



Adjuvant Therapy for Breast Cancer

This information explains what adjuvant therapy is, how different kinds of adjuvant therapies work, and how to manage possible side effects.

What Is Adjuvant Therapy?

Adjuvant therapy is treatment given in addition to your breast surgery. It's used to kill any cancer cells that may be left in your breast or the rest of your body. It's also sometimes given before surgery to help make the procedure easier to do. Adjuvant therapy lowers the chance of having your breast cancer come back. Your doctor will decide which therapy is right for you. Adjuvant therapy could be 1 or more of the following:

- **Chemotherapy** kills cancer cells by stopping the cells' ability to multiply. Your chemotherapy may last 3 to 6 months or longer.
- **Hormonal therapy** uses medications to stop your body from making some hormones or change the way these hormones affect the body. Hormonal therapy may be taken for years.
- **Antibody therapy** is when antibodies attach to growth proteins on cancer cells and kill cancer cells. Antibody therapy may be taken for up to 1 year.
- **Radiation therapy** targets cancer cells that doctors can't see but remain in the breast or lymph nodes after surgery. Radiation therapy may last 3 to 7 weeks.

Planning Your Adjuvant Therapy

Your treatment plan is created for you based on many factors. Your doctor will

review your full history, and do a physical exam. Then they will review your test results, pathology results, and imaging, and use this information to design your treatment plan. Everyone's treatment plan is different. Your doctor will review your treatment plan with you in detail. Ask your doctor or nurse any questions you may have.

Managing Possible Side Effects

If you have any of these side effects, call your doctor or nurse. They may be able to give you advice or a prescription to help you feel better. You don't need to wait for your next appointment.

Specific possible side effects of chemotherapy, hormonal therapy, and antibody therapy are described below. Each section also gives tips on how to feel better during your treatment. Your doctor and nurse will tell you which side effects to expect from your treatment. If you're going to get radiation therapy to your breast as part of your adjuvant therapy, your Radiation Oncology team will give you additional information about radiation.

Nausea and vomiting

Chemotherapy may cause nausea and vomiting. Nausea and vomiting happen because chemotherapy irritates the areas of your brain that control nausea or the cells lining your mouth, throat, stomach, and intestines.

There are medications that are very good at preventing or controlling nausea. If the chemotherapy you'll be getting causes nausea and vomiting, you'll get anti-nausea medication before, after, or both for each chemotherapy treatment. This will reduce the chance that you will have nausea. You will also get a prescription for anti-nausea medication to take home with you. Your nurse will tell you how to take the medication. Taking it the right way will give it the best chance to work.

Nausea can make you want to stop eating. Not eating and drinking won't allow your body to get the energy it needs to repair itself from the effects of your chemotherapy. Below are some tips to help you lessen your nausea. You can also read the resource *Eating Well During Your Cancer Treatment* (www.mskcc.org/pe/eating_cancer_treatment) for more information.

The following are tips to help with your nausea:

- Take your anti-nausea medication as instructed by your doctor or nurse. Don't try to hold off on taking the medication to see if the nausea will go away. Anti-nausea medications are most effective when you take them at the first sign of nausea.
- Eat dry, starchy foods (such as crackers or pretzels) or suck on hard candy to help prevent nausea.
- Eat small meals often. Stop eating before you feel too full.
- Drink 8 to 10 glasses of non-caffeinated liquids every day. This will prevent dehydration. Take small sips to avoid feeling more nauseous.
- Practice relaxing. Listen to soft music, breathe deeply, do yoga, or meditate. You might also try to think of pleasant things to distract yourself.
- Ask your doctor or nurse to refer you to a clinical dietitian nutritionist for more suggestions.

Things to avoid:

- Eating fried, greasy, creamy, or spicy foods.
- Eating or cooking foods that have a strong odor (smell).

Call your doctor or nurse if you:

- Are vomiting or have diarrhea often.
- Have nausea that doesn't go away even if you take your anti-nausea medication.
- Can't drink or keep anything in your stomach.
- Feel light-headed or dizzy.
- Have heartburn or stomach pain.

Hair loss or thinning (alopecia)

Some chemotherapy medications cause hair loss. Hair loss usually starts about 2

to 4 weeks after your first chemotherapy treatment. If you do lose your hair, it will begin to grow back once you're no longer getting chemotherapy. Some hormonal therapies can thin your hair, as well.

Generally, hair loss is affected by:

- The type, dose, and length of time you take the medication(s).
- The amount of hair you have before treatment.
- The amount of chemical processing (such as perm and dye) the hair had before treatment.

What you can do:

- Sign up for a free, virtual Look Good Feel Better class to learn about wigs, make-up, and skincare techniques. To register for an online class, visit lookgoodfeelbetter.org/virtual-workshops/.
- Use a mild shampoo, such as Johnson's Baby Shampoo®.
- Talk with your doctor or nurse about getting a prescription for a wig before you start treatment. People who lose their hair from cancer treatment may have insurance coverage for a wig. Check with your insurance provider for more information. For more information on where you can find wigs and hairpieces, read the resource *Where to Buy Wigs and Hairpieces* (www.mskcc.org/pe/where_buy_wigs_hairpieces).
- Wear scarves and soft terry cloth turbans on your head, if you would like. They're very comfortable and add variety.
- Use a low-heat setting when blow-drying your hair.
- Speak with your doctor about trying a cold cap. A cold cap is a cap filled with cold gel that is worn on your head during chemotherapy to reduce the amount of chemotherapy that reaches your hair follicles. This can help minimize hair loss. For more information, read *Managing Hair Loss with Scalp Cooling During Chemotherapy for Solid Tumors* (www.mskcc.org/pe/scalp_cooling). Cold-capping is usually not covered by insurance.

What to avoid:

- Bleaching or perming your hair.
- Using hot curlers.

Low white blood cell count (leukopenia)

Your white blood cells help your body fight off infections. Having a low white blood cell count can raise your risk of getting an infection. You may start having low white blood cell counts 7 to 14 days after each treatment. There are medications that may be used to raise your white blood cell count or prevent it from falling. These medications come in the form of injections (shots) or devices that you wear on your arm.

What you can do if you have a low white blood cell count:

- Take your temperature by mouth every 4 hours if you think you have a fever, body aches, or chills, or notice an increased temperature of your skin. **Call your doctor or nurse if it's above 100.4° F (38° C).** This is very important. If you have a fever after hours, you should call your doctor's office and ask to talk to the doctor on call.
- Ask your nurse or doctor if you can take acetaminophen (Tylenol®).
- Always wash your hands after using the toilet and before eating.
- Protect your hands from cuts and burns:
 - Don't cut your cuticles. Push them back instead.
 - Wear gloves when you wash the dishes, cook, or garden.
 - Keep your skin moisturized to avoid skin cracking.
- If you have a cut, wash it with soap and water right away. You can also use an antibacterial ointment or spray on the cut. Watch for any signs of infection such as redness, swelling, or pus. If you notice any of these signs, call your doctor.

What to avoid if you have a low white blood cell count:

- Being around people who are sick or have been exposed to anything that could

make you sick, such as chickenpox, strep throat, tuberculosis (TB), the flu, measles, or the common cold.

- Dental work or surgery. Check with your doctor or nurse first.
- Using suppositories (medication taken through the rectum (anus), vagina, or penis), rectal thermometers, and enemas.
- Live virus vaccines, such as the shingles vaccine, MMR, chickenpox vaccine, and the nasal spray flu vaccine.
- Being around anyone who has gotten a live virus vaccine or nasal spray vaccine. You should wait 7 to 10 days after they got it before being around them again.

Call your doctor or nurse:

- If you have redness, swelling, or pus leaking from a wound.
- If you have an oral temperature of 100.4° F (38° C) or higher.
- If you have chills or body aches, with or without a fever.
- Before you get any vaccines.

Low red blood cell count (anemia)

Anemia is when your body doesn't make enough red blood cells. Red blood cells carry oxygen through your body. When you don't have enough red blood cells, you may feel very tired (fatigue) or have trouble breathing. Anemia is more likely to happen after you've been getting chemotherapy for some time.

What you can do if you have a low red blood cell count or to prevent it:

- Eat foods that have iron, which may lower your chance of becoming anemic.
 - Iron-rich foods include lean meat, chicken, fish, dried apricots, raisins, beans, and lentils. For more information on how to get your daily dose of iron, read *Iron in Your Diet* (www.mskcc.org/pe/iron_diet).
- Cut back on work and social activities that you don't need to do and on household chores.

What to avoid:

- Anything that makes you feel tired.
- High altitudes or elevations, which may make you very dizzy.

Call your doctor or nurse if you have:

- Dizziness.
- Intense fatigue (feeling more tired or weak than usual).
- Trouble breathing.
- Chest pain or pressure.

Low platelet count (thrombocytopenia)

A low platelet count lowers your body's ability to stop bleeding if you have a cut or an injury. This side effect isn't as common as having low red or white blood cell counts. You may have a low platelet count 10 to 14 days after chemotherapy, but this it's more likely to happen after months of chemotherapy.

If you have a low platelet count, ask your doctor before taking an anti-inflammatory medication such as ibuprofen (Advil[®], Motrin[®]) or naproxen (Aleve[®], Naprosyn[®]), since these medications can also increase bleeding. Tell your doctor if you take aspirin or blood thinners for other health conditions.

What you can do:

- Use a soft toothbrush for your teeth and gums to prevent sores from forming in your mouth.
- If you currently floss your teeth, you may keep doing it, but gently. If you don't floss regularly, don't start now.
- Be careful not to cut or bump yourself.
- Look for any unexplained bruises or red spots on your skin.

What to avoid:

- Sharp objects (such as cuticle scissors, straight razors, and sharp knives).
- Using rectal thermometers or suppositories.
- Dental work or surgery.
- Contact sports or anything that may result in bumping or banging.
- Avoid having more than 3 alcoholic drinks per week.

Call your doctor or nurse if you have:

- Blood in your urine (pee), stool (poop), vomit, or if you cough up blood.
- Unexplained bruising or bleeding from your nose or gums.
- Changes in your vision, such as watery eyes, or blurry vision.
- Headaches or any signs of a stroke, such as weakness or numbness on 1 side.

Sensation Changes in Your Hands or Feet (Neuropathy)

Some types of chemotherapy can affect the nerves in your hands and feet. You may develop some numbness or tingling in your fingers, toes, or both. This is known as neuropathy. This may not last or might be permanent depending on how long you're taking the chemotherapy. Your doctor may be able to help your neuropathy by using medications or changing the dose of your chemotherapy. For more information on neuropathy, read *Neuropathic Pain* (www.mskcc.org/pe/neuropathic_pain).

What you can do:

- Talk with your doctor about putting ice on your hands and feet during your treatment, which may help prevent neuropathy. For more information, read *Nail Cooling During Treatment with Taxane-based Chemotherapy* (www.mskcc.org/pe/nail_cooling_taxane_chemotherapy).
- Be extra careful to avoid burning yourself when using the stove, oven, or iron. You may not be able to feel heat as much as you used to.

What to avoid:

- Using heating pads or hot packs because you could burn yourself.

Contact your doctor or nurse if you have:

- Problems holding a pencil or pen or closing buttons.
- Pain, burning, or tingling in your fingers or toes.
- Trouble walking or feeling the ground when you walk.
- Trouble balancing resulting in falls.

Taste changes

Having a metallic taste in your mouth is common during treatment. Some foods may taste bland or unpleasant. This won't last forever and will go away after your chemotherapy treatment finishes.

What you can do:

- Chew flavored gum.
- Suck on hard candy to lessen the metallic taste. If it happens while you're getting chemotherapy, ask your nurse for a hard candy.
- Ask your doctor or nurse to refer you to a clinical dietitian nutritionist for more suggestions.

What to avoid:

- Eating foods that cause an unpleasant taste.

Diarrhea

Loose or watery stools (diarrhea) are caused by irritation of the lining of the stomach and intestines during chemotherapy.

What you can do if you have diarrhea:

- Drink 8 to 10 glasses of non-caffeinated liquids daily so that you don't get dehydrated. Water, juices diluted with water, or liquids with electrolytes, such as Pedialyte[®], Gatorade[®], Powerade[®], and other sports drinks are good

choices.

- Eat bland foods such as bananas, rice, applesauce, and white toast.
- Ask your doctor or nurse if you can take medication to help, such as bismuth subsalicylate (Kaopectate®) or loperamide (Imodium A-D®).
- Keep your rectal area clean and dry to help decrease skin irritation.
- For rectal irritation, try warm sitz baths. A sitz bath is when you sit in warm water up to your hips to soothe your rectal area. You can also apply a soothing cream such as A&D®, petroleum jelly (Vaseline®), or hemorrhoidal cream.
 - Don't use suppositories until you have checked with your doctor first.
- Apply a warm cloth to your stomach, which may soothe cramping. Be careful not to burn yourself.
- Ask your doctor or nurse to refer you to a clinical dietitian nutritionist for more suggestions.

What to avoid:

- Foods that contain high amounts of fiber (such as bran, oats, whole wheat or whole-grain bread and cereal, brown rice, and beans).
- Foods and drinks with caffeine or high amounts of artificial sweeteners or sugar (such as coffee, tea, colas, and other soft drinks). They may stimulate your bowel, which can make you have more bowel movements.
- Dairy products.
- Foods that make you bloated or gassy (such as cabbage and beans).
- Stool softeners.
- Rectal suppositories.

Call your doctor or nurse if you have:

- Three or more loose, watery stools in 1 day.
- Diarrhea, even after eating bananas, rice, applesauce, and white toast for 2 days.

- Rectal irritation that doesn't go away.
- Blood in your stool.

For more information on managing diarrhea, read the resource *Diarrhea* (www.mskcc.org/pe/diarrhea).

Constipation

Constipation is having fewer bowel movements than what's normal for you, less than your or having hard stools that aren't passed easily. It's a common side effect of medications used to treat pain and nausea. Some chemotherapy can also cause constipation.

What you can do if you're constipated:

- Drink 8 to 10 glasses of non-caffeinated liquids daily.
- Slowly increase the amount of fiber you eat to help prevent gas. Fiber is found in fruits, vegetables, cereals, and grains (such as bran, oats, whole wheat or whole-grain bread and cereal, brown rice, beans). For more information on how to get more fiber in your diet, read *Food Sources of Fiber* (www.mskcc.org/pe/food_sources_fiber).
- Exercise if you can. Walking is a great way to stay active, and it helps decrease constipation.
- Ask your doctor or nurse if you can take medications for constipation such as docusate sodium (Colace®), senna (Senokot®), or polyethylene glycol (MiraLAX®).
- Ask your doctor or nurse to refer you to a clinical dietitian nutritionist for more suggestions.

What to avoid:

- Suppositories
- Enemas

Call your doctor or nurse if you:

- Haven't had a bowel movement for more than 3 days.
- Have hard stools or trouble having a bowel movement for more than 3 days.

For more information on constipation, read the resource *Constipation* (www.mskcc.org/pe/constipation).

Mouth Sores (Mucositis)

Chemotherapy can cause painful areas or sores in your mouth or throat. These usually last a few days to a week.

What you can do if you have mouth sores:

- Rinse your mouth 4 times a day using either a mixture of 1 to 2 teaspoons of salt in 1 quart of water or an alcohol-free mouthwash. Don't swallow the solution.
 - Gargle with the salt solution or using mouthwash in the morning, after each meal, and at bedtime. If you vomit, clean your mouth well and gargle afterward.
- Keep your lips moist with lip balm or ointments to prevent them from drying out.
- If you have dentures, remove them during your mouth rinses and before bedtime.
- Eat soft foods.
- Ask your nurse or doctor to refer you to a clinical dietitian nutritionist if you're not able to eat because of your mouth sores.

What to avoid:

- Commercial mouthwashes that may have alcohol or hydrogen peroxide. These can make your sores worse.
- Acidic, salty, coarse, sharp, or spicy foods.

- Foods that are hot to touch.

Call your doctor or nurse if you:

- Get mouth sores often.
- Have pain when eating or swallowing.
- Can't drink enough liquids to keep yourself hydrated.

For more information on mouth care, read the resource *Mouth Care During Your Cancer Treatment* (www.mskcc.org/pe/mouth_care).

Allergic reaction

Sometimes, chemotherapy may cause an allergic reaction while it's being given to you. You will get medication to prevent this, if needed. If you get medication to take at home before your treatment, take it as instructed by your doctor and tell your healthcare team if you didn't take it. Your nurse will closely monitor you during your treatment.

Your doctor and nurse will tell you if any of the medications you're getting can cause a reaction.

Call your doctor or nurse if you:

- Have a rash, trouble breathing, or swelling on any part of your body while you're at home.

Pain

Getting chemotherapy is not painful. But some chemotherapy or the medications given to prevent low blood counts can cause aches and pains between treatments. Some hormonal therapies can cause achy joints. Tell your doctor or nurse if you have pain. Your doctor can adjust your medication or prescribe you another medication to make you more comfortable. Ask if it's safe to use over-the-counter anti-inflammatory pain medications, such as ibuprofen (Advil® or Motrin®).

Eye and vision changes

Some chemotherapy medications may cause you to have dry eyes or watery eyes (tearing). If this happens, you can use wetting drops or allergy eye drops. If you have blurry vision during your treatment, see your eye doctor. It may be because your eyes are dry or tearing.

Some chemotherapy medications may cause your eyelashes and eyebrows to fall out. If this happens, it won't last. They will grow back in after your chemotherapy treatment with that medication is over.

Skin and nail changes

Chemotherapy can cause changes to your skin. You may have darkening of your skin, nails, tongue, and the veins that were used to give you the chemotherapy. You may also have general skin changes, including:

- Dryness
- Itchiness
- Cracking
- Sensitivity to sunlight
- Rash

What you can do if you have any signs of skin changes:

- Put on fragrance-free body lotion and hand creams while your skin is still moist, such as after a shower.
- Use a sunscreen with an SPF of 30 or higher every day.
- Wear broad-brimmed hats.
- Wear long-sleeved clothes.
- Talk with your nurse about using ice on your fingers and toes during chemotherapy to decrease your chance of having nail changes. For more information, read *Nail Cooling During Treatment with Taxane-based Chemotherapy* (www.mskcc.org/pe/nail_cooling_taxane_chemotherapy).

What to avoid if you have skin changes:

- Long, hot baths or showers.
- Long periods of time in direct sunlight.

Call your doctor or nurse if:

- Your skin is peeling or blistering.
- You have a rash.
- You have any new bumps or nodules (lumps) on your skin.

Weight changes

Some people will gain weight during treatment, and others may lose weight.

Weight gain can be due to:

- Fatigue, which decreases your activity level and causes you to burn fewer calories.
- Eating a lot of carbohydrates. Eating carbohydrates may help relieve nausea in some people.
- Overeating.
- Drinking more juices and drinks high in sugar.
- Starting menopause during or after treatment. This can cause some women's metabolism to change, so they may be more likely to gain weight.

What you can do to avoid gaining weight:

- Eat a well-balanced diet and avoid extra calories. Read the resource *Eat Your Way to Better Health* (www.mskcc.org/pe/eat_better_health) for more information.
- Exercise regularly.
- Ask your doctor or nurse to refer you to a clinical dietitian nutritionist for more suggestions.

Weight loss can be due to:

- Nausea from medications.
- Mouth sores, which can make it hard to eat.
- Lack of appetite (not feeling hungry).
- Loss of appetite from medication, constipation, or depression.

What you can do to avoid losing too much weight:

- Eat a well-balanced diet.
- Eat small meals often if you can't finish a large meal.
- Add extra calories to your meals and by snacking in between.
- Ask your doctor if there are medications that can increase your appetite.
- Ask your doctor or nurse to refer you to a clinical dietitian nutritionist for more suggestions.

Fatigue

Many people describe fatigue as feeling weak or having no energy. Fatigue from treatment can range from a mild to an extreme feeling of being tired.

What you can do:

- Eat a well-balanced diet, including good sources of protein such as chicken, fish, eggs, lentils, or peanut butter. Also include grains such as pasta, rice, bread and cereals, and fruits and vegetables. For more information, read the resource *Eat Your Way to Better Health* (www.mskcc.org/pe/eat_better_health).
- Do activities and exercise when you have the energy. Walking is a good way to get some exercise even when you're feeling fatigued.
- Make time to rest.
- Ask others to help you with your household chores and other tasks.
- Talk with your doctor or nurse for more ways to manage your fatigue. You can also read the resource *Managing Cancer-Related Fatigue* (www.mskcc.org/pe/managing_fatigue) for more information.

Don't start taking any vitamins or supplements for your fatigue until you talk with your doctor or nurse.

Heart problems

Some chemotherapy treatments can affect the way your heart functions. They may cause you to have a fast heartbeat, feel fatigued, or have trouble breathing. Your doctor will tell you if the treatment you're getting requires any heart tests before you start your treatment.

Tell your doctor or nurse if you have:

- Fast or irregular heartbeats.
- Trouble breathing after physical activity or exercise.
- Chest pain or heaviness in your chest.

Memory changes

Cancer treatment can sometimes affect your mind. This might mean that you won't be able to think clearly or as quickly as you did before starting treatment. You may also notice that you:

- Have trouble concentrating or focusing.
- Have trouble doing more than 1 thing at a time.
- Have trouble remembering things.

Many things can cause these changes. Fatigue, mood changes, stress, anxiety, normal aging, hormonal changes, cancer itself, and anesthesia (medication to make you sleep) can affect your thinking for some period of time.

Many people don't experience any of these problems. It's hard to tell who might have them, but they often go away over time. If this is something you're worried about, talk with your doctor. If you do have any of these problems, an occupational therapist can help you with your everyday activities. They can also help you improve your attention, concentration, and memory.

Other things you can do:

- Make sure you get enough sleep.
- Eat a well-balanced diet.
- Read and talk with others to keep your mind active.
- Talk with your doctor or nurse about trying counseling if you have anxiety or depression. These conditions can add to memory problems. Read the following resources for more information on managing anxiety and depression:
 - *Managing Anxiety During Your Cancer Treatment* (www.mskcc.org/pe/anxiety)
 - *Managing Depression During Your Cancer Treatment* (www.mskcc.org/pe/depression)
- Read the resource *Improving Your Memory* (www.mskcc.org/cancer-care/patient-education/improving-your-memory) for other helpful tips.

What to avoid:

- Unnecessary medication that can make you sleepy, such as anti-anxiety medication or sleep aids.
- Stressful situations, as much as you can.

Call your doctor or nurse if:

- The changes in memory are preventing you from doing your normal daily activities.
- You also have headaches.
- You also have trouble with your vision or balance.

Hot flashes

Cancer treatment may sometimes cause hot flashes or sweating that can affect your daily routine or your sleep.

What you can do to manage hot flashes:

- Check with your doctor before taking any herbs or over-the-counter substances for hot flashes. Don't use herbal remedies, such as oil of evening primrose, cohosh, or red clover. These herbs can work similarly to estrogen, which might cause breast tumors to grow.
- Wear comfortable, loose-fitting cotton clothing and dress in layers.
- Ask your doctor or nurse how to manage or treat signs of menopause.
- Keep a log of when your hot flashes happen to try to figure out what your triggers might be. Common triggers include hot foods and drinks, spicy food, caffeine, and alcohol. Avoiding these triggers can decrease your hot flashes.

For more information on how to manage hot flashes, read *Managing Your Hot Flashes Without Hormones* (www.msccc.org/pe/managing_hot_flashes).

Body changes and sexual intimacy

Breast cancer and breast cancer treatment may change how you look. This may be because of a tumor, radiation, surgery, or a combination of these. Changes in your body from cancer treatment may affect:

- How you feel about yourself.
- Your comfort with showing your body to another person.
- Your desire for sex. Both men and women may notice a decrease in their sexual desire during chemotherapy.
- How your body responds sexually.
- Your ability to get pregnant and have children.

What you can do:

- Talk with your partner. It's important to share with each other how you're both feeling. You may find that they're worried about causing you pain or discomfort during sex.
- Talk with a member of your healthcare team about ways to improve your sexual health.

- See a specialist in our [Male Sexual and Reproductive Medicine Program](#) or [Female Sexual Medicine and Women’s Health Program](#). For more information or to make an appointment, call 646-888-5076 to reach the women’s program and 646-422-4359 for the men’s program.
- Attend Memorial Sloan Kettering’s (MSK) Embodied educational program for people wanting more information on cancer and body image changes. For more information, email RLAC@mskcc.org, or visit www.mskcc.org/event/embodied-coping-cancer-related-body-image-changes.
- Read the resource *Sexual Health and Intimacy* (www.mskcc.org/pe/sexual_health_intimacy) for more information.

Side Effects Experienced by Women

Menstrual cycle (period) changes

Some treatments may cause your periods to change (to heavy or light), become irregular, or stop. Your treatment plan may also include medication or surgery that will stop your periods.

- **If you still have ovaries and a uterus, you can still be ovulating and can get pregnant, even if your periods stop.** If you have ovaries and a uterus, you must use a non-hormonal form of birth control such as a condom, diaphragm, or non-hormonal IUD during your treatment.
 - Read the resource *Sexual Activity During Cancer Treatment: Information for Women* (www.mskcc.org/pe/sexual_activity_treatment_women) for more information.
- Ask your doctor when you can stop using these methods of birth control.
- Hormonal changes caused by medication and your period may give you mood swings.
- Chemotherapy can cause early menopause. Your period is more likely to stop if you are 40 or older.

Vaginal dryness

Many women have vaginal dryness after menopause or from hormonal treatments.

This can make penetrative sex painful or difficult. It can also make it easier to get urinary tract infections (UTI).

What you can do to help with vaginal dryness:

- Use vaginal moisturizers regularly, such as Replens[®], K-Y[®], Silk-E[®], or Vitamin E gel caps.
- Use lubricants during sexual activity to reduce discomfort.
 - Use water-based lubricants, such as Astroglide[®], K-Y[®] Jelly, or Liquid Silk.
- Make foreplay longer. This may increase your arousal.
- Talk with your partner about your vaginal dryness. Make sure they know that it's a side effect of the treatment, not your lack of desire.
- Try different sexual positions. Some may be better than others.
- See a specialist in our Female Sexual Medicine and Women's Health Program. For more information or to make an appointment, call 646-888-5076.
- Read the resource *Improving Your Vulvovaginal Health* (www.mskcc.org/pe/improving_vulvovaginal_health) for more information.

Fertility and Pregnancy

Women shouldn't become pregnant while they, or their partner, are on chemotherapy or hormonal therapy. These treatments can cause birth defects. Even women whose menstrual periods have recently stopped may still be at risk of getting pregnant for some time.

Women with breast cancer shouldn't use oral birth control. Oral birth control contains estrogen and progesterone. These hormones may stimulate tumor growth.

Men and women on chemotherapy should use barrier methods of birth control (such as condoms, diaphragms, or both). Don't rely on avoiding sex during fertile times in your menstrual cycle (the rhythm method). It's not effective in preventing pregnancy.

Chemotherapy or hormonal therapy can cause infertility for both men and women. It's not always permanent but often is. Discuss this with your doctor before you start treatment. You may be able to take steps to preserve your fertility by freezing your eggs (for women), sperm (for men) or embryos. You can also read the following resources for more information:

- *Fertility Preservation: Options for Women Who Are Starting Cancer Treatment* (www.mskcc.org/pe/fertility_women_starting_treatment)
- *Building Your Family After Cancer Treatment: Information for Men* (www.mskcc.org/pe/building_family_men)
- *Building Your Family After Cancer Treatment: Information for Women* (www.mskcc.org/pe/building_family_after_cancer_women)

Managing Your Emotions During Treatment

It's very common to have new, upsetting feelings during your treatment. These feelings are different for everyone, but some common ones include:

- Feeling sad, lonely, anxious, or angry.
- Feeling exhausted or restless.
- Changes in your mood throughout the day.

What you can do to help manage these emotions:

- Talk with people you're close with about your feelings and the changes you're going through. Open communication will help you understand each other better. Friends and family can support and comfort you.
- Ask for help with anything if you need it. Accept the help that others may offer you.
- Share your concerns with your doctors and nurses. They can tell you more about the emotional changes you might have. They can also refer you to other resources.
- Make an appointment with MSK's Counseling Center. Many people find that counseling helps them deal with emotions during cancer treatment. Our

counselors provide counseling for individuals, couples, families, and groups. Talk with your healthcare provider for more information, or call 646-888-0200.

Survivorship

About 2 to 5 years after your treatment ends, your care may be transferred from your doctor to a survivorship nurse practitioner (NP). Your survivorship NP will be a member of MSK's breast cancer team. They will examine you and order tests, focusing on your long-term physical and psychological needs. Your survivorship NP will communicate with your local doctor about your breast cancer treatment and recovery so that in time, you can transfer your care to your local doctor. For more information, read the resource *Transitioning Your Breast Cancer Care from MSK to Your Local Doctor* (www.mskcc.org/pe/transitioning_breast_care).

Frequently Asked Questions

Does someone need to come with me each time I have treatment?

During your treatments, you may get medications that can make you very drowsy (sleepy). If you're getting these medications, it wouldn't be safe for you to drive a car or travel alone. It may be helpful if a friend or family member could pick you up at the end of your treatment.

After your first treatment, you will have a better idea of how you feel and what works best for you. You can also ask your doctor or nurse if you're likely to feel drowsy after getting your medications.

What can I eat before and after chemotherapy? Are there any foods to avoid?

It's best to eat small meals 4 to 5 times a day before chemotherapy to prevent feeling too full during your treatment. Food safety is also important during treatment. Avoid raw or undercooked meat, fish, and poultry and unpasteurized products. Ask your nurse if you should read the *Low-Microbial Diet* (www.mskcc.org/pe/low_microbial_diet) resource.

Drink lots of non-caffeinated liquids before and after your chemotherapy

appointment to stay well hydrated.

Do I still need to take my anti-nausea medication if I'm not nauseous?

Nausea and vomiting can happen on the day you get chemotherapy or many days after getting chemotherapy. If the chemotherapy you're getting can cause nausea, your doctor will prescribe medication to reduce or prevent it. Always take your anti-nausea medication as instructed. Some medication works best if you take it before you become nauseous. If you're still nauseous while taking your medication as instructed, call your doctor or nurse.

Why wasn't I able to get my chemotherapy treatment when it was scheduled?

Chemotherapy works on both cancer cells and normal cells. You're supposed to get your chemotherapy treatments on a set schedule so that your body has time to recover between treatments. This allows your normal cells to be replaced. Your body may need more time to reverse the effects of therapy (such as allowing any mouth sores to heal or blood counts to rise to normal).

Your doctor will decide if your chemotherapy should be rescheduled and they will discuss the reasons with you.

My chemotherapy treatment was delayed because my ANC was low. What is an ANC?

An ANC is an absolute neutrophil count. A neutrophil is a white blood cell that helps fight infections. The ANC count usually falls 7 to 14 days after getting chemotherapy. If your ANC is low, your doctor may delay your treatment until it's back to normal. This is a precaution (safety measure) to prevent you from getting an infection.

Is there anything I can do to increase my blood counts?

Your blood counts will increase again over time. Your doctor may prescribe medication to maintain or raise your white blood cell count. These are usually shots given between treatments. Sometimes your treatment will be delayed to allow time for your blood counts to recover.

There's no evidence that vitamins or a special diet will speed the recovery of your blood counts. But if you're told you have anemia (a low red blood cell count) and your iron levels are low, you may need to take iron supplements. Your doctor will discuss this with you.

I have chills or a fever above 100.4° F (38° C), but the doctor's office is closed. How can I reach a doctor?

You can always reach a doctor. During evenings, weekends, or holidays, call the hospital operator at 212-639-2000. Ask for the doctor covering your healthcare provider's office.

I haven't lost my hair yet, and my counts haven't dropped. Does this mean that the chemotherapy isn't working?

Not having side effects such as hair loss, lowered blood counts, or nausea doesn't mean that the chemotherapy isn't working. Different therapies cause different side effects. Different people also have different reactions to the same treatment. Your doctor and nurse will monitor your progress and response to treatment.

What can I take for a headache?

You can take acetaminophen (Tylenol® or Extra Strength Tylenol®) for a headache. If you feel like you have a fever or chills, check your temperature before you take acetaminophen. This is because the acetaminophen can lower your temperature and hide a fever, which is usually the first sign of infection. Call your doctor or nurse if you have chills or a fever greater than 100.4° F (38° C).

Ask your doctor or nurse if you can take products containing aspirin or ibuprofen. These can sometimes increase the chance for bleeding with some chemotherapy. Your nurse can give you a list of products to avoid.

I've been having problems urinating (peeing). Is this normal?

Some chemotherapy can irritate your bladder. Side effects can be an urgency to urinate, burning when urinating, or blood in your urine. These may be signs of an infection or irritation. Call your doctor if you have any of these symptoms. They

may want to collect some of your urine and test it to see if you have an infection.

It's important to drink 8 to 10 glasses of liquids each day and urinate often.

Can I still take my other prescription medications?

In most cases, you can keep taking your prescription medications. Tell your doctor the names of all the medications, herbs, and supplements you take. These include the ones you need a prescription for and the ones you buy over-the-counter.

Some medications, herbs, or supplements may change the way the chemotherapy works. Don't start any new medications before checking with your doctor.

Can I take vitamins or mineral supplements?

You should avoid most vitamins, mineral, herbal, or other dietary supplements. They might interfere with your treatment or affect your cancer. They might also increase the side effects of your treatment. Talk to your doctor or clinical dietitian nutritionist about any vitamin, mineral, herbal or other dietary supplements you're taking or might want to take.

Can I drink alcohol?

Your liver processes chemotherapy medications and many other medications. Your liver also processes alcohol. This means that drinking alcohol while getting chemotherapy can:

- Limit your liver's ability to process the chemotherapy, causing more side effects.
- Interact with some medications and make them less effective.
- Cause your body to lose too much water.
- Cause you to feel very drowsy.

For these reasons, you should limit alcohol during chemotherapy. If you want to drink alcohol, talk with your doctor or nurse.

Can I have dental work?

Don't have any procedure that can cause bleeding, such as dental work. This may allow bacteria to enter your bloodstream, which could cause an infection. If your blood counts are low, you're also at a higher risk for a serious infection. Check with your doctor before you schedule any dental work, including cleanings or surgery.

Can I color or perm my hair?

You shouldn't color or perm your hair. Chemicals found in hair dye and for perms are irritating to the hair follicles. This can speed up hair loss during chemotherapy. If you have to dye your hair, discuss this with your doctor first.

Does insurance cover wigs?

People who lose their hair from cancer treatment may have insurance coverage for a wig. Check with your insurance company for details. If you want a wig and your insurance will cover it, ask your doctor for a prescription for one.

Can I travel while I get chemotherapy?

While traveling is sometimes allowed, it's recommended that you try to plan your trips around your chemotherapy schedule. It's preferred that you don't miss any of your chemotherapy appointments. If you would like to travel, discuss this with your healthcare provider before making specific plans.

Will I be able to continue working during treatment?

Many people with breast cancer keep working. If you're able to work depends on the type of job you have, the side effects of your treatment, and the symptoms of your breast cancer. Talk with your doctor or nurse if you're having trouble working or if you would like to stop working for a period of time.

Advance Care Planning

Advance care planning involves protecting your right to make decisions about your healthcare. Advance care planning allows you to think about important health issues when you're healthy and don't need to make these decisions right away.

Planning your care when you aren't under too much emotional stress will help you get the care you would want if you're not able to make decisions on your own.

Planning in advance helps put your loved ones at ease because they don't have to guess what you would want and worry whether they've made the right decision.

We recommend that you talk with a member of your healthcare team about your wishes early in your treatment and anytime you feel like things have changed. They can help you make sure your choices are documented in a way that is recognized by the law.

Written instructions on how you want medical decisions to be made if you're unable to communicate or make the decisions yourself are called advance directives. The 2 most common types of advance directives are a Health Care Proxy and a living will.

- A Health Care Proxy is a legal document that identifies the person you want to make medical decisions on your behalf if you're unable to make them for yourself.
- A living will is a document that states your wishes about your medical care. It goes into effect if you develop an irreversible condition that prevents you from making your own medical decisions, such as if you become terminally ill or permanently unconscious. In the document, you specify which treatments you do or don't want to receive if you're in this situation.

Talk with your nurse if you're interested in completing a health care proxy. You can also read the resources *Advance Care Planning* (www.mskcc.org/pe/advance_care_planning) and *How to Be a Health Care Agent* (www.mskcc.org/pe/health_care_agent) for information about health care proxies, other advance directives, and being a health care agent.

Resources and Support Services at MSK

There are many resources available to support and help our patients understand and cope with cancer. The following are some examples. Read the resource *MSK Support Services* (www.mskcc.org/pe/support) and *Breast and Imaging Center (BAIC) Support Services* (www.mskcc.org/pe/baic_support) for more information.

Art Therapy

646-888-5397

The art therapy group meets weekly on Tuesdays from 10:00 AM to 4:00 PM. It meets in the group room, which is located in the library in the Evelyn H. Lauder Breast Center. It offers patients and families a chance to relax and be creative. No materials or experience is necessary, and patients and their families may stay as long as they would like.

Chaplaincy Service

212-639-5982

At MSK, our chaplains are available to listen, help support family members, pray, contact community clergy or faith groups, or simply be a comforting companion and a spiritual presence. Anyone can request spiritual support, regardless of formal religious affiliation. The interfaith chapel is located near the main lobby of Memorial Hospital and is open 24 hours a day. If you have an emergency, please call the hospital operator and ask for the chaplain on call.

Counseling Center

646-888-0200

Many people find that counseling helps them deal with emotions during cancer treatment. Our counselors provide counseling for individuals, couples, families, and groups. They can also prescribe medications to help with anxiety or depression.

Evelyn H. Lauder Breast Center Boutique

646-888-5330

Our boutique is located on the 2nd floor of the Evelyn H. Lauder Breast Center and is open Monday through Friday from 9:00 AM to 5:00 PM. Come browse or talk with our experienced fitter for prostheses or breast forms. The boutique offers a large selection of headwear and head coverings, prosthetics, specialty bras, and bathing suits.

Genetic Counseling

646-888-4050

MSK's Clinical Genetics Service offers genetic testing and counseling about you and your family members' risk of getting certain cancers that are hereditary

(passed through your genes).

Integrative Medicine Program

646-888-0800

Our Integrative Medicine Service offers patients many services to complement traditional medical care. Some of our services include music therapy, mind/body therapies, dance and movement therapy, yoga, and touch therapy. Our services are available to patients, their families and caregivers, and the general public. The Bendheim Integrative Medicine Center is located at 1429 First Avenue (at East 74th Street).

Library

646-888-5993

The library located in the Evelyn H. Lauder Breast Center has books and videos on breast health topics. Library materials are for use on-site, and staff can help you make copies if there's information you want to take home. Many pamphlets are also available for you to keep. The library has computers with access to the Internet.

Look Good Feel Better

www.lookgoodfeelbetter.org

800-395-LOOK (800-395-5665)

This program offers workshops to learn things you can do to help you feel better about your appearance. For more information or to sign up for a workshop, call the number above or visit the program's website.

Nutritional Counseling

646-888-4880

Our Nutrition Service offers nutrition counseling by one of our certified clinical dietitian nutritionists. They will go over your current eating habits and help you decide what to eat while you're going through treatment.

Supportive Care Service

646-888-2726

Our Supportive Care Service is dedicated to relieving pain and improving the quality of life for patients at MSK. Supportive care (also called palliative care)

includes any treatment given to relieve the symptoms caused by cancer. Patients can get supportive care at any point during treatment.

Our doctors and nurses specialize in helping patients manage physical symptoms, such as pain, shortness of breath, and nausea, as well as emotional issues, such as sadness, depression, and anxiety. We work with the patient's primary team, providing an extra layer of support. If you feel that you or your loved one may benefit from the care provided by the Supportive Care Service, talk with your doctor.

Patient-to-Patient Support Program

212-639-5007

You may find it comforting to speak with a cancer survivor or caregiver who has been through a similar treatment. Through our Patient-to-Patient Support Program, you can talk with former patients and caregivers.

Rehabilitation Services (Occupational and Physical Therapy)

646-888-1900

MSK offers many outpatient rehabilitation services to help patients throughout all phases of their treatment. These include occupational and physical therapy to help people perform their daily activities, decrease pain, and enhance their quality of life after some cancer treatments.

Social Work

646-888-5203 or 646-888-5271

www.mskcc.org/experience/patient-support/counseling/individual-family-counseling/social-work-experts

Our social workers can help you, your family, and your friends cope with issues that are common for people with cancer. We offer specialized programs, including both in-person and online support groups. We can also help with other issues, such as transportation to and from medical appointments, temporary housing, and financial concerns.

If you're interested in joining an online support group, you can visit our Virtual Programs website at www.mskcc.org/vp for more information.

Sexual Health Programs

Cancer and cancer treatments can have an impact on your sexual health. MSK's sexual health programs can help you take action and address sexual health issues before, during, or after your treatment.

Female Sexual Medicine and Women's Health Program

646-888-5076

www.mskcc.org/cancer-care/diagnosis-treatment/symptom-management/sexual-health-fertility/health/female-medicine

Our Female Sexual Medicine and Women's Health Program helps women who are dealing with cancer-related sexual health challenges, including premature menopause and fertility issues. For more information, or to make an appointment, please call the number above.

Male Sexual and Reproductive Medicine Program

646-888-6024

www.mskcc.org/cancer-care/diagnosis-treatment/symptom-management/sexual-health-fertility/health/male-medicine

Our Male Sexual and Reproductive Medicine Program helps men who are dealing with cancer-related sexual health challenges, including erectile dysfunction. For more information, or to make an appointment, please call the number above.

Tobacco Treatment Program

212-610-0507

Our Tobacco Treatment Program at MSK can help you stop using tobacco, whether or not you're a patient at MSK. We use a wide range of approaches to help you quit, including medications and behavioral techniques. We're located at 641 Lexington Avenue (between East 54th and East 55th Streets) on the 7th floor.

If you have any questions, contact a member of your healthcare team directly.
If you're a patient at MSK and you need to reach a provider after 5:00 PM,
during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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