

Understanding Your Brain Tumor and Treatment



Allina Health

Brain Tumor Center: 612-863-3732

Your neuro-oncologist:

Your chemotherapy pharmacy:

Your local pharmacy:

Your primary care provider:

**Lab where you will have blood draws on
Monday or Tuesday:**

Social worker: 612-863-1618

Understanding Your Brain Tumor and Treatment

First edition

Developed by Allina Health.

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The publisher believes that information in this manual was accurate at the time the manual was published. However, because of the rapidly changing state of scientific and medical knowledge, some of the facts and recommendations in the manual may be out-of-date by the time you read it. Your health care provider is the best source for current information and medical advice in your particular situation.

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Disclaimer

This publication is for general information only and is not intended to provide specific advice or recommendations for any individual. The information it contains cannot be used to diagnose medical conditions or prescribe treatment. The information provided is designed to support, not replace, the relationship that exists between a patient and his/her existing physician.

For specific information about your health condition, please contact your health care provider.



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Introduction

You have had surgery and been diagnosed with a brain tumor. Your health care team will tailor treatment to fit your specific needs.

The Brain Tumor Clinic staff will support you and your caregivers during this journey. Use this book as a resource for both you and your caregivers.



Chapter 1:

Living With a Brain Tumor

In This Chapter:

- Seizures
- Driving
- Steroids
- Changes in Thinking
- Activity
- Blood Clots
- Returning to Work
- Insurance and Disability
- Follow-up Appointments
- Medicine Use
- Medicine Refills
- Planning for Your Future Health Care



Seizures

Why seizures happen

A seizure is caused by a change in the electrical excitability in the brain. In most cases, seizures last just seconds to a minute or so and stop on their own. They are not painful and they do not cause brain damage.

There are different types of seizures that depend on which area of the brain has the abnormal electrical signals. Seizures are common with slow-growing gliomas and metastatic brain tumors, among others.

Seizures are common

It is common for people who have brain tumors to have seizures. Out of 10 patients, 6 will have at least one seizure during their illness.

Warning signs

Seizures can happen at any time. You may have a strange feeling or sensation before a seizure. This is known as an aura. It may include:

- ringing or buzzing in the ear
- dizziness
- strong emotions
- bright lights.

What happens during a seizure

A seizure may last for 2 to 3 minutes. The seizure may come on suddenly and you may:

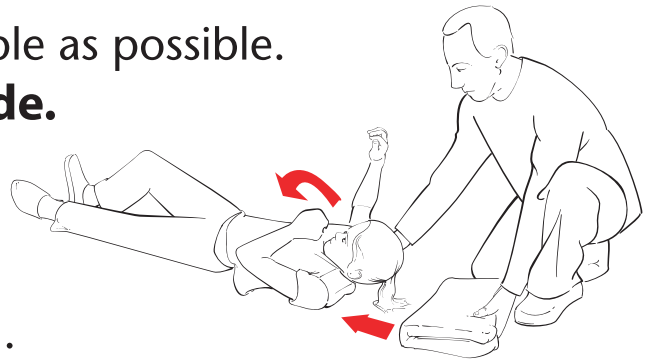
- lose consciousness
- twitch and have your muscles tighten
- bite your tongue
- stop breathing for about 30 seconds.

After a seizure you may feel tired, have a headache, be confused, have sore muscles and feel weak or numb.

FIRST AID FOR SEIZURES

1. Stay calm, most seizures only last a few minutes.
2. Prevent injury by moving any nearby objects out of the way.
3. Pay attention to the length of the seizure.

4. Make the person as comfortable as possible.
Turn the person on their side.



5. Keep onlookers away.
6. Do **not** hold the person down.
7. Do **not** put anything in the person's mouth.

8. Do **not** give the person water, pills, or food until the person is fully alert.



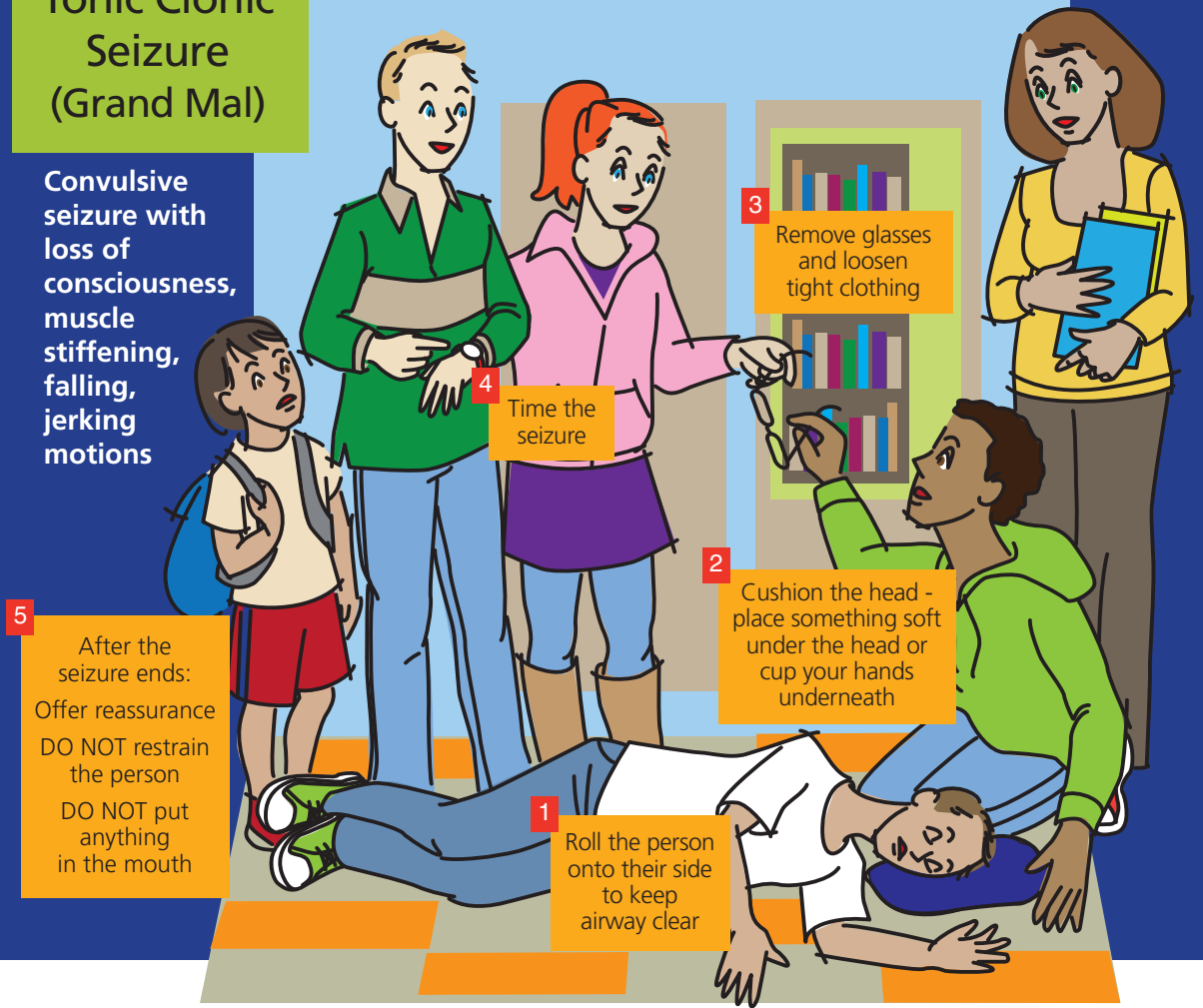
9. If the seizure continues for longer than five minutes, call 911.
10. Be sensitive and supportive, and ask others to do the same.

Reprinted with permission from the Epilepsy Foundation of Minnesota.

Seizure First Aid

Tonic Clonic Seizure (Grand Mal)

Convulsive seizure with loss of consciousness, muscle stiffening, falling, jerking motions



5 After the seizure ends:
Offer reassurance
DO NOT restrain the person
DO NOT put anything in the mouth

4 Time the seizure

2 Cushion the head - place something soft under the head or cup your hands underneath

3 Remove glasses and loosen tight clothing

1 Roll the person onto their side to keep airway clear

Complex Partial Seizure

Non-convulsive seizure with signs of confusion, unresponsiveness or inappropriate behavior. Altered consciousness and total loss of awareness. May be mistaken for alcohol or drug intoxication.

- DO NOT restrain the person
- Gently guide from behind
- Time the seizure
- After the seizure ends, offer reassurance

When to call 911:

You know, or believe it to be, the person's first seizure

If the seizure lasts more than 5 minutes

You feel uncomfortable dealing with the situation

If the person is injured

Driving

General guidelines

- Talk with your health care team about driving.
- Do not drive if you are taking **any** prescription pain medicines.
- There are certain times where you may be told not to drive due to side effects, such as after some chemotherapy treatments or after certain procedures. You will be told ahead of time if you will not be able to drive and for how long.

What to do if you had a seizure

This is important and you will need to take action:

- If you had a seizure that caused you to black out (lose consciousness), lose control of your arms or legs, lose your ability to speak, or caused you to feel confused, **call the Department of Motor Vehicles (DMV) within 30 days of the seizure** and give them details.
- In Minnesota, you cannot drive for at least 3 months after your last seizure. Once the 3 months have passed, the state will require a doctor's statement about your ability to start driving again. Please bring the paperwork to the Brain Tumor Clinic for completion. Make sure you complete and sign your portion of the form. If you don't receive the form in the mail, call the DMV.

Steroids

Medical Term

Swelling is known as edema.

Tumors and treatments can cause swelling (edema) in your brain. This can cause problems such as headaches, speech problems or weakness.

Steroids are often used to treat the swelling. You will likely be prescribed dexamethasone for a while. The dose may be adjusted often. The goal is to eventually stop it after a gradual taper.

Steroids can cause many side effects including:

- acne
- blurred vision
- thinning of the skin
- weight gain
- increased appetite
- muscle weakness.

Stopping the medicine too quickly may cause nausea, increased weakness and headaches.

Changes in Thinking

Many patients with brain tumors have trouble with their thinking. This can be with attention, memory, (both short- and long-term) learning new things, and language or speaking abilities.

This can happen because of brain tumor location and size, swelling in the brain, seizures, medicines, treatments, changes in sleep, anxiety and depression. Occupational or speech therapy may be able to help you manage these changes.

Activity

You should stay as active as possible, even during treatment. It is important to get exercise every day, even when you feel tired. Walking for 30 minutes 2 to 3 times a day is a great way to get exercise. Getting exercise will actually help you feel less fatigued and will help you to sleep better at night.

Blood Clots

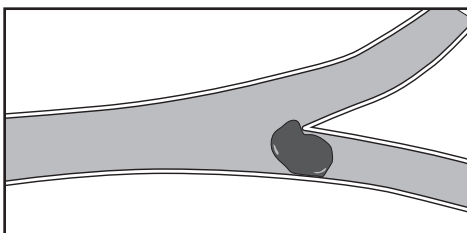
Medical Term

A blood clot is known as a deep vein thrombosis (DVT) or pulmonary embolism (PE).

Because you have a brain tumor, you have a higher risk of developing a blood clot. A clot that forms in a large vein, usually in a leg, is called deep vein thrombosis (DVT). A clot that breaks away and moves to the lungs is called a pulmonary embolism (PE).

You are at greater risk if you:

- are not active
- are older
- smoke
- are overweight.



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A blood clot stops the flow of blood in a vein.

Symptoms of a DVT include redness, pain, swelling or cramping of the leg or arm, and swelling in the face or neck. Symptoms of a PE include shortness of breath, chest pain and rapid breathing.

Your doctor can check for DVT with an ultrasound and check for PE with a chest X-ray or CT scan. If you have either or both, your health care provider will talk with you about your treatment options.

Returning to Work

Tip

A brain tumor can limit your ability to work. Please talk with your family and your health care team to help make the best decisions with you.

This is a difficult topic for most patients. When you are first diagnosed, you may need to be off work for a long time to recover from the surgery.

Talk with your doctor about when it is safe for you return to work. This decision will depend on your diagnosis and treatment plan.

If you need radiation and chemotherapy, your doctor will recommend that you stay off work during that time.

It is important to know how side effects may affect your work. Talk with your health care team if you are tired, have problems speaking or cannot think as clearly as normal.

Insurance and Disability

A social worker can help answer your questions or concerns about insurance and disability.

- If you have forms that need to be filled out, please give your doctor enough time to complete them (7 to 10 days is best).
- Please make sure that you fill out your parts of the form and sign the form where you need to. Your doctor cannot fill out the form if you have not filled in your sections first.
- If possible, provide a fax number or address where the form needs to be submitted.

Follow-up Appointments

You will have regular imaging studies (MRI) and office visits during your treatment. Your health care team will talk with you about your schedule.

Medicine Use

- Take your prescription medicine as directed.
- Talk with your health care provider before taking over-the-counter medicines (including herbals and natural products).
- Bring your medicine list to all follow-up appointments.

Medicine Refills

Call your pharmacy when you need a refill of any of your medicine that are filled by our office. This includes seizure medicines, anti-nausea medicines and steroids.

Please give your pharmacy at least 3 days (72 hours) to have the refills ready for you.

Planning for Your Future Health Care

Advance care planning is the process of giving information to others about your health care choices in case illness or injury prevents you from telling them yourself.

Talk with members of your care circle (family, friends or others close to you) about your health care choices. This is a time for you to share:

- what kind of care and treatment you do or do not want
- your wishes, goals and values and how they relate to your health care choices for the future.

You can put your health care choices in writing by creating a health care directive. Members of your care circle and your health care providers will use this document to interpret and understand your wishes, goals and values for your future health care needs.

How to get started

Allina Health offers three ways to help you get started:

- Sign up for a free advance care planning class.
Call 612-262-2224 or 1-855-839-0005 to register.
- Fill out a free, secure health care directive online.
Go to account.allinahealth.org to create an account.
- Print out a health care directive at allinahealth.org/acp.



Chapter 2:

Treatments

In This Chapter:

- Radiation
- Chemotherapy
- Other Medicines To Treat Brain Tumors
- Support Medicines While You are on Chemotherapy
- Other Treatments
- Implanted Port
- Intra-arterial Chemotherapy

Radiation

The most common treatment includes:

- radiation usually given Monday through Friday for 6 weeks
- chemotherapy (for a time agreed upon by you and your health care providers).

You will meet with a radiation-oncologist who will plan your radiation treatments with you.

Chemotherapy

Your specific plan includes:

Your Treatment

Chemotherapy name:

Schedule:

Your chemotherapy plan may change based on the scan of your brain.

□ Temozolomide (Temodar®)

Medical Term

A “primary” brain tumor is a tumor that started in your brain. It did not travel to your brain from another part of your body.

Temozolomide is an anti-cancer medicine that stops cell growth and division. This medicine is used to treat primary brain tumors.

How well the temozolomide works will be measured with imaging tests (MRI) and physical exams.

How long you will take temozolomide depends on how well your body and area of the brain tumor responds to it.

The dosage you receive is based on your height and weight.

How is it given?

- capsule by mouth

What side effects may occur?

This is a partial list of the side effects you may have with this medicine. You may have some, all or none of those listed, or you may have other side effects not listed. Most side effects last only a short time.

Common:

- lowered white blood cell and platelet counts (occurs 2 to 3 weeks after treatment)
- nausea and vomiting — usually occurs the first day
- mouth sores
- diarrhea
- constipation (unable to have a regular bowel movement)
- loss of appetite
- hair thinning
- lethargy or fatigue
- headache

Less common:

- lowered red blood cell count
- feeling dizzy or unsteady
- skin rash

How to Treat Constipation

If you have constipation you may drink fruit juices, such as prune juice, or take a mild laxative (senna) or stool softener (docusate sodium).

Do not strain or force bowel movements.

Unused Temozolomide

Call your pharmacy if you have unused temozolomide.

The pharmacist will tell you how to properly throw it away based on state laws.

Do not get rid of it by flushing it down the toilet or putting it in the garbage.

Special notes

- Take temozolomide on an empty stomach. You should avoid eating for 1 hour before and 2 hours after each dose.
- Take temozolomide at the same time each day. The best time to take it is before bed.
- Take your anti-nausea medicine 30 minutes before taking temozolomide.
- You may have to take a combination of 250 mg, 180 mg, 140 mg, 100 mg, 20 mg, and 5 mg capsules to make the dosage you need.
 - It is important that you to correctly identify the capsules.
 - Taking the wrong capsules could result in an overdose (too much medicine) or an underdose (too little medicine).
- If you miss a dose, take it as soon as you remember. If you do not remember until the next morning, or if you miss an entire day, call your doctor. **Do not take a double dose the next day.**
- Do not crush or dissolve the capsules.
- Take your other regular medicines as usual. You may take them at the same time as the chemotherapy.
- Take temozolomide with a full glass of water.
- If you have to take more than one capsule, take them all at one time or swallow them one after another without a break in between capsules.
- If you feel sick, you may take another dose of anti-nausea medicine 4 hours after your first dose. You may then take a dose every 8 hours as you need it.
- Do not drink alcohol while you are taking temozolomide. Limit any alcohol you drink at any time.
- Use an SPF 30 sunscreen if you are outside longer than 15 minutes. Chemotherapy makes you more sensitive to the sun and your skin may burn easily, even if you never had a problem with sunburn before.
- You may able to get an infection easier while on chemotherapy. Ways to decrease your risk of infection include:
 - Wash your hands often.
 - Take good care of your teeth and mouth.
 - Avoid being around people who are sick.
 - Take the antibiotic (medicine) prescribed during radiation to reduce your risk of pneumonia (lung infection).

- Avoid getting any cuts or scratches. If you do, keep them clean.
 - Use an electric razor instead of blades.
 - Wear long pants and gloves when working around the house or in the yard.
 - Call your doctor if you have a fever, chills, sore throat, wheezing or problems breathing.
 - Call your doctor if you see a whitish coating on your tongue or if you have sores in your mouth.
 - While you feel like throwing up, do not eat your favorite foods, large meals, or foods that are spicy or hot.
 - Call your doctor if your anti-nausea medicine does not work.
- You may have changes in your menstrual cycle or sperm count.
 - Talk with your doctor about birth control. You should not get pregnant or father a child while taking this medicine.
 - If you are prescribed antibiotics by another provider for any reason, please call the Brain Tumor Clinic.

When to call your doctor

Call your doctor if you have:

- fever, chills or sore throat
- unusual bleeding or bruising
- shortness of breath
- rash
- mouth sores
- uncontrolled nausea, vomiting or diarrhea.

For more complete information or for questions about this medicine, please ask your doctor, nurse or pharmacist.

Special precautions

- If you have an allergy to dacarbazine (DTIC), another chemotherapy medicine, do not take temozolomide.
- If you need help taking temozolomide, any caregiver who helps you should wear temozolomide gloves or make sure to wash his or her hands well with soap and water before **and** after handling the medicine.
- Only take the capsule(s) out of the package when it is time to take temozolomide.
- Do not take the temozolomide capsules out of their package and keep them in other containers or with other pills.

- Do not break a capsule because it could irritate your skin. If this happens, wash your hands well with soap and water.

Lab work

- You will need to have your blood drawn every week on Monday or Tuesday so your health care team can check your blood cell count.

You should go to the lab every week starting the week you start the chemotherapy and continuing until at least 1 month after you are done with all chemotherapy.

You will need to go have blood drawn even on the weeks when you are not taking the chemotherapy.

- Temozolomide can lower the number of blood cells your body makes. This includes white blood cells (that fight infection), red blood cells (that carry oxygen through your body) and platelets (that help clot blood and promote healing).

Food and drink

- You need to eat well-balanced food so your body can stay strong and healthy.
- Temozolomide may change your appetite. If you feel hungry during one part of the day, take advantage of those times and eat. Eating small meals or snacks during the day may be easier for your body to take than eating three larger meals a day.
- Do not take any vitamins, supplements, herbal or natural products without first talking with your doctor.
- Talk with your doctor if you have concerns about your appetite.

Other Medicines To Treat Brain Tumors

Tip

If you need any of these medicines, your doctor will talk with you and members of your care circle (family members, friends or those close to you).

- Bevacizumab (Avastin®)
- Carboplatin (Paraplatin®)
- Cisplatin (Platinol®)
- Cyclophosphamide (Cytosan®, Neosar®)
- Etoposide (VP-16®, VePesid®)
- Leucovorin (Folinic Acid, Wellcovorin, Citrovorum Factor)
- Lomustine (CCNU®, CeeNu)
- Methotrexate (Mexate®, Amethopterin)
- Vincristine (Oncovin®)

Support Medicines While You are on Chemotherapy

❑ Ondansetron (Zofran®)

Ondansetron (Zofran) is a medicine that helps to prevent and treat nausea and vomiting caused by chemotherapy.

How ondansetron is given

It is given by:

- clear liquid by IV (intravenous) in your hand or arm, or into a PowerPort if you have one
- tablet by mouth.

Side effects you may have

This is a partial list of the side effects you may have with this medicine. You may have some, all or none of those listed, or you may have other side effects not listed.

Most side effects last only a short time.

Common:

- headache
- fatigue
- constipation or diarrhea
- dizziness
- drowsiness

Less common:

- hiccups
- muscle spasms (especially in the face, neck or back)
- allergic reaction: itching or hives, swelling in the face or hands, swelling or tingling in your mouth or throat, tightness in your chest, and breathing problems

Special notes

- Ondansetron works the best during the first 24 to 48 hours after receiving chemotherapy.
- Tell your doctor if you have phenylketonuria (PKU).

Birth control

- Talk with your doctor about birth control. You should not get pregnant or father a child while taking this medicine.

□ Other Anti-nausea Medicines

There are other anti-nausea medicines you can try if ondansetron does not work for you. Members of your health care team will work with you to find the right medicine for you.

□ Other Medicines During Radiation

You will take a sulfa medicine (antibiotic) every Monday, Wednesday and Friday starting at the beginning of radiation. This will help to prevent certain types of pneumonia.

When radiation is completed, you will not need to keep taking this medicine.

If you have an allergy to sulfa, you will receive pentamidine, a medicine you inhale. You will have two appointments about 4 weeks apart for this medicine.

Other Treatments

Optune™

The Food and Drug Administration approved this device for people who have high-grade brain tumors.

How it works

Adhesive pads with ceramic discs called “transducer arrays” are put on your scalp to target the tumor.

Optune therapy works by creating alternating, “wave-like” electric fields that travel across the upper part of your brain in different directions to help slow or stop cancer cells from dividing.

Special notes

- Optune therapy targets dividing cancer cells in the brain. In general, it does not harm healthy cells.
- You need to have your head shaved clean and smooth by a professional hair stylist or barber before you can start this therapy.

Implanted Port

Why you need a port

Your doctor wants you to have a central line called a PowerPort placed. This will make it easier and more comfortable for you to receive IV fluids and medicines, including chemotherapy. It *may* also be used to give you the dye needed for an MRI or CT scan.

A port is not usually used for routine blood draws. Specially-trained nurses are the only people who should use the port.

What it is

A port is a small metal and plastic device with a hollow space in the middle. It is connected to a catheter (thin, flexible tube) that goes under your skin and into your bloodstream.

The port is placed under your skin, likely in your upper chest. It will not slip out of place. The procedure takes about 60 minutes.

Special notes

- Do not have anything to eat or drink after midnight on the day of the procedure. You may take your usual medicines in the morning with a sip of water.
- You will receive 1 container of Hibiclens® to use to clean your skin before you come to the hospital. Hibiclens does not foam or make suds.
 - Use Hibiclens the evening before the procedure.
 - Rinse your body.
 - Gently use the Hibiclens to wash your upper chest from your chin to the nipple line.
 - Rinse your body.
 - Dry yourself with a clean towel.
 - Put on clean clothes.
 - Use Hibiclens the morning of the procedure before you come to the hospital.
 - Clean your body the same way you did last night.
- **Do not put anything on your skin after you use the Hibiclens. This includes lotions, oils, powders, perfumes, sprays or deodorants.**
- When riding in a car, adjust the seat belt so it does not irritate or rub your chest.
- The port needs to be flushed every 4 to 8 weeks when it is

not used regularly. Check with your health care team about scheduling this flushing.

Before the procedure

- Tell your health care provider if you:
 - are pregnant
 - have a latex allergy
 - have diabetes
 - take a blood-thinner medicine.
- Remove any jewelry or piercings.
- If you are leaving the hospital after the procedure, you will need to have someone drive you home. You will not be able to drive.
- Bring a list of your current medicines with you. Include all prescription, over-the-counter, vitamins, herbal and natural products.

Incision site care

- Follow your health care provider's directions for changing the dressing and when you can get it wet.
- You may take acetaminophen (Tylenol®) if you have discomfort.
- You may use ice on the port site.
 - For the first 48 hours, you may place an ice pack or bag of frozen vegetables on your chest for pain relief and to help keep the swelling down.
 - Wrap the bag in a light towel before using.
 - Keep the ice pack on for 30 minutes and then keep it off for 30 minutes.

When to call your doctor

Call your health care provider if you:

- have a temperature of 101 F or higher
- have new pain or pain you can't control

- feel dizzy or lightheaded that won't stop
- have signs of infection at your incision site:
 - pain
 - swelling
 - redness
 - odor
 - warmth
 - green or yellow discharge
- are unable to get out of bed
- have nausea (upset stomach) or vomiting (throwing up) that won't stop
- have any questions or concerns.

Intra-arterial Chemotherapy

Members of your health care team will talk with you if this is right for you.

Chapter 3:

Side Effects of Treatment

In This Chapter:

- General Guidelines for Treatment
- How to Deal With Side Effects of Treatment:
 - Fatigue
 - Mouth Sores
 - Nausea and Vomiting
 - Low Platelets
 - Low Red Blood Cells
 - Low White Blood Cells
 - Hair Loss
 - Menopause Symptoms
 - Preventing Infections While Your Blood Counts are Low
- Tips For Managing Your Thinking Changes From Cancer Treatments



General Guidelines for Treatment

Before starting chemotherapy

If you are about to start receiving chemotherapy medicine, or if you are already receiving it, you probably have concerns. Please ask your health care team any questions you have. It is important that you to understand your cancer treatment.

- Tell a member of your health care team if you:
 - are allergic to any medicines, either prescription or over-the-counter
 - are taking any other medicine, either prescription or over-the-counter (including vitamins and herbal remedies)
 - are pregnant or plan to get pregnant
 - are breastfeeding
 - have ever been treated with radiation or cancer medicines
 - have any other medical problems:
 - chicken pox
 - lung disease
 - herpes zoster
 - kidney disease
 - infection
 - liver disease.
- If you can, have dental work done before starting chemotherapy or radiation. Please tell your doctor if you need any procedures during treatment.

While taking medicine

- Avoid getting pregnant or fathering a child.
- Use anti-nausea medicines as directed — let your doctor or nurse know if they are not helping.
- Drink plenty of liquids.
- Do not take aspirin or products containing aspirin without checking with your doctor.
- Avoid alcoholic beverages.
- You need a flu shot every year. Talk with your doctor about when to have it and if you need any other shots.

- See your health care provider on a regular schedule to check your progress.
- It is important for you to know that everyone reacts differently to chemotherapy. Many people either do not have any side effects or have only mild effects. Your doctor or nurse will give you further information on your specific chemotherapy medicine and its possible side effects.

When to call your doctor or nurse right away

Call right away if you have:

- a fever higher than 101 F
- shaking chills
- unusual bruising or bleeding:
 - blood in stool or urine
 - nose bleeds
- chest pain
- shortness of breath
- uncontrollable pain
- yellowing of your skin or eyes.

When to call a member of your health care team within 24 hours

Call within 24 hours if you have:

- nausea or vomiting unrelieved by medicine, lasting for longer than 24 hours or both
- sore mouth, painful or difficult swallowing
- constipation or diarrhea lasting longer than 48 hours
- pain at the IV site
- burning during urination.

Please call a member of your health care team if you have any questions.

How to Deal With Side Effects of Treatment

Fatigue

Fatigue is a feeling of tiredness that can keep you from doing the things you normally do or want to do. Fatigue is one of the most common problems cancer patients have to deal with. It is a warning sign that the body needs more rest, so listen to your body.

Signs of fatigue

You may have fatigue if you:

- feel weary or exhausted. It may be physical, emotional or mental exhaustion.
- have a decreased desire to do normal daily activities
- find it hard to think clearly and to concentrate
- feel very “heavy,” especially arms and legs.

When to call your nurse

You should call your nurse if you:

- are too tired to get out of bed for the past 24 hours
- feel confused or cannot think clearly
- think your fatigue has become worse
- have severe shortness of breath
- feel dizzy when you change positions.

How to manage your fatigue

- Plan your day so you have time to rest.
- Take several short naps instead of one, long rest period.
- Pace your activities around your energy level.
- Eat a well-balanced diet if possible and drink plenty of liquids.
- Increase the protein and calories in your diet (such as cheese, yogurt, milk shakes, fish, meat, poultry and supplements).
- Take short walks or do light exercise once a day if you can.
- Try easier or shorter versions of activities you enjoy.
- Try less strenuous activities, like reading or visiting with friends and family.
- Save your energy for those activities that are most important to you.

- Try to become comfortable asking friends and family for help.
- Avoid caffeine and alcohol.
- If you can, reduce your hours at work or stop working temporarily.
- Do activities that you enjoy or make you feel good.

Cancer fatigue is real. Please don't ignore it. Talk with your nurse about what you can do to help maintain your quality of life.

Mouth Sores

It is common for patients being treated with chemotherapy or radiation to have problems in their mouth or throat. These areas may become dry or develop sores as a result of treatment.

Since the lining of your mouth provides the first line of defense against infection, these sores can lead to a more serious infection if not treated.

Signs of mouth sores

- pain or burning
- taste changes
- sore throat
- difficulty swallowing
- mild redness and swelling along the gumline
- white patches in your mouth

When to call your nurse

You should call your nurse if you have:

- ulcers or white patches
- difficulty eating or drinking due to pain
- a fever.

How to help prevent mouth sores

- Use a soft-bristled toothbrush.
- Wear dentures only when needed. You may need to keep your dentures out if they do not fit right, to avoid irritation.
- Drink lots of liquids.
- Keep your lips and mouth moist.
- Avoid commercial mouthwashes.

- Rinse your mouth after every meal and at bedtime with a non-irritating mouth wash:
 - Mix 1 teaspoon baking soda with 1 cup warm water.
 - Do not add hydrogen peroxide to mouth rinses.
- Clean your dentures every day and soak them every night in fresh solution.

How to manage mouth sores

- Keep your mouth and gums clean to help prevent infections. (See “How to help prevent mouth sores” on page 36.)
- Avoid foods and juices that are highly acidic.
- Avoid hot, spicy or sugary foods.
- Cold, soft, bland foods, such as ice cream, yogurt, or Popsicles® are more soothing and usually better tolerated.
- Use a straw to make drinking easier.
- Avoid cigarettes and alcohol.
- Avoid using floss and toothpicks if your blood counts are low.
- If dry mouth is a problem:
 - sip water often
 - suck on ice chips
 - chew sugarless gum or suck on hard candy
 - use artificial saliva (over-the-counter product).
- Use prescription oral anesthetics as directed.
- Use pain medicines as directed.

Because eating well and drinking liquids play a vital role in your body’s healing process, it is important to take good care of your mouth and throat.

Call your doctor or nurse if you begin to have problems. Please ask your nurse if you have any more questions about mouth care or mouth sores.

Nausea and Vomiting

Chemotherapy and radiation may cause nausea and vomiting because they affect the stomach lining and the part of the brain that controls vomiting.

The amount of nausea (upset stomach) and vomiting (throwing up) a patient has varies from person to person. Medicine can control nausea and vomiting.

When to call your nurse

You should call your nurse if:

- vomiting occurs more than 3 times in 1 hour and lasts for 3 hours or longer
- you can't keep liquids down for 12 hours or longer
- you can't eat for more than 2 days
- you have any blood in the vomit or if the vomit looks like coffee grounds
- you are unable to keep medicines down.

How to manage nausea and vomiting

- Take anti-nausea medicine as prescribed.
- Eat small, frequent meals during the day.
- Eat foods cold or at room temperature to decrease strong smells.
- Avoid fried, fatty, greasy or spicy foods.
- Eat bland, starchy foods such as toast, crackers or cereal.
- Avoid foods that are hard to digest like red meat.
- Avoid your favorite foods during nausea and vomiting.
- Drink more liquids. Good choices are:
 - clear liquids such as water, ginger ale, fruit juices
 - try Popsicles®, Jell-O®, ice chips and sports drinks.
- Drink liquids 1 hour before or after meals. Do not drink during meals.
- Rest after meals. Rest in a chair for 1 to 2 hours after meals. Do not lie flat.
- Avoid unnecessary stimulation during meals. Try a cool, well ventilated environment with less noise and light.
- Avoid odors that bother you.
- Avoid eating for a few hours before treatment if you have nausea during chemotherapy.
- Keep crackers or bread within reach.
- Try distractions such as music, watching TV, or visiting with friends or family.
- Do not force foods or liquids if you are vomiting.

Because eating well and drinking liquids play a vital role in your body's healing process, it is important to try and control nausea and vomiting during your treatments. Tell your doctor or nurse if your nausea is not being controlled. Talk with your nurse if you have any concerns or questions.

Low Platelets

What low platelets mean

Chemotherapy and radiation can affect the bone marrow where all your blood cells are made, including platelets, which help your blood to clot. When your platelet count is low you may bruise or bleed easily.

When to call your nurse

You should call your nurse if you have:

- bleeding from a cut that won't stop
- blood in your urine or stool
- dark brown vomit
- black, tarry stools
- frequent nose bleeds
- tiny pinpoint-sized red or purple spots on your skin
- unusually heavy menstruation
- headache
- bleeding gums.

What to do if your platelet count is low

- Postpone any surgeries or dental work.
- Avoid injury — make your home as safe as possible.
- Avoid using aspirin or aspirin-containing medicines.
- Use stool softeners to avoid straining on the toilet.
- Do not use sharp instruments.
- Shave with an electric razor only.
- Use a soft bristle toothbrush.
- Avoid flossing your teeth.
- Avoid rectal suppositories and enemas. Women: avoid douches and tampons.
- Blow your nose gently.
- Report any changes in menstruation, including increased bleeding and bleeding between cycles
- Avoid intercourse when your platelets are too low.
- Avoid contact sports.
- Wear shoes when you walk.
- If your platelet count becomes too low, you may need a platelet transfusion.

Your platelet count will get better. Until then, it is important for you to be careful and to try and prevent any bleeding. Please ask your nurse if you have any questions.

Low Red Blood Cells

Low red blood cells

Chemotherapy and radiation can affect the bone marrow where all your blood cells are made. The red blood cells are the oxygen-carrying cells in your body. When your red blood cells are low, you may become anemic.

When to call your nurse

You should call your nurse if you:

- are tired (fatigue)
- have shortness of breath
- feel lightheaded
- are dizzy
- have a fast heart rate
- have a headache
- feel weak
- have a pale skin color.

What to do if your red blood cell count is low

- Eat foods rich in iron such as green leafy vegetables.
- Change your activities to get enough rest.
- Do light exercises if possible every day.
- Save your energy for those activities that are most important to you.
- Pace your activities around your energy level.
- Change your positions slowly.
- If your red blood cells become too low, you may need a blood transfusion.

Your red blood cell count will get better. Until then, it is important to follow the advice above and to listen to your body. Please ask your nurse if you have any questions.

Low White Blood Cells

Low white blood cells

Chemotherapy and radiation affect the bone marrow where all your blood cells are made. Most people who receive chemotherapy, radiation or both will have some low blood counts.

The white blood cells are your infection-fighting cells, so when they are lowered, usually seven to 14 days after treatment, you are at a higher risk for getting an infection.

When to call your nurse or doctor

Please tell your nurse or doctor if you have:

- a fever of more than 101 F
- shaking or chills
- burning or frequent urination
- a cough or sore throat
- redness, swelling or drainage in any area.

Ways to help prevent getting an infection

- Remind all visitors to wash their hands. Hand washing is the most important way to prevent spreading an infection.
- Don't have more than three visitors at one time. Family or friends should not visit if they have skin, intestinal or respiratory infections. Only children who are family members should visit. Those children should not have come in contact with exposure to an illness that can be spread within the last 3 weeks.
- Be sure to wash all fresh fruits and vegetables.
- Brush your teeth with a soft bristled toothbrush or a sponge brush.
- Rinse your mouth with a salt solution 4 times a day to keep your mouth moist and clean.
- If you are a woman of child-bearing age, do not use tampons.
- Practice proper skin care. Pat (do not rub) your skin. Do not use a straight edge razor. Only use an electric razor.

Your white blood cell count will get better. Until then, it is important to take these extra precautions to prevent infections. Please ask your nurse if you have any questions about low white blood cell counts and infection precautions.

Hair Loss

Hair loss

Hair loss is a common side effect of many chemotherapy medicines and radiation used to treat cancer. How much hair you lose and how long you will lose it depends on the types of medicine(s) used and the areas of radiation.

For many people, hair loss is one of the most difficult side effects of cancer treatment because it affects their self-image and quality of life. Remember: everyone's experience is different and that hair loss caused by chemotherapy is usually not permanent.

- Hair loss can start anywhere from 7 to 21 days after treatment.
- Hair will usually fall out gradually or in clumps.
- Any hair still growing may become dull and dry.
- Your hair will start to grow back when you are finished with your treatments.
- It may take up to 6 to 12 months to grow back completely.
- Hair may grow back with a different color or texture.
- You may also have hair loss from other parts of your body, such as eyebrows, eyelashes and genital area.
- Radiation to the head may cause permanent hair loss.
- Get a wig or hairpiece before your hair falls out.
- The purchase of a wig or hairpiece is tax-deductible. Check with your insurance provider if your policy covers it.
- Consider borrowing a wig or hairpiece. Check with the local chapter of the American Cancer Society.
- Try hats, turbans and scarves for hair coverings. Check with the local American Cancer Society to find out about Look Good...Feel Better programs in your area.

How to manage hair loss

- Use mild shampoos.
- Use soft hairbrushes.
- Avoid hair dryers or use the lowest heat setting.
- Cut your hair short. This makes the hair look thicker and fuller and it will also make hair loss easier to manage if it occurs.
- Avoid permanents or hair coloring at this time.
- Be sure to cover your head or use sunscreen (SPF 15) when exposed to sunlight.
- Cover your head in winter to prevent heat loss.

Hair loss from chemotherapy or radiation can be hard to accept. It's common and normal for both women and men to feel angry or depressed about this outward sign of their illness. Remember that preparing yourself in advance can enhance the quality of your life during and after treatment.

Talk with your nurse if you have any other questions about hair loss.

Menopause Symptoms

Menopause symptoms

Your brain cancer treatment may cause you to feel menopausal symptoms because:

- you were taken off hormone replacement therapy or
- your chemotherapy medicines (such as cytoxan) or hormone blocking medicines (such as tamoxifen) caused menopause.

Common menopause symptoms include:

- hot flashes
- vaginal dryness
- headache
- depression
- insomnia.

Hot flashes

- Wear clothing made from absorbent fabrics, such as cotton.
- Wear clothing in layers that can be removed.
- Avoid hot drinks (such as coffee or black tea and hot, spicy foods).
- Keep the room temperature low, if you can control it.
- Learn how to reduce long-term and short-term stress. Good choices are exercise and relaxation techniques.
- Keep track of how often the hot flashes occur, how bad they are and the time they occur. Also note what is happening before the hot flashes. You may be able to control them in the future.
- Medicines can sometimes control hot flashes. Discuss various choices with your oncologist.
- Over-the-counter vitamins may also help control hot flashes. Some choices are vitamin E (800 IU every day), vitamin B6 (250 mg every day) or vitamin C plus bioflavonoids (2 or 3 tablets every day).

- Many herbal remedies (such as evening primrose oil) may help control hot flashes. Some of these herbs contain plant estrogens. Talk with your doctor before trying herbal remedies.
 - The plant estrogens have been linked to the prevention of breast cancer, but there is no research that indicates they are either safe or unsafe for a woman who has breast cancer.
 - Some herbal choices are ginseng root, garlic, hops, catnip, chamomile, passion flower, royal jelly or soy.

Vaginal dryness

- Use over-the-counter products such as Replens[®], Gyne-Moistrin[®] and Lubrin[®]. They work for about 3 days in a row.
- Use water-based moisturizers (such as Astroglide[®] and K-Y Jelly[®]) to make sexual intercourse easier. You should avoid Vaseline[®] and petroleum jelly because they are not good for your vaginal tissues. If you have vaginal atrophy, a dilator may make intercourse easier.
- Putting low-dose estrogen right on the vagina through a vaginal ring also helps. This has been shown to result in little or no increase in circulating estrogens, and so may be safe for a woman with breast cancer.

Depression

- For mild depression: The medicine(s) you take to treat cancer may increase your depression. An exercise program geared just for you helps decrease depression.

If the depression makes it hard for you to start and enjoy an exercise program, you may need a friend to exercise with you. This person can motivate you to keep going, even when you don't feel like it.

- For severe depression: A depression that lasts longer than 2 weeks is not normal. Talk with your doctor if your depression won't go away. Medicine or counseling may help turn your negative thoughts into positive ones.

Insomnia

Insomnia means you have problems falling asleep and staying asleep.

- Go to bed only when you are planning to sleep.
- Do not lie in bed to watch TV or read.
- Keep a regular schedule of going to bed and getting up.
- Get up on time even if you did not sleep well.
- Set a time during the day to worry.

- Get up if you do not fall asleep within 30 minutes.
- Exercise regularly, but not right before bed.
- Avoid alcohol because it interferes with sleep patterns.
- Try natural sleep-inducing remedies before bedtime such as warm milk with honey, chamomile tea, or lemon verbena tea.

Headaches

Headaches are caused by an upset in the balance of hormones. This occurs when you have a decrease in either estrogen or progesterone.

- Try taking anti-inflammatory drugs such as acetaminophen, aspirin or ibuprofen. Check with your doctor before taking these medicines. They may cause side effects when mixed with the other medicines (especially chemotherapy medicines) you are taking.

Preventing Infections While Your Blood Counts are Low

Why guidelines are needed

Because of the effects of your treatment you are more likely to get infections. The guidelines below will help you prevent infections when you are at home.

When your blood counts are recovered and are not expected to go down again, you may stop these guidelines. Please ask your doctor before you stop following these guidelines.

Always follow good hand hygiene. This is the best way to avoid infection, even when you are healthy. Remember, even if you follow these guidelines, you may still get infections.

When to call your doctor

If you have any of the following problems, please call your doctor right away:

- a fever of more than 101 F
- shaking chills
- burning while urinating or having to urinate often
- loose bowel movements for 2 days
- cough, sore throat or shortness of breath
- redness, swelling or drainage in any area
- nausea or vomiting that lasts more than 12 hours
- any change that concerns you.

Guidelines to help prevent infections

■ Handwashing

Washing your hands is the single most important way to protect against infections.

- Wash your hands often, including after using the toilet and before eating.

■ Visitors

- Limit visitors to immediate family members and close friends.
- Remind all visitors to wash their hands.
- Ask that friends and family members don't visit if they:
 - are recovering from a respiratory or gastrointestinal disease, or a skin infection
 - had symptoms of the stomach flu (upset stomach, vomiting, diarrhea or all) in the last 72 hours.
- Children should not visit unless they are healthy and were not exposed to a disease that can be spread (like a cold or influenza) within the last 3 weeks.
- Avoid large crowds. If you must be out in public areas, wear a mask.

■ Pets

- If possible, avoid direct contact with pets.
- If you own a pet, take it to a vet for a check-up, feed it only commercial pet food, and don't let it wander out of your yard.
- Wash your hands after petting animals.
- Don't handle reptiles such as turtles or snakes.
- Do not clean up animal droppings or feces, and do not clean a litter box, bird cages or fish tanks.
- Keep litter boxes away from kitchens, dining rooms or where food is prepared or served.

■ Food

- Follow food safety guidelines when preparing foods. Clean food preparation areas, wash your hands, cook food well.
- Do not eat raw meat or raw seafood.
- Do not eat from salad bars or bulk containers at grocery stores.
- Wash raw vegetables and fruits before eating.

- Do not share drinking glasses or eating utensils.
- Throw out old food and check for outdated foods, such as yogurt.

■ **Housecleaning**

- Do not do housework that raises dust.
- If possible, wear a mask or leave the room while it is being cleaned, dusted or vacuumed.
- If you are in a room while it is being dusted, have the person cleaning use a damp dust cloth to contain the dust.
- If a humidifier is needed, use a steam vaporizer and clean often. Do not use a cold humidifier.

■ **Personal hygiene**

- Bathe every day. Wash your hands often.
- Use different towels from others in your house.
- Wash your perineal area after a bowel movement.
Women: wash the area from front to back.
- If your skin is dry, use lotion.
- Avoid rectal suppositories and enemas.
Women: avoid douches and tampons.
- Shave with an electric shaver only.

■ **Mouth care**

- Use a soft toothbrush and soak it in hot water before using it. This will help to soften the bristles. If you have mouth sores, tell your doctor and ask about medicines and a sponge toothbrush. Avoid using floss.
- You may be told to do mouth rinses with a solution of salt and baking soda.
- Postpone surgery or dental work.

■ **Sexual activity**

- You may lose desire or interest. This is normal.
- Talk to your partner about your feelings and need to be intimate in other ways.
- You may hold, kiss or hug your partner unless he or she is ill or recently sick.
- You may have intercourse once your platelet count is more than 50,000 and white cell count is more than 2,000.
- You may need to use a vaginal lubricant such as K-Y Jelly®.
- Avoid anal and oral intercourse.

- Use condoms to decrease the risk of infection.
- Birth control is recommended because there is the chance you can get pregnant or father a child while on the treatments.
- **Travel**
 - You will need your doctor’s approval before traveling.
 - You may need to take extra precautions around food. Drink only commercially bottled beverages.
- **Miscellaneous**
 - Talk with your doctor before you get a vaccination when your blood counts are low.
 - Avoid working in the garden or check with your doctor to see if you may work in the garden while wearing gloves and a mask.
 - If you are around a construction site, wear a mask.
 - Do not smoke. Avoid tobacco smoke.
 - Do not bathe or swim in recreational waters such as pools, lakes or hot tubs.

Tips For Managing Your Thinking Changes From Cancer Treatments

Create routines and habits

Routines and habits can make your life easier by lowering the amount of energy it takes to remember everything.

You can create your own routine by:

- picking a certain place for commonly used items. This may include items such as keys, wallet, glasses or daily planner.
- keeping the same daily and weekly schedule. This may include going to bed and getting up at the same time each day or having a list of chores to complete on a certain day of each week.

Use checklists

Checklists help your brain create routines and habits by having you complete tasks in the same way every time.

Some helpful checklists include:

- your medicines and the time you take each one. Check off each medicine after you take it.
- the items you need to leave the house. Review your checklist before you go out the door.

Make lists

Writing lists makes remembering easier for your brain. Some helpful lists include:

- grocery lists
- to-do lists
- lists for special events such as birthday parties or vacations.

Use a calendar

Keeping your appointments and schedule in one place is a way to stay organized and lower your stress.

Try these tips when using your calendar.

- Write down your appointments as soon as you make them.
- Write down due dates or other important dates you need to remember. This may include due dates for bills or medicine refill dates.

Use an alarm

Use an alarm on your watch or phone to remember your appointments and to take your medicines.

Take breaks

- Schedule rest breaks throughout your day.
- Do activities that take the most energy when you are at your best.
- Do activities in a quiet environment.

Try these speaking tips

- Think of the first letter of the word.
- Describe what the object looks like or how you use it.
- Use another word that has a similar meaning, such as large or big.
- Point to the item as you are speaking.
- Say another word that is usually used with the word you are trying to remember. For example, for coffee you could say cream and sugar.

Talk with your health care provider if you still have a hard time with your thinking.

Chapter 4:

Integrative Therapies

In This Chapter:

- Acupuncture
- Aromatherapy
- Biofeedback
- Deep Breathing
- Exercise Physiology
- Guided Imagery
- Healing Touch
- Integrative Nutrition
- Massage
- Music Therapy
- Progressive Relaxation
- Reflexology
- Traditional Chinese Medicine
- Yoga



Integrative Therapies

You can use the following in addition to treatments prescribed by the Brain Tumor Clinic. If you have questions of if you need help finding these resources, please ask a staff member at the clinic.

To learn more, call the Penny George™ Institute for Health and Healing at 612-863-3333 or visit allinahealth.org/GeorgeInstitute.

Acupuncture

Acupuncture is part of an ancient medical system called traditional Chinese medicine.

An acupuncturist, a person who has special training, gently inserts fine, sterile acupuncture needles through your skin to help promote health and treat illness or pain.

Acupuncture supports your body's ability to heal. It is known to improve more than 200 health conditions and helps to prevent disease.

How acupuncture works

Acupuncture moves Qi (pronounced "chee"). Qi is energy that moves through your body along channels. When you are healthy, the Qi moves freely. When you are in pain, sick or emotionally upset, the Qi can become stuck. Acupuncture unblocks this stuck Qi.

When the needles are placed, you may feel tingling, warmth or nothing at the acupuncture points or other areas of your body. Sometimes, people feel discomfort when the needles are inserted.

When you have acupuncture you may stay in your bed or sit in a chair. The needles are usually left in place for 20 minutes. At the end of the session, you often feel relaxed and peaceful.

Aromatherapy

Aromatherapy uses essential oils to maintain and restore health. It encourages your body's natural ability to relax and heal, and supports the balance of mind, body and spirit.

Studies have shown that using aromatherapy helps reduce:

- pain
- anxiety
- upset stomach (nausea)
- being unable to sleep (insomnia).

The aromatherapy program at Allina Health was created by certified aromatherapy practitioners to offer another option to help support health and well-being.

Benefits

The natural ingredients of the essential oils that help relax your busy mind, calm your stress, help you sleep and reduce your pain.

When you smell the aroma, the molecules of the essential oil move from your nose through your body, bringing healing to the places that need it.

Allina Health hospitals offer these inhalers:

- Lavender is used to treat anxiety, stress, insomnia (unable to sleep) and pain. The full name is *Lavandula angustifolia*.
- Ginger is used to treat nausea (upset stomach) and pain. The full name is *Zingiber officinalis*.
- Mandarin is used to treat upset stomach, anxiety, insomnia and can help lift your spirits. The full name is *Citrus reticulata*.
- Marjoram is used to treat muscle pain, anxiety and insomnia. The full name is *Origanum majorana*.

How to safely use an aromatherapy inhaler

You breathe in the essential oil with an inhaler. The inhaler is small so you can carry it with you. To use the inhaler:

- Remove the cap.
- Hold the inhaler about 4 inches under your nose.
- Move the inhaler back and forth a few times while you take in slow, deep breaths.
- Replace the cap right away.

Tip

People respond differently to the aroma. You can choose which one you like best.

Use the inhaler as needed. The aromatherapy will stay fresh for up to 3 months if you keep the cap on when you are not using it. Here are safety tips for using aromatherapy:

- Stop using essential oils right away if you have any reactions such as red, dry or itchy skin.
- Do not use essential oils in or around your eyes.
- Do not take (or swallow) essential oils by mouth.
- Do not use undiluted essential oils on your skin.
- Do not use essential oils on children under 15 years old or pets (unless you have talked with a certified aromatherapy practitioner).
- If you are using essential oils at home, talk with a certified aromatherapy practitioner about special instructions for:
 - pregnancy
 - medical conditions
 - taking medicines.

Biofeedback

Biofeedback therapy teaches you how to control your body using your mind. You learn to relax muscles, breathe correctly, and calm nerves and other stressed body systems.

Biofeedback helps you gain control over your body's responses to stress, injury, pain and illness.

A trained therapist will help you develop skills of mind and body relaxation. You can use these skills every day.

What biofeedback can help

Biofeedback can help:

- muscle pain
- jaw disorders
- face, neck, shoulder, arm and leg pain
- spine and low back pain
- headaches
- anxiety
- sleep problems
- repetitive stress injuries (like wrist pain from typing)
- nerve pain
- high blood pressure
- fast heartbeat.

The therapist will help you gain control of your symptoms in the following ways:

- increase behaviors for your well-being
- improve your physical abilities
- increase awareness of your symptoms
- improve your physical abilities
- increase awareness of your symptoms
- develop awareness and control of your thoughts, emotions and actions in response to your symptoms.

Awareness and control

Using computers that give visual and audio feedback, you will learn skills to help your body's ability to control pain and to heal.

You will gain control of muscle tension, skin temperature and other mind-body responses.

The therapist can also help you adjust to physical issues and mental disorders.

Therapy

Biofeedback therapy usually involves five, 1-hour sessions that meet once a week for 2 weeks. Sessions continue every 2 weeks for the remainder of the sessions.

Deep Breathing

Deep natural breathing is a powerful and simple relaxation exercise. You can do this exercise for 1 to 2 minutes, several times a day.

How to breathe deeply

- Sit down or lie on your back in bed. Make sure your feet and hands are not crossed.
- Begin to bring your thoughts and attention to your breath.
- Feel where your breath comes in and out of your nose.
- Put one hand on your stomach so you can feel it rise with each breath.
- Breathe in deeply through your nose. Let your lungs fill completely and your belly to expand, moving your hand outward.
- Slowly breathe out. Make a "whooshing" sound with pursed lips. (Pursed lips are in the shape of blowing out a candle.)

- Try breathing out twice as long as you breathe in.
- Repeat several times in a slow, deliberate manner.

Other things to think about

- Notice how your body feels when you are breathing.
- Notice how your muscles soften and how the breathing releases your stress and pain.
- Gently bring your attention back to your breathing if your mind starts to wander.

Exercise Physiology

Being physically active is a key to living a longer, healthier and happier life. It can help relieve stress and provide an overall feeling of well-being.

Exercise physiology is the study of how the body adapts to physical activity.

An exercise physiologist creates an exercise plan that helps enhance your overall health.

Benefits of exercise

Exercise can help you:

- maintain a healthy weight
- increase your energy
- sleep better
- manage stress
- build muscle strength
- control your blood glucose
- increase your HDL (“good”) cholesterol.

Exercise can help lower your:

- risk of heart disease
- blood pressure
- blood glucose
- risk of osteoporosis (weak, brittle bones)
- risk of diabetes
- risk of arthritis
- risk of certain cancers, such as colon and breast
- anxiety and depression.

Guided Imagery

Guided imagery is a gentle but powerful technique that focuses and directs the imagination to ease stress and enhance well-being.

It uses words and images to help move your attention away from the worry, stress and pain and help you find your own inner strength and creativity to support healing. This brings the natural powers of the mind into health and healing.

How guided imagery works

Guided imagery helps relax your body by reducing muscle tension and increasing positive emotions. This can help:

- lower stress
- lower anxiety
- lower blood pressure
- you sleep better
- lower pain
- strengthen your immune system.

Benefits of guided imagery

Imagery has a positive affect on heart rate, blood pressure, breathing and oxygen rates, brain waves, temperature and hormone balance.

Guided imagery can help relieve symptoms caused or made worse by stress, such as:

- chest pain (angina)
- high blood pressure
- high blood glucose
- headaches
- pain
- digestive problems
- breathing problems.

Guided imagery in the hospital

While you are in the hospital, guided imagery can help you:

- become calm and focused before, during and after a procedure or surgery
- have a temporary, mental escape at a stressful or difficult time
- lower pain and anxiety.

Tip

Ask your nurse if you are interested in guided imagery during your hospital stay.

Guided imagery at home

After your hospital stay, you can buy relaxation or guided imagery CDs or downloads to use at home.

You can also create your own imagery by writing down a relaxing scene.

- Include images of yourself becoming healthier, stronger and more successful.
- Put on quiet music.
- Close your eyes.
- Relax and imagine your relaxing scene.

Healing Touch

Healing touch is an energy-based approach to health. The goal is to promote healing on physical, mental, emotional and spiritual levels.

It is based on the belief that each person has a dynamic, subtle energy field in and around the body that can be influenced to promote health.

How healing touch works

The healing touch practitioner centers his or her awareness and focuses on your needs. The practitioner uses gentle touch and a variety of hand motions to clear your energy field.

The goal is to restore the harmony and balance in your energy.

Benefits of healing touch

Some benefits of healing touch include:

- improved relaxation (physical and mental)
- pain relief
- reduced anxiety and stress
- improved wound healing
- help in recovering from surgery
- improved sleep
- increased sense of well-being
- support in the dying process.

Integrative Nutrition

Integrative nutrition centers on whole person care, focusing on health and wellness instead of treating a disease. It uses natural (complementary) and medical (conventional) therapies to nourish the mind, body and spirit.

You and your integrative nutritionist will work together to create a plan to correct imbalances, fight inflammation, and improve your overall health and well-being.

Food as medicine

Integrative nutrition uses a “food as medicine” approach to eating, using food to support your body’s natural ability to heal. Food and nutrients (how many calories or how much carbohydrate, fat, vitamins and minerals) are looked at as information for the body. Without the right information, your body is not able to work properly.

Your story

An important part of integrative nutrition is your personal story and understanding how it impacts your beliefs, attitudes and motivations for wanting to make changes to your lifestyle. Your integrative nutritionist will listen to your story and use the information to help create your plan of care.

Learning more about your body

After listening to your story, asking about your health history and looking at any lab work you have had done, your integrative nutritionist will talk with you about:

- your genetics
- nutrients of which your body has too much (toxicities) or does not have enough (deficiencies)
- any imbalances in your body.

Your plan of care: putting the pieces together

You and your integrative nutritionist will review all of the information gathered to create your plan of care. Using this information, he or she will work with you to develop nutrition strategies to support your body’s natural ability to heal.

Your integrative nutritionist will also talk with you about the power of choice, and how your body has the ability to heal itself through consuming proper foods and nutrients, and nourishing the mind and spirit.

Benefits of integrative nutrition

By working with an integrative nutritionist, you can:

- better understand what to eat and how to promote your body's natural healing ability
- create a plan of care that uses specific foods, supplements and other therapies
- use nutrition to support long-lasting (chronic) conditions
- set goals and develop healthful eating patterns.

Massage

Massage is the treatment of the skin and soft tissues of the body to enhance health and healing and promote relaxation. It can help to restore or maintain balance in your mind and body.

Benefits of massage

Research studies show that massage can help to:

- reduce pain
- reduce muscle tension
- lower blood pressure and heart rate
- improve circulation
- increase the “feel good” chemicals (endorphins)
- soften tight muscles
- prevent muscles from weakening.

Massage usually results in decreased stress and anxiety, creating a sense of calm and well-being.

Massage may help people who have several health conditions by relieving many physical and emotional symptoms.

Therapeutic massage may be right for you if you have:

- arthritis
- asthma
- pain (short-term or long-term)
- circulatory problems
- gastrointestinal disorders
- headache
- immune system disorders
- sleep problems
- face and jaw pain

- reduced range of motion
- stress.

Massage sessions

During a massage session, the massage therapist talks with you about any health and comfort needs or concerns you have.

You may be fully clothed, partially clothed or not clothed and covered with a sheet. You will lie on a massage table or in a hospital bed. The massage therapist will massage and work on the areas you request.

The massage therapist is careful with the amount of pressure used. The strokes may vary depending on your comfort level. During the session, the massage therapist talks with you to make sure the massage is effective.

Music Therapy

Listening to, or creating, music can help your physical, emotional and social well-being.

Music therapy can reduce your feelings of anxiety, stress and pain. It can help you take an active role in your treatment.

Music therapy sessions

Listening to special music can promote relaxation. Music reduces feelings of restlessness, quiets your thoughts, and brings positive images into your mind.

Increased relaxation can:

- improve your breathing
- lower your blood pressure and heart rate
- reduce your muscle tension
- help your attention span and memory.

Music can also help you talk about how you feel about your health. Singing, listening, playing instruments or writing music can help you express your feelings.

Actively participating in music making can:

- stimulate brain activity
- improve your memory
- increase movement of your large muscles
- increase your coordination
- help improve how you walk or talk.

Progressive Relaxation

Progressive relaxation is a short and easy exercise to help you relax.

Getting started

Find a relaxing position. You may sit down or lie on your back in bed. Be sure your legs and hands are not crossed.

You may close your eyes. If you prefer, you can keep your eyes open but focus on one spot in front of you.

Bring your attention to your breathing. Think about where your breath comes in and out of your nose or mouth. Think about how your chest moves up and down with each breath.

Imagine a gentle, safe wave of relaxation that will slowly and warmly flow through your body. The wave can help you find those places that need to relax and give them permission to relax.

You can also imagine this wave in any way you find most comfortable. You may see it as light, water, or just a feeling.

If your mind wanders, gently bring it back to your breathing.

Relax from your head to your feet

- Bring your attention to the top of your head and begin to imagine a wave.
- With your next breath out, feel it flow through your head. Feel your jaw soften and relax.
- Breathe in.
- With your next breath out, focus on the back of your neck. Let it soften and relax.
- Breathe in.
- With your next breath out, imagine the wave moving through each arm all the way to your hands. Feel your hands become slightly heavier where they are lying.
- Breathe in.
- With your next breath out, imagine the wave of relaxation roll gently and safely down your spine. Let all of your back muscles relax and soften.
- Continue to breathe. Feel the wave flow as you breathe out.
- Let the wave flow through your pelvic area and hips into your upper legs and thighs.

- Breathe in.
- With your next breath out, allow the wave to find those areas in your legs and knees that need to relax. Give them permission to relax.
- Breathe in.
- With your next breath out, feel the wave move into your calves, then your feet. Feel your feet become a little heavier.
- Take two deep breaths. Imagine any remaining stress gently flowing out the bottoms of your feet.

Take a moment to observe the still place you created. With practice, relaxation will become easier.

Reflexology

Reflexology is a healing art that has been practiced in many cultures for centuries.

It is based on the principle that there are reflex maps in each foot and hand. These maps correspond to all body parts and organs.

When pressure techniques and massage are applied to your hands and feet, it causes physical changes in your body.

Benefits of reflexology

Reflexology creates a relaxation response. This supports the body, mind and spirit to enter into its natural healing state. Reflexology helps to:

- decrease pain, nausea, anxiety
- balance physical and emotional symptoms.

Reflexology may also be used to help prevent illness and maintain wellness as part of a healthy lifestyle.

Reflexology sessions

You are fully clothed. You lie in bed or on a massage table, or you sit in a chair.

The reflexologist will apply pressure to your hands or feet using various thumb, finger, and hand techniques over the reflex areas that connect to your body. Pressure will not go outside your comfort level.

After the session, you may feel calm, relaxed and revitalized.

Traditional Chinese Medicine

Traditional Chinese medicine focuses on restoring the flow of energy so your body can heal itself. For thousands of years, this health care system has been used by people throughout the world.

When you are healthy, there is a smooth flow of energy through your body. When energy is blocked, you can feel:

- pain
- very tired
- nauseated (upset stomach)
- tight muscles or cramps
- irritable
- depressed
- frustrated
- stress
- out of control.

Traditional Chinese medicine is a range of therapies to help unblock your energy and support the way your body works to heal itself. Therapies include herbal medicines, massage, acupuncture, acupressure and qigong.

How traditional Chinese medicine can help

Many things can cause an energy imbalance including:

- foods you eat
- air quality
- illness
- injury
- emotional stress or trauma.

Being out of balance can cause long-term health problems. Therapies like acupuncture or acupressure can restore balance to your body, mind and spirit by unblocking your energy.

These therapies move Qi (pronounced “chee”). Qi is energy that moves through your body along channels. Qi can also be called “life’s vital force.”

When you are healthy, the Qi moves freely. When you are in pain, sick or emotionally upset, the Qi can become stuck.

Acupuncture and acupressure

Two common therapies used in the hospital are acupuncture and acupressure. The purpose of both is to help promote health and treat illness or pain.

- An acupuncturist gently inserts fine, sterile acupuncture needles through your skin.
- An acupressurist uses his or her fingertips on key areas (acupoints) of your body.

Both therapies can help restore balance to your body, mind and spirit.

Yoga

Yoga is an ancient practice that is used to create and maintain balance in the body, mind and spirit. Therapeutic yoga uses breathing techniques, gentle movement and meditation to relax the body as well as increase strength and flexibility.

Yoga Sessions

One-to-one yoga sessions provide individual attention and instruction. Breath-work, movement exercises and meditation are taught according to your needs.

A plan is designed to let you use the techniques you learned as an ongoing self-care practice.

Yoga benefits

Yoga helps maintain health and can support the healing process in several ways. A regular yoga practice can:

- ease muscle tension
- improve circulation
- increase energy
- improve concentration and memory
- increase flexibility and balance
- tone and strengthen the body
- support proper working of all body systems, including digestive, cardiovascular, nervous and respiratory
- ease pain
- relax your body and mind.

Anyone can benefit from yoga. It can complement traditional medical treatment for a variety of conditions, such as:

- long-term pain
- neurological disorders such as multiple sclerosis
- anxiety
- cancer
- low back pain
- reduced range of motion
- stress.

Chapter 5:

Resources

In This Chapter:

- Support Groups
- Cancer Resource Center
- Websites



Resources

Support Groups

Abbott Northwestern Hospital's Neuroscience Institute and the Virginia Piper Cancer Institute offer a support group for people who have brain tumors and their caregivers.

Social workers and health care providers meet to offer education and support to individuals and families affected by brain tumors.

The support group meets on the second Thursday of each month from 5:30 to 7:30 p.m. A light meal is served.

Call 612-863-3732 or 612-863-1618 for more information.

Cancer Resource Center

The Abbott Northwestern Hospital Cancer Resource Center is open Monday through Friday from 8 a.m. to 4:30 p.m. The Cancer Resource Center is located in the Piper Building. It has educational materials about cancer, treatments, and managing symptoms that you may find helpful.

Call 612-863-3150 for more information.

Websites

- allinahealth.org/cancer
- allinahealth.org/classes
- ABTA.org (American Brain Tumor Association)
- clinicaltrials.org (available clinical trials)



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