

BAPTIST MD ANDERSON CANCER CENTER

# Chemotherapy Guide

## When to Call Your Oncology Team

Your health care team will teach you about the signs and symptoms you should report. For certain therapies, your health care team may advise you to report side effects as soon as you notice them.

Watch for the following and report. These are only general guidelines. If your health care team gives you different instructions, follow them.

- Fever of 100.4°F or higher
- Nausea longer than 24 hours
- Vomiting longer than 48 hours
- Diarrhea longer than 24 hours
- Constipation longer than 72 hours
- Worsening or new pain
- Inability to eat and drink Dizziness
- New bleeding
- Numbness, pain or swelling in legs or arms
- New rash
- 

## When to seek immediate emergency help

**DIAL 911 if you are experiencing the following symptoms:**

- Chest pain
- New confusion
- Shortness of breath
- Irregular, abnormal heart beat
- Loss of consciousness
- Swelling of tongue/face interfering with swallowing or breathing
- New seizure
- Stroke like symptoms-new weakness in face, arm or leg
- Bleeding that won't stop
- Severe abdominal pain

# Table of Contents

<b>Basic Information .....</b>	<b>3</b>
<i>Cancer Cells.....</i>	<i>3</i>
<i>Chemotherapy .....</i>	<i>3</i>
<i>Targeted Therapy and Biotherapy.....</i>	<i>4</i>
<i>Blood Counts.....</i>	<i>5</i>
<b>Your Treatment Plan .....</b>	<b>7</b>
<i>You and Your Care .....</i>	<i>7</i>
<i>Infusion Center.....</i>	<i>8</i>
<i>What to Expect on Outpatient Treatment Day(s).....</i>	<i>9</i>
<i>Questions to Ask Your Oncology Team.....</i>	<i>10</i>
<i>When to Call Your Oncology Team .....</i>	<i>10</i>
<b>Safety Concerns and Recommendations .....</b>	<b>11</b>
<i>Preventing Infection.....</i>	<i>11</i>
<i>Over-the-Counter (OTC) Medicines.....</i>	<i>12</i>
<i>Safe Handling of Body Fluids and Waste .....</i>	<i>13</i>
<i>Safe Handling of Oral Therapy at Home .....</i>	<i>15</i>
<i>Sexual Health Safety Tips.....</i>	<i>17</i>
<b>Common Side Effects.....</b>	<b>18</b>
<i>Loss of Appetite .....</i>	<i>22</i>
<i>Nausea and or Vomiting.....</i>	<i>23</i>
<i>Diarrhea.....</i>	<i>24</i>
<i>Constipation.....</i>	<i>27</i>
<i>Mouth Care.....</i>	<i>29</i>
<i>Hair, Skin and Nails.....</i>	<i>31</i>
<i>Chemobrain .....</i>	<i>34</i>
<i>Pain, Nerves and Muscles .....</i>	<i>34</i>
<i>Sexuality and Fertility .....</i>	<i>36</i>
<b>Resources.....</b>	<b>38</b>
<i>Assistance During Cancer Treatment.....</i>	<i>38</i>
<i>Pharmacy Patient Resources .....</i>	<i>39</i>
<i>Outside Organizational Resources.....</i>	<i>39</i>

# Basic Information

## Cancer Cells

To understand cancer therapy, it is helpful to understand cancer cells. Cells are the body's basic unit of life. Normal body cells grow and divide in a controlled way. Each cell has a certain job in the body and dies after a natural length of time. The body cleans up these dead cells on an ongoing basis.

Cancer cells are abnormal cells that no longer work correctly. Cancer cells:

- Grow and divide in a rapid, uncontrolled way
- Have ways to be “invisible” so that the body's immune system does not kill them
- Find a way to live longer than normal cells, which makes a tumor
- Cause new blood vessels to grow to the tumor, giving energy to the cancer

## Chemotherapy

You may have chemotherapy alone or it may be given before or after other treatments. Other treatments may include surgery or radiation. You may also receive multiple medicines. Combining medicines and therapies often improves the success of treatment.

Chemotherapy can react with other substances so it is important to talk with your oncology team before taking the below medications:

- Prescription medicine
- Non-prescription (over-the-counter) medicines
- Nutritional supplements
- Vitamins, minerals or herbal products
- Street drugs
- Alcohol

## How Chemotherapy Works

Chemotherapy attacks all rapidly growing cells in the body. The goal is to kill or stop cancer cells from growing.

Chemotherapy may affect cancer cells by:

- Breaking down parts of the cell
- Stopping the cells from growing
- Using up nutrients needed by the cancer cells
- Limiting blood vessel growth to the tumor

## Administration

Chemotherapy is given in several ways, called routes of administration. You may get chemo by:

### *Injection*

- Into a muscle, under the skin, directly into the cancerous area or into a vein
- Into the cerebral spinal fluid (called an intrathecal injection)

### *Infusion*

- Through a needle connected to a tube in your arm or through a central venous catheter (CVC or port)
- Into an artery through a catheter inserted directly into the area that has the tumor

### *Mouth*

- Tablet, capsule or liquid form

### **Topical application**

- Creams, ointments or lotions rubbed into the skin

### **Side Effects of Chemotherapy**

Chemotherapy affects all rapidly growing cells in the body. This includes normal, fast-growing, healthy cells. When this happens, side effects may result. Not everyone responds the same. Areas of the body most often affected by chemo are:

- Digestive tract (mouth, esophagus, stomach and intestines)
- Bone marrow (where blood cells are made)
- Skin and hair
- Sex organs
- Nervous system (nerves in the hands and feet)

Most side effects are short term. They can often be managed with medicines and proper care. Some side effects can be permanent. Discuss any changes with your oncology team when you first begin to notice them. Many side effects that you may experience are addressed in this **Chemotherapy Guide**.

### **Targeted Therapy and Biotherapy**

Targeted therapy is a type of medicine that treats cancer. Some types of targeted therapy kill cancer cells directly by affecting how the cells grow and survive. Other targeted therapies help the body's immune system, its natural defense, attack and fight cancer. Some targeted therapies are considered biotherapy. Biotherapy uses substances made from living organisms or laboratory-produced versions of such substances to treat cancer.

Targeted therapy can be used alone or with other cancer treatments. Other methods used to treat cancer are chemotherapy, radiotherapy and surgery.

### **How Targeted Therapy and Biotherapy Works**

Targeted therapy does not attack all rapidly growing cells. Targeted therapy is specific because it works on certain actions within cancer cells versus normal cells. For example, the therapy may do one or more of the following:

- Stop the cancer cells from growing, dividing and spreading
- Stop a cancer cell from living longer than a normal cell should
- Stop blood supply to the tumor
- Help the immune system destroy cancer cells
- Deliver cell-killing substances to cancer cells
- Starve cancer of the nutrients it needs to grow

### **Administration**

Patients receive targeted therapies in the same ways as traditional chemotherapy – in pill form or by an injection under the skin, into a muscle or into a vein.

Targeted therapy does not treat all cancers, and some cancers do not respond to it. Your doctor will discuss your treatment options with you and help decide if targeted therapy is the best treatment for your cancer.

### **Side Effects of Targeted Therapy or Biotherapy**

Targeted therapy may be less harmful to normal cells compared to other types of treatment. Patients who receive targeted therapy may still have side effects. Targeted therapies share some of the same side effects but each is different and may have its own unique side effects. Some possible side effects include:

- Flu-like symptoms
- Skin and hair changes
- Effects on the digestive tract (mouth, esophagus, stomach and intestines)
- Effects on blood counts

- Nervous system changes
- Kidney and liver changes
- Weight gain or loss

If you notice any unusual or unexpected side effects, discuss these changes with your health care team. Many targeted therapies are new, all side effects may not be known. You may be asked to keep a chart or diary of your side effects. You can expect regular follow-up visits with the health care team to check your progress. They may also ask you to keep track of any medicines you take and the times you take them.

It is also important to note that you might not develop any of these side effects. You may have very few or none at all. Even if the side effects do not occur, this does not mean the therapy is not working. Targeted therapy does not mean you have to limit your normal life. Many people find that they are able to work and do their day-to-day activities with very few changes.

## Blood Counts

Blood carries oxygen and nutrition to the cells of the body. It also carries away wastes. Special blood cells fight against infection. Other blood cells help with clotting. There are cells to repair cuts and clear bruises. When you get a blood test, each of these blood cell types is measured.

Blood cells are produced mainly in the bone marrow. The marrow is the soft, spongy part in the center of the bone. It is like a factory that produces blood cells. Chemotherapy, some cancers and radiation can suppress the bone marrow. This may lower the number of blood cells.

### Blood Counts after Treatment

Some types of treatment decrease the bone marrow's ability to make new blood cells. This lowers the number of cells in the blood. When blood counts are lowest, it is called nadir. Recovery depends on treatment and your general health. Infections and some medicines can delay the recovery of blood counts. Before resuming normal activities of daily living (such as returning to work, gardening, having sex), discuss the risks with your health care provider.

Your blood counts are checked regularly during treatment.

#### ***Normal Values***

- Hemoglobin
  - Adult male, 14-18 g/dL
  - Adult female, 12-16 g/dL
- Platelets, 140-440 k/uL
- White blood cells, 4-11 k/uL
  - % Neutrophils, 42-66% (per 100 cells counted)
  - Absolute Neutrophil Count (ANC), 1.70-7.30 k/uL

## Types of Blood Cells

There are 3 main types of blood cells: red blood cells, white blood cells and platelets.

### ***Red Blood Cells and Hemoglobin***

Red blood cells (RBC) and hemoglobin carry oxygen to all parts of the body. They contain hemoglobin which holds the oxygen. A person who does not have enough RBCs is anemic. An anemic person is often pale and may feel tired or become short of breath. Anemia may be treated by a blood transfusion. There may be other treatments, depending on the cause.

### **White Blood Cells**

White blood cells (WBC) are also called leukocytes. They include neutrophils, monocytes and lymphocytes. They protect the body against infection. If your WBC counts drop, your risk of infection rises. Here are ways you can help prevent infection:

- Wash your hands often with soap and water.
- Avoid people who you know are sick.
- Avoid getting cuts or breaks in the skin.
- Wear gloves while working in the garden or doing housework.
- Bathe or shower daily and practice good mouth care.
- Take your temperature as instructed. For a fever of 101°F (38.3°C) or above, or if you have a fever of 100.4°F (38°C) for more than 1 hour, go to the nearest hospital emergency center. Your oncology team may give you other temperature guidelines.
- Do not take aspirin or any other pain reliever such as ibuprofen (Advil® or Motrin®), naproxen (Naprosyn® and Aleve®) or acetaminophen (Tylenol®) unless your doctor says it is OK. These medicines can mask a fever.
- Do not use suppositories, rectal thermometers or enemas. If the rectum is injured, bacteria may enter more easily.

### **Lymphocytes**

Most cancer patients have normal lymphocyte values. However, if you have too few or if they are not working properly, you may get infections more easily. When your immunity is low, you may also get infections from immunizations that contain live viruses. Follow these guidelines:

- **Do not** get any immunizations unless they are approved by your health care team at MD Anderson Cancer Center.
- Ask if household members may receive live vaccines.
- Avoid anyone exposed to measles or chicken pox. If you are exposed to anyone with these diseases, report this to your health care team right away.
- Upon request, a letter can be provided to a school or workplace to explain all precautions that should be taken to protect you.

### **Platelets**

- Platelets are important for blood clotting (to stop bleeding). If your platelet count is low, you may bruise and bleed more easily. You may also notice tiny red dots under your skin. When your platelet count is low:
- Avoid vigorous activity, such as contact sports.
- Blow your nose gently.
- Tell your health care team about any dietary and herbal supplements you take. Some may increase the risk of bleeding.
- Do not take any aspirin or other pain relievers such as ibuprofen (Advil or Motrin) or naproxen (Naprosyn and Aleve) unless your doctor says it is OK. These medicines can affect the way your platelets work and may increase your risk of bleeding.
- Do not use suppositories, enemas or rectal thermometers. They may cause rectal bleeding.
- If you have bleeding, apply pressure until bleeding stops (usually 5 to 10 minutes). If you are still bleeding after 10 minutes, apply ice and pressure and go to the nearest hospital emergency center.
- Go to the nearest hospital emergency center if you cough up blood or have bleeding that does not stop.

### **Blood/Platelet Transfusions**

When blood/platelet counts are low, you may receive replacement through intravenous transfusion. You may receive whole blood with all the types of cells. Or you may receive only the cells that are low. Refer to the patient education sheet titled **Transfusion of Blood/Platelet Components** for more information.



# Your Treatment Plan

Cancer treatment is typically given in **cycles**. Your first day of your treatment is Day 1 of the treatment cycle. You may need different types of treatment within the same cycle. Chemotherapy (chemo) is the use of medicines to treat cancer. It kills or slows the growth of the primary tumor. It also works in the body against cancer cells that have moved away (metastasized) from the primary tumor. Some of the other medicines used to treat cancer include biotherapy, targeted therapy or vaccines. Each works differently, so the action in the body may be very different. The side effects may also be different. These types of treatment are further described below.

Some treatment regimens only require one day of treatment per cycle while others will require multiple days of treatment per cycle. Most cycles are 14 days, 21 days or 28 days. Some patients will need to go into the hospital for treatment while others can receive chemo in an outpatient infusion center. Some patients will take learn how to take chemo at home by either an infusion pump, topical application, or taking it by mouth. This is dependent of the treatment regimen prescribed. **You will receive detailed information regarding your treatment regimen, including specifics regarding each drug within the regimen, prior to starting.**

Below are some important tips to keep in mind as your start and progress through your treatment plan.

- To get the best results, it is important to follow your treatment plan. Stay on schedule. **Do not** miss appointments. Here are a few tips to help.
- Use a cell phone or watch alarm as a reminder to take your medicine.
- Write your appointments in a day planner or calendar. There is a calendar in the new patient binder that can be used.
- Stay motivated by talking with your doctor about the benefits of your treatment.
- Talk with your social worker if you are having problems with finances or transportation.
- A journal of symptoms can be helpful. Be sure to include the day of the cycle that you are on as symptoms are often predictable and can often be treated proactively.

## You and Your Care

You, the patient, are the most important person on the care team. During treatment, you have a major part in taking care of yourself.

It is very important that you follow instructions **exactly as they are given**. For example, medicines should be taken at the right times. You should always store your medicine in the correct way. Take good care of yourself by eating the right foods, drinking a lot of liquids (water, juice) and resting when you feel the need.

Because you may be on therapy for a long time, you may need to learn how to give yourself the medicine(s). Some targeted therapies are given by shots in the muscle (**intramuscular**) or under the skin (**subcutaneous**). If you have to give yourself shots, your nurse or pharmacist will teach you or a family member how to prepare your medicine.

Your nurse will teach you how to give the shot, where to give it, and how to store and dispose of the medicine, syringes and needles. Information is available to help you with this process. If you cannot give yourself a shot, other ways can be found to do this. Discuss any concerns with your health care team.

Many patients have a special **catheter** put into a large vein in the arm (PICC line) or shoulder (a subclavian) to receive medicine. Some patients may have an implanted port which allows direct access to the large vein to serve this purpose as well. This is to avoid repeated needle sticks and prevent skin damage. These catheters may be used for many months. If you have a catheter, you or a family member will need to attend a class to learn how to take care of the catheter. Sometimes, other types of catheters may be placed (such as in the abdomen). If this happens, your nurse will teach you how to care for this catheter.



**Do not** take any medicine without the consent of your health care team. This includes aspirin and other over-the-counter medicines. It is important that you tell your health care team about all other medicines prescribed by your family doctor. Examples include medicines for high blood pressure, heart trouble or birth control. If you need a pain medicine, be sure to discuss this with your health care team. Be sure to discuss the use of alcohol or any other drugs with your health care team.

## Infusion Center

The amount of time needed for treatment is different for each person. Your doctor, nurse, or pharmacist will tell you how long it will take to give your chemotherapy. Please allow extra time at the clinic. Your blood counts need to be checked before you receive chemotherapy. If these are OK, there is a wait time while the chemo is mixed. You may also need other fluids or medicines before treatment.

### Infusion Center provides care to patients receiving:

- Chemotherapy, targeted and/or immunotherapy
- Injections (chemo/non-chemo)
- Intravenous Immunoglobulin (IVIG)
- Hydration and electrolyte replacement
- Therapeutic phlebotomy
- Blood products

## Locations

Listed below are the infusion Center locations. Talk to your physician if you see an infusion location that is more convenient, as you may be eligible to receive treatment in that location.

### ***BMDA DOWNTOWN***

9<sup>th</sup> floor- Monday through Friday 8-430p  
1301 Palm Ave, Jacksonville, Florida 32207

### ***BMDA SOUTH***

2<sup>nd</sup> floor-Monday through Friday 8-430p  
14550 Old St Augustine Rd, Jacksonville, Florida 32258

## Laboratory Services

Laboratory services are available at all Baptist locations. Many labs ordered by your provider can be done the day before treatment (excludes a type & cross match for same day blood transfusions). Check with your provider if you are unsure.

## Scheduling Appointments

Patient Access Services (PAS) schedule appointments based on treatment type, length, and availability. If you need to reschedule any appointment please reach out to scheduling. **Please refer to the Who to Call sheet.**

For the safety of all patients and visitors, no one under the age of 12 is allowed in the Infusion treatment area. Please keep this in mind when you schedule your appointments.

## What to Expect on Outpatient Treatment Day(s)

### Check-in Process

- 1) Please arrive at your scheduled time. If you arrive early or late, it may affect your wait time.
- 2) A PAS staff will complete the check-in process upon your arrival.
- 3) You will be given a patient ID wristband and ask that you verify the information.
- 4) Mobile check is available.
- 5) The charge nurse reviews your chart to make sure you are “treatment ready,” and assigns you to a nurse. Treatment ready means that certain safety requirements have been met. Requirements include but are not limited to:
  - 6) Provider clearance is completed to include consent for treatment.
  - 7) Treatment orders are signed.
  - 8) Lab results have been reviewed and are within parameters.
- 9) A nursing assistant records your weight, take your vital signs (temperature, heart rate and blood pressure) and brings you to a treatment room.

### What to Wear

- Dress comfortably in loose-fitting clothes.
- Wear well-fitting shoes with non-skid soles, no backless shoes or flip-flops.

### What to Bring

- All medicines you routinely take at home (blood pressure, pain, etc.)
- Equipment (colostomy bags, portable oxygen, tube feeding, etc.)
- Sweater, jacket or extra layer of clothing
- Snack

### Meals

A complimentary light meal is available for patients only who are receiving treatment during lunch hours.

### Reasons for Delay

The Infusion center staff works to avoid treatment delays. However, appointment delays can happen from time to time.

Reasons may include, but are not limited to:

- Pending lab results
- Missed lab appointments
- Unsigned treatment orders
- Financial block
- No available room

### Discharge

Your infusion appointment treatment details can be reviewed by asking your nurse for a copy of your schedule.

## Questions to Ask Your Oncology Team

You should understand the expected benefits, side effects and risks of treatment before you start. Ask your doctor about your treatment plan. This list may help you get started.

- What is the goal of chemotherapy for my cancer? (Such as: Will it control the growth of the tumor? Is it to increase comfort? Do we expect the tumor to shrink?)
- What are the chances that the chemotherapy will work?
- How will I know if the chemotherapy is working?
- What are the short and long-term risks and side effects?
- How long will I receive chemotherapy? How often and for how long? How is it given?
- What can I do to prepare myself for chemotherapy and decrease my chance of side effects?
- Are there any side effects I should report right away?
- How will the treatment affect my diet? Activities? Work? Sexual activity?

To help you remember your doctor's answers, write down your questions and take notes during your appointments. Ask if you can record the conversation so you do not miss anything. Take a friend or relative with you. The more you understand the better choices you can make about your care.

## When to Call Your Oncology Team

Your health care team will teach you about the signs and symptoms you should report. For certain therapies, your health care team may advise you to report side effects as soon as you notice them.

Watch for the following and report. These are only general guidelines. If your health care team gives you different instructions, follow them.

- Fever of 100.4°F or higher
- Nausea longer than 24 hours
- Vomiting longer than 48 hours
- Diarrhea longer than 24 hours
- Constipation longer than 72 hours
- Worsening or new pain
- Inability to eat and drink Dizziness
- New bleeding
- Numbness, pain or swelling in legs or arms
- New rash

### WHEN TO SEEK IMMEDIATE EMERGENCY HELP

***DIAL 911 if you are experiencing the following symptoms:***

- Chest pain
- New confusion
- Shortness of breath
- Irregular, abnormal heart beat
- Loss of consciousness
- Swelling of tongue/face interfering with swallowing or breathing
- New seizure
- Stroke like symptoms—new weakness in face, arm or leg
- Bleeding that won't stop
- Severe abdominal pain

# Safety Concerns and Recommendations

## Preventing Infection

Preventing infection is critical to your health. It is especially important in the hospital. Many people are in close quarters and a sick body doesn't fight infection as well. The most important way to prevent the spread of infection is through hand washing and using hand sanitizers.

### How to Wash Your Hands

Wet your hands and use enough soap for a good lather. Rub your hands together using friction for 20 seconds. Scrub all areas of your hands, including fingers. Then rinse well with water. Dry your hands with a clean paper towel. Use a paper towel to turn off the faucet to keep your hands clean.

### Hand Sanitizer

Alcohol-based hand sanitizer kills the germs on your hands. Use it when your hands are not visibly dirty. Apply enough to cover your hands. Rub your hands together using friction for 20 seconds until the product is dry. If your hands dry in less than 20 seconds, there was not enough sanitizer. Get more sanitizer and repeat for 20 seconds.

### When to Clean Your Hands

- When your hands are dirty
- Before and after contact with another patient, family member or health care worker
- Before eating and drinking
- Before and after handling food (especially raw meats)
- After handling dirty items
- After using the restroom
- After blowing your nose, coughing or sneezing

### Other Ways to Protect Against Infections

- Remind members of your health care team to wash their hands.
- Remind visitors to wash their hands.
- **Do not** touch your nose, eyes or mouth with contaminated (unwashed) fingers.
- **Do not** share personal items, such as dishes, towels, creams, toothbrushes, etc.
- Avoid anyone who is ill.
- Avoid anyone who has a respiratory illness or the flu (sneezing, coughing, sore throat). If this is not possible, you and they should wear masks until their symptoms are gone.

### Patients with Increased Risk for Infection

- Cancer patients who are receiving treatment
- Neutropenic patients (patients with a low white blood cell count)
- Stem cell transplant (SCT) patients
- Leukemia, lymphoma and myeloma patients (blood cancers)

## Extra Precautions

Ask your health care team if the precautions below are recommended for you:

- Wear a mask when outside your hospital room and/or outside your home.
- Wear a mask in crowded public areas.
- Wear a mask in construction areas. (This includes any area where parts of buildings or streets are being repaired, torn down or constructed. Large amounts of dust and debris may be present in the air.)
- Ask your visitors or family members to wear a mask. (In many cases, visitors should always wear a mask while in a patient's room and should change the mask when it becomes damp.)

## Ask your health care team if it is OK to:

- Visit public areas during peak hours (such as theaters, restaurants, indoor playgrounds)
- Visit animal facilities (such as zoos, butterfly museums, pet stores)
- Clean up after your pet (such as litter boxes, birdcages, dog waste)

## More Information

If you have questions concerning how to prevent infections, ask your health care team or call. Refer to **Infection Control and Prevention**

## Over-the-Counter (OTC) Medicines

Check with your doctor or pharmacist before taking any OTC medicines while you are on cancer treatment. This includes nutritional supplements, vitamins, minerals and herbal products. Some OTC medicines may interact with your cancer treatment or worsen side effects. If you are not sure if you should take an OTC medicine, ask your health care team.

Keep in contact with your family doctor during your treatment. He or she needs to know what medicines you take for your cancer. Keep a current list of all the medicines you take and bring the list with you to every appointment.

If you have...	You may consider using...
Constipation	Senokot® (Senna), Colace® (docusate)
Diarrhea	Imodium® (loperamide)
Sinus congestion	Sudafed® (pseudoephedrine or phenylephrine)*, Afrin® nasal spray (oxymetazoline)
Sinus allergies or itching	® (diphenhydramine), Zyrtec® (cetirizine), Claritin® (loratadine), Allegra® (fexofenadine)
Cough	Robitussin® (guaifenesin), Delsym® (dextromethorphan)
Prevention and treatment of mouth sores	Baking soda rinse (1/2 teaspoon baking soda in 8 ounces of water)
Nasal congestion or dryness	Simply Saline® Nasal Mist, Ocean® Nasal Spray (saline nasal spray)
Indigestion/stomach gas	Pepcid® (famotidine), Zantac® (ranitidine), GasX® (simethicone)
Rash	Hydrocortisone cream 1%, Benadryl® tablets or liquid (diphenhydramine)

*These are some OTC medicines that your health care team may recommend to help manage the side effects of cancer treatment.*

Consult with your health care team before taking this if you have high blood pressure or a heart problem.

Medicines are listed by brand name (generic name in parentheses). You may use either the brand or generic version. Follow package directions unless given other instructions by your health care team.

## Read Labels

Your health care team needs to know if you have a fever. However, some ingredients in OTC medicines may lower your temperature and mask a fever. Examples are aspirin, Advil® (ibuprofen) or Tylenol® (acetaminophen). Some ingredients may affect your blood platelets.

Examples are aspirin and ibuprofen, among others.

Read the labels of OTC products. Look for the following ingredients:

### ***Salicylates:***

- Aspirin or aspirin-like compounds
- Acetylsalicylic acid, ASA
- Bismuth subsalicylate, salicylamide
- Methyl salicylate, sodium salicylate
- Potassium salicylate, magnesium salicylate, etc.

### ***Ibuprofen:***

- IB, IBU, ibuprofen

### ***Naproxen:***

- naproxen sodium

### ***Ketoprofen***

### ***Acetaminophen:***

- APAP, acetaminophen, paracetamol

## Safe Handling of Body Fluids and Waste

You are receiving chemotherapy (chemo) to treat your cancer. There are things you can do to protect you and your loved ones from the effects of chemotherapy. It takes time for your body to get rid of the chemo medicines. Follow these instructions to handle chemo during treatment and for 48 hours after you complete your treatment. If you are getting continuous chemo without any breaks, talk with your health care team about the risks involved to you and your loved ones if exposed to the chemo or waste from your body. If you follow these precautions, the people you live with and the environment are safer from the chemo medicine(s).

You should take care to not contaminate others within the home or the environment. Caregivers should take care to not contaminate themselves with the chemotherapy or the body waste from the patient receiving chemo.

These precautions are for patients who take chemotherapy with the highest risk of harm due to accidental exposure. Talk with your health care team about the risk linked to your chemo and any possible changes that may be made to these precautions.

## Handling Body Waste during Chemotherapy Treatment and 48 Hours after the Last Dose

Safe handling guidelines are used any time anyone might touch body waste, such as urine, stool or vomit. This includes touching toilets, bedside commodes, bedpans, vomit pans, urinals, ostomy bags or other body waste containers.

- Use the toilet as usual. When you are done, close the toilet lid and flush (2 times if a low-flow toilet) to ensure all waste has been emptied.
- Try to not splash urine. If the toilet or toilet seat becomes soiled with urine, stool or vomit, clean the surfaces before other people use the toilet.
- Wash your hands well with soap and water after you use the toilet.

- Keep toilets and restrooms clean.
- Change and wash all soiled clothes or bed linens right away.
- Wash your skin with soap and water.
- If you use diapers or bladder control products, use the disposable kind. Place soiled items inside 2 sealable, leak-proof plastic bags for disposal. This is called “double-bagging.”
- Empty body waste containers into the toilet. Pour close to the water not to splash. Clean body waste containers after each use with soap and water. Rinse well.
- Clean ostomy bags one time a day and empty as needed.
- Caregivers should wear disposable gloves when handling or cleaning any type of bodily waste from the patient. Never use torn gloves or gloves with small holes in them.
  - Remove the used gloves and place them in the leak proof bags.
  - Wash your hands after you remove the gloves.

## **Handling Laundry**

Wash your clothes or bed linens as usual unless they become soiled with chemo or body waste. Wash soiled laundry separately from other laundry items. Follow these instructions:

- Wash soiled laundry right away. If it cannot be washed right away, put it in a plastic bag. Wash it as soon as possible.
- Carry any soiled laundry away from your body. Wash your hands.
- Use detergent and hot or warm water.
- Caregivers should wear disposable gloves when handling laundry soiled by body waste from the patient. Never use torn gloves or gloves with small holes in them.
  - Remove the used gloves and place them in the leak proof bags.
  - Wash your hands after you remove the gloves.

## **Handling Trash**

- Use the leak-proof plastic bag or container with lid for soiled trash.
- Seal the bag and place it inside a larger leak-proof bag. Seal bags with ties or rubber bands when full. Seal containers with tape. Place in household trash.
- Label the bag “not for recycle.”
- Keep trash away from children and pets.

## **Sexual Activity**

- If you are sexually active and of childbearing age, use birth control during treatment. Your health care team can help you decide what kind is best for you.
- Most patients are able to continue sexual activity during chemo, but special precautions are sometimes needed. Small amounts of chemo may be present in vaginal fluid and semen for up to 48 hours after you finish treatment. Ask your health care team if you or your partner should use a condom.
- Activities such as hugging and kissing are safe and do not require special precautions.



## Safe Handling of Oral Therapy at Home

You are receiving an oral medication. Although the goal of the therapy is to treat your cancer, it may cause harm to normal body cells. Following the below instructions during treatment and for **48** hours after your last dose, will help keep yourself, the people around you, and the setting you live in as safe as possible.

### Supplies

- Latex powder-free gloves
- If allergic to latex, then use latex-free gloves
- Leak-proof plastic bags or disposable container with lid

### Storage

- Keep your medication in a safe place, out of the reach of children and pets.
- Label all containers
- Follow your nurse's or pharmacist's instructions for storage.
- If refrigeration is needed, store the medication in a separate leak-proof container. Place the container away from food. Do not put the medicine in or near the freezer.
- Do not store the medicine in the bathroom (too much moisture). Do not store in areas with temperatures that are very hot or very cold.

### Handling Your Medication

- Do not crush, break or chew the pills. Swallow them whole.
- Only adults should handle the medicine.
- Do not touch the pills with your bare hands (unless you are administering the medication to yourself).
- Pregnant women and children should not handle your medication or body waste at any time.
- Wash your hands well with soap and water before and after handling the medication.
- Wear 2 pair of disposable gloves when handling. Never use torn gloves or gloves with small holes in them. Gloves are not necessary if you give the drug to yourself.
- Remove the used gloves and place them in the leak proof bags. Wash your hands after you remove the gloves.

### Handling Body Waste

Follow safe handling guidelines during your chemo treatment and 48 hours after your last dose. A caregiver should wear gloves for any of the below activities, including touching toilets, bedside commodes, bedpans, vomit pans, urinals, ostomy bags or other body waste containers.

- Use the toilet as usual. When you're done, close the toilet lid and flush twice.
- Try to avoid splattering urine. Men should urinate sitting down.
- Wash your hands well with soap and water after you use the toilet.
- Keep toilets and restrooms clean. After cleaning, put the toilet lid down and flush twice.
- If you use diapers or bladder control products, use disposables. Place soiled items inside 2 sealable, leak-proof plastic bags for disposal. This is called "double-bagging."
- Empty body waste containers into the toilet. Pour close to the water to avoid splashing. Clean body waste containers after each use with soap and water. Rinse well.
- Ostomy bags need to be cleaned once a day and emptied as needed.
- Remove the gloves and put them inside 2 plastic bags. Seal the bags and throw them in the trash. Then wash your hands.

## Handling Laundry

Wash your clothes or bed linens as usual unless they become soiled with chemo or body waste. Wash soiled laundry **separately** from other laundry items. Follow these instructions:

- Soiled laundry should be washed right away. If it can't be washed right away put it in a plastic bag. Wash it as soon as possible.
- Wear 2 pairs of gloves to handle soiled laundry. Carry the soiled laundry away from your body. Remove gloves and wash your hands. Wash body with soap and water if exposed to any of the soiled laundry.
- Use detergent and hot or warm water.

## Handling Trash

Wear gloves to handle trash that contain pills or body waste. Wash your hands after you remove the gloves.

- Use the leak-proof plastic bag or container with lid for soiled trash.
- Seal the bag and then place this bag inside a larger leak-proof bag. Seal bags with ties or rubber bands when full. Seal containers with tape. Place in household trash.
- Label the bag "not for recycle."
- Keep trash away from children and pets.

## Pregnancy/Sexual Activity

- If you are sexually active and of childbearing age you should use birth control during treatment. Your doctor can help you decide what kind is best for you.
- Do not breastfeed while on this therapy
- Most patients are able to continue sexual activity during chemo, but special precautions are sometimes needed. Traces of your medication may be present in vaginal fluid and semen for days after you finish treatment. Ask your health care provider if you or your partner should use a condom.

## Disposal of the Pills (Take Back Programs)

- To dispose your medication, call your city or county government's household trash and recycling service. Ask if a drug take-back program is offered in your community.
- Some counties have hazardous waste collection days. On these days, prescription medicines are accepted, at a central location, to ensure proper disposal
- Information for local take back programs can be found at [www.dea.gov](http://www.dea.gov)

## Resources

From the American Cancer Society:

<http://www.cancer.org/treatment/treatmentsandsideeffects/treatmenttypes/chemotherapy/oral-chemotherapy>

Safe Handling of Chemotherapy at Home: Taking Chemotherapy by Mouth. The University of Texas MD Anderson Cancer Center ©2008 Revised 07/2016, Patient Education, Reviewed 10/4/2021.

## Sexual Health Safety Tips

### **Risk of infection**

Most patients are able to have sexual activity during treatment. However, there can be a greater risk for infection if your blood counts (white blood cells and/or platelets) are low or may become low. Therefore, please talk to your health care team about whether it is safe to have sex.

### **Avoid Pregnancy**

Some treatments may lower a man's sperm count. However, this may not make him infertile. Treatments may also cause a woman's periods to stop. However, women can still get pregnant prior to return of periods. Pregnancy may still be possible. Some treatments may cause birth defects. Discuss your risks of pregnancy with your doctor. Talk to your health care team about the best method of birth control for you.

Practice safe sex if you or your partner have sex with more than one person. Latex condoms and/or dental dams help prevent infections from body fluids. If you use a lubricant with latex condoms, choose one that is water-based. Do not use a lubricant that contains oil (such as baby oil or petroleum jelly). Oil weakens the condom.

# Common Side Effects

## Fatigue

Fatigue means feeling tired physically or mentally. Cancer or cancer treatments can cause fatigue. Cancer-related fatigue can be overwhelming. Many people describe fatigue as feeling weak, weary, worn out, heavy, or slow. Resting does not always help. Many people say they feel fatigue during chemotherapy and even for weeks or months after treatments are over. Your caregiver can also become fatigued.

## Causes

Fatigue may have many causes:

- The cancer itself
- Cancer Treatment
- Persistent pain
- Anemia
- Stress from other factors such as family problems, divorce or work
- Depression that lasts for more than 2 weeks
- Trouble sleeping
- Poor diet
- Dehydration
- Lack of physical activity and exercise
- Lack of support from family and friends
- Over doing it with regular activities and routines
- Other medical issues

## Symptoms

Some signs and symptoms of fatigue are:

- A weak feeling over the entire body
- Problems concentrating
- Waking up tired after sleep
- Lack of energy or low energy
- Lack of motivation to be physically active
- Increased irritability, nervousness, anxiety or impatience
- No relief from fatigue, even with rest or sleep

## Prevention and Management

Here are some tips that may help prevent or manage fatigue:

- Prioritize your activities. Plan a work schedule that works for you. Complete the most important tasks when you have the most energy.
- Delegate activities to others when you can.
- Place things that you use often within easy reach to save energy.
- Treat any medical problems that may contribute to your fatigue.
- Drink plenty of fluids.
- Eat a balanced diet.
- Exercise: take short walks or other physical activity.
- Before you start any exercise program, discuss it with your health care team.
- Manage stress with exercise, relaxation, visual imagery, meditation, talking with others and counseling.
- Balance rest and activities.

- Do not stay in bed. Limit naps/rest periods to 30 minutes at a time. If not sleeping more than 8 hours per night discuss with oncologist.
- Keep a diary of how you feel each day.

## **When to Call Your Doctor**

Apply the above tips first. Depending on the cause of your fatigue, there may be prescription medicines to help reduce it. Talk with your doctor if you:

- Have fatigue that does not get better, keeps coming back or becomes severe. Signs of severe fatigue include spending all day in bed and inability to do daily activities.
- Are much more tired than you should be after an activity. Or if the fatigue is not related to doing any activity.
- Have fatigue that cannot be relieved by rest or sleep.
- Have fatigue that disrupts your social life or daily routine

## **Energy Conservation Tips**

Conserving energy during regular daily activity helps decrease fatigue. How you do an activity, stand, walk and move your body, as well as the spacing of your work area, can affect your energy use.

### ***Plan and Organize***

Alternate tasks between those that take a lot of energy with those that take less. Plan activities for each day as well as for each week to better alternate tasks. Delegate as much as possible. This helps you get tasks done. It also allows others, who want to help, to feel useful.

Combine similar chores or errands. Arrange your household so that most activities can be done on one level of the house. Organize ahead of time so you do not have to rush.

### ***Pace Yourself***

Balance activities with rest periods so you are doing, resting, doing, resting. Stop to rest before you get tired, even if it means stopping in the middle of a task. Do not rush to do everything in one day. Overdoing it on one day may make you so tired that you need more than one day to recover.

Try to avoid activities that take big spurts of energy. This can drain energy. Pace activities on good days as well as bad days. Develop a routine to prevent overdoing.

### ***Position***

Sit to do activities whenever possible. Use assistive devices to help you maintain good posture while walking or moving around. Examples of assistance devices are walkers, scooters, canes, handrails, and grab bars. This equipment can save energy by allowing you to do things without having to bend or reach.

Avoid heavy lifting such as lifting children, groceries and laundry. Use carts or wagons to move things from room to room or place to place. Wear a fanny pack, a jacket, or sweater with pockets to carry things.

### ***Prioritize***

Focus on the things you enjoy doing. Be realistic with yourself about how much you can do. For example, make a list of all your activities for the day, and then number them according to priority. Perform activities with the highest priority first.

## **When you're Too Tired to Eat**

When the thought of cooking or eating a meal makes you tired, try these tips:

- Let others help prepare or bring food. Family or friends often like to help. Ask about community resources that deliver prepared meals.
- Use canned, frozen, or other prepared foods or order out.

- On days when you feel well, cook extra food. Freeze it in small containers. Heat and eat this food on days when you are tired.
- Eat small, frequent meals rather than several large meals each day. Have snack foods readily on hand.

## **Activities to Preserve Energy**

### ***Basic Activities***

#### *Dressing*

- Wear loose-fitting clothes which are easier to get on and off.
- Bring your foot to your knee to put on socks and shoes so you won't have to lean over.
- Wear slip-on shoes or shoes that have Velcro® or elastic shoelaces.
- Use a long-handled shoe horn or sock aid.
- For women, fasten bra in front and turn it to the back.
- Wear clothes that button in front rather than pullovers or clothes with back buttons.
- Place chairs throughout home to allow rest stops.

#### *Bathing and grooming*

- Wash your hair in the shower rather than over a sink.
- Use a terrycloth robe instead of towels to dry off.
- Use organizers to keep items within reach.
- Use a chair in the shower or tub.
- Use a long-handled sponge or brush to reach your back and feet.
- Rest your elbows on a counter or dressing table to avoid leaning unsupported.
- Use long-handled brushes or combs to avoid holding your arms overhead.
- Use liquid soap or soap on a rope.
- Use an elevated toilet seat.

#### *Miscellaneous*

- Install and use ramps.
- Use a lift chair.
- Use cruise control when driving.

### ***Advanced Activities***

#### *Housework*

- Spread tasks out over the week or month.
- Hire help.
- Use long-handled dusters, mops and dustpans.
- Use an automatic washer and dryer, if possible.
- Use a lightweight iron.
- Use a robotic vacuum.

#### *Shopping*

- Make a list.
- Organize list by store aisle.
- Request store assistance or use scooters when available.
- Have groceries delivered, if possible.
- Shop at less busy times.
- Use grocery services to order online and pick up at the store or have it delivered.

### *Meal Preparation*

- Assemble all ingredients before starting.
- Use mixes or pre-packaged foods.
- Use cookware you can serve from.
- Use small, lightweight appliances.
- Use labor-saving devices.
- Buy utensils that fit comfortably in your hand.
- Store frequently used items at chest level to minimize bending or reaching.
- Line ovens and drip pans with foil for easier cleanup.
- Let dishes soak rather than scrubbing them.
- Let dishes air-dry.

### *Childcare*

- Plan activities or outings at a place that will allow sitting or lying down.
- Take advantage of day care programs.
- Teach children to make a game of household chores.

### *Work*

- Plan your work around the time of day when you have the most energy.
- Organize work centers so equipment is within easy reach.
- Create shortcuts.
- Take rest breaks.
- Work partial days, if possible.

### *Leisure*

- Plan activities that allow you to sit or lie down.
- Plan social events at your peak energy times.

## **Sleep**

### ***Tips for a Good Night's Rest***

#### *During the Day*

- Exercise regularly. A 20-minute walk during the day can help you relax. Do not exercise in the evening before bedtime.
- Limit naps if you can. If you must rest, limit your nap to 30 minutes or less.

#### *Before Bedtime*

- Avoid alcohol, caffeine, chocolate and nicotine in the late afternoon and evening. Limit liquids in the evening before going to bed.
- Turn off the TV 1 hour before bedtime. Listen to quiet music or take a warm bath to relax before bed.
- If you are worried or anxious, or thoughts are keeping you awake, try these tips. Write down your thoughts or make a list of things you need to do. This will allow you to worry less about forgetting anything and will help you relax.

#### *At Bedtime*

- Go to bed and get up at the same time every day. Keep this routine even on weekends.
- A light bedtime snack of warm milk, turkey or a banana may make you sleepy. Use your bedroom for sleep and intimacy only. Do not read, watch TV, or work in the bedroom.
- If you tend to watch the clock at night, turn the clock around.



- If you have a partner, both people should go to bed at the same time, if possible.

#### *Problems Falling Asleep or Waking up During the Night*

- If you have not fallen asleep in 15 minutes, go to another room to relax.
- Listen to quiet music.
- Avoid things that provide mental stimulation such as watching TV or reading exciting books.
- Go back to bed when you feel sleepy. If you still cannot fall asleep, get up again and repeat these steps as necessary.

#### *Improving Sleep During Your Hospital Stay*

- Try the same strategies as above as if you are at home.
- Bring familiar items from home to make you more comfortable.
- Talk with your nurse and doctor about clustering your care.
- Consider using an eye mask to avoid light and earplugs to block out noise during sleep.
- Maintain a daily routine and do physical activity to promote a better night's sleep.
- Take a 20 to 30 minute nap, if needed, during the day to improve alertness and increase mood.
- Try not to lie in bed all day. Get up and do activities throughout the day.

#### *Apps for Sleep*

There are many types of apps available to help with sleep and relaxation. Do a search on your smart phone or tablet for new ideas to help improve your sleep quality.

## Loss of Appetite

Cancer and its treatment can cause a decrease in appetite or a complete loss of appetite. Eating less can lead to muscle and weight loss, which may affect your energy level and your ability to tolerate treatment. It is important to eat well to help your body stay strong during and after treatment. Tell your doctor, nurse or registered dietitian if you lose weight during treatment.

### Causes

Loss of appetite may be caused by many things, such as:

- Cancer and side effects from cancer treatments. These include nausea, vomiting, constipation, diarrhea, altered taste, etc.
- Medical conditions, such as fever, pneumonia or shortness of breath
- Mouth and throat problems that make it painful to eat
- Certain drugs can cause you to lose your taste for food
- Appetite changes can also come from sadness, depression or anxiety

### Prevention and Management

To help you manage appetite loss, try the following:

- Try to eat 6 to 8 small meals throughout the day instead of 3 regular size meals. Include high-calorie and high-protein foods and fluids with your meals.
- Choose a time to eat instead of waiting to be hungry. Set an alarm to remind you to eat every 2 to 3 hours.
- Limit fried and greasy foods. They can be hard to digest and may limit you from eating later.
- Drink most of your fluids between meals and sip as needed with meals to help swallow foods. Choose beverages that also provide calories (milk, juices, shakes, smoothies).

- Keep your kitchen well stocked with foods that are easy to prepare, such as single-serve entrees and ready-to-eat foods. Some ideas are peanut butter crackers, cheese and crackers, high-protein shakes, nuts and frozen meals. Your dietitian can provide more suggestions.
- Eat your largest meal at the time of day when you are most hungry.
- Try to make eating enjoyable. Eat your favorite foods in a pleasant, relaxed atmosphere.
- Avoid strong food odors that increase feelings of appetite loss and nausea.
- Make a list of your favorite foods (snacks, entrees and desserts) to share with your friends and family so that they can prepare and deliver them to you.
- Light exercise, such as walking, before a meal may help improve your appetite.
- Add nutritional supplements to your diet to increase calorie and protein intake. Your clinic dietitian can give you more information.
- Ask your doctor if medicine to increase your appetite is an option for you.

If you would like to see a dietitian, ask your oncology team for a consult.

## Nausea and or Vomiting

Nausea is when you feel sick to your stomach, like you are going to throw up. Vomiting is when you throw up. You may also have dry heaves, which when your body tries to vomit even though your stomach is empty.

### Tips to Control

Some chemotherapy (chemo) medicines may cause nausea and/or vomiting. This most often happens within 24 hours of receiving chemo. You may have nausea for a few days after chemo is completed. This is referred to as “delayed” nausea. After repeated chemo, some people worry that they will have nausea. So they begin to feel it even before the treatment starts. This is called anticipatory nausea.

Not all chemotherapy causes nausea and vomiting. When these side effects are felt, there are medicines and methods to ease symptoms. If you have nausea and vomiting and are having a hard time eating, ask for a consult with a dietitian.

### Antiemetics

Antiemetics are medicines that help control nausea and vomiting. They work best if given before chemo. Antiemetics may be given by mouth, IV or by other routes.

You may be given an antiemetic to use at home. You may be told to take this medicine on a regular basis or as needed. Some patients are asked to take their antiemetic at home before coming in for chemo.

You may need to try more than one antiemetic before you get relief. Do not give up. Tell your health care team if your nausea is not controlled. It is normal to need to take 2 or more different medicines to prevent or relieve nausea and vomiting.

### Prevention

- Ask your doctor which antiemetic will be prescribed to prevent and control nausea and vomiting. Learn how, when and how often to take them.
- Take your nausea medicine as directed. Do not wait until nausea is a problem before taking medicines.
- Eat 6 small meals throughout the day instead of 3 big meals.
- Avoid having an empty stomach.
- Avoid heavy, high fat and greasy meals right before chemotherapy.
- Avoid strong smells and unpleasant odors.
- Drink enough liquids so that your urine is light colored. Sip on liquids throughout the day. Do not gulp large amounts at one time.

- Practice good mouth care.
- Wear comfortable, loose-fitting clothing.
- Avoid exercising right after eating.
- Sit or recline with your head elevated for at least 30 to 60 minutes after eating.

## Management

- Take your antiemetic(s) as directed.
- Apply a cool wet cloth to your forehead or neck.
- Eat dry foods (such as crackers or toast) when you awaken, before moving around.
- Move slowly.
- Open a window or use a fan to feel fresh air movement.
- Sip room temperature carbonated drinks such as cola or ginger ale.
- Try tart or sour flavored foods, hard candies or liquids.
- Do not force yourself to eat.
- Drink enough liquids so that your urine is light colored. Sip liquids throughout the day or eat ice chips made from water, Gatorade®, juices or ginger ale.
- Pay attention to which foods trigger and/or soothe nausea. Do not eat your favorite foods when nauseated. Doing so may cause them to no longer be your favorite foods due to being linked to feeling sick.
- Use distraction such as music, puzzles, games, TV or reading.
- Learn relaxation techniques. Ask your health care team for other treatment options (like acupuncture or complementary therapies, such as ginger).

## Diarrhea

Diarrhea is frequent bowel movements that may be soft, loose, or watery. Chemotherapy can cause diarrhea because it harms healthy cells that line your large and small intestines. It may also speed up your bowels. Diarrhea can also be caused by infections or drugs used to treat constipation. It is important to treat the cause of diarrhea. See below some of the causes of diarrhea and how to treat it.

## Causes

### ***Cancer Treatment***

#### *Radiation*

Radiation treatment to the abdomen affects the lining of your colon. This may cause diarrhea. Treat this by taking loperamide (brand name Imodium®, available without a prescription). You can also get Lomotil® by prescription. These medicines slow the movement of stool through the intestine.

#### *Surgery*

Surgery that removes part of the intestine may result in frequent stools. These stools are often soft and formed, not liquid.

Try these solutions to help slow stools:

- Take Imodium or Lomotil at the time your doctor or nurse suggests.
- Take medicinal fiber, such as psyllium (Metamucil®) or methylcellulose (Citrucel®) with 2 ounces of water. The fiber absorbs excess fluid like a sponge. Do not drink liquids for 1 hour after taking medicinal fiber. When you take the right amount of psyllium, other medicines may not be needed. As you increase the dose of psyllium, decrease the dose of Imodium or Lomotil.
- Add foods from the BRAT diet to your normal diet. These include bananas, white rice, applesauce and dry toast.
- Avoid spicy foods, deep fried foods and hot liquids. These can cause frequent stooling after surgery.

### ***Chemotherapy***

Certain types of chemotherapy (chemo) drugs cause diarrhea. Ask your doctor how to control diarrhea. You may be told to take Imodium. Do not take Imodium if you are being checked for C. difficile or other bacteria. When taking Imodium, do not take more than 8 pills (16 milligrams) per day. Read the package label and follow directions. Take over-the-counter medicine for diarrhea only if your health care team says it is OK.

If you took fiber before you started chemo, it may not be needed during chemo. Ask your health care team if you have questions.

### ***Food Allergies***

Eating foods that you are allergic to can cause diarrhea. You should stop eating foods that cause diarrhea. Discuss your food allergies with your health care team.

### ***Lactose Intolerance***

You may have diarrhea if your body cannot digest lactose, the sugar in dairy foods. Some people do not have the enzyme needed to digest lactose. Dairy products include milk, yogurt, cheese, cottage cheese and ice cream. If you get gas or bloating after eating dairy products, you can take the over-the-counter product Lactaid®. You may also try lactose-free dairy foods available in most grocery stores.

### ***Infections and Parasites***

Certain types of bacteria and parasites can cause diarrhea. To help with treatment options, your doctor may request a stool sample from you.

### ***Antibiotic Therapy***

Antibiotics (medicines to treat bacterial infections) may cause diarrhea by destroying the normal bacteria that live in the intestine. If you have diarrhea when you take antibiotics, try these tips:

- Eat 2 servings of yogurt that contain acidophilus or live cultures daily. Avoid yogurt that can cause your gastrointestinal (GI) system to become more active (such as those containing bifidus regularis).
- Drink buttermilk.
- Take acidophilus or lactobacillus in pill form if approved by your health care team. You can buy it in drug stores or health food stores.
- Ask about over-the-counter products that can help with diarrhea caused by antibiotics.

### ***Impaction (Severe Constipation)***

An impaction is the collection of a large amount of stool in the colon. A severe impaction can cause diarrhea. Diarrhea can occur when liquid stool seeps around the formed stool. Do not take anti-diarrhea medicine because the impaction may get worse.

### ***Other Causes***

- Alcohol and caffeine
- Tube feeding formula that is given too quickly
- Gastroenteritis - inflammation of the stomach
- Diverticulitis - inflammation of areas in the intestine
- Irritable bowel syndrome
- Adding medicinal fiber too fast to your diet may cause more diarrhea, cramping and bloating. For more information, ask for the handout Medicinal Bulk-Forming Fiber.

### ***Unknown Causes***

If you have diarrhea and do not know the cause, talk with your health care team. Your treatment will vary depending on the cause of diarrhea.

## Management

### *Ways to Manage*

- Drink eight to twelve cups of clear liquids each day.
- Eat low fiber foods
- Let your doctor or nurse know if your diarrhea last for more than 24 hours or if you have pain and cramping along with diarrhea.
- Be gentle when you wipe yourself after a bowel movement.

### *Avoid:*

- Drinks that are very hot or very cold
- Beer, wine, and other types of alcohol
- Milk or milk products, such as ice cream, milkshakes, sour cream, and cheese.
- Spicy foods, such as hot sauce, salsa, chili, and curry dishes
- Greasy and fried foods, such as French fries, and hamburgers
- Foods or drinks that cause gas, such as cooked dried beans, cabbage, broccoli, and soy milk and other soy products
- Foods that are high in fiber, such as cooked dried beans, raw fruits and vegetables, nuts, and whole-wheat breads and cereals.

### *Medicines*

Some medicines can cause diarrhea. Ask your health care team before taking these. Examples are:

- Antacids that contain magnesium
- Laxatives
- Aldomet (methyldopa)
- Non-steroidal medicines
- Theophylline
- Cytotec (misoprostol)
- Reglan (metoclopramide)
- Medicines with artificial sweeteners (sorbitol or xylitol)

### *Nutrition and Diarrhea*

Regardless of the cause of diarrhea, follow these guidelines:

- Drink 8 to 10 cups (64 to 80 ounces) of fluids every day. Diarrhea can make you dehydrated if you do not drink enough. If your urine is dark, you are not drinking enough.
- Sodium and potassium are lost when you have diarrhea. Eat salted crackers, pretzels or broth to replace sodium. Include high potassium foods such as orange juice, potatoes (no skin) and bananas as tolerated. Low carbohydrate electrolyte drinks also help replace electrolytes. Some examples include half strength Gatorade® or Powerade® (mix equal parts of drink and water), G2® (sugar-free Gatorade), Pedialyte® and CeraLyte-70®.
- Eat small, frequent meals every 2 to 3 hours.
- Limit high-fiber foods such as peas and beans, seeds, whole grains, and high-fiber fruits and vegetables or those with thick peels/skins.
- Limit high-fat foods such as fried foods, rich desserts (pies, cakes, cookies), and foods with large amounts of butter, oil or cream.
- Drinking hot fluids (including soups) may make diarrhea worse. Allow hot fluids to cool to room temperature.
- Avoid alcohol, caffeine and spicy foods which cause food to move more quickly through the intestine.
- Milk and other dairy products that contain lactose may make diarrhea worse. You may need to limit or avoid these foods until diarrhea stops. Cultured milk products such as yogurt, buttermilk and hard cheeses may be better tolerated. Lactose-free milk or Lactaid may be used instead of limiting milk and other dairy products.
- Limit the use of sugar-free gums and candies that contain sorbitol or xylitol.

### ***Self-Care Tips***

- After each bowel movement, clean your anal area with a mild soap. Rinse well with warm water. Pat the skin dry. Or, you may want to use baby wipes to clean after each bowel movement.
- Apply a water-repellent ointment, such as A&D® or petroleum jelly to the anal area.
- Sit in a tub of warm water or a sitz bath to help soothe the area.
- Protect furniture by using pads with plastic backing where you lie down or sit.

### **When to Call Your Doctor**

Report any of these symptoms to your doctor:

- You have 6 or more loose bowel movements a day and this does not get better in 2 days.
- You have blood in your stool or around your anal area.
- You lose 5 pounds or more after the diarrhea starts.
- You have new belly pain or cramps for 2 days or more.
- You do not make urine for 12 hours or more.
- You are unable to drink liquids for 24 hours or more.
- You have a puffy or swollen belly.
- You have constipation for several days followed by diarrhea, which could be caused by an impaction.

## **Constipation**

Constipation is when you have hard, dry stool that is difficult to pass. Bowel movements may also be less frequent. Symptoms may include pain, discomfort, gas, nausea and a decrease in appetite. See below for some of the causes of constipation and how to manage it.

### **Causes**

#### ***Medications and cancer treatment***

Pain medicines and some anti-nausea medicines can often cause constipation. They slow the normal movement of stool in the colon. Because stool stays in the colon longer, more water is removed from the stool. This can cause hard, dry stools and painful bowel movements.

In order to manage your pain and nausea, it is important to take medicines as needed. It is a good idea to take a stool softener and/or laxative with these medicines to help prevent constipation.

Stool softeners hold water in the gastrointestinal (GI) tract to keep stool soft. Laxatives stimulate movement through the GI tract.

Ask your health care team if your medicines may cause constipation.

#### ***Decreased Activity***

Many people feel tired and are less active during chemotherapy (chemo) treatment. Less physical activity slows down the GI tract. Physical activity such as walking can help stimulate the bowels and bring on a bowel movement. Be as active as you can.

#### ***Decreased Appetite and Fluid Intake***

Chemo can cause nausea, vomiting and lack of appetite. You may not be able to eat and drink as much as you normally do. A decrease in appetite and fluid intake can cause constipation. Ask your health care team for tips to improve your appetite and how to manage nausea and vomiting.

## Management

### Medicines

You can take the below medicines to help promote a bowel movement and soften stool. They can be purchased without a prescription at most drug and grocery stores. Many store brand stimulant laxative/stool softeners work as well as brand names and often cost less.

**Senokot-S:** A medicine that contains both a laxative and a stool softener is senna with docusate (Senokot-S®). You can safely take up to 8 Senokot-S pills per day. Start with 1 pill, 2 times a day (1 in the morning and 1 at bedtime) or as directed by your health care team. If this does not bring on a bowel movement, slowly increase the dosage 1 pill at a time until you have soft-formed stools every day or every other day. **Do not** take more than 8 tablets per day.

**Miralax:** Another laxative that can help prevent constipation. Miralax draws water into the colon and helps soften stool, making it easier to pass. Use by mixing 17 grams of Miralax in 8 ounces of water or other liquid and drink it every day. You may take Miralax once per day in addition to Senokot-S if needed.

***If this does not help bring on a bowel movement, contact your nurse.***

### Nutrition and Constipation

These general nutrition tips may help improve appetite and fluid intake.

- Eat small, frequent meals every 2 to 3 hours.
- Add high-fiber foods to your diet every day, unless you have been told to limit fiber. Examples:
  - High-fiber cereals
  - Fresh vegetables
  - Fresh fruits with skins, especially prunes
  - Whole grains (quinoa, oatmeal, brown rice, whole grain breads)
  - Legumes (beans)
- Drink 8 to 10 cups (64 to 80 ounces) of fluids every day. Drinking enough liquid helps soften stools. If your urine is dark, you are not drinking enough.
- Drink warm or hot fluids (including soups). This stimulates the GI tract. Drinking warm prune juice before a meal and a hot beverage after your meal can help bring on a bowel movement.
- Try taking medicinal fiber like Metamucil® or Citrucel®. This type of fiber helps soften stool. Mix 1 tablespoon (6.8 grams) of the fiber in 8 ounces of water. Next, drink 8 more ounces of fluid right away. Taking fiber without drinking enough fluid can make constipation worse. Psyllium is the generic name for Metamucil, and methylcellulose is the generic name for Citrucel.

**Do not** substitute:

- Fiber pills for powdered fiber or wafers. These products can make constipation worse.
- Soluble fiber (such as Benefiber or Fiber Choice) for a bulk-forming fiber. Soluble fiber does not have the same effect as bulk-forming fiber. Soluble fiber feeds the normal bacteria in the colon and helps move stool down the GI tract. The inside of an apple and other fruits and vegetables are examples of soluble fiber.

### Self-Care Tips

- Keep track of your bowel movements.
- Treat constipation right away when symptoms first appear. Do not wait to take action.
- Do not ignore the urge to have a bowel movement. Holding stool results in harder and larger stool that is difficult to pass.
- Find out which foods cause you constipation and avoid those foods.
- Do not use enemas and suppositories if your platelet or white blood cell counts are low or if you take blood thinners.



- Do not strain with BMs. It may be helpful to purchase a Squatty Potty device to help avoid straining. This can be purchased at Baptist MD Anderson Cancer Center's Life Wellness Center and other retail stores.

## When to Call Your Doctor

Report any of these symptoms to your doctor:

- You go 3 days without a bowel movement.
- You have constipation for several days followed by diarrhea. This might indicate an impaction (severe constipation) which needs attention.
- You see blood in your stool.
- You have cramps or vomiting that does not stop.

## Mouth Care

Chemotherapy treatment may affect your mouth. Some types of chemotherapy harm fast growing cells, such as those that line your mouth, throat, and lips. This can affect your teeth, gums, the lining of your mouth, and the glands that make saliva. Most mouth problems go away a few days after chemotherapy is over. Use this information to help manage your mouth care.

## Common Issues

You can see or feel most of these problems. Check your mouth every day for:

- Sores in your mouth or throat (ulcers)
- Infected sores
- Painful mouth and/or gums
- Burning, peeling or swelling of the tongue
- Changes in thickness of saliva
- Dry mouth
- Changes in taste
- Painful swallowing
- Difficulty eating or talking

## Management

### *Dental care*

Visit your dentist a month or 2 before you start chemo. Tell your dentist and oncology team if you have had mouth or dental problems. These may include:

- Gum disease (periodontal disease/pyorrhea) or bleeding gums when brushing
- Sensitive teeth, loose teeth, broken teeth or fillings
- Persistent irritation from dentures

Use a soft toothbrush and fluoride toothpaste. **Do not** use toothpaste with tartar/whitening control. Brush your teeth and tongue after each meal and at bedtime. Even if you are not eating, brush your teeth to remove the film and bacteria.

After you brush your teeth, rinse your mouth with a baking soda solution. Mix 1/2 teaspoon baking soda in 8 ounces of water. Swish gently and spit. Leukemia patients should ask the nurse for special baking soda rinse instructions. **Do not** use store-bought mouthwashes. They may have alcohol or other chemicals that can irritate your mouth.

If you floss daily, use **waxed** floss. If you do not floss regularly, speak with your doctor before you begin to floss. **Do not** floss if your platelets are below 50,000 (50 k/uL).

### ***Dentures or Partial***

Be careful when you put in or take out dentures or partial dentures. If your dentures/partial do not fit well, **do not** wear them. Wearing them may injure your mouth tissues and delay your treatment. At bedtime, soak dentures in a store-bought denture soak. Rinse them well with water before you put them back in your mouth. Remove your dentures on the days you receive chemo.

Dentures may increase nausea and vomiting with chemo. **Do not** wear dentures if your blood counts are low. Your oncology team will talk with you about your blood counts and tell you when you should leave your dentures out.

### ***Preventing Dry Mouth and Lips***

- Rinse your mouth with water and/or baking soda solution as instructed.
- Drink 64 to 96 ounces of non-alcoholic, non-caffeinated fluids each day. Your urine should be light colored or clear.
- Suck (do not chew) on ice chips (if not taking oxaliplatin) or popsicles.
- Chew sugar-free gum.
- Use a saliva substitute if needed.
- Use lip balm as needed. Do not use petroleum jelly (like Vaseline™).

### **Food Considerations**

Soft foods with fewer spices are often easier to tolerate. Avoid temperature extremes. Lukewarm or cool foods are less irritating. Take small bites of food and chew slowly. Sip liquids with meals.

Choose soft, liquid, blended or moist foods. For example:

- Scrambled eggs
- Finely ground meats with gravy
- Oatmeal or other cooked cereals
- Nutrition drinks
- Milkshakes
- Puddings

**Do not** eat foods that may irritate your mouth. For example:

- Acidic foods, such as oranges or other citrus
- Spicy foods, such as hot peppers
- Hard foods, such as potato chips or toast

### **Mouth and Throat Soreness Relief**

Treatment may cause soreness in your mouth and throat. Some chemotherapy can cause oral mucositis. This is a red, sore mouth. There may be open ulcers. Tell your doctor or nurse if you have sores in your mouth. Report any bleeding or white patches on your tongue.

### ***Treatments***

Sometimes mouth rinses provide relief. Ask your health care team if you should use any of these:

#### ***Baking soda rinse***

- Each day, make your own baking soda solution. Mix 1/2 teaspoon of baking soda with 8 ounces of warm water.
- Swish 1 to 2 ounces in your mouth for 30 seconds and then spit it out.
- You may also gargle with the rinse for several seconds. Then spit it out.
- Rinse every 2 or 3 hours while you are awake. Rinse after meals and at bedtime. Do not rinse with the baking soda more than 6 times a day.

### *Salt and baking soda rinse*

- In 8 ounces of warm water, add 1/8 teaspoon of salt and 1/4 teaspoon of baking soda. Stir until dissolved.
- Swish and spit 2 tablespoons at a time, 4 times each day.

### *Mucosa coating agents*

- This is a thick, colored liquid. You need a prescription for it.
- Swish to coat the inside of your mouth. Swallowing it soothes the throat too. If you are nauseated and not able to swallow it, you may spit it out.
- Do not drink anything for 15 minutes after you rinse.

### *Topical anesthetics*

- Comes in thick liquids, gels or sprays.
- You need a prescription. Follow directions for use.

### **Diet**

Eating may be difficult. You may need to pay attention to food texture and temperature. Eat what is most comfortable for you. Below are helpful tips:

- Choose soft, moist foods that are easy to swallow. Avoid rough-textured, acidic, tart and spicy foods that may cause irritation.
- Cut foods into small bites to reduce chewing.
- If spoons or forks cause pain, drink blended meals from a cup. Puree or liquefy foods with a blender or food processor.
- Drink liquids through a straw to help push the food past painful areas in your mouth.
- Avoid extremely hot and cold foods. Drink fluids and eat foods that are at room temperature. Use liquid nutrition supplements. Examples include Boost<sup>®</sup>, Ensure<sup>®</sup> and Carnation Breakfast Essentials<sup>®</sup>. These help you get enough calories and protein.
- Limit caffeine.
- Drink plenty of fluids to prevent dehydration and a dry mouth.
- Practice good mouth care every day.
- Keep your lips and mouth moist: drink often, suck on ice chips (if not taking oxaliplatin) and enjoy sugar-free popsicles. Use lip balm, as needed.

### **Other Tips:**

- Check your mouth and tongue everyday
- Keep your mouth moist
- Clean your mouth, teeth, gums and tongue
- Be careful what you eat when your mouth is sore

## **Hair, Skin and Nails**

Side effects such as hair loss, changes in skin color or texture or cracked or brittle nails may occur during chemotherapy.

**Some chemo medicines may cause these changes, others do not.** *If you have any of these changes, ask your health care team if your medicines may be the reason.*

### **Hair Loss or Thinning**

Hair loss (known as alopecia) can occur on any part of the body. This includes the head, face, arms, legs, underarms or pubic areas. It may involve mild thinning or complete hair loss. Hair loss does not normally happen right away. It can start from 7 to 21 days after chemo begins. Hair loss is usually temporary. Hair can grow back a different color or texture after chemo is done. It can also return to its original appearance.

If you have hair loss, keep your scalp clean and moisturized to prevent skin breaks. Use sunscreen, sun block, a hat, scarf or wig to protect your scalp from the sun. Some health insurance policies pay for the cost of a wig during chemo treatment.

### ***Life Wellness Center***

Offers a variety of image enhancement services to help patients look and feel their best throughout their healing process. These include:

- Organic hair and skin products
- Cosmetic solutions for scars, brow and lash loss
- Hair replacement alternatives such as wigs

Located on the 2<sup>nd</sup> floor of the downtown Baptist MD Anderson campus. Open Monday- Friday 9am- 4:30pm.

### ***Ways to Manage***

#### ***Before Hair loss:***

- Talk with your doctor or nurse
- Cut your hair short or shave your head
- Choose your wig before you start chemotherapy
- Ask if your insurance company will pay for a wig.
- Be gentle when you wash your hair.

#### ***After Hair loss:***

- Protect your scalp
- Stay warm
- Sleep on a satin pillow case
- Talk about your feelings

#### ***Helpful tips:***

- Use mild shampoos and soft hairbrushes.
- Do not overheat your hair with blow dryers, irons, and hot rollers. If you must use them, use the lowest heat setting.
- Pat hair dry.
- Consider a shorter hairstyle. Shorter hair styles often appear thicker and fuller.
- If you decide to use a wig, get one before you lose a lot of hair. You can more closely match your original style and color prior to your hair loss.

### ***Skin Changes***

Some types of chemotherapy can damage the fast growing cells in your skin and nails. While these changes may be painful and annoying, most are minor and do not require treatment. Many of them will get better once you have finished chemotherapy. However, major skin changes need to be treated right way because they can cause lifelong damage.

#### ***Minor skin changes include:***

- Itching, dryness, redness, rashes, and peeling
- Sensitivity to sun
- Hyperpigmentation
- Other skin problems such as discoloration in nails, nails may become brittle and crack. Sometimes nails will loosen and fall off, but new nails will grow back.

**Major skin changes can be caused by:**

- Radiation recall
- Chemotherapy Leaking from your IV
- Allergic reaction to chemotherapy.

**Ways to Manage***Dry skin*

- Bathe or shower in lukewarm water. Avoid long, hot showers and bubble baths.
- Use mild soaps without perfume or fragrance. Consider a moisturizing body wash.
- Pat yourself dry instead of rubbing
- Keep your skin moisturized. Use hypoallergenic creams without fragrance after you bathe or shower. Examples include Eucerin®, CeraVe®, Vanicream® or Aquaphor®.
- Avoid perfume, cologne or aftershave lotion. These products often contain alcohol which dries and irritates skin.
- Drink enough fluids so that your urine is light colored or clear. This means your body has enough fluid.

*Sensitivity to sunlight*

- You may sunburn more easily. The sun may also cause a skin rash.
- Avoid prolonged exposure to sunlight. Do not use sunlamps or tanning beds.
- Use a PABA-free sunscreen (SPF 30 or greater) and lip balm, no matter your skin tone. You may need to avoid direct sunlight completely.
- Wear sun protective clothing such as long-sleeved cotton shirts, hats, sunglasses and/or pants when outside.

*Acne, skin rash or itching*

- Keep your face clean and dry
- Report any rash, blisters, itching, redness or peeling to your doctor or nurse right away.
- Ask for medicines to relieve itching.
- Bathe or shower with body washes such as Dove® or Oil of Olay®.
- Wear loose fitting clothing.
- Talk with your doctor about over-the-counter or prescription medicines that may help.

**Nail Changes**

Changes in fingernails or toenails may occur from chemo. Your nails may darken or develop white streaks or ridges. They may become brittle, dry and cracked. Nails may lift up from the nail bed. These changes are temporary and will take time to grow out. Protect your hands and feet if these changes occur. If you do not, the chance of infection and nail loss increases.

**Management**

- Gently trim or file nails. Do not cut nails too close to the nail bed.
- Do not get professional manicures or pedicures unless your health care team says it is OK.
- Use lotions and creams to keep your nails and cuticles healthy.
- Wear gloves while working around the house or yard.
- Do not use nail-strengthening products. They may irritate your skin or nails.
- Talk with your health care team about artificial nails. They may cause fungal infections. They may also mask nail changes caused by cancer treatment.
- Report redness, pain or other changes that occur around your cuticles.

## Chemobrain

Patients may have changes in thinking skills from cancer or chemotherapy. Changes may range from mild to severe. Sometimes these changes are called “chemobrain.”

### Symptoms

Chemobrain may include any of the following:

- Slower recall of names, words or numbers
- Trouble concentrating
- Problems with memory
- Confusing dates and appointments
- Misplacing objects
- Having trouble doing more than one thing at a time
- Feeling mentally slower than usual

These changes may result from other causes. Examples include low blood counts, other medicines, anxiety or depression. Symptoms often fade after chemo ends. However, each patient is different. It may take a year or more after treatment for some patients to feel normal again. Others do not regain full cognitive function.

### Coping Tips

- Get adequate rest and nutrition.
- Manage fatigue.
- Stay physically and mentally active.
- Practice relaxation.
- Use memory aids on your smartphone, day planner or calendar.
- Create a daily task list.
- Set audible alerts such as the alarm on your smartphone or watch for reminders.
- Use a “memory station”: always place important items, such as keys, in the same place.
- Minimize distractions.
- Manage depression and anxiety. Easing stress and elevating mood can ease symptoms.
- Try apps that can help with brain training such as Lumosity, FitBrains, etc.
- If you have symptoms of chemobrain, a referral to the Section of Neuropsychology may be helpful. They can assess your strengths and weaknesses. This can lead to treatments to help, such as tools and memory aids. In some cases, certain medicines may be helpful.

## Pain, Nerves and Muscles

It is common for patients to feel pain. Pain may be caused by the tumor or cancer treatments. Pain can be managed to provide a level of comfort in order to do daily activities. We want you to understand cancer- and treatment-related pain and how to control it.

### Why Pain Should Be Treated

Pain can affect you in many ways. It can keep you from being active, sleeping well, enjoying time with family and friends and eating. Pain can make you feel afraid or depressed. Pain may also prevent you from participating in your care and can slow your recovery from treatment.

Most cancer pain is manageable with treatment. When you have less pain, you may be more active and interested in doing things you enjoy. Tell your doctor or nurse right away if you are feeling any pain. Getting help for your pain early can make pain treatment more effective.

## Causes

There are many causes of pain in cancer patients. Most cancer pain occurs when a tumor presses on bone, nerves or body organs. Cancer treatment or surgical procedures can also cause pain.

You may also have pain that has nothing to do with your illness or treatment. Like everyone, you can get headaches, muscle strains and other aches and pains. If you are taking medicine for cancer treatment or pain, talk with your health care team about what you can take for these every day aches and pains.

Other conditions such as arthritis can also cause pain. Pain from other conditions can be treated along with cancer pain. Talk with your health care team about your medical history. They will discuss how each condition can be treated and what may work best for you.

## Management

Cancer pain is most often treated with medicine. Radiation, surgery and other treatments can be used along with pain medicine to help relieve pain. Ask your health care team about how other therapies might help you.

There are ways to decrease pain without medicine as well. Ask your health care team about non- drug treatments, including relaxation techniques, biofeedback, prayer, distraction and imagery.

It is important to treat pain early. Waiting until it is very bad requires more medicine, making it harder to treat. Check with your doctor, nurse or pharmacist before taking over-the-counter pain relievers.

## Nerves and Muscles

It is common for patients on chemotherapy to experience nerve and muscle-related side effects. Nerve and muscle pain can be caused by the cancer or cancer treatments irritating nerves and/or muscles. Some chemotherapy (such as paclitaxel) can cause a condition known as peripheral neuropathy. Patients may experience tingling, burning or numbness in the hands and/or feet.

Peripheral neuropathy tends to get worse gradually over time and can be permanent. Tell your health care team when you start to notice these symptoms so they can identify ways to manage this side effect and they may need to decrease the dose of your treatment.

Other nerve-related symptoms may include dizziness, lightheadedness, loss of balance and clumsiness. You may have trouble picking up objects or walking. Some patients shake or tremble. There may be changes in vision or hearing. In addition, certain chemotherapy medicines can lead to weak, tired or sore muscles.

In most cases, these symptoms are temporary and get better with time. Sometimes they persist after chemotherapy. Nerve and muscle symptoms that do not go away may mean serious problems that need medical attention.

Tell your health care team if you have any nerve or muscle symptoms. To manage nerve or muscle-related side effects:

- Change positions slowly if you are light headed or dizzy.
- Do the following for numbness or tingling in the hands or feet:
  - Wear shoes or slippers when walking.
  - Test bath water temperature with your elbow.
  - Hold hot mugs by the handle, not the cup.
  - Use caution with sharp objects.
- Use handrails when going up or down stairs for balance or muscle strength problems.
- Ask for help if you are too weak or are in too much pain to complete a task.



## Sexuality and Fertility

### Changes in Sexuality

During chemo, some men and women feel less interested in sexual intimacy. For some, fatigue makes sex difficult. Chemo may, but does not always, affect hormone levels. These changes may affect sexual organs and functioning.

#### *Men*

During treatment, men may have trouble getting or maintaining an erection. This usually returns to normal after treatment.

Chemo may reduce a man's sperm cell count. This can affect his ability to father children. It does not affect the ability to have sexual intercourse. A low sperm count may be temporary or permanent. It depends on the dose of chemo, the type of medicines and the man's age. Ask your doctor about the long-term effects of your treatment plan. **If you develop sexual dysfunction as your oncology team about a referral to the Men's Sexual Health Clinic at Baptist MD Anderson.**

#### *Women*

Chemo may affect the function of the ovaries. Menstrual periods may become irregular. They may stop completely. Changes can be temporary or permanent. Sometimes chemo may cause a woman to enter menopause. Common symptoms include hot flashes and vaginal dryness or itching. Vaginal dryness can be relieved by using vaginal moisturizers. Use them regularly.

Vaginal lubricants can make sexual activity more comfortable. You can buy these over-the-counter without a prescription.

Chemo causes vaginal mucositis in some women. This is a painful irritation of the lining of the vagina. **If you develop vaginal pain or any other sexual health concern, ask your oncology team about a referral to the Women's Sexual Health Clinic at Baptist MD Anderson.**

### Fertility Preservation Options for Men and Women

Before starting cancer treatment, men and women who may want to have a child in the future should consider fertility preservation options. Talk with your doctor.

#### *Men*

For men, fertility means being able to produce healthy sperm cells that can make a woman pregnant. Cancer treatment may affect sperm cells and increase the chance of infertility. Some men may not be affected at all. Others may only be affected during treatment. Some men may be affected permanently. This depends on the type and amount of treatment given.

Sperm banking is an option for men who may want to have a child in the future. Banking sperm includes freezing a semen sample. The sample can later be thawed and used to make a woman pregnant. Most health insurance plans do not pay for sperm banking. Some sperm banks have payment plans for patients with cancer. There are also financial assistance programs that can lower the cost of banking and storage.

The sperm sample is collected at an infertility clinic or sperm bank. To get the sample, a man must ejaculate through masturbation. The clinic will test the semen for sperm count and motility. Then the sample is divided into small amounts and frozen. Frozen samples may be stored for a long time. Men who are unable to provide a semen sample or those who have low sperm counts may be able to have sperm collected through an outpatient surgical procedure.

## **Women**

For women, fertility means being able to become pregnant and carry a pregnancy successfully to a live birth. Cancer therapy may damage a woman's ovaries, which produce eggs. The amount of damage depends on the type and amount of treatment given.

Women who want to have a child in the future have options of freezing eggs, embryos (fertilized eggs) or tissue from the ovaries before cancer treatment. The frozen tissue can later be used to conceive a child. Frozen embryos and eggs can be stored for a long time.

The most successful way to preserve fertility is to freeze embryos or eggs. To do this, a woman takes hormones to stimulate the ovaries to grow several eggs at once. Then the eggs are removed in a minor, outpatient surgery. Once the eggs have been removed, they can be frozen right away or fertilized in the lab with sperm. Eggs that are fertilized and form embryos are frozen and stored for future use in a process called in vitro fertilization (IVF).

IVF and other methods of fertility preservation may be expensive. Most health insurance plans do not cover the cost. However, there are financial assistance programs that can help lower the costs for cancer patients.

For more information on sperm banking, please ask for a copy of the patient information sheet, **Cancer and Fertility: Treatment Side Effects and Preservation Options**.

# Resources

## Assistance During Cancer Treatment

Cancer can cause a lot of changes in the lives of patients and their loved ones. It is important for you to know that you are not alone. There are resources at Baptist MD Anderson that can help.

### Talk about Your Feelings

Talking about your feelings can help decrease stress. Sometimes it is easier to talk with someone outside of your friends or family. Social work counselors offer counseling to patients and caregivers at no cost.

Think about joining a support group. A support group is a safe place to share experiences and connect with other people who are facing the same challenges. Members share stories, concerns and helpful tips with each other.

### Talk with Children

Ask your social services team for resources and support available in your area.

### Advance Care Planning

Receiving chemotherapy can give you time to think. You may wonder about what types of care you do or do not want or who would make health care decisions for you if you were unable to make them for yourself. These things are important to think about and document. **Social work counselors can help guide you through this process.**

### Caregiver Needs

Providing care can be rewarding and satisfying. It can also be difficult and tiring. Accept offers for help and do not be afraid to ask for help. Have a list of needs ready so you know what things you might need help with the most. Talk to social services for local resources and support available to caregivers.

### Financial Concerns

The financial impact of cancer can be stressful. Social work counselors can tell you about resources that offer help with housing, transportation and parking.

Visit <https://www.baptistmdanderson.com/patients-and-families>

### Prior Authorizations

#### *Infusion Therapies and Oral Chemotherapy*

Certain medicines and services must be approved by your insurance company before you can get them. This is called prior authorization. Prior authorizations make sure medicines and services are given correctly. Our oncology team including a pharmacist will work with your insurance company to obtain a prior authorization. Sometimes the medication access team needs to fill out a form and fax it to the insurance company. This may take up to 7-14 business days.

If you are approved, you will get your medicine delivered to your home or to the clinic (research protocols only).

If you are not approved, you have other choices:

- 1) You can appeal. Your doctor may write a letter or talk with your insurance company for approval.
- 2) Ask the medication access team about patient assistance programs.
- 3) Pay for the medicine.
- 4) Ask your doctor if your insurance will pay for a different medicine.

## Insurance Appeals

You may fill out the forms for an appeal if your insurance company denied your medicine. An appeal is a request for your insurance company to change their decision mind and agree to pay for your medicine. Appeals may take up to 30 business days but usually can be expedited upon request based on clinical needs.

## Patient Financial Assistance Program

Baptist MD Anderson has dedicated team members to help patients apply for internal and external financial assistance to patients who may be experiencing financial difficulties. Please let your oncology team know if you are experiencing any financial stresses.

Visit <https://www.baptistmdanderson.com/patients-and-families/insurance-and-billing>

To explore our campus, visit <https://www.baptistmdanderson.com/patients-and-families/explore-our-campus>

## Pharmacy Patient Resources

Ask medication access team about resources for specialty pharmacy for further resources. They will usually obtain funding for you and if funding is not available then you may need to complete application for manufacture assistance and/or copay assistance.

## Outside Organizational Resources

### American Cancer Society

800-227-2345

<http://www.cancer.org>

Not-for-profit organization that supports cancer research and offers educational programs, support groups and free booklets.

### CancerCare

800-813-4673

<http://www.cancercare.org>

This non-profit agency provides free emotional support, information and practical help. This agency also offers online teleconferences, referrals to support services and other services.

### Caregiver.Com

<http://www.caregiver.com>

[info@caregiver.com](mailto:info@caregiver.com)

Online newsletters and discussions for caregivers. Produces *Today's Caregiver* magazine.

### Centers for Disease Control and Prevention (CDC)

<http://www.cdc.gov/cancer/>

National agency that works with other groups supporting efforts to prevent and control cancer.

### Hospice Foundation of America

800-854-3402

<http://www.hospicefoundation.org>

Provides information on terminal illness, death and the process of grief and bereavement.

**LIVESTRONG Fertility Program**

855-220-7777

[www.livestrong.org/what-we-do/program/fertility](http://www.livestrong.org/what-we-do/program/fertility)

Non-profit organization provides reproductive information, support and hope to cancer patients and survivors whose medical treatments present the risk of infertility.

**National Cancer Institute (NCI)**

800-422-6237

<http://www.cancer.gov/>

Part of the National Institutes for Health, NCI provides information for all cancer types.

Outside Organizational Resources

The University of Texas MD Anderson Cancer Center ©2001

Reviewed 01/2020, Patient Education Page 2 of 2

**National Coalition for Cancer Survivorship**

877-622-7937

<http://www.canceradvocacy.org/>

Answers questions and directs callers to local groups and individuals. Offers information on legal issues and discrimination.

**National Suicide Prevention Lifeline**

800-273-8255

<https://suicidepreventionlifeline.org/>

The Lifeline provides 24/7, free and confidential support for people in distress, prevention and crisis resources for you or your loved ones.

**Patient Advocate Foundation**

800-532-5274

<http://www.patientadvocate.org>

Serves as a liaison between patients and their insurer, employer and/or creditors. Helps resolve insurance, job retention and/or debt crisis matters.

**United Ostomy Associations of America**

800-826-0826

<http://www.ostomy.org>

Dedicated to complete rehabilitation of all "ostomates."

**United Way NEFL.org**

<https://unitedwaynefl.org/>

Dial 2-1-1

Volunteers provide 24-hour telephone referral to appropriate agencies/services.

**Visiting Nurse Association of America**

888-866-8773

<http://www.vnaa.org>

Provides information on all aspects of home health care.