

My Chemo Guide



About this Book

Use the information in this booklet as a guide before, during and after your treatment. It contains handouts about common side effects from chemo and how to manage them. Many of the handouts also tell you what problems you need to look for and report to your doctor. If you have any questions or concerns after reading these items, please speak with your doctor or nurse.

Chemo affects people in different ways. You may have a lot of side effects, some or none at all. This depends on the type and amount of chemo you get, how your body reacts and whether you have other health problems, such as diabetes or heart disease. Before you start chemo, talk with your doctor or nurse about which side effects to expect.

Getting Ready for Your First Day of Treatment

- Attend a chemo class. Speak with your doctor or nurse to schedule your class or call 216-844-5432 to learn more.
- Ask your cancer doctor if you need to do any of these things before starting treatment:
 - See a dentist.
 - Get any vaccines such as those for the flu, pneumonia or chicken pox.
 - Talk with a fertility doctor about fertility options, in case you might want to have children in the future.
- Write down any questions you have. Talk with your doctor or nurse to get answers.

This info is general resource. It is not meant to replace your doctor's advice. Ask your doctor or health care team any questions. Always follow their instructions.

If you need this document in large print or another language, call 216-286-4636.

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Questions and Answers About Chemo

What is chemotherapy?

Chemotherapy (also called chemo) is a type of cancer treatment that uses drugs to destroy cancer cells.

How does chemo work?

Chemo works by stopping or slowing the growth of cancer cells, which grow and divide quickly. But it can also harm healthy cells that divide quickly, such as those that line your mouth and intestines or cause your hair to grow. Damage to healthy cells may cause side effects. Often, side effects get better or go away after chemo is over.

What does chemo do?

Based on your type of cancer and how advanced it is, chemo can:

- **Cure cancer** - when chemo destroys cancer cells to the point that your doctor can no longer detect them in your body and they will not grow back.
 - **Control cancer** - when chemo keeps cancer from spreading, slows its growth, or destroys cancer cells that have spread to other parts of your body.
 - **Ease cancer symptoms** (also called palliative care) - when chemo shrinks tumors that are causing pain or pressure.
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How is chemo used?

Sometimes, chemo is used as the only cancer treatment. But more often, you will get chemo along with surgery, radiation therapy, or biological therapy. Chemo can:

- Make a tumor smaller before surgery or radiation therapy. This is called neo-adjuvant chemo.
- Destroy cancer cells that may remain after surgery or radiation therapy. This is called adjuvant chemo.
- Help radiation therapy and biological therapy work better.
- Destroy cancer cells that have come back (recurrent cancer) or spread to other parts of your body (metastatic cancer).

Questions and Answers About Chemo

How does my doctor decide which chemo drugs to use?

This choice depends on:

- The type of cancer you have. Some types of chemo drugs are used for many types of cancer. Other drugs are used for just one or two types of cancer.
 - Whether you have had chemo before
 - Whether you have other health problems, such as diabetes or heart disease
-

How often will I receive chemo?

Treatment schedules for chemo vary widely. How often and how long you get chemo depends on:

- Your type of cancer and how advanced it is
- The goals of treatment (whether chemo is used to cure your cancer, control its growth, or ease the symptoms)
- The type of chemo
- How your body reacts to chemo

You may get chemo in cycles. A cycle is a period of chemo treatment followed by a period of rest. For instance, you might get 1 week of chemo followed by 3 weeks of rest. These 4 weeks make up one cycle. The rest period gives your body a chance to build new healthy cells.

Can I miss a dose of chemo?

It is not good to skip a chemo treatment. But sometimes your doctor or nurse may change your chemo schedule. This can be due to side effects you are having. If this happens, your doctor or nurse will explain what to do and when to start treatment again.

Questions and Answers About Chemo

How is chemo given?

Chemo may be given in many ways, such as:

- **Injection.** The chemo is given by a shot in a muscle in your arm, thigh, or hip or right under the skin in the fatty part of your arm, leg, or belly.
- **Intra-arterial (IA).** The chemo goes straight into the artery that is feeding the cancer.
- **Intraperitoneal (IP).** The chemo goes straight into the peritoneal cavity (the area that contains organs such as your intestines, stomach, liver, and ovaries).
- **Intravenous (IV).** The chemo goes straight into a vein.
- **Topically.** The chemo comes in a cream that you rub onto your skin.
- **Orally.** The chemo comes in pills, capsules, or liquids that you swallow.

Questions and Answers About Chemo

Things to know about getting chemo through an IV

Chemo is often given through a thin needle that is placed in a vein on your hand or lower arm. Your nurse will put the needle in at the start of each treatment and remove it when treatment is over. Let your doctor or nurse know right away if you feel pain or burning while you are getting IV chemo.

IV chemo is often given through catheters or ports, sometimes with the help of a pump.

- **Catheters.** A catheter is a soft, thin tube. A surgeon places one end of the catheter in a large vein, often in your chest area. The other end of the catheter stays outside your body. Most catheters stay in place until all your chemo treatments are done. Catheters can also be used for drugs other than chemo and to draw blood. Be sure to watch for signs of infection around your catheter. To learn more about infection, read **Infection and Low White Blood Cell Count** on page 12.
- **Ports.** A port is a small, round disc made of plastic or metal that is placed under your skin. A catheter connects the port to a large vein, most often in your chest. Your nurse can put a needle into your port to give you chemo or draw blood. This needle can be left in place for chemo treatments that are given for more than 1 day. Be sure to watch for signs of infection around your port. To learn more about infection, read **Infection and Low White Blood Cell Count** on page 12.
- **Pumps.** Pumps are often attached to catheters or ports. They control how much and how fast chemo goes into a catheter or port. Pumps can be internal or external. External pumps remain outside your body. Most people can carry these pumps with them. Internal pumps are placed under your skin during surgery.



Questions and Answers About Chemo

How will I feel during chemo?

Chemo affects people in different ways. How you feel depends on how healthy you are before treatment, your type of cancer, how advanced it is, the kind of chemo you are getting, and the dose. Doctors and nurses cannot know for certain how you will feel during chemo.

Some people do not feel well right after chemo. The most common side effect is fatigue, feeling tired and worn out. You can prepare for fatigue by:

- Asking someone to drive you to and from chemo
- Planning time to rest on the day of and day after chemo
- Getting help with meals and childcare the day of and at least 1 day after chemo

There are many ways you can help manage chemo side effects. This booklet contains information about the many ways you can help manage chemo side effects.

Can I work during chemo?

Many people can work during chemo, as long as they match their schedule to how they feel. Whether or not you can work may depend on what kind of work you do. Ask your doctor if it is ok for you to work during chemo. If your job allows, you may want to see if you can work part-time or work from home on days you do not feel well.

Many employers are required by law to change your work schedule to meet your needs during cancer treatment. Talk with your employer about ways to adjust your work during chemo. You can learn more about these laws by talking with a social worker.

Questions and Answers About Chemo

Can I take over-the-counter and prescription drugs while I get chemo?

This depends on the type of chemo you get and the other types of drugs you plan to take. Take only drugs that are approved by your doctor or nurse. Tell your doctor or nurse about all the over-the-counter and prescription drugs you take, including laxatives, allergy medicines, cold medicines, pain relievers, aspirin, and ibuprofen.

One way to let your doctor or nurse know about these drugs is by bringing in all your pill bottles. Your doctor or nurse needs to know:

- The name of each drug
- The reason you take it
- How much you take
- How often you take it

Talk to your doctor or nurse before you take any over-the-counter or prescription drugs, vitamins, minerals, dietary supplements, or herbs.

Can I take vitamins, minerals, dietary supplements, or herbs while I get chemo?

Some of these products can change how chemo works. For this reason, it is important to tell your doctor or nurse about all the vitamins, minerals, dietary supplements, and herbs that you take before you start chemo. During chemo, talk with your doctor before you take any of these products.

How will I know if my chemo is working?

Your doctor will do physical exams and medical tests such as blood tests and x-rays. He or she will also ask you how you feel.

You cannot tell if chemo is working based on its side effects. Some people think that severe side effects mean that chemo is working well. Or that no side effects mean that chemo is not working. The truth is that side effects have nothing to do with how well chemo is fighting your cancer.

Questions and Answers About Chemo

How much does chemo cost?



It is hard to say how much chemo will cost. It depends on:

- The types and doses of chemo used
- How long and how often chemo is given
- Whether you get chemo at home, in a clinic or office, or during a hospital stay
- The part of the country where you live

If you have questions about bills or the cost of your treatment, please ask to speak with one of our financial counselors.

What are clinical trials and are they an option for me?

Cancer clinical trials (also called cancer treatment studies or research studies) test new treatments for people with cancer. These can be studies of new types of chemo, other types of treatment, or new ways to combine treatments. The goal of all clinical trials is to find better ways to help people with cancer.

Your doctor or nurse may suggest you take part in a clinical trial. You can also suggest the idea. Before you agree to be in a clinical trial, learn about:

- **Benefits.** All clinical trials offer quality cancer care. Ask how this clinical trial could help you or others. For instance, you may be one of the first people to get a new treatment or drug.
- **Risks.** New treatments are not always better or even as good as standard treatments. And even if this new treatment is good, it may not work well for you.
- **Payment.** Your insurance may or may not pay for treatment that is part of a clinical trial. Before you agree to be in a trial, check with your insurance company to make sure it will pay for this treatment.

Chemo Side Effects

What are side effects?

Side effects are problems caused by cancer treatment. Some common side effects from chemo are fatigue, nausea, vomiting, decreased blood cell counts, hair loss, mouth sores, and pain.

What causes side effects?

Chemo is designed to kill fast-growing cancer cells. But it can also affect healthy cells that grow quickly. These include cells that line your mouth and intestines, cells in your bone marrow that make blood cells, and cells that make your hair grow. Chemo causes side effects when it harms these healthy cells.

Will I get side effects from chemo?

You may have a lot of side effects, some, or none at all. This depends on the type and amount of chemo you get and how your body reacts. Before you start chemo, talk with your doctor or nurse about which side effects to expect.

How long do side effects last?

How long side effects last depends on your health and the kind of chemo you get. Most side effects go away after chemo is over. But sometimes it can take months or even years for them to go away.

Sometimes, chemo causes long-term side effects that do not go away. These may include damage to your heart, lungs, nerves, kidneys, or reproductive organs. Some types of chemo may cause a second cancer years later. Ask your doctor or nurse about your chance of having long-term side effects.

What can be done about side effects?

Doctors have many ways to prevent or treat chemo side effects and help you heal after each treatment session. Talk with your doctor or nurse about which ones to expect and what to do about them. Make sure to let your doctor or nurse know about any changes you notice - they may be signs of a side effect.

Side Effects At-A-Glance

Below is a list of the more common side effects that chemo may cause.

Not everyone gets every side effect. You may have a lot of side effects, some, or none at all. Which ones you have depend on the type and dose of your chemo and whether you have other health problems, such as diabetes or heart disease.

Talk with your doctor or nurse about the side effects on this list. Ask which ones may affect you. Mark the ones that you may get and go to the pages to learn more.

Side effects	Side effects that may affect you	Pages to learn more
Anemia (low red blood cell count)		19
Bleeding (low platelet count)		21
Constipation		52
Diarrhea		49
Fatigue		24
Hair loss		26
Infection (low white blood cell count)		12
Infertility		42
Mouth and throat changes		32
Nausea and vomiting		46
Nervous system changes		35
Sexual concerns		39
Skin and nail changes		28

Normal Blood Cell Counts

This handout tells you about blood cells and what they do. You can use the second page to keep track of your lab results.

The goal of cancer treatment is to stop the growth of cancer cells and destroy them over time. Cancer treatments may also lower your normal blood cells. When your normal blood cell levels are lowered you may have side effects such as fatigue, bleeding or infection. Your body can replace these normal blood cells over time, so most of these side effects are short-term.

During your treatments, your doctor may take samples of your blood to closely watch these blood cell levels. You may hear your health care team members refer to these levels as your “blood counts,” “counts” or CBC.

Where blood cells are made and what they do

Blood cells are made in the bone marrow, which is the spongy tissue filling the center core of your bones. Each blood cell has a job to do. The three major types of blood cells are:

1. **White blood cells:** help you fight infection.
2. **Red blood cells:** carry oxygen to your body’s tissues.
3. **Platelets:** help your blood clot.

Use the log on the next page to keep track of your blood cell counts.



My Blood Cell Counts

Use this form to keep track of your blood cell counts. If your blood is drawn at another lab or hospital, the normal ranges listed for each blood cell count may not be the same. If you have questions, please speak with your doctor or nurse.

Normal ranges	White Blood Cells (WBC)	Absolute Neutrophil Count (ANC)	Hemoglobin (Hgb)	Hematocrit (Hct)	Platelets (Plts)
	4.4 - 11.3	Greater than 1000 = low risk for infection 500 - 1000 = medium risk for infection Less than 500 = high risk for infection Men: 1600 – 5500 Women: 1200 – 7700	Men: 13.5 - 17.5 Women: 12 - 16	Men: 41 - 52 Women: 36 - 46	150,000 - 450,000
Date					

Infection and Low White Blood Cell Count

What it is and why it occurs

White blood cells help your body fight germs that cause infection (sickness). Cancer treatments can make you more likely to get infections because your white blood cell count can be lowered. When this happens, your body might not be able to fight off infections like it used to. Any type of infection may become serious quickly.

Infections that happen during cancer treatment can often be treated, but some can become serious or life-threatening in a short amount of time. If you have an infection when your white blood cell count is low, you may not see the normal warning signs like pus, redness and swelling. If you feel sick, warm, flushed or chilled, take your temperature to see if you have a fever. Sometimes a fever is the only sign of an infection. Page 14 explains what to do if you have a fever of 100.4°F (38°C) or higher.

When am I most at risk for an infection?

You are likely to have a higher chance (risk) of getting an infection when your blood cell counts are their lowest. This period of time is often called a **nadir**, meaning “lowest point.” The nadir often occurs 7 to 14 days after you finish each chemo treatment, and it may last up to one week. Your nadir may vary, based on your treatment. **Ask your doctor or nurse when your white blood cell count will be lowest, since this is when you’re most at risk for infection.**

How can I help prevent infections?

Cleaning your hands is one of the best ways to help prevent infections.

Use soap and water to wash your hands. Scrub your hands with soap for 20 seconds before rinsing them with water. Dry your hands fully with a clean paper towel and use it to turn off the faucet. Use an alcohol-based hand sanitizer for times you are not near soap and water.



Always wash your hands before cooking and eating, before and after touching wounds or catheters and after you use the bathroom, blow your nose, cough, sneeze or touch animals.

Infections can happen to anyone, but there are things you can do to help prevent them. Read this handout to learn more ways to help prevent infections. Talk with your doctor or nurse if you have any questions or concerns.

Know the signs and symptoms of infection and what to do

Call your doctor right away (even on the weekend, holidays or in the middle of the night) if you think you have an infection, or if you have:



- **Fever of 100.4°F (38°C) or higher.** Do not take drugs that reduce a fever such as: aspirin, acetaminophen (Tylenol), ibuprofen (Advil, Motrin), or naproxen (Aleve) without your doctor's permission.
- Shaking, chills or sweats that are new or getting worse

Other signs of infection include:

- Redness, soreness, drainage (pus) or swelling in any area, including wounds, ports and IV sites
- Shortness of breath that is new or getting worse
- Rash or new sores on your skin
- Sore throat, new mouth sores or white patches in your mouth
- Frequent need to pee or pain or burning when you pee
- Bloody or cloudy urine
- Stiff neck
- New cough, change in cough or cough with green or yellow mucous (phlegm)
- Vaginal discharge or itching that is not normal for you
- Vomiting (throwing up)
- 3 or more loose, watery bowel movements in 24 hours (diarrhea)
- Sinus pain, pressure or nasal congestion
- New pain
- Confusion or feeling very sleepy or restless for no reason

If you have any questions or concerns, or if you think you have an infection, call your doctor right away.



If you have a fever of 100.4°F (38°C) or higher:

1. **Call your doctor right away** - even on the weekend, holidays or in the middle of the night.

Do not take drugs that reduce a fever such as: aspirin, acetaminophen (Tylenol), ibuprofen (Advil, Motrin), or naproxen (Aleve) without your doctor's permission.

2. If no one calls you back in 20 minutes, go to the nearest ED (Emergency Department). Call your doctor's office again and tell them which ED you are going to.
3. If you go to the ED, as soon as you arrive tell the ED staff:
 - you are getting chemo for cancer
 - your cancer doctor's name
 - you have a fever and it's an emergency

If you have a fever, make sure you tell the ED staff right away.

A fever means you might have an infection. This can be a life-threatening problem and you should be seen quickly.

If your doctor thinks you are very sick, they may tell you to go to the ED in an ambulance. If so, this is for your safety.

Don't forget to give the ED staff a copy of your medicine list.

More ways to help prevent infection: Your mouth

Check your mouth for problems. If you have dentures, remove them before looking in your mouth. Look closely inside your mouth, around your lips, under your tongue, around the edges of your teeth, on the roof of your mouth and on the inside of your cheeks. Call your doctor right away if you have any new mouth pain, sores or white patches in your mouth, or if you are bothered (sensitive) by hot or cold foods.

Protect yourself

- Check your mouth and brush your teeth after each meal and before you go to bed. Use a very soft toothbrush to avoid harming your gums. Replace your toothbrush often, especially after any mouth infection. Let your toothbrush dry before storing it.
- Check with your cancer doctor before having any dental work done. Tell your dentist that you are getting treatment for cancer.
- Ask your doctor or nurse if and how often you should floss your teeth.
- Use lip balm to protect your lips.
- Rinse your mouth at least 3 times a day. Do not use mouthwash that contains alcohol because it can cause burning and dryness. You can make a mouth rinse by mixing $\frac{1}{4}$ teaspoon baking soda and $\frac{1}{4}$ teaspoon salt in 1 cup (8 ounces) of warm water. Swish the mixture around in your mouth, gargle and spit it out. Store any unused mouth rinse in a covered container at room temperature. If your mouth rinse is more than 24 hours old, throw it away and make a new batch.
- Read our **Mouth and Throat Changes** handout for more ways to care for your mouth. Ask your nurse for a copy if needed.



More ways to help prevent infections: Your skin

When your skin is broken, your chances of getting an infection are higher. Keep your skin clean to help prevent germs from entering your body. Inspect your skin often. Report any changes like rashes or sores to your doctor.

Protect yourself

- **Wash your hands often with soap and water.**
Use alcohol-based hand sanitizer for times when you are not near soap and water. Take a warm shower each day. Use lotion or oil to soften dry skin.
- Use sanitizing wipes to clean surfaces and items that you touch. This includes doorknobs, ATM machines and household surfaces.
- Wear gloves when working in the garden, washing dishes or doing housework. If your white blood cell count is low, ask your doctor if it's ok to work in the garden.
- Shave with an electric razor but do not shave your head. It can cause your scalp to become inflamed or infected.
- Do not squeeze or scratch any pimples. Do not cut or tear your nail cuticles. Be extra careful when using scissors, needles or knives.
- Avoid cuts, scratches and burns. Do not go barefoot. Clean any cuts, scrapes, scratches or burns right away with warm water, soap and an antiseptic. Do this each day until the area has a scab over it. Keep the area covered with a clean bandage if needed.
- Clean your rectal area gently after each bowel movement. Speak with your doctor or nurse if your rectal area is sore, or bleeds, or if you have hemorrhoids.
- Ask your doctor or nurse if you should avoid sex.
- If you have a catheter, mediport or wound, watch for signs of infection around these areas. Signs include skin redness, drainage (pus), swelling or soreness. Call your doctor right away if you have any of these signs.



More ways to help prevent infections

Pets and animals

- Wash your hands after touching pets or other animals. Do not clean litter boxes, bird cages or fish tanks. Avoid cleaning up animal waste. Ask your doctor if it's ok for you to provide direct care for animals.
- Do not have direct or indirect contact with reptiles, fish and birds.



Food Safety

- Do not eat uncooked (raw) and undercooked fish, seafood, meat, chicken or eggs. Do not eat unwashed fruits and veggies.
- Keep hot foods hot and cold foods cold. Do not leave leftovers sitting out. Put them in the fridge as soon as you are done eating.
- Do not have food or drinks that are moldy, spoiled or past the freshness date.
- To learn more food safety guidelines, read our **Food Safety Guidelines for People with Cancer** handout. Ask your nurse for a copy if needed.



Vaccines

- While you are getting chemo, do not get a flu shot or other types of vaccines (immunizations) without first asking your doctor or nurse. Some vaccines contain a live virus, which you should not be exposed to.
- Avoid contact with people who have received a live vaccine within the past 30 days.
- Call your doctor for advice if you are exposed to chicken pox but you've never had it. You may need special treatment.

More ways to help prevent infections

- Clean your hands often. Keep your hands away from your eyes, nose and mouth.
- Stay away from crowds. Try not to be around a lot of people. For instance, try to shop during the least busy hours.
- Stay away from sick children and adults. Call your doctor right away if you have any contact with someone who has chicken pox, shingles, measles or other contagious diseases.
- Do not share drinking glasses, eating utensils or other personal items.
- Wipe yourself from front to back after each time you go to the bathroom. Clean your rectal area well after each bowel movement.
- Stay as active as you can. Avoid staying in bed for long amounts of time. Take deep breaths once in awhile to keep your lungs clear.
- Avoid fresh or dried plants and flowers because of the risk of a fungal lung infection called *Aspergillus*.
- Do not enter, travel through or stay in an area of construction or renovation, or where construction material or debris has been placed or where fields have recently been plowed.
- Talk with your doctor, nurse or dietitian **before** taking probiotics. Ask if it's safe for you to take them. Some patients should avoid taking certain probiotics based on their diagnosis and/or treatment plan.

Low Red Blood Cell Count (Anemia)

What it is and why it occurs

Red blood cells carry oxygen throughout your body. Anemia is when you have too few red blood cells to carry the oxygen your body needs. Your heart works harder when your body does not get enough oxygen. Hemoglobin and hematocrit are the blood tests used to measure the red blood cell count. When these levels are low, you are anemic.

Some types of chemotherapy cause anemia because they make it harder for bone marrow to produce new red blood cells.

Anemia can make you feel:

- Very tired or weak
- Faint or dizzy
- Short of breath
- Like your heart is pounding or beating very fast

You may also appear pale and look like you have lost color in your skin and/or lips.

Call your cancer doctor or nurse right away if you have any of the problems listed above.

Ways to manage anemia:

- **Get plenty of rest.** Try to sleep at least 8 hours each night. You might also want to take 1 or 2 short naps (1 hour or less) during the day.
- **Limit your activities.** This means doing only the activities that are most important to you. Save your energy by being active for short lengths of time. Rest between activities.
- **Accept help.** When your family or friends offer to help, let them. They can help care for your children, pick up groceries, run errands, drive you to your doctor's visits, or do other chores you feel too tired to do.
- **Stand up slowly.** You may feel dizzy if you stand up too fast. When you get up from lying down, sit for a few minutes before standing.
- **Eat a healthy diet and drink enough fluids.** Choose a diet that contains the calories and protein your body needs. Calories help keep your weight up and extra protein can help repair tissues harmed by cancer treatment. Talk to your nurse or ask to speak our dietitian to find out what foods you should eat. Drink 6 to 8 cups of caffeine-free liquids each day.

There may be times when your doctor wants you to get a blood draw to check your blood cell counts.

If your red blood cell count falls too low, your doctor may want you to get a blood transfusion.



Call your cancer doctor or nurse right away if:

- You have fatigue that is so bad that you cannot do your normal activities
- You feel dizzy or like you are going to faint
- You feel short of breath or have problems breathing
- You feel very tired or weak
- It feels like your heart is pounding or beating very fast
- You look very pale or like you have lost color in your skin and/or lips



To learn more about how to manage fatigue, ask your nurse for our Fatigue handout.

Bleeding and Low Platelet Count

What it is and why it occurs

Platelets are cells that make your blood clot when you bleed. Cancer treatment such as chemo can lower the number of platelets because it changes your bone marrow's ability to make them.

A low platelet count is called **thrombocytopenia (THROM-boh-sy-toh-PEE-nee-uh)**. This problem may cause bruises (even when you have not been hit or bumped into something), bleeding, or a rash of tiny red or purple dots. Your doctor may delay your treatment or order a platelet transfusion if your platelet count is too low.

Ways to manage when your platelet count is low

- Brush your teeth with a very soft toothbrush. Soften the bristles of your toothbrush by running hot water over them before you brush.
- Blow your nose gently with your mouth open.
- Be careful when using scissors, knives, tools, or other sharp objects.
- Use an electric shaver instead of a razor.
- Wear shoes all the time, even inside the house or hospital.
- Protect your hands. Wear gloves if working in the yard and use an emery board to file nails.
- Avoid lifting heavy objects.
- Keep your bowels regular. Tell your doctor or nurse if you are constipated or straining to have a bowel movement. He or she may prescribe a stool softener to prevent straining and rectal bleeding when you go to the bathroom.
- Make sure your home is safe so you do not fall. Use nonskid rugs and nightlights. If you are not steady on your feet, use a cane or walker.
- Avoid intramuscular and subcutaneous injections (shots) and blood draws; if they must be done, apply pressure to the area afterwards, to help control bleeding.

Things you should not do when your platelet count is low:

- Do not use dental floss, water flossers or toothpicks
- Do not play sports or do other activities during which you could get hurt
- Do not use tampons, enemas, suppositories or rectal thermometers
- Do not wear clothes with tight collars, wrists or waistbands
- Do not take aspirin, ibuprofen, or any products that contain either of these medicines because they can cause bleeding. Read labels closely since many products contain these medicines. Do not take Advil, Aleve or other NSAIDs (non-steroidal anti-inflammatory medicines). If you have questions, talk with your pharmacist, doctor, or nurse.

Check with your cancer doctor or nurse before:

- Drinking beer, wine, or other types of alcohol.
- Having sex. If he or she says you can have sex, use a water-soluble lubricant for sex. Avoid any sexual activity that may harm your skin or cause bleeding.
- Seeing your dentist.
- Taking vitamins, herbs, minerals, dietary supplements, aspirin, ibuprofen or other over-the-counter medicines. Some of these products can change how chemo works or cause bleeding problems.
- Taking acetaminophen (Tylenol). Ask if it's safe for you to take this medicine for pain relief.

If you cut yourself:

1. Stay calm. Put a clean cloth or tissue over the cut and apply pressure for 10 minutes. If the dressing is saturated, do not remove it. Put more bandages on top of it.
2. Lay down and put the area that is bleeding above heart or head level.
3. If bleeding does not stop after 10 minutes, call your doctor or nurse right away or go to the nearest ER (emergency room).
4. If bleeding stops in less than 10 minutes, put an ice pack on the area.

If you have a nosebleed:

1. Call your doctor's office.
2. Apply ice and hard pressure for 10 minutes by pinching the bridge of your nose with your fingers and thumb. Keep your head down during this time.
3. If bleeding stops, do not blow your nose right away.
4. If bleeding does not stop and you cannot reach your doctor, go to the nearest ER (emergency room). You may need a platelet transfusion if the bleeding does not stop.

Call your doctor or nurse right away if you have any of these problems:



- easy bruising, especially when you have not been hit or bumped into something
- tiny pinpoint-sized red or purple spots on your skin. These spots are called petechiae (peh-TEK-key-ee).
- red, brown or pink urine (pee)
- black or bloody bowel movements
- bleeding from your gums, nose or rectal area (bottom)
- bleeding from a cut for more than 10 minutes after you apply pressure
- soaking 1 or more large size pads or tampons with blood each hour
- swelling or a warm or hot feeling in your arm or leg

Call 911 right away if have any of these problems:

- coughing or throwing up blood
- vomit that looks like coffee grounds
- sudden, severe headache or mood changes like being agitated or very irritable
- changes in eyesight
- feeling confused, dizzy, lightheaded or very sleepy
- heavy bleeding or bleeding from a large open wound
- signs of shock such as pale, cold, clammy skin, or heart feels like it's racing

Fatigue (Tiredness): What it is and Ways to Manage

What it is and why it happens

Fatigue (tiredness) from chemo (chemotherapy) can range from a mild to extreme feeling of being tired. Many people describe fatigue as feeling weak, worn out, heavy or slow. Resting does not always help. Fatigue can happen all at once or little by little. People feel fatigue in different ways. You may feel more or less fatigue than someone else who gets the same type of chemo. If you receive radiation therapy along with chemo your fatigue may be more severe.

Many people say they feel fatigue during chemo and even for weeks or months after treatment is over. Fatigue can be caused by the type of chemo, the effort of making frequent visits to the doctor, or feelings such as stress, anxiety and depression.

Fatigue can also be caused by:

- Low red blood cell count
- Pain
- Medications
- Appetite loss
- Trouble sleeping
- Lack of activity
- Trouble breathing
- Infection
- Doing too much at one time
- Other medical problems

What you can do to manage fatigue

- **Be active.** Exercise is the best way to lessen fatigue. Ask your cancer doctor if it's safe for you to exercise during your treatment. Even 15 or 30 minutes of exercise a day, like walking or doing yoga, can help give you energy. To learn more, ask for our handout, **Exercise During and After Cancer Treatment**, or call 216-844-5432 to have a copy sent to you.
- **Do things to help you relax.** You might want to try meditation, prayer, yoga, guided imagery or visualization.
- **Eat and drink well.** Try to eat 5 to 6 small meals and snacks rather than 3 large meals. Keep foods around that are easy to fix, such as canned soups, frozen meals, yogurt and cottage cheese. Drink 6 to 8 (eight ounce) cups of liquids each day. You can also try protein shakes like Boost Plus[®] or Ensure Plus.
- **Try not to do too much.** With fatigue, you may not have enough energy to do all the things you want to do. Choose the activities you want to do and let someone else help with the others. Try quiet activities, such as reading, knitting or learning a new language on tape.

More ways you can manage fatigue

- **Plan time to rest.** You may feel better when you rest or take a short nap during the day. If you feel tired, stop and rest. Many people say that it helps to rest for just 10 to 15 minutes rather than nap for a long time. If you nap, try to sleep for less than 1 hour. Keeping naps short will help you sleep better at night.
- **Sleep at least 8 hours each night.** You are likely to sleep better at night when you are active during the day. You may also find it helpful to relax before going to bed. For instance, you might read a book, work on a jigsaw puzzle, listen to music, or do other quiet hobbies. Stay away from alcohol and caffeine after 6 p.m. These may keep you awake.
- **Plan a work schedule that works for you.** Fatigue may affect the amount of energy you have for your job. You may feel well enough to work your full schedule. Or you may need to work less – maybe just a few hours a day or a few days each week. If your job allows, you may want to talk with your boss about ways to work from home. Or you may want to go on medical leave (stop working for a while) while getting chemo.
- **Let others help.** Ask family members and friends to help when you feel fatigue. Perhaps they can help with household chores or drive you to and from doctor's visits. They might also help by shopping for food and cooking meals for you to eat now or freeze for later.
- **Learn from others who have cancer.** People who have cancer can help by sharing ways that they manage fatigue. One way to meet others is by joining a support group – either in person or online.
- **Keep a diary of how you feel each day.** This will help you plan how to best use your time. Share your diary with your nurse. Let your doctor or nurse know if you notice changes in your energy level, whether you have lots of energy or are very tired.
- **Talk with your doctor or nurse.** Your doctor may prescribe medication that can help decrease fatigue, give you a sense of well-being, and increase your appetite. They may also suggest treatment if your fatigue is from a low red blood cell count (also called anemia).

Call your doctor or nurse right away if you have:

- Fatigue that is so bad that you cannot do your normal activities
- Dizziness or loss of balance when walking or getting out of a bed or chair
- Trouble breathing
- Trouble walking
- Fallen and hurt yourself



Hair Loss: What it is and ways to manage

What it is and why it happens

Some types of chemo can harm the cells that make hair. This means that hair on your head and anywhere on your body may fall out.

Hair loss is called alopecia. Hair loss often starts 2 to 3 weeks after chemo begins. Your scalp may hurt at first. Then you may lose your hair, either a little at a time or in clumps. This can happen anywhere on your body: your head, face, arms, legs, underarms or pubic hair between your legs. It takes about 1 week for all your hair to fall out. Hair often grows back about 2 to 3 months after your last chemo treatment.

Your hair will be very fine when it starts growing back. Your new hair may not look or feel the same as it did before. For instance, your hair may be thin instead of thick, curly instead of straight, and darker or lighter in color.

What you can do about hair loss

Before you lose your hair:

- **Ask your doctor or nurse if you are likely to have hair loss.** Some patients may not lose their hair during chemo. Hair loss depends on the type of chemo being used.
- **Cut your hair short.** Cutting your hair short often makes hair loss easier to manage. **Do not shave your head.** Shaving your head can cause your scalp to become inflamed or infected.
- **If you plan to buy a wig, do so while you still have hair.** The best time to choose your wig is before chemotherapy starts. This way, you can match the wig to the color and style of your hair. Make sure to choose a wig that feels comfortable and does not hurt your scalp.
- **Ask if your insurance company will pay for a wig.** If it will not, you can deduct the cost of your wig as a medical expense on your income tax. Your insurance company may use the term “hair prosthesis” instead of wig. Some local groups offer free wigs to cancer patients. Ask your nurse or social worker about free wig services in your area or call the UH Seidman Cancer Information Service Line at 216-844-5432.

What you can do about hair loss

- **Be gentle when you wash your hair.** Use a mild shampoo, such as a baby shampoo. Dry your hair by patting (not rubbing) it with a soft towel.
- **Do not use items that can hurt your scalp.** These include:
 - Straightening or curling irons
 - Hair bands and clips
 - Brush rollers or curlers
 - Hairsprays, hair dyes or products to perm or relax your hair
 - Electric hair dryers

After you lose your hair:

- **Protect your scalp.** Your scalp may hurt during and after hair loss. Protect it by wearing a hat, turban or scarf when you are outside. Try to avoid places that are very hot or very cold. This includes tanning beds and outside in the sun or cold air. Always apply sunscreen of SPF 30 or higher to protect your scalp.
- **Stay warm.** You may feel colder once you lose your hair. Wear a hat, turban, scarf or wig to help you stay warm.
- **Sleep on a satin pillowcase.** Satin creates less friction than cotton when you sleep on it. You may find satin pillow cases more comfortable.
- **Talk about your feelings.** Many people feel angry, depressed or embarrassed about hair loss. If you are very worried or upset, you might want to talk about these feelings with a doctor, nurse, social worker, family member, close friend or someone who has had hair loss caused by cancer treatment.
- **Attend a free Look Good...Feel Better[®] program.** Offered by the American Cancer Society (ACS), this program gives beauty and make-up tips for women getting chemo. Call the ACS at 1-800-227-2345 to learn more.

Skin and Nail Changes

What they are and why they happen

Some types of chemo can damage the fast-growing cells in your skin and nails. These changes may be painful and bothersome, but most are minor and do not need treatment. Many will get better once you are done with chemo. However, major skin changes need to be treated right away because they can cause lifelong skin damage.

Minor skin changes may include:

- **Itching, dryness, redness, rashes and peeling.**
- **Darker veins.** Your veins may look darker when you get chemo through an IV.
- **Sensitivity to the sun** (when you burn very quickly). This can happen even to people who have very dark skin color.
- **Nail problems.** This is when your nails become dark, turn yellow, or become brittle and cracked. Sometimes your nails will loosen and fall off, but new nails will grow back.
- **Hyperpigmentation:** This is when skin, nails and/or teeth darken in color when exposed to the sun.



Major skin changes need to be treated right away because they can cause lifelong skin changes.

Major skin changes may include:

- **Chemo leaking from your IV.** Tell your cancer doctor or nurse right away if you have burning or pain when you get IV chemo.
- **Allergic reactions to chemo.** Some skin changes may mean that you are allergic to the chemo. Tell your cancer doctor or nurse right away if you have sudden and severe itching, rashes or hives.

- **Radiation recall.** Some chemo causes skin changes in the area where you had radiation to turn red (ranging from very light to bright red). Your skin may blister, peel or be very painful.

Ways to Manage Skin and Nail Changes during Chemo

Some of the tips below should not be used for skin that has received radiation. If you are getting radiation, ask your radiation doctor or nurse how to care for the skin at your radiation site.

- **Itching, dryness, redness, rashes and peeling**
 - Apply cornstarch, as you would dusting powder.
 - Take quick warm, not hot, showers or sponge baths instead of long, hot baths.
 - Pat (do not rub) yourself dry with a clean, smooth towel after bathing.
 - Apply cream or lotion while your skin is still damp after washing.
 - Tell your doctor or nurse if this does not help.
 - Use hypoallergenic oil-in-water creams or ointments. Do not use greasy creams or creams that have perfume or petroleum in them.
 - Do not use perfume, cologne, lotion, cream, gel or aftershave that has alcohol.
 - Take a colloidal oatmeal bath (special powder you add to bath water) when your whole body itches.
 - Remove make-up with a hypoallergenic liquid cleanser.
 - Cut nails straight across until the nails no longer extend over the fingers or toes.
 - Avoid scratching, use soft cloth to rub over skin or apply massage or pressure.
 - Maintain a well-balanced diet which promotes healing
- **Acne**
 - Keep your face clean and dry.
 - Ask your cancer doctor or nurse if you can use medicated creams or soaps and which ones to use.

Ways to Manage Skin and Nail Changes during Chemo

■ Sensitivity to the sun

- Avoid direct sunlight. This means not being in the sun from 10 a.m. until 4 p.m. These are the times when the sun is strongest.
- Use hypoallergenic sunscreen lotion each day, no matter what season it is. Sunscreen needs to:
 - have an SPF (sun protection factor) of at least 30 and be broad-spectrum,
 - contain zinc-oxide or titanium dioxide,
 - protect against ultraviolet A and B rays (UVA/UVB) and,
 - be PABA-free (para-aminobenzoic acid-free)
- Keep your lips moist with a lip balm that has an SPF of 30 or higher.
- Wear light-colored pants, long-sleeve cotton shirts and hats with wide brims.
- Do not use tanning beds.

■ Nail problems

- Wear rubber or cotton-lined gloves when washing dishes, working in the garden, or cleaning the house.
- Do not wear tight fitting shoes.
- If you use topical products to strengthen your nails, stop using them if you have skin or nail pain.
- Tell your cancer doctor or nurse if your cuticles are red and/or painful.
- Do not cut, bite or push back your cuticles. Doing so can increase your chances of getting an infection.

Ways to Manage Skin and Nail Changes during Chemo

■ Radiation recall

- Protect the area of your skin that received radiation therapy from the sun. It will be more sensitive to the sun and can get sunburn more easily. Keep the area clean and dry.
- Do not use tanning beds.
- Place a cool, wet cloth where your skin hurts.
- Wear clothes made of cotton, or other soft fabric. This includes your underwear (bras, underpants, and t-shirts).
- Let your doctor or nurse know if you think you have radiation recall.

Call your cancer doctor or nurse right away if you have:

- New skin changes, rashes, blisters or pain
- Swelling of your mouth, tongue or face
- Wheezing or other trouble breathing
- Pain, redness, burning or swelling at any injection or IV site
- Fever of 100.4°F (38°C) or higher



Mouth and Throat Changes

What they are and why they happen:

Some types of chemotherapy can harm cells that line your mouth, throat and lips. This can cause problems with your teeth, gums, lining of your mouth and glands that make saliva. Most mouth problems go away a few days after chemo is over. Mouth and throat problems can include:

- A dry mouth with little or no saliva.
- Infections of your gums, teeth or tongue.
- Greater sensitivity to hot or cold foods.
- Mouth sores that can cause trouble eating.
- Changes in your taste and smell. Foods can have strange tastes, like metal or chalk, have no taste at all or taste and smell different than they used to.

What you can do:

- **Ask your doctor if you need to see a dentist before starting chemo.** If so, be sure to tell your dentist that you will be getting chemo for cancer.
- **Check your mouth and tongue each day.** Call your doctor or nurse right away if you see any problems such as mouth sores or white spots.
- **Keep your mouth moist.** You can sip water throughout the day, suck on ice chips or sugar-free hard candy and chew sugar-free gum.
- **Use a water-based moisturizer on your lips at least 2 times a day.** This helps keep your mouth moist. Avoid lip balms or moisturizers that contain petroleum. Petroleum attracts and holds germs and bacteria, which can lead to infection.

- **Clean your mouth, teeth, gums and tongue at least 2 times a day.**

- Brush your teeth, gums, and tongue after each meal and at bedtime with an extra soft toothbrush and fluoride toothpaste.
- Ask your doctor or nurse if and how often you should floss your teeth.



- **Rinse your mouth at least 3 times a day.** Do not use mouthwash that contains alcohol because it can cause burning and dryness. You can make a mouth rinse by mixing ¼ teaspoon baking soda and ¼ teaspoon salt in 1 cup (8 ounces) of warm water. Swish the mixture around in your mouth, gargle and spit it out. Store any unused mouth rinse in a covered container at room temperature. If your mouth rinse is more than 24 hours old, throw it away and make a new batch.

- **Be careful of what you eat when your mouth is sore.**

- Choose foods that are moist, soft and easy to swallow. Soften food with gravy, sauces, broth, yogurt or other liquids.
- Take small bites of food, chew slowly and sip liquids while you eat. Eat foods at cool or room temperature. Warm or hot foods can hurt your mouth or throat. Suck on ice chips or popsicles to relieve mouth pain.
- Ask to speak with a dietician for ideas of foods that are easy to eat.

- **Stay away from things that can hurt, scrape or burn your mouth such as:**

- Sharp or crunchy foods such as crackers and potato or corn chips.
- Spicy foods, such as hot sauce, curry dishes, salsa and chili.
- Citrus fruits or juices such as orange, lemon, and grapefruit.
- Food and drinks with a lot of sugar, such as candy or soda.
- Beer, wine and other alcohol.
- Toothpicks or other sharp objects.
- Tobacco products such as cigarettes, pipers, cigars and chewing tobacco.

- **If you wear dentures, retainers or other oral devices:**

- Brush dentures 2 times a day and rinse well. Use a soft bristle toothbrush or a brush made for cleaning dentures. Clean other oral devices 2 times a day as recommended for that device.
- Keep dentures moist when not being worn. Soak them in the denture cleaning solution recommended by your dentist.
- Clean denture and oral device soaking cups and change soaking solution daily.
- Remove dentures or other oral devices when cleaning your mouth. If you have mouth sores, or your mouth is inflamed or painful, avoid wearing these items to prevent further irritation.

Call your cancer doctor's office right away if you have:

- Bad pain in your mouth or throat. Your doctor may order medicine to help lessen this.
- Open sores on your lips, gums, or tongue.
- White, “cheese-like” patches in your mouth or throat. This could be a sign of infection.
- Bleeding of your gums that does not stop easily.
- Fever of 100.4°F (38°C) or higher.
- Mouth problems that cause you to not be able to eat.



Nervous System Changes: What they are and Ways to Manage

What they are and why they happen

Chemo (chemotherapy) can cause harm to your nervous system. Many nervous system problems get better within a year of when you stop chemo, but some may last the rest of your life.

Problems may include:

- Tingling, burning, lack of strength, or numbness in your hands or feet. These problems are sometimes called "**peripheral neuropathy**."
- Pain when walking
- Feeling colder than normal
- Not able to feel hot or cold sensations, such as a hot stove
- Not able to feel pain from things like a sore on your foot or a cut on your hand
- Sweating too much or too little
- Weak, sore, tired or achy muscles
- Being clumsy and losing your balance
- Trouble picking things up or buttoning your clothes
- Shaking or trembling
- Hearing loss
- Fatigue (tiredness)
- Stomach pain, constipation or heartburn
- Confusion and memory problems
- Dizziness
- Depression



Call your cancer doctor right away if you notice any of the nervous system changes listed above. It is important to treat these problems as soon as possible.

What you can do about nervous system changes from chemo

- **Call your cancer doctor or nurse right away if you have any of the nervous system changes listed on the first page of this handout.** It is important to treat these problems as soon as possible.
- **Be careful when handling knives, scissors, and other sharp or unsafe objects.**
- **Avoid falling.** Walk slowly, hold onto handrails when using the stairs, and put no-slip bath mats in your bathtub or shower. Make sure there are no rugs or cords to trip over.
- **Always wear sneakers, tennis shoes or other footwear with rubber soles.**
- **Be extra careful not to burn or cut yourself while cooking.**
- **Wear gloves when working in the garden, cooking or washing dishes.**
- **Make sure your bath water is not too hot so you don't get burned.**
- **Rest when you need to.**
- **Steady yourself when you walk by using a cane or other device.**
- **Talk to your doctor or nurse if you notice memory problems, feel confused or are depressed.**
- **Ask your doctor for pain medicine if you need it.**

Chemo Brain: What it is and Ways to Manage

What it is

Chemo brain is a term used to describe problems with thinking that may happen, during or after cancer treatment. Many people say having chemo brain feels like their mind is in a fog. Even though it's called chemo brain, these problems can happen with chemo (chemotherapy) or radiation treatments to the head. Chemo brain can cause you to have trouble with:

- Calling to mind things like names, dates and common words
- Getting things done on time
- Doing more than one thing at a time
- Paying attention
- Finding the right word to say
- Learning new things
- Keeping daily tasks in order
- Solving problems in your head, like keeping a checkbook balanced
- Matching up eye and hand movements, like hitting a nail with a hammer

Why it happens

The cause of chemo brain is not known. People who have chemo or radiation to the head may have a greater chance of having this problem. Certain chemo drugs and meds to help chemo side effects may change how the brain works. Other things like the cancer itself, low blood counts, trouble sleeping, sadness and stress can also cause problems with thinking.

For **most** people, chemo brain goes away or gets better within a year after treatment is over. For **some** people, chemo brain may get better slowly over time but never fully go away.

What you can do about chemo brain

Talk to your doctor or nurse if you are having problems with thinking. Try these tips to help sharpen your thinking:

- Make lists, take notes or use a daily planner to help keep track of things.

- Be aware of things that distract your thinking like TV noise or background music.
- Use sticky notes or a dry erase board at home to remind you to do things like taking out the trash or locking the door.
- Keep the same routine each day. Keep things you use each day in the same place such as your purse, wallet, glasses and keys.
- Do one thing at a time. When doing a task with a lot of steps, like cooking or working on the computer, whisper each step to yourself to help keep focused.
- Repeat out loud the things that you want to remember. Saying something a couple times can help your mind hold on to it. Making up a song to remind you can also help.
- Work your brain by taking a class, doing puzzles or reading books.
- Get at least eight hours a night sleep and take naps during the day if you need to.
- Get some exercise daily. Get up and walk for 30 minutes each day. Walk 5 to 10 minutes at a time if 30 minutes at once is too much.
- Ask friends and loved ones for help when you need it. Cutting down on daily tasks can save your mental strength.
- Ask your doctor or nurse about seeing a social worker or speech therapist to help with chemo brain problems.

Call your doctor or nurse right away if you have:

- A very bad headache that is not helped by medicine and will not go away
- Throwing up (vomiting) for no reason
- Trouble speaking
- Trouble walking or keeping your balance
- Blurry or foggy eyesight



Sexual Concerns

What they are and why they happen

Some types of cancer treatment can cause sexual concerns. These changes are different for women and men. Cancer treatments can include surgery, radiation therapy, chemo, and other anti-cancer therapies.

In women, some treatments may affect the ovaries, which can cause changes in hormone levels. Hormone changes can lead to problems like:

- Being too tired to have sex or not wanting to have sex
- Feeling too worried, stressed or sad to have sex
- Hot flashes, vaginal dryness, irregular or no monthly periods
- Bladder or vaginal infections
- Vaginal discharge or itching

In men, some treatments can cause changes in hormone levels, decreased blood supply to the penis, or harm to the nerves of the penis. These can lead to problems like:

- Being too tired to have sex or not wanting to have sex
- Not being able to get or keep an erection that is firm enough for sex (also called erectile dysfunction or ED)
- Not being able to reach orgasm
- Feeling too worried, stressed or sad to have sex

Whether or not you have sexual concerns depends on if you have had these problems before, the type of treatment you are getting, your age, and whether you have any other health problems. Some problems, such as not wanting to have sex, are likely to improve once treatment is over.

What you can do about sexual concerns during treatment

■ Talk with your doctor or nurse about:

Sex. Ask your doctor or nurse if it is ok for you to have sex during treatment. Most people can have sex, but it is good to ask. Small amounts of chemo may be found in vaginal fluid or semen after getting chemo. It's unknown if these small amounts can harm a sexual partner. To help protect your partner we recommend that you use a barrier during sex (vaginal, oral or anal). Follow this guideline **for 7 days** after each IV chemo treatment. **If you take chemo pills (oral chemo)**, follow this guideline at all times, even if you take a break from oral chemo. When you are done taking all of your oral chemo treatment, follow this guideline for 7 days after your last dose.

Certain cancer treatments can cause low white blood cell counts which may increase your chances of getting an infection. Talk to your doctor or nurse if you have questions about your chances of getting an infection during sex. If you had a stem cell transplant, talk to your transplant team about more ways to protect yourself from infection.

Infertility. Ask if cancer treatment will cause you to not be able to get pregnant or father a child and what choices you have. It's best to ask about this **before starting your treatment**.

You can learn more about your choices by seeing a fertility doctor. Call the UH Fertility Center at **216-285-5028** to schedule a visit. Tell the scheduler that you will be starting cancer treatment and to see a doctor as soon as possible.

Medicines. Talk with your doctor, nurse or pharmacist about medicines that may help sexual problems.

For women:

- **Wear cotton underwear and pantyhose with cotton linings.**
- **Do not wear tight pants or shorts.**
- **Use a water-based vaginal lubricant such as K-Y Jelly or Astroglide when you have sex.** If lubricant doesn't help and sex is still painful because of dryness talk to your doctor or nurse.
- **Cope with hot flashes in these ways. Dress in layers,** with an extra sweater or jacket that you can take off. **Be active.** This includes walking, riding a bike or other types of exercise. **Learn ways to manage stress.** Try yoga, meditation or other ways to relax.

For men and women:

- **Be open and honest with your spouse or partner.** Talk about your feelings or concerns.
- **Explore new ways to show love.** If you are having sex less often, try other things that make you feel close to each other, such as, hug and cuddle more, bathe together or give each other massages.
- **Talk with a doctor, nurse, social worker or counselor.** If you, your spouse or partner are worried about sexual problems, you may want to talk with someone who can help.
- **Learn more.** Visit the American Cancer Society’s website, www.cancer.gov. Type “Sexuality” in the search box for more resources. Or, call the ACS at 1-800-227-2345.

Birth Control

For women. You must not get pregnant while getting certain cancer treatments, such as chemo. Chemo may hurt the fetus, mainly during the first 3 months of pregnancy. If you still have menstrual periods, or spotting, talk to your gynecologist about the best birth control for you. Be sure to tell your gynecologist that you are getting treatment for cancer since this may affect the type of birth control they suggest.

For men. Your spouse or partner must not get pregnant while you are getting treatment. Cancer treatment can harm your sperm and cause birth defects. Use condoms each time you have sex to prevent pregnancy.

As an extra safety measure, people getting treatment and their partners may both want to use birth control. This is called the “double barrier” method.

Call your doctor or nurse if you have:



- Pain during sex.
- Questions about what type of birth control to use.
- Questions about when it is safe to have sex while getting treatment. If your platelet count or other blood counts go down during treatment, talk to your doctor or nurse **before** having sex.

Infertility and Cancer Treatment

What it is and why it happens

Some types of cancer treatment can affect your ability to have children. Women may not be able to get pregnant and men may not be able to father children after treatment.

If you think you may want to have children in the future, it's important to talk with your doctor or nurse and see a fertility doctor before starting cancer treatment.

In women, chemo may affect the ovaries. This can lower the number of healthy eggs in the ovaries. It can also lower the hormones produced by them. The drop in hormones can lead to early menopause. Early menopause and fewer healthy eggs can cause infertility.

In men, chemo may affect sperm cells, and the way they work. These changes may cause infertility.

Whether you become infertile depends on the type of chemo you get, your age, and whether you have other health problems. Infertility can last the rest of your life.

Ways to manage

Talk with your doctor or nurse about whether you might want to have children.

Before starting cancer treatment, let your doctor or nurse know if you think you might want to have children in the future. He or she may talk with you about ways to preserve your eggs or sperm or refer you to a fertility doctor.

You can learn more about your choices by seeing a fertility doctor. Call the UH Fertility Center at **216-285-5028** to schedule a visit. Tell the scheduler that you will be starting cancer treatment and need to see a doctor as soon as possible.

Most insurance doesn't cover the cost of fertility preservation. Our fertility center can check your benefits. Ask the fertility center if they have any cost saving programs for cancer patients. Groups such as LIVESTRONG® Fertility and some drug companies may also have programs to help with the cost.

Cancer treatment can cause birth defects.

Men: do not father a child while getting cancer treatment.

Women: do not get pregnant while getting cancer treatment.

To learn more

- Visit fertilehope.org or call 1-855-220-7777. Fertile Hope is a LIVESTRONG® program that offers info, support, resources and hope to people with cancer whose treatments may cause infertility.
- Call **216-285-5028** if you think you might want to have children in the future and want to see a fertility doctor. Tell the scheduler that you will be starting cancer treatment and need to see a doctor as soon as possible.

Not everyone who has cancer has pain. But, if you do have pain we want to work with you to find the best way to treat your pain.

What it is and why it happens

Pain may be caused by cancer or other problems such as an infection. Some side effects from chemo can cause pain. These include burning, numbness, and tingling or shooting pains in your hands and feet. Mouth sores, headaches, muscle pains, and stomach pains can also occur.

Doctors and nurses have ways to decrease or relieve your pain. That's why you should speak up and let your health care team know if you are having pain.

Ways to manage

Talk about your pain with a doctor or nurse. Be specific and describe:

- Where you feel pain. Is it in one part of your body or all over?
- What the pain feels like. Is it sharp, dull, or throbbing? Does it come and go, or is it steady?
- How strong the pain is. Describe it on a scale of 0 to 10, where 0 is no pain, and 10 is the worst pain you have ever had.
- How long the pain lasts. Does it last for a few minutes, an hour, or longer?
- What makes the pain better? For instance, does an ice pack, heat or certain medicine help?
- What makes the pain worse? Are there things that cause the pain?
- Which medicines you take for pain. Do they help? How long do they last? How much do you take? How often?

Be sure to tell your doctor or nurse if you have pain.

Let your family and friends know about your pain. They need to know about your pain so they can help you. If pain is bothering you, they can call your doctor or nurse for you. Knowing about your pain can also help them understand why you may not be acting the same.

Practice pain control

- Take your pain medicine as prescribed. Keep a diary of when you take your pain medicine and how much you take. If your pain medicine is not working, call the health care provider who prescribed it and let them know.
- Try deep breathing, yoga, or other ways to relax. This can help reduce muscle tension, anxiety, and pain. You may also want to try heat, cold or changing positions.

Ask to meet with a pain or palliative care specialist. This can be a doctor or nurse who talks with you about ways to better control your pain.

Let your doctor, nurse, or pain specialist know if your pain changes. Your pain can change over time. When this happens, your pain medicines may need to be changed.

Be aware of pain medicine side effects. Side effects from pain medicine may include constipation, nausea and sleepiness. It may not be safe for you to drive or use heavy machinery. Talk with your doctor or nurse if you have questions or concerns about these side effects.

Call your doctor or nurse if you have:

- New pain that you didn't have before or pain that feels different
- Pain that doesn't get better or go away when you take your pain medicine(s)
- No bowel movement for 2 full days
- Problems keeping food or fluids down for more than 12 hours because of nausea or vomiting
- Problems with being too sleepy, such as napping all day, or falling asleep while talking
- Questions about how much pain medicine to take or how often to take it



Nausea and Vomiting: What it is and Ways to Manage

What it is

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 is when your body tries to vomit even though your stomach is empty.

Nausea and vomiting can occur while you are getting chemo (chemotherapy), right after, or many hours or days later. You will most likely feel better on the days you do not get chemo.

Why it happens

Some causes of nausea and vomiting are:

- Certain types of chemo
- Certain types of radiation therapy
- The cancer itself
- Certain medicines
- Infections or illness

Some chemo can cause nausea, vomiting or both. New drugs can help prevent nausea and vomiting. These are called **antiemetic** or **anti-nausea** drugs. Your doctor may tell you to take these drugs 1 hour before each chemo treatment and for a few days after. How long you take them after chemo will depend on the type of chemo you are getting and how you react to it. You may need to take more than one type of drug to help with nausea. Talk with your doctor or nurse about treatments to control nausea and vomiting caused by chemo.

If one anti-nausea drug does not work well for you, your doctor can prescribe a different one.

What you can do about nausea and vomiting

Do not take meds on an empty stomach unless your doctor tells you to do so.

Choose bland, easy-to-digest foods and drinks that do not upset your stomach. These include plain crackers, toast, gelatin and drinks such as ginger ale. Avoid spicy or greasy food.

Eat small meals and snacks. Instead of 3 large meals each day, you might feel better if you eat 5 or 6 small meals and snacks. Do not drink a lot before or during meals. Also, do not lie down right after you eat.

Have foods and drinks that are warm or cool (not hot or cold). Give hot foods and drinks time to cool down, or make them colder by adding ice. You can warm up cold foods by taking them out of the refrigerator 1 hour before you eat or warming them slightly in a microwave. Drink clear soda or ginger ale at room temperature.

Stay away from foods and drinks with strong smells. These include coffee, fish, onions and garlic.

Get enough fluids. Sip on clear fluids throughout the day which include:

- Water
- Broth
- Caffeine-free tea
- Sports drinks like Gatorade or Powerade
- Fruit juices like apple, cranberry or grape

Try small bites of popsicles or fruit ices. You may also find sucking on ice chips helpful.

Suck on sugar-free mints or tart candies - do not use tart candies if you have mouth or throat sores.

Relax before treatment. You may feel less nausea if you relax before your chemo. Meditate, do deep breathing exercises, or imagine scenes or things that make you feel peaceful. You can also do quiet hobbies such as reading, listening to music or knitting.

More you can do about nausea and vomiting

When you feel like vomiting, breathe deeply and slowly or get fresh air.

You might also distract yourself by chatting with friends or family, listening to music, or watching a movie or TV.

Talk with your doctor or nurse. Your doctor can give you drugs to help prevent nausea during and after chemo. Be sure to take these drugs as ordered and let your doctor or nurse know if they do not work. You might also ask your doctor or nurse about acupuncture, which can help relieve nausea and vomiting caused by cancer treatment.

Let your doctor or nurse know if your medicine for nausea is not working.

Call your doctor or nurse right away if you:



- Cannot keep liquids down for 12 hours
- Cannot eat or drink for 12 hours
- See blood or what looks like coffee grounds in your vomit
- Are unable to take your anti-nausea medicine or if it is not working
- Feel dizzy or lightheaded
- Have not made urine (pee) for 12 hours or if your urine (pee) is dark yellow
- Feel confused or have trouble staying awake
- Vomit within 30 minutes after taking your medicine

Diarrhea: What it is and Ways to Manage

What it is

Diarrhea is 3 or more loose, watery bowel movements in 24 hours. When foods and liquids pass through the bowel quickly your body cannot absorb enough nutrients and water from them. This can cause your body to lose fluid (dehydration) and have chemical (electrolyte) imbalances. If this happens, you may need IV fluids to replace lost water and nutrients.

Why it happens

Diarrhea can be caused by cancer treatments. This includes chemo, radiation, surgery or biological therapy. These treatments can harm healthy cells in the lining of your large and small bowel. Diarrhea can also be caused by infections or other medicines.

Tips for eating and drinking if you have diarrhea

Drink 8 to 12 cups of clear liquids each day. 1 cup equals 8 ounces. Drink liquids slowly. You can try broth, popsicles, ice chips or sports drinks like Gatorade® or Powerade®.

Eat 5 or 6 small meals each day instead of 3 large meals.

Eat foods and liquids that are high in sodium and potassium. Diarrhea can cause your body to lose these needed substances. Liquids with sodium include bouillon and fat-free broth. Foods high in potassium include bananas, oranges, canned apricots and cooked potatoes.

Eat low-fiber foods. Low-fiber foods include plain or vanilla yogurt, white toast, white rice, eggs, saltine crackers, canned fruit, well-cooked veggies, chicken or turkey (skinless and baked, broiled or grilled) and instant oatmeal.

Have foods and drinks that are not too hot or too cold.

Ask your doctor if you should try a clear liquid diet. This can give your bowels time to rest.

More tips for eating and drinking if you have diarrhea

Avoid foods or drinks that can make diarrhea worse. These include:

- Very hot or very cold drinks
- Milk products, unless they are low-lactose or lactose-free. Some people can handle about 1 to 1 ½ cups of milk and milk products each day. 1 cup equals 8 ounces. Be careful with nutrition drinks like Boost[®] or Ensure[®]. Although they are lactose-free they may make diarrhea worse.
- Fried, greasy or fatty foods
- Spicy foods, such as curry, garlic, pepper, hot sauce, salsa and chili
- Sugary drinks such as soda, fruit punch, prune, orange, and apple juice
- Foods that are high in fiber such as:
 - Whole wheat breads
 - Whole grain cereals
 - Raw fruits and vegetables
 - Salads and leafy greens
- Foods or drinks with caffeine such as regular coffee, tea, some sodas and chocolate
- Beer, wine and other types of alcohol
- Sugar-free products that contain xylitol or sorbitol. These are mostly found in sugar-free gums and candy. Read product labels to find out if they have these sweeteners in them.
- Foods or drinks that can cause gas. These include cooked dried beans, cabbage, broccoli, cauliflower, cucumbers, sodas and melons.
- Nuts, seeds and popcorn
- Tobacco

More ways to manage diarrhea

Keep your rectal area clean and dry. After each bowel movement use mild soap and water. Use a cream such as Desitin to protect your skin.

Tell your doctor or nurse if your rectal area is sore, bleeds or if you have hemorrhoids.

Ask your nurse if a warm sitz bath would be helpful for rectal pain.

Ask your doctor if over-the-counter medicines, like Imodium may be used.

Do not take any medicine for diarrhea without first asking your doctor or nurse.

Ask to speak with a dietitian. They can tell you about good foods to eat and what to avoid.

Call your doctor or nurse right away if you:



- Have 3 or more loose or watery bowel movements in a 24-hour period
- Feel dizzy, faint or lightheaded
- Feel very thirsty
- Feel like your heart is racing or skipping a beat (palpitations)
- Do not pass urine (urinate) for 6 hours or more
- Are told to take medicine to stop your diarrhea and it does not work
- Have pain or cramping along with diarrhea
- Have watery or bloody bowel movements
- Have rectal spasms, sores or new open areas of skin
- Have a fever of 100.4°F (38°C) or higher

Constipation: What it is and ways to manage

What it is

Constipation is when bowel movements happen less often and stools are hard, dry and not easy to pass. You may also feel bloated or sick to your stomach (nauseated), belch, pass a lot of gas, and have stomach cramps, pain or pressure in the rectum.

Why it happens

Some common causes of constipation are:

- Pain meds, anti-nausea meds and some types of chemo (chemotherapy)
- The location of the cancer
- Not being as active or spending a lot of time sitting or lying down
- Changes in your diet such as not eating enough or not drinking enough fluids

Ways to manage constipation

- **Know that you may become constipated during treatment.** Keep track of your bowel movements on a calendar. If you're constipated, your doctor or nurse may ask you for this info. Having it written on a calendar can be helpful.
- **If you have a remedy for constipation that's worked before, ask your cancer doctor or nurse if it's okay to use it.** Sometimes they may want you to avoid certain medicines, foods or home remedies for constipation. Never use enemas or suppositories unless your doctor or nurse tells you to do so.
- **Try being active each day.** This can help prevent and relieve constipation. You can be active by walking or doing yoga. If you can't walk, ask what exercises you can do in a chair or bed. Ask your doctor if you need to limit your activity in any way.

- **Drink at least 8 cups of fluids each day unless someone on your health care team tells you not to.** One cup is equal to 8 ounces. Fruit juices, such as prune juice, may help. If you drink fluids with caffeine, you can't count them towards your 8 cups of fluid for the day. This is because caffeine make you lose fluid (called a diuretic).
- **Drink warm or hot liquids.** Many people find that drinking warm or hot liquids can help relieve constipation. Warm or hot liquids may include coffee, tea, warm water with lemon, and soup. You might also try drinking warm or hot liquids right after meals.
- **Allow time to have a bowel movement at the same time each day.**
- **Ask your doctor or nurse if you can eat foods high in fiber or use a fiber supplement.** Foods high in fiber and fiber supplements **can harm** people with certain types of cancer or those not drinking enough fluids. Check with your doctor or nurse before adding high fiber foods or a fiber supplement to your diet. High fiber foods include veggies, fruits with skin, whole grain products, popcorn, dried fruits and nuts.
- **If you need help finding a constipation remedy, talk with your cancer doctor, nurse or dietitian.** Ask if there's a laxative, stool softener or other medicine you can take. You may also want ask if you should take something to help prevent constipation. Doing so may help you keep your normal bowel pattern. It's best to ask **before** starting chemo, if you take pain or anti-nausea medicine or if you've had past problems with constipation.

Call your doctor or nurse right away if you:



- Have not had a bowel movement in 2 days.
- Have not had a bowel movement within 24 hours after using a home remedy.
- Have belly pain, bloating or cramping.
- Have an upset stomach (nausea) and are throwing up (vomiting).
- Are not passing gas.
- Fever of 100.4°F (38°C) or higher.

**Constipation is sometimes a sign of a more severe health problem.
Call your doctor or nurse right away if you have any concerns.**

What's your plan to prevent or manage constipation?



Use this space to write down your plan for how to prevent or manage constipation. If you're not sure what to do, talk with your doctor or nurse.

Today's Date: _____

My plan: _____

Exercise During and After Cancer Treatment

As long as your doctor says it is safe, you can exercise during or after cancer treatment.

Routine exercise can help:

- Reduce fatigue (tiredness) and stress
- Make you stronger and more flexible
- Improve bone and heart health
- Improve your sleep and mood
- Give you more energy



Include in your exercise routine:

1. **Aerobic activities** to get your heart pumping like brisk walking, swimming or riding a bike. The goal is to do 30 to 60 minutes of moderate to vigorous activity at least five days a week.
2. **Strengthening exercises** to tone and build muscles. These exercises use resistance from free weights, bands or weight machines. Do this type of exercise two days a week.
3. **Stretching exercises** to keep you flexible. Do a few stretches before aerobic activity.

Getting started

- If you have any questions or concerns, speak with your doctor.
- Make a wellness plan for yourself. Invite family and friends to join you.
- Use a fitness tracking device, like a pedometer, to keep track of how many steps you take each day.
- Some exercise is better than none. If needed, start slowly. Each person will have their own starting point and progress at their own pace.
- Follow the safety guidelines on the next page.

Be safe!

- Do not exercise if you're not feeling well or if you have a fever.
- Do not exercise if you feel sick to your stomach (nausea), are throwing up or have pain that is not controlled with medicine.
- If you have swollen ankles, weight gain you cannot explain or feel short of breath when resting, call your doctor.
- If your immune system is weak, avoid public gyms until your white blood cell count returns to a safe level. Your doctor or nurse can tell you your white blood cell count.
- If you have peripheral neuropathy, which is pain, numbness or tingling in your hands and/or feet, a stationary bike may be safer than brisk walking.
- If you have a mediport or central line, avoid contact sports and things that could cause blunt force trauma to the mediport or central line such as playing baseball, wrestling, martial arts or using a rifle at a shooting range. If your mediport or central line is in use, do not swim or do other water activities.

Local exercise programs

- **LIVESTRONG** at the YMCA – a 12-week program designed to help survivors improve their strength and quality of life. Offered at little or no cost at YMCAs throughout Ohio. To learn more, call 1-844-448-3257 or visit www.livestrong.org. Click on What We Do and choose LIVESTRONG at the YMCA. You may also call your local YMCA and ask if they offer this program.
- Strong Women, Strong Bones – at the UH Landerbrook Women's Health Center
To learn more, call 216-831-8311.
- The Gathering Place – in Beachwood and Westlake
To learn more, call 216-595-9546.
- Silver Sneakers – free wellness program offered to people with certain Medicare plans.
To learn more, call 1-866-584-7389 or visit www.silversneakers.com.

Eating Well During Cancer Treatment

This handout suggests ways to eat well and maintain good nutrition during cancer treatment.

People with cancer have different diet needs

When you have cancer, you need to keep up your strength to deal with the side effects of treatment. When you are healthy, eating enough food is often not a problem. But when you are dealing with cancer and treatment, this can be a real challenge.

Eating well during treatment can help you:

- Feel better
- Keep up your muscle strength and energy
- Maintain your weight and your body's store of nutrients
- Lower your risk of infection
- Heal and recover quickly

Try to keep your weight stable during treatment. Your health care team will watch you for rapid weight loss or weight gain. Often, you will need extra protein and calories due to the cancer and treatment. Even though you may not be as active, you may need to eat more to keep from losing weight.



Ask your doctor or nurse if you should speak with a dietitian about diet changes you may need to make.

If your appetite is good and your weight is steady, eat a balanced diet:

<p>Fruits and Vegetables</p>	<ul style="list-style-type: none"> • Eat 5 to 7 servings (or more than 4 cups) each day • Focus on different colors of fruits and vegetables
<p>Grain products</p>	<ul style="list-style-type: none"> • Eat at least 6 servings of grain products each day 3 of your 6 servings should be whole grain products • Choices: ½ cup oatmeal, ½ cup of brown rice, 1 slice of whole bread, ½ cup of whole wheat pasta
<p>Low-Fat Meat, Fish and Poultry</p>	<ul style="list-style-type: none"> • Do not eat more than 18 ounces of cooked red meat each week. Cooked red meats are beef, lamb and pork. • Choices: Lean beef trimmed of fat, such as round, sirloin, flank, tenderloin ground beef that is 90 percent lean or greater; cuts of pork trimmed of all visible fat and skinless chicken breast
<p>Low-Fat Dairy Foods</p>	<ul style="list-style-type: none"> • Choose no more than 3 servings a day of low-fat dairy foods. • Choices: 1 cup of low-fat milk, 1 cup of low-fat yogurt, 2 cups of low-fat cottage cheese, 1/3 cup of low-fat shredded cheese (3 grams of fat or less per ounce)
<p>Cut Back on Fat, Sugar, Alcohol and Salt</p>	

Getting enough liquids

- You need 6 to 8 servings of caffeine-free liquids each day. Each serving should be 8 ounces. You may have drinks with caffeine but they do not count toward your daily servings because caffeine makes you lose fluid.
- Foods that are liquid at room temp can be counted as liquids. Examples are: ice cream, sherbet, gelatin, cream soups and popsicles.
- Keep something to drink with you at all times so you can sip on it throughout the day.



If you are having trouble eating well:

During treatment, you may not feel hungry and foods may not taste right to you. Even small amounts of food may make you feel full. If you have trouble eating, choose high calorie and high protein foods listed in the tables on the next 2 pages. Push yourself to eat even when you are not hungry. Try to eat 5 to 6 small, frequent meals instead of 3 large meals.

If you are not eating well, or if you have vomiting, diarrhea or night sweats, you may need more than 6 to 8 servings of liquids a day. Choose liquids that contain calories such as:

- Fruit juices and sports drinks
- Milk
- Smoothies
- Liquid supplements or meal replacements such as Boost Plus, Carnation Breakfast Essentials or Ensure Plus

Other things you need to know

- Tell your doctor or dietitian if you are on a special diet for high blood sugar (diabetes), kidney or heart disease or any other problem.
- **Talk to your doctor or dietitian about any herbs, herbal products, vitamins, minerals, anti-oxidants or supplements you are taking or thinking about taking. Some of these products can be unsafe and cause other problems by changing how your cancer treatment works.**
- Talk with your doctor, nurse or dietitian **before** taking probiotics. Ask if it's safe for you to take them. Some patients should avoid taking certain probiotics based on their diagnosis and/or treatment plan.

Ways to Add Calories

To These Foods	Try Adding
Soups, Potatoes, Hot Cereals, Grits, Rice, Cooked Vegetables, Gravies, Sauces or Noodles	1 tablespoon of butter, margarine adds 120 calories 1 tablespoon of sour cream adds 26 calories
Hot chocolate, Desserts, Gelatin, Pudding, Pancakes, Waffles or Fruit	2 tablespoons of whipped cream adds 25 calories
Soups, Sauces, Scrambled Eggs, Pudding, Hot Cereals, Mashed Potatoes, Hot Chocolate, Meatloaf or Hamburgers	1 cup of whole milk adds 150 calories 1 cup of half and half adds 315 calories
Breads, Muffins, Fruits or Crackers	1 tablespoon of cream cheese adds 51 calories
Breads, Cereals, Shakes, Fruit or Yogurt	1 tablespoon of honey or jam adds 64 calories 1 tablespoon of sugar adds 30 calories
Cookies, Muffin or Bread Mixes, Yogurt, Fruit or Ice Cream	½ cup of granola adds 210 calories
Muffins, Cookies, Breads, Cakes, Cereals or Puddings	1 mini box of raisins or 2 dried apricots adds 40 calories
Sandwiches, dips, toast, omelets	½ of a medium avocado adds 125 calories

Ways to Add Protein

To These Foods	Try Adding
<ul style="list-style-type: none"> • Sandwiches • Bread • Tortillas • Chili • Hamburgers • Eggs • Vegetables • Soups • Casseroles • Potatoes • Rice • Pasta 	<p>1 ounce of cheese adds 7 grams of protein</p>
<ul style="list-style-type: none"> • Hot cereals • Soups • Hot chocolate 	<p>1 cup of whole milk adds 8 grams of protein</p>
<ul style="list-style-type: none"> • Shakes • Milk • Casseroles • Bread • Meatloaf • Pasta • Sauces • Soups • Mashed potatoes • Puddings • Hot cereals • Scrambled eggs 	<p>$\frac{1}{4}$ cup of powdered milk adds 6 grams of protein</p> <p>1 to 2 scoops of protein powder adds 20 to 35 grams of protein</p> <p>$\frac{1}{2}$ cup of Greek yogurt adds 13 grams of protein</p>
<ul style="list-style-type: none"> • Shakes • Cakes • Cookies • Brownies • Pies • Bubbly drinks 	<p>$\frac{1}{2}$ cup of ice cream or frozen yogurt adds 4 grams of protein</p>
<ul style="list-style-type: none"> • Salads • Casseroles • Soups • Vegetables 	<p>1 hard cooked egg adds 7 grams of protein</p>

More Ways to Add Protein

To These Foods	Try Adding
<ul style="list-style-type: none"> • Casseroles • Breads • Muffins • Pancakes • Cookies • Waffles • Fruit, Cereal • Ice Cream • Yogurt • Vegetables • Salad 	<p>$\frac{1}{4}$ cup of nuts or seeds adds 6 to 9 grams of protein</p> <p>$\frac{1}{4}$ cup of wheat germ adds 8 grams of protein</p>
<ul style="list-style-type: none"> • Sandwiches • Toast • Crackers • Muffins • Waffles • Pancakes • Vegetables • Fruits • Shakes 	<p>2 tablespoons of peanut butter adds 8 grams of protein</p>
<ul style="list-style-type: none"> • Soups • Casseroles • Pasta • Grains • Vegetables 	<p>$\frac{1}{4}$ cup of beans or legumes adds 4 grams of protein</p>
<ul style="list-style-type: none"> • Vegetables • Salads • Casseroles • Soups • Sauces • Baked potatoes • Omelets • Soufflés • Quiches • Stuffing • Sandwich fillings 	<p>1 ounce of cooked and chopped meat or fish adds 7 grams of protein</p>

Call your doctor or nurse:



- If you start to have eating problems.
- Before going on a special diet or taking any supplements, vitamins, herbs or anti-oxidants. These products may change how your cancer treatment works.

Call your doctor's office right away if you:

- Cannot eat or drink for more than 12 hours
- Have a fever of 100.4°F (38°C) or higher

To learn more

- Read **Eating Hints** from the National Cancer Institute

For a free copy, call the UH Seidman Cancer Center Puck Learning Resource Center at 216-286-4636 or ask your nurse. To view online, visit cancer.gov and type "Eating Hints" in the search box.

- About Food Safety:
 - Read our **Food Safety Guidelines for People with Cancer** handout in the **My Chemo Guide** or ask your nurse for a copy
 - Read the booklet **Food Safety Guidelines for People with Cancer** – from the U.S. Departments of Agriculture and Health and Human Services

To order a free copy, call 1-888-674-6854 or email fsis.outreach@usda.gov. To view online, visit: fsis.usda.gov. Click on Topics > Food Safety Education > Fact Sheets > At-Risk Populations > Food Safety for People with Cancer

- The American Institute for Cancer Research – Nutrition for the Cancer Patient
1-800-843-8114 or aicr.org
- National Center for Complimentary and Alternative Medicine
1-888-644-6226 or nccam.nih.gov

Food Safety Guidelines for People with Cancer

When certain bacteria, viruses or parasites contaminate food, they can cause foodborne illness. People with weak immune systems due to cancer are more likely to get sick from contaminated food. This handout will tell you how to safely handle and prepare your food to avoid foodborne illness. It also has a chart that lists foods you should not eat.

Four basic steps to food safety

Food that looks fine can have bacteria, viruses or parasites that can make you sick. The easiest way to stay safe is to follow four steps each time you handle and prepare food. These 4 steps are: **clean, separate, cook and chill.**

Step One: Clean your hands and surfaces often. Bacteria can spread in the kitchen and get onto cutting boards, utensils, countertops and food. To make sure your hands and surface are clean you should:

- Wash hands in warm soapy water for **at least 20 seconds** before and after:
 - Handling food
 - Touching garbage
 - Using the bathroom
 - Touching pets
- Wash cutting boards, dishes, utensils and countertops with hot soapy water before and after you prepare raw meat, poultry, seafood and any food that will not be cooked. As an added precaution, the U.S. Departments of Agriculture and Health and Human Services suggest sanitizing cutting boards and countertops by rinsing them in a solution made of 1 tablespoon of unscented liquid chlorine bleach per gallon of water. As an alternative, plastic cutting boards can be run through the wash cycle of a dishwasher.
- Wash all fresh fruits and veggies well under running water for at least 30 seconds right before eating. These include fruits and veggies that are prewashed, prerinsed or are organic.
- Use paper towels to clean up kitchen surfaces. Wash kitchen cloths, towels and sponges daily in the hot cycle of the washing machine.
- Clean lids of cans with hot soapy water before opening. Wash the can opener with hot soapy water after use.
- Wipe the handles of grocery carts and baskets with a sanitizing wipe before using them.
- Wash your hands with soap and water or use an alcohol-based hand sanitizer after touching menus in a restaurant.

Step Two: Separate and don't cross contaminate. Cross-contamination occurs when bacteria spreads from one type of food to another. This often happens when raw meat, poultry, seafood and eggs are not handled safely. To prevent cross-contamination:

- Keep raw meat, poultry, seafood and eggs away from other foods in your grocery cart, grocery bags and in your refrigerator. Put raw packaged meat, poultry or seafood into a plastic bag before putting it in the shopping cart. Store meat and seafood on the bottom shelf of the fridge.
- Never put cooked food back on a plate that held raw meat, poultry, seafood or eggs. Wash the plate with hot soapy water before putting cooked foods on it.
- Don't reuse marinades that were used on raw foods unless you bring them to a boil first.
- Use separate cutting boards for meat and nonmeat foods.
- Don't cut different types of foods with the same knife. Wash the knife with hot, soapy water before using it to cut a different type of food. Or, use one knife to cut meat, another to cut veggies and another to cut bread.
- Don't taste the food you are cooking with the same utensil used for stirring. Use a clean utensil each time you taste food while it is cooking.

Step Three: Cook foods to safe temperatures. Foods are safely cooked when they are heated to the USDA-FDA recommended safe minimum internal (inside) temperatures, as listed on this page. **To make sure foods are cooked safely, always use a food thermometer.** Check the inside temperature in several places with the thermometer to make sure the food is cooked to the safe minimum temperature. Follow the table below for safe cooking guidelines.

Turkey, Chicken, Duck Whole, Pieces and Ground	Heat to an inside temperature of at least 165°F.
Beef, Pork, Veal, Lamb Steaks, Roasts and Chops	Heat to an inside temperature of at least 160°F for ground meats and at least 145°F for steaks, roasts and chops with a 3-minute rest time after cooking. Juices should run clear.
Fish	Heat to an inside temperature of at least 145°F. Cook until flesh is opaque and thickest part pulls apart easily with a fork.
Shrimp, Lobster, Crab	Cook until red and flesh is pearly opaque.
Clams, Mussels, Oysters	Cook until the shells open. If the shells do not open, do not eat the seafood inside.
Eggs	Cook until the yolks and whites are firm. Use only recipes in which the eggs are cooked or heated to at least 160°F.
Sauces, soups, gravies	Bring to a boil when reheating.
Hot dogs, packaged lunch meats and deli meats	Heat until steaming hot or at least 165°F.
Leftovers and Casseroles	Heat to at least 165°F.
Nonpasteurized tofu	Cut into cubes and boil for 5 minutes.
Foods that are cooked and waiting to be served	All foods should stay at least at 140° F between the time they are cooked and served.

- When cooking in a microwave oven, cover, stir and rotate food for even cooking. If there is no turntable, rotate the dish by hand once or twice during cooking. Always allow standing time before checking the inside temperature with a food thermometer. Food is done when it reaches at least the safe minimum inside temperature.

Step Four: Chill foods quickly. Cold temperatures slow the growth of harmful bacteria. Use an appliance thermometer to make sure the refrigerator is at 40°F or lower and the freezer temperature is at 0°F or lower. To chill foods safely you should:

- Read food labels when in the store to make sure food is not past its “sell by” date.
- Refrigerate or freeze meat, poultry, eggs, seafood and any foods that can spoil within 2 hours after buying or cooking. Refrigerate within 1 hour if the temperature outside is above 90°F.
- Never thaw food at room temperature, such as on the countertop. Thaw food in the refrigerator, in cold water or in the microwave. When thawing food in the refrigerator, keep it away from raw fruits, veggies and other cooked foods. Put a dish under the food to catch drips. If you thaw food in cold water or in the microwave, you should cook it right after it is thawed. Do not refreeze food once it is thawed.
- Throw away food that has been out of the refrigerator for more than 2 hours.
- Throw away cooked foods, such as leftovers, that are stored in the refrigerator after 72 hours (3 days). Put dates on cooked foods you store in the refrigerator. If you are not sure about the safety of a food in your refrigerator, don’t take the risk – **when in doubt, throw it out!**
- Freeze foods that will not be used within 2 to 3 days.

If you are not sure about the safety of a food in the refrigerator, don’t take the risk.

When in doubt, throw it out!

Call your doctor or nurse right away if you have:

- Nausea
- Vomiting
- Diarrhea
- Fever of 100.4°F (38°C) or higher



Foodborne illness often feels like the flu. Call your doctor or nurse right away if you have the symptoms above or if you think you have become sick because of food you have eaten.

Foods and drinks to avoid

Follow the guidelines in this handout for safe selection and preparation of foods. If you had a bone marrow or stem cell transplant, see the last page.

Food Group	Do Not Eat or Drink
Protein Sources	<ul style="list-style-type: none"> • Undercooked or raw meat, poultry, seafood, shellfish and eggs • Nonpasteurized tofu (tofu that is not shelf stable or aseptically packaged). Unpasteurized tofu must be cut into 1-inch cubes or smaller, and boiled for at least 5 minutes in water or broth before eating or using in recipes. • Sliced meats from the deli. Commercially packaged luncheon meats and hot dogs are allowed, if heated until steaming hot before eating. • Unpasteurized, refrigerated pâtés or meat spreads • Smoked seafood unless contained in a cooked dish • Unroasted raw nuts
Milk	<ul style="list-style-type: none"> • Unpasteurized or raw milk, milk products or eggnog • Unpasteurized cheeses • Sliced cheeses from the deli (commercially packaged cheeses are allowed) • Soft cheeses such as feta, Brie, Camembert, blue-veined cheeses, and Mexican-style cheeses such as “queso blanco fresco” • Unpasteurized yogurt
Beverages	<p>Cold brewed tea/sun tea/mate’ tea</p> <p>Unpasteurized beer</p> <ul style="list-style-type: none"> • Kombucha tea

More foods and drinks to avoid

Food Group	Do Not Eat or Drink
Fruits	<p>Fresh fruits that have not been carefully washed, peeled or cooked.</p> <p>Unpasteurized fruit juices (such as apple cider)</p>
Vegetables	<p>Fresh vegetables or herbs that have not been carefully washed, peeled or cooked.</p> <p>Raw sprouts (alfalfa, bean, broccoli and any other sprouts)</p> <p>Unpasteurized vegetable juices</p>
Grains	<p>Unpackaged breads</p> <p>Raw, uncooked grain products</p>
Fats, Oils and Sweets	<p>Salad dressings containing molded cheese (such as bleu, Roquefort)</p> <p>Foods that contain raw/undercooked eggs such as homemade mayonnaise, eggnog, cookie dough and Caesar-salad dressings</p> <p>Raw or unpasteurized honey</p>
Other	<p>Items from salad bars, buffets or self-service restaurants</p> <p>Items from bulk food bins</p> <p>Raw uncooked brewers' yeast</p> <p>Moldy and outdated food products</p>



If you had a bone marrow or stem cell transplant, follow the food safety guidelines in our “Low Pathogen Diet and Food Safety” handout. If you need a copy of this handout, please ask your nurse.

Other information

- Talk with your doctor, nurse or dietitian **before** taking probiotics. Ask if it's safe for you to take them. Some patients should avoid taking certain probiotics based on their diagnosis and/or treatment plan.

To learn more about food safety

- Visit www.foodsafety.gov
- Read the booklet “Food Safety Guidelines for People with Cancer” from the U.S. Departments of Agriculture and Health and Human Services

To order a free copy, call 1-888-674-6854 or email fsis.outreach@usda.gov.

To view online, visit: www.fsis.usda.gov. Click on Topics > Food Safety Education > Fact Sheets > At-Risk Populations > Food Safety for People with Cancer

This handout explains more about anxiety and depression and what to do if they happen. Talk with your doctor or nurse if you have any questions or concerns after reading this.

Anxiety

It is normal to have many feelings after you learn you have cancer. These feelings can change from day to day, hour to hour and minute to minute. One feeling you may have is anxiety. Anxiety is a feeling of distress, worry, fear or panic. It is normal to feel anxious before, during and after treatment for an illness. Your body may react to the stress and worry about your health. You may notice that you:

- Don't feel like eating, or you eat more
- Have headaches or muscle pains
- Feel sick to your stomach or have diarrhea
- Feel shaky, weak, dizzy or your heart beats faster
- Have a tight feeling in your throat or chest or it's hard to breath
- Sleep too much or too little
- Find it hard to concentrate
- Have more pain
- Feel restless
- Find it hard to cope or keep your normal routine

Stress can keep your body from fighting disease as well as it should, so it's important to find ways to help manage anxiety. The next page suggests some things you can do.

Things you can do to help manage anxiety

- **Talk with your doctor, nurse or social worker about how you feel.** Tell us if you would like to speak with our spiritual care coordinator or someone who has special training in mental health.
- **Think about doing guided imagery, deep breathing, progressive relaxation, meditation and/or exercise.** These things may help. A basic breathing technique is to sit or lie down in a comfortable position. Breathe in slowly through your nose. Hold your breath for a few seconds, and then do a long, slow exhale through your mouth. Do this breathing technique for 10 minutes, 2 to 3 times a day.
- **Listen to music or listen to a guided imagery CD.** Guided imagery CDs can be found at a library or in our gift shop.
- **Do things that you enjoy and that take your mind off your illness.** You might choose to listen to music, watch a favorite movie, spend time outdoors or talk to friends on the phone.
- **Find a quiet place to rest.**
- **Spend time in prayer or meditation.**

Your doctor may order a medicine to relieve your anxiety. Be sure to tell your doctor or nurse how this medicine is working for you and if you have any side effects from it.

Ways caregivers can help

- Stay with the patient when he or she is anxious. Be calm and reassuring.
- Talk about and focus on other things you would have talked to your loved one about before they were diagnosed with cancer.
- Speak with a doctor, nurse or social worker if you need help giving support to the person you care about.

Depression

Many people with cancer feel sad or depressed. It is normal to feel sad, worried or depressed some days. But, if you have more than a day here and there where you feel sad and hopeless, this may be a sign of depression. When you're depressed, you may have very little energy, feel tired, get little joy from things that used to make you happy, or not want to eat.

Depression is sometimes a serious problem. If feelings of sadness and hopelessness seem to take over your life, you may have depression. Depression can be treated but you must speak up. If your health care team does not know you are depressed, they cannot help you feel better. When depression is not treated, people may have more problems. This is because they do not have the energy and concentration to follow through with all of the things their health care team asks them to do.

Eight common signs of depression are listed below. Let your doctor or nurse know if you have one or more of these signs almost every day.

Early signs of depression

- A feeling that you are helpless and hopeless, or that life has no meaning
- No interest in being with your family or friends
- No interest in the hobbies and things you used to enjoy
- A loss of appetite or no interest in eating
- Crying for long periods of time, or many times each day
- Sleep problems, either sleeping too much or too little
- Changes in your energy level
- Thoughts of killing yourself. This includes making plans or action to kill yourself, as well as frequent thoughts about death and dying.

If you ever feel like you will harm yourself or others and you cannot get in touch with someone right away, go to the nearest Emergency Room (ER), call 911 or call the National Suicide Prevention Lifeline at 1-800-273-8255 for help.

Depression can be treated but you must speak up. Tell us if you feel really down or if feelings of sadness or despair seem to take over your life.

Call your doctor, nurse, social worker or mental health counselor right away if you:



- Become more anxious and you cannot control it using the methods that have worked for you before
- Feel down or depressed
- Feel that you are helpless and hopeless, or that life has no meaning
- Have no interest in being with your family or friends
- Have no interest in the hobbies and things you used to enjoy
- Have a loss of appetite or no interest in eating
- Are crying for long periods of time, or many times each day
- Have sleep problems, either sleeping too much or too little
- Have changes in your energy level
- Have thoughts of killing yourself. This includes making plans or action to kill yourself, as well as frequent thoughts about death and dying.

If you ever feel like you will harm yourself or others and you cannot get in touch with someone right away, go to the nearest Emergency Room (ER), call 911 or call the National Suicide Prevention Lifeline at 1-800-273-8255 for help.

Relaxation Techniques

Relaxation techniques can be very helpful because they can reduce feelings of stress, pain and anxiety and may help boost immune function. This handout explains some common ways to relax, but you may find others that are helpful. Trying these techniques for just a few minutes each day can be a useful part of your daily routine and can promote a sense of peace and calmness. They may also help when you are trying to fall asleep or if you wake up in the middle of the night.

Before you start

- Find a quiet setting
- Sit or lie in a position of comfort
- Be aware of your breathing
- Choose a phrase such as “All will be well,” or “Shalom” or “peace” to repeat to yourself.
- If unwanted thoughts enter your mind, do not fight them. Gently refocus on your breathing or repeat your phrase, if you are using one.

Deep breathing technique

1. **Sit or lie in a relaxed position.**
2. **Place your hands on the bottom of your ribcage (diaphragm).**
3. **Breathe in (inhale) slowly and deeply through your nose, making your diaphragm rise.** You should feel your hands rising as you inhale.
4. **Breathe out (exhale) slowly through your mouth.**
5. **Keep your breathing at an easy and steady rate.** Make sure it’s not too fast or too slow. Keep doing this deep breathing exercise until you feel calm, which can vary from person to person.

Guided imagery technique

This technique is a way to relax by forming pictures in your mind. It can be done alone or with someone's help who can talk you through a known scene, such as the beach or your backyard.

- 1. Picture a place in your mind that is easy for you to recall details.** Allow your mind to revisit the sounds, smells, tastes and feelings of being in that place.
- 2. Use music if it is calming for you.** If you picture a beach, use a CD with waves splashing in the background. Think about the way that the beach looks. See the waves... see the sun or the clouds. Smell the salt in the air and taste it on your lips. Allow your mind to feel the sand beneath your toes, while the warm breeze gently blows against your face. Hear the squawk of the seagulls as they glide above your head.

There are many guided imagery CDs you can use to learn this technique. These CDs can be found at local libraries or online.

After any relaxation technique:

- Take three slow, deep breaths.
- Let yourself become used to the space around you in the room.
- Get up slowly and only when you are ready. Make sure you don't stand up too fast.

To learn more about relaxation techniques



- **Call the Connor Integrative Health Network**
 - Some of their programs or classes may have a cost or co-pay.
To learn more, call 216-285-4070 or visit uhconnorintegrativehealth.org.
- **Visit or call the Puck Learning Resource Center**
 - On the lobby level of the UH Seidman Cancer Center at Cleveland Medical Center. Our health librarian can send items to you or suggest other resources. Free service for all patients, family members and friends. Call 216-286-4636.
- **Ask to talk with a social worker, or our Spiritual Care Coordinator**
- **Find out if a local cancer support center offers free services or programs**
 - The Gathering Place in Beachwood and Westlake. Call 216-595-9546 or visit touchedbycancer.org.
 - Stewart's Caring Place, serving Summit, Medina, Stark, Portage and Wayne counties. Call 330-836-1772 or visit stewartscaringplace.org.
 - Yellow Brick Place in Youngstown. Call 234-228-9550 or visit yellowbrickplace.org.

This pathfinder may be useful in finding information about spirituality – the way of being and acting in the world in connection with a higher purpose.

Books

Little Healing Book: Daily Affirmations to Support You Through Your Cancer Healing Journey (2016) by Rosella Longinotti

Zen Cancer Wisdom: Tips for Making Each Day Better (2014) by Suzanne Friedman

50 Days of Hope: Daily Inspiration for Your Journey through Cancer (2012) by Lynn Eib

Soulful Spirituality: Becoming Fully Alive and Deeply Human (2011) by David G. Benner

Blessing in Disguise: 39 Life Lessons from Today's Greatest Teachers (2008) by Andrea Joy Cohen M.D

Everyday Strength: A Cancer Patient's Guide to Spiritual Survival (2006) by Randy Becton

Broken Open: How Difficult Times Can Help Us Grow (2005) by Elizabeth Lesser

Pocketful of Miracles: Prayer, Meditations, and Affirmations to Nurture Your Spirit Every Day of the Year (1994) by Joan Borysenko

Websites

National Comprehensive Cancer Network has a lot of info for patient and caregiver. Go to www.nccn.org/patients/. In the search box, type “Finding Comfort in Spirituality” and click on the link with that title.

National Cancer Institute offers information for cancer patients on the benefits of spirituality in cancer care. Go to www.cancer.gov, then type in spirituality in the search box.

Spirituality & Health Magazine has an online version that includes videos, interviews, blog posts, and articles covering topics for the mind, body, and soul. Go to www.spiritualityhealth.com

This Pathfinder is a suggested list of books and websites and is not meant to take the place of medical advice or professional counseling. If you have any questions, please talk to your doctor, nurse, chaplain, or social worker.

Searching for Online Health Info

Be Aware

Many people want to search online for answers after getting a cancer diagnosis. There is a lot of health info online, but what can you trust? Here are some tips you may find useful. Ask these questions when looking at a website:



- **Purpose: Is the website selling a product or giving free info?**
Does it support what your doctor says, or does it want to replace it?
- **Author: Is the website sponsored by an honest, trusted group or person?**
Or is it written by someone who just has own experience with the topic?
Is the author upfront about who he or she is?
- **Current: Is the website up-to-date?**
- **Personal Info: Does the website respect your privacy?**
Or do you have to sign in to get info?

Any website that makes promises like these below should **not** be trusted:

- “Treats all forms of cancer”
- “Makes cancers go away”
- “Shrinks malignant tumors”
- “Avoids surgery, radiation, chemo or other normal treatments.”

Be careful if a website tells you to use their product instead of what your doctor suggests.

Helpful Websites for Online Searches

Health on the Net Foundation - www.hon.ch

You can search for reliable websites from here.

Medical Library Association - www.mlanet.org/resources/userguide.html#6

Tips for finding health info online. Also includes links to many reliable health websites.

Consumer Watchdog - www.consumerwatchdog.org

This site collects news stories about many topics that inform and protect American consumers of any product. You can search a topic to see what’s been reported.

See the next page for trusted websites for cancer info.

Trusted Websites for Cancer Info

These websites can help you find cancer info online. Always talk with your doctor, nurse or social worker if you have any questions or concerns.

General Cancer Sites

American Cancer Society

1-800-ACS-2345 (227-2345)

Offers info about specific cancers.

www.cancer.org

Association of Cancer Online Resources

An information and support community hosting online support programs in chat rooms and listservs.

www.acor.org

National Cancer Institute (NCI)

1-800-4-CANCER (1-800-422-6237)

Offers a wide range of cancer info.

www.cancer.gov

National Center for Complementary and Alternative Medicine

Offers info about Complementary and Alternative Medicine (CAM).

www.nccam.nih.gov

Cancer.Net

Sponsored by the American Society of Clinical Oncology (ASCO). Offers info about cancer, treatment, clinical trials, support and symptom management.

www.cancer.net

Clinical Trials

UH Seidman Cancer Center

1-800-641-2422

Offers info about clinical trials and lets you search for trials at our center.

www.UHseidman.org/ClinicalTrials

National Cancer Institute (NCI)

1-800-4-CANCER (1-800-422-6237)

Offers a database of over 12,000 active clinical trials across the country.

www.cancer.gov/clinicaltrials/search

To Learn More

- **Talk with your doctor, nurse or social worker.**



- **Call our health librarian at 216-286-4636.**

On the lobby level of the UH Seidman Cancer Center at UH Cleveland Medical Center. Our health librarian can research websites, info or suggest other resources. This is a free service for all patients, family and friends.

Safe Handling of Body Fluids after Chemo

Chemo drugs destroy cancer cells, but they can also harm healthy cells. After getting chemo, there may be small amounts of chemo in body fluids like saliva, urine, vomit, stool, semen and vaginal fluids. It's best if other people aren't exposed to these small amounts of chemo. This handout lists ways that you and your family can safely handle body fluids after chemo.



Follow these guidelines **for 7 days** after each IV chemo treatment.

If you take chemo pills (oral chemo), follow these guidelines at all times, even if you take a break from oral chemo. When you are done taking all of your oral chemo treatment, follow these guidelines for 7 days after your last dose.

Basic guidelines for handling body fluids

- Try to handle your own body fluids when you can. Other people should avoid contact with your body fluids when they can. If they must clean up body fluids, they should wear gloves. They also need to wear gloves when cleaning items that hold body fluids such as soiled clothing or linens, a bedside commode or basin for vomit.
- Don't let pregnant women or children touch body fluids or items that may contain chemo.
- You and anyone who touches your body fluids should wash their hands with soap and water afterwards.
- Wear gloves you can throw away when touching body fluids and soiled items. Don't use gloves with holes or tears. As you remove each glove, turn them inside out. Try not to touch the outside of the gloves. Wash hands with soap and water after taking off gloves.

In the bathroom

- Wash your hands well with soap and water after using the bathroom. Don't touch other items or surfaces until after you wash your hands.
- If you can, use your own bathroom. If you can't use your own bathroom, wipe the toilet seat and rim with a sanitizing wipe after each use. After cleaning, wash your hands with soap and water before touching anything. At the end of 7 days after treatment, wash the toilet and bathroom floor.
- If you have a low flow toilet, put the lid down and flush the toilet twice. This helps make sure body waste isn't left in the toilet.
- Use a toilet rather than a bedpan or urinal when you can. Wear gloves when cleaning these items, using soap and water after each use.



If your clothes or linens become soiled with urine, stool or vomit

- Wash soiled items in a washing machine right away. Don't wash soiled items with other clothing. Put them through the wash cycle twice using hot water and detergent.
- If you don't have access to a washing machine, place soiled items in a sealed plastic bag until you can wash them.
- If you can, handle your own soiled items. If other people touch the soiled items, they should wear gloves and not let the items come in contact with their skin or clothing. If they do, wash them.



If you throw up

Wear gloves if you need to clean up vomit or empty a basin. Wash the basin with soap and water after each use.

If you don't have control of your bladder or bowels

Use throw-away plastic backed pads or diapers to absorb urine or stool. Wear gloves and change these items right away if they become soiled. Wash soiled skin gently with soap and water. Place any soiled diapers, plastic-backed pads and gloves in their own plastic bag before putting them in the regular trash.



If you have sex

Small amounts of chemo may be found in vaginal fluid or semen after chemo treatment. We do not know if these small amounts of chemo can harm a sexual partner. To help protect your partner, we recommend that you use a barrier during sex (vaginal, oral or anal).

If you have an ostomy

Caregivers need to wear gloves when they change or empty ostomy bags. Any ostomy supplies that can be thrown away, such as the bags or gloves, should be put in their own bag before putting them in the regular trash.

If you take chemo pills or get IV chemo in your home, you need to follow extra safety guidelines. Talk with your doctor or nurse to learn more.

Quick Guide to Ways We Can Help

Services we provide	Who can help	Ways they can help	For more info
Cancer Information	<ul style="list-style-type: none"> • Cancer Information Service line • Puck Learning Resource Center (Library) 	<ul style="list-style-type: none"> • Answer questions about cancer • Provide books and information about cancer • Perform searches on health topics 	<ul style="list-style-type: none"> • Call or visit the Puck Learning Resource Center* (Library) 216-286-4636 • <i>Located at main campus of UH Seidman Cancer Center –open to all patients</i> • Call the Cancer Information Service line 1-800-641-2422
Symptom Management and Supportive Care	<ul style="list-style-type: none"> • Symptom Management and Supportive Care Clinic* <p><i>* Located on first floor of the main campus of UH Seidman Cancer Center</i></p> <ul style="list-style-type: none"> • Inpatient Palliative Care team (for patients in the hospital) 	<ul style="list-style-type: none"> • Talk with you about your values, goals for care & treatment choices • Provide added support to help manage: <ul style="list-style-type: none"> – Pain – Fatigue (feeling tired) – Shortness of breath – Depression – Anxiety (worry) – Loss of appetite – Problems sleeping – Constipation – Nausea/Vomiting 	<ul style="list-style-type: none"> • Speak with your doctor or nurse
Coping and Emotional Support	<ul style="list-style-type: none"> • Social workers • Symptom Management & Supportive Care team • Psychiatrists • Inpatient Palliative Care team (for patients in the hospital) 	<ul style="list-style-type: none"> • Talk with you and your family about your concerns, worries or upset feelings • Provide the support you need • Address concerns about sexuality, self-image and/or changes in family roles 	<ul style="list-style-type: none"> • Speak with your doctor or nurse
Help with Day-to-Day Needs	<ul style="list-style-type: none"> • Social workers 	<ul style="list-style-type: none"> • Counseling and talking about your concerns • Referrals to local resources • Support for children dealing with the illness of a parent or grandparent 	<ul style="list-style-type: none"> • Speak with your doctor or nurse

Quick Guide to Ways We Can Help (continued)

Services we provide	Who can help	Ways they can help	For more info
Diet and Nutrition Support	<ul style="list-style-type: none"> • Dietitians 	<ul style="list-style-type: none"> • Answer your diet questions • Help you choose the best food and drinks during and after treatment 	<ul style="list-style-type: none"> • Speak with your doctor or nurse
Billing Questions	<ul style="list-style-type: none"> • Financial counselors 	<ul style="list-style-type: none"> • Answer your billing questions • Discuss our financial aid programs 	<ul style="list-style-type: none"> • Call 216-286-3814 For last names A – M • Call 216-286-3809 For last names N – Z
Discharge Planning	<ul style="list-style-type: none"> • Care coordinators • Case managers • Social workers (inpatient) 	<ul style="list-style-type: none"> • Make plans for extra care and items you may need at home once you leave the hospital • Work with your insurance company during your hospital stay 	<ul style="list-style-type: none"> • Speak with the doctor or nurse caring for you in the hospital
Cancer Rehab	<ul style="list-style-type: none"> • Occupational therapists • Physical therapists • Speech therapists • Physical medicine and rehabilitation doctors 	<ul style="list-style-type: none"> • Use exercise and activity to help regain your strength and movement • Suggest ways to avoid falls and injuries • Manage the effects of lymphedema 	<ul style="list-style-type: none"> • Speak with your doctor or nurse
Art Therapy Music Therapy	<ul style="list-style-type: none"> • Art therapist • Music therapists 	<ul style="list-style-type: none"> • Provide ways to reduce pain and stress, express your feelings and help you cope • Work with you and/or your family 	<ul style="list-style-type: none"> • Call 216-844-5432
Pet Pals	<ul style="list-style-type: none"> • Pet Pals volunteers 	<ul style="list-style-type: none"> • Provide ways to reduce pain and stress, express your feelings and help you cope 	<ul style="list-style-type: none"> • Call 216-844-1504
Integrative Oncology	<ul style="list-style-type: none"> • Integrative Oncology Team Doctor and Nurse Practitioner 	<ul style="list-style-type: none"> • Provide ways to reduce pain and stress, express your feelings and help you cope 	<ul style="list-style-type: none"> • Speak with your doctor or nurse
Spiritual Care	<ul style="list-style-type: none"> • Spiritual care coordinator • Clergy 	<ul style="list-style-type: none"> • Talk with you about your faith or spirituality • Offer prayer, listening and scripture reading 	<ul style="list-style-type: none"> • Call 216-286-3871 or • Speak with your doctor or nurse
Help with Advance Directives	<ul style="list-style-type: none"> • Social workers 	<ul style="list-style-type: none"> • Answer questions and help you complete a Living Will and/or Healthcare Power of Attorney 	<ul style="list-style-type: none"> • Speak with your doctor, nurse or social worker

Some Helpful Tips:

- Talk to your cancer doctor before taking any medicines that contain aspirin or ibuprofen. These medicines can cause bleeding problems.
- Drink 6 to 8 cups of caffeine-free liquids each day.
- Avoid caffeine, alcohol, and tobacco. They may increase nausea and cause fluid loss (dehydration).
- Eat small, frequent meals to avoid nausea.
- Avoid long naps during the day. It may disrupt nighttime sleep.
- Try to maintain as much of your normal routine as you can.
- It is your duty to know what medicines you are taking. Please keep an up-to-date medicine list with you at all times.



If you have any new health problems or concerns, call your doctor's office. Your health care team can help you figure out what is or isn't an emergency.

**Ask questions.
The only bad question is the one you don't ask!**

Words to Know

Acupuncture (AK-yoo-PUNK-cher): The technique of inserting thin needles through the skin at set points on the body to control nausea, vomiting, pain and other symptoms.

Adjuvant chemotherapy (AD-joo-vant KEE-moh-THAYR-uh-pee): Chemo used to kill cancer cells after surgery or radiation.

Alopecia (A-loh-PEE-shuh): The lack or loss of hair from areas of the body where hair is most often found. Alopecia can be a side effect of chemo.

Anemia (uh-NEE-mee-uh): A problem in which the number of red blood cells is lower than normal.

Antiemetic (AN-tee-eh-MEH-tik): A drug that prevents or reduces nausea and vomiting.

Antinausea: A drug that prevents or reduces nausea and vomiting. Also called antiemetic.

Biological therapy (BY-oh-LAH-jih-kul THAYR-uh-pee): Treatment that uses substances made from living organisms to treat disease. These substances may occur naturally in the body or may be made in the lab. Some biological therapies stimulate or suppress the immune system to help the body fight cancer, infection, and other diseases. Others attack specific cancer cells, which may help keep them from growing or kill them. They may also lessen certain side effects caused by some cancer treatments.

Blood cell count (blud sel kownt): A measure of the number of red blood cells, white blood cells, and platelets a sample of blood. Also called CBC or complete blood count..

Bone marrow (bone MAYR-oh): The soft, sponge-like tissue in the center of most bones. It makes white blood cells, red blood cells, and platelets.

Cancer clinical trial (KLIH-nih-kul TRY-ul): Type of research study that tests how well new medical approaches work in people. These studies test new methods of screening, prevention, diagnosis, or treatment of a disease. Also called clinical study or research study.

Catheter (KA-theh-ter): A flexible tube used to give fluids into or withdraw fluids from the body.

Chemotherapy (KEE-moh-THAYR-uh-pee): Treatment with drugs that kill cancer cells.

Constipation (KON-stih-PAY-shun): When bowel movements become less frequent and stools are hard, dry, and difficult to pass.

Diarrhea (dy-uh-REE-uh): Frequent bowel movements that may be soft, loose or watery.

Dry heaves: When you body tries to vomit even though your stomach may be empty.

Fatigue (fuh-TEEG): A problem of extreme tiredness and inability to function due lack of energy.

Words to Know

Healthy cells: Noncancerous cells that function the way they should.

Hormone (HOR-mone): One of many substances made by glands in the body. Hormones circulate in the bloodstream and control the actions of certain cells or organs.

Impotence (IM-puh-tents): Not being able to get or keep an erection. Also called erectile dysfunction.

Immune System (ih-MYOON SIS-tem): A complex network of cells, tissues, organs, and the substances they make that helps the body fight infections and other diseases. The immune system includes white blood cells and organs and tissues of the lymph system, such as the thymus, spleen, tonsils, lymph nodes, lymph vessels, and bone marrow.

Infertility (IN-fer-TIH-lih-tee): the inability to produce children.

Injection (in-JEK-shun): Use of a syringe and needle to push fluids or drugs into the body; often called a "shot."

Intra-arterial (IN-truh-ar-TEER-ee-ul): Within an artery. Also called IA.

Intraperitoneal (IN-truh-PAYR-ih-toh-NEE-ul): Within the peritoneal cavity. Also called IP.

Intravenous (IN-truh-VEE-nus): Into or within a vein. Also called IV.

Metastatic (meh-tuh-STA-tik): The spread of cancer from the primary site (place where it started) to other places in the body.

Monoclonal antibody (MAH-noh-KLOH-nul AN-tee-BAH-dee): A type of protein made in the lab that can bind to substances in the body, such as cancer cells. There are many kinds of monoclonal antibodies. A monoclonal antibody is made so that it binds to only one substance. Monoclonal antibodies are being used to treat some types of cancer. They can be used alone or to carry drugs, toxins, or radioactive substances to cancer cells.

Nausea (NAW-zee-uh): When you have an upset stomach or queasy feeling and feel like you are going to throw up.

Neo-adjuvant chemotherapy (NEE-oh-AD-joo-vant KEE-moh-THAYR-uh-pee): When chemo is used to shrink a tumor before surgery or radiation.

Neutropenia (noo-troh-PEE-nee-uh): An abnormal decrease in the number of neutrophils (a type of white blood cell).

Neutrophil (NOO-troh-fil): A type of white blood cell that is one of the first cell types to travel to the site of an infection. Neutrophils help fight infection.

Outpatient (OWT-pay-shunt): A patient who visits a health care facility for diagnosis or treatment without spending the night.

Words to Know

Palliative (PA-lee-uh-tiv kayr) **care**: Care given to improve the quality of life of patients who have a serious or life-threatening disease.

Peritoneal cavity (PAYR-ih-toh-NEE-ul KA-vuh-tee): The space within the abdomen that contains the intestines, stomach, liver, ovaries and other organs.

Platelet (PLAYT-let): A type of blood cell that helps form blood clots to slow or stop bleeding, and to help wounds heal. Also called thrombocyte.

Port: An implanted device through which blood may be withdrawn and drugs may be given without repeated needle sticks. Also called port-a-cath or Mediport.

Pump: A device used to give a precise amount of a drug at a specific rate.

Radiation therapy (RAY-dee-AY-shun THAYR-uh-pee): The use of high-energy radiation from x-rays, gamma rays, neutrons, protons, and other sources to kill cancer cells and shrink tumors.

Recurrent cancer (ree-KER-ent KAN-ser): Cancer that has recurred (come back) after not being detected for a period of time.

Red blood cells: Cells that help carry oxygen to all parts of the body. Also called RBC.

Side effect (side eh-FEKT): A problem that occurs when treatment affects healthy tissues or organs.

Standard treatment: Treatment medical experts agree is appropriate, accepted and widely used.

Targeted therapy (TAR-geh-ted THAYR-uh-pee): A type of treatment that uses drugs or other substances to identify and attack specific types of cancer cells with less harm to normal cells. Some targeted therapies block the action of certain enzymes, proteins, or other molecules involved in the growth and spread of cancer cells. Others help the immune system kill cancer cells or deliver toxic substances to cancer cells and kill them. Targeted therapy may have fewer side effects than other types of cancer treatment. Most targeted therapies are either small molecule drugs or monoclonal antibodies.

Thrombocytopenia (THROM-boh-sy-toh-PEE-nee-uh): A decrease in the number of platelets in the blood that may result in easy bruising and excessive bleeding from wounds or bleeding in mucous membranes and other tissues.

Vomiting: When you throw up.

White blood cells: (hwite blud sel): Cells that help the body fight infection and other disease. Also called leukocyte and WBC.

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If you would like to share feedback or comments about this booklet, please call 216-844-5432 or 1-800-641-2422.

This booklet was created by staff at UH Seidman Cancer Center. Resources include the American Cancer Society, Centers for Disease Control and Prevention, National Cancer Institute, Oncology Nursing Society and U.S. Departments of Agriculture and Health and Human Services.

