sample is being sent out to a laboratory. Speak to your insurance provider to find out the cost of MRD testing.

For additional information, visit www.LLS.org/booklets to download or print the booklet *Minimal Residual Disease (MRD)*.

Please reach out to our Information Specialists for more information about this and other disease, treatment, and support questions and concerns at **800.955.4572** or www.LLS.org/InformationSpecialists.

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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

How a Chaplain Can Help

When you have cancer, you may want care for your spirit as well as your body. Chaplains can help. They listen to you. They support you when you need it, whatever your religion or spiritual path. Huntsman Cancer Institute chaplains are available to visit with you. Call the number below or talk with your care team to ask for a chaplain visit.

A Chaplain's Role in Your Treatment and Care

A chaplain can support you and your loved ones.

- Speaks up with your care team and loved ones for your well-being of spirit, emotion, and body
- Helps you talk with your loved ones and care team about your concerns and feelings
- Finds support and approaches to cope with stress and other concerns
- Helps resolve conflicts

A chaplain can help work through big questions.

- Gives you support for coping with grief and loss
- Helps you explore or manage feelings such as anger, fear, and guilt
- Helps you work through hard decisions
- Helps you define your quality-of-life goals
- Helps you prepare for the end of life

A Chaplain's Role in Faith, Religion, and Spirituality

Having cancer may open you to new thoughts about spirituality. A chaplain can help you:

- Explore your beliefs
- Find and talk about meaning in your life
- Talk with you about the experience of illness and suffering
- Hear confessions or regrets about thoughts, words, actions, or failures to act
- Find literature, sacred objects, or teachers to help your spiritual practice
- Do ceremonies important to you
- Arrange care for a loved one's body after death

If you belong to a church or follow a spiritual path, a chaplain can support your needs:

- Offer help with your spiritual practices
- Pray (aloud, silently, with others, or alone) for you or a loved one
- Read sacred texts or scriptures you choose
- Help connect you with local religious communities
- Help resolve separation from your faith community

For Spiritual Care Services, dial FAITH from your hospital phone or call 801-213-2484.

Adapted with permission from *Chaplaincy Interventions Defined*, Texas Medical Center Project, © Brent Peery

