



PATIENT & CAREGIVER EDUCATION

Managing Your Chemotherapy Side Effects

This information will help you manage the side effects from your chemotherapy.

Possible Chemotherapy Side Effects

Your nurse will go over this information with you and tell you which side effects you may have. You may experience some, all, or none of these side effects.

Weakened immune system

A weakened immune system can be caused by neutropenia (new-tro-PEE-nia), which is having a low number of neutrophils (NEW-tro-fills) in your blood. Neutrophils are a type of white blood cell that help your body fight infection. Neutropenia is often caused by chemotherapy.

When you have neutropenia, you're at risk for infection. The instructions below will help you prevent infections. It's important to follow them until your neutrophil count returns to normal.

How to manage

- Avoid being near people who are sick.

- Clean your hands with soap and water or an alcohol-based hand sanitizer often. Remember to always clean your hands:
 - Before eating a meal
 - After touching something that may have germs (such as after using the restroom or touching a doorknob)

Call your doctor or nurse if you:

- Have a fever of 100.4° F (38° C) or higher
- Are shaking or have chills

For more information about ways to keep from getting an infection, read *Hand Hygiene and Preventing Infection* (www.mskcc.org/pe/hand_hygiene) and *Neutropenia (Low White Blood Cell Count)* (www.mskcc.org/pe/neutropenia).

☐ Increased risk of bleeding

After your chemotherapy treatment, you may have a low platelet count for 10 to 14 days. A low platelet count lowers your body's ability to stop bleeding or bruising.

How to manage

- Use a soft toothbrush for your teeth and gums.
- Be careful not to cut or bump yourself.
- If you need to shave, use only an electric razor.

Call your doctor or nurse if you have:

- Blood in your urine (pee), bowel movements (poop), vomit

(throw up), or when you cough

- Very dark or black bowel movements
- Unexplained bruising or bleeding from your nose or gums
- Changes in your vision
- Headaches or any signs of a stroke, such as weakness on one side of your body

For more information about ways to lower your risk of bleeding, read *Low Platelet Count*

(www.mskcc.org/pe/low_platelet_count).

Fatigue



Please visit

www.mskcc.org/pe/manage_fatigue_video to watch this video.

Fatigue is feeling unusually tired, weak, or as though you have no energy. Fatigue from treatment can range from a mild to extreme tiredness.

How to manage

- If you feel tired, take a rest break. You can take short naps (about 15 to 20 minutes long) to help with fatigue throughout the day. Taking shorter naps will help keep them from interfering with your sleep at night.
- Try to be active to keep your energy levels up. For example, go for a walk outside or on a treadmill. People who do mild

exercise, such as walking, have less fatigue and tolerate treatment better. For more information about how you can manage fatigue with exercise, read *Managing Cancer-Related Fatigue with Exercise*

(www.mskcc.org/pe/fatigue_exercise).

- Plan activities on days you know you'll have more energy.
- Don't be afraid to ask your family and friends for help with tasks or activities that make you feel tired.
- Drink enough liquids. Try to drink about 8 (8-ounce) glasses of non-caffeinated liquids every day.

For more information about how to manage fatigue, read *Managing Cancer-Related Fatigue*

(www.mskcc.org/pe/managing_fatigue) and watch the video below.

Nausea, vomiting, or loss of appetite



Please visit www.mskcc.org/pe/chemo_nausea to watch this video.

Some chemotherapy causes nausea (feeling like you're going to throw up) and vomiting (throwing up). This is because chemotherapy irritates either the areas of your brain that control nausea or the cells lining your mouth, throat, stomach, and intestines.

How to manage

- Take your anti-nausea medication as instructed by your doctor or nurse.
- Drink 8 (8-ounce) glasses of liquids daily so that you don't get dehydrated. Water, juices diluted with water, or liquids containing electrolytes (such as Pedialyte[®], Gatorade[®], Powerade[®], and other sports drinks) are good choices.
- Avoid drinks that have caffeine (such as coffee, tea, and soda).
- Eat small, frequent meals.

Call your doctor or nurse if you:

- Throw up 3 to 5 times within 24 hours
- Have nausea that doesn't stop 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

For more information on nausea and vomiting during chemotherapy, read *Nausea and Vomiting Due to Chemotherapy*

(www.mskcc.org/pe/nausea_vomiting_chemotherapy).

Constipation



Please visit www.mskcc.org/pe/chemo_constipation to watch this video.

Constipation is having fewer than your usual number of bowel movements or having hard bowel movements. It's a common side effect of medications used to treat pain and nausea. Some chemotherapy can also cause constipation.

How to manage

- Eat foods that are high in fiber. Fruits, vegetables, whole grains, prunes, and prune juice contain fiber.
- Drink at least 8 (8-ounce) glasses of liquids every day, if you can.
- Go for a walk or do light exercises, if you can.
- If needed, take an over-the-counter (medication you buy without a prescription) stool softener (such as Colace®) or laxative (such as Senokot® or Miralax®). Your nurse will tell you how much of these medications you should take.

Call your doctor or nurse if you:

- Haven't had a bowel movement (pooped) or passed gas for more than 2 to 3 days
- Have hard bowel movements or difficulty moving your bowels for more than 2 to 3 days

For more information about how to manage constipation, read

Constipation (www.mskcc.org/pe/constipation).

Diarrhea

Diarrhea is loose or watery bowel movements.

How to manage

- Drink 8 to 10 (8-ounce) glasses of liquids each day. Make sure to drink both water and drinks that contain electrolytes, such as Gatorade[®], Pedialyte[®], broths, or juices.
- Take an over-the-counter anti-diarrheal medication, such as loperamide (Imodium[®]), unless your doctor or nurse tells you not to.
- Don't take any stool softeners or laxatives for at least 12 hours, or until the diarrhea stops.
- Eat small amounts of soft, bland foods. Eat your food at room temperature.
- Follow the BRATY diet: eat bananas, rice, applesauce, white toast, and yogurt.

For more information about how to manage diarrhea and what foods you should and shouldn't eat, read our resource *Diarrhea* (www.mskcc.org/pe/diarrhea).

Call your doctor or nurse if you have:

- 4 or more loose, watery bowel movements in 24 hours that doesn't get better by taking medication

- Diarrhea, even after following the BRATY diet for 2 days
- Rectal irritation that doesn't go away
- Blood in your bowel movements

☐ Neuropathy (numbness or tingling hands and feet)

Some chemotherapy can affect the nerves in your hands or feet. You could develop some numbness or tingling in your fingers, toes, or both. This may be temporary or permanent depending on how long you're on chemotherapy. Your doctor may be able to make the neuropathy less bothersome by using medications or changing the dose of your chemotherapy.

How to manage

- Tell your doctor or nurse when the tingling and numbness starts and if it worsens.
- 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.
- Wear sturdy shoes and walk carefully if your feet are tingling or numb.

Call your doctor or nurse if you have:

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

For more information about neuropathy, ask your nurse for the

resource *Neuropathic Pain*

(www.mskcc.org/pe/neuropathic_pain), *About Peripheral Neuropathy*

(www.mskcc.org/pe/about_peripheral_neuropathy), and *Managing Peripheral Neuropathy*

(www.mskcc.org/pe/managing_peripheral_neuropathy).

Cold sensitivity

Cold sensitivity is numbness, tingling, or cramping in your hands or feet. It's caused by cold temperatures such as cold weather, cold foods, and cold drinks.

Cold sensitivity usually gets better or goes away between chemotherapy treatments. The more treatments you have, the longer this may take.

How to manage

- Avoid cold foods and drinks.
- Cover your nose and mouth when outside in cold weather to avoid breathing in cold air.
- Wear gloves when outside in cold weather and handling cold items.
- Don't use heating pads or hot pads. You may not be able to feel heat as much as you used to and may burn yourself.

Skin and nail changes

Chemotherapy can cause changes to your skin. You may have darkening of your skin, nails, tongue, and the veins in which

you have received the chemotherapy. You may also have general skin changes such as dryness and itchiness. Your nails may become weak and brittle and may crack.

How to manage

- Apply body lotion and hand creams after you shower or bathe. We recommend using Eucerin[®], CeraVe[®], or Aquaphor[®].
- Use a sunscreen with an SPF of 30 or higher every day.
- Don't expose your scalp to the sun. Wear broad-brimmed hats and long-sleeved clothing when in the sun.
- Wear gloves when cleaning or washing dishes.
- Ask your nurse if you're a candidate for nail cooling

Call your doctor or nurse if:

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

For more information about nail changes, ask your nurse for the resources *Nail Changes During Treatment With Taxane-based Chemotherapy*

(www.mskcc.org/pe/nail_changes_taxane_chemotherapy) and

Nail Cooling During Treatment with Taxane-based Chemotherapy

(www.mskcc.org/pe/nail_cooling_taxane_chemotherapy).

□ Mucositis

Some treatments can cause mucositis. Mucositis is redness, swelling, tenderness, or sores in your mouth, tongue, or lips.

How to manage

- 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.
- Avoid mouthwashes that may have alcohol or hydrogen peroxide. These can make the sores worse. If you would like to buy a commercial mouthwash, try Biotene®.
- Use a soft toothbrush for your teeth and gums.
- Avoid acidic, salty, or spicy foods.
- Avoid smoking or using tobacco products.
- Avoid foods that are hot to touch.
- Keep your lips moisturized with a lip balm.
- Ask your nurse if oral cryotherapy (a procedure that uses extreme cold (liquid nitrogen) to destroy tissue) is an option for you.

Call your doctor or nurse if you:

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

For more information about how to manage mouth sores, ask

your nurse for the resource *Mouth Care During Your Cancer Treatment* (www.mskcc.org/pe/mouth_care).

□ Hair thinning or hair loss

Some chemotherapy medications cause hair loss. Hair loss usually starts about 2 to 4 weeks after the first chemotherapy treatment. If you do lose your hair, it will begin to grow back once you're no longer taking that chemotherapy medication.

How to manage

- If your hair is long, you may want to have it cut short before you begin treatment.
- Wash and condition your hair every 2 to 4 days with a baby shampoo or other mild shampoo and a cream rinse or hair conditioner.
- Use shampoos and conditioners that have sunscreen to prevent sun damage to your scalp.
- Don't expose your scalp to the sun. Keep your head covered in the summer.
- In the winter, cover your head with a hat, scarf, turban, or wig to keep it warm. This can also help to contain falling hair.
- Sleep on a satin or silk pillowcase. These are smoother than other fabrics and can decrease hair tangles.
- Ask your nurse if you are a candidate for scalp cooling treatment. For more information, read our resource *Managing Hair Loss with Scalp Cooling During*

Chemotherapy for Solid Tumors

(www.mskcc.org/pe/scalp_cooling).

For more information about hair loss during your cancer treatment, ask your nurse for the resource *Hair Loss and Your Cancer Treatment*

(www.mskcc.org/pe/hair_loss_cancer_treatment).

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.

Managing Your Chemotherapy Side Effects - Last updated on April 24, 2019

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