

## **Caring for Myself after Chemotherapy (Chemo)**

Learning something new can be hard. It is even harder if you are not feeling well. The purpose of this education plan is for you and the staff to review this information together. Here are some good things to tell the staff:

- Who you want to learn with you. We would like to have someone who will be helping you at home learn with you.
- The best way for you to learn. Do you learn best by reading a book or pamphlet, or by doing things yourself?
- If you are not feeling well, if you are in pain or you cannot focus on learning right now.

This information is important to your health. We may explain something more than once. We will be giving you information in small bits over several days. If there is something you don't understand, *It's OK to Ask* us to explain.

### **What I Need to Learn About Taking Care of Myself after Chemo**

By the time I leave the hospital I will be able to tell the staff:

1. How to avoid infections
2. What are the signs or symptoms of an infection
3. When to call my doctor

### **The staff will use three questions to teach me about caring for myself after chemo:**

1. What is my main problem?
2. What do I need to do?
3. Why is this important to me?

The staff will ask me to repeat back important points in my own words, or ask me to show what I have learned. They want to make sure that I know about how to take care of myself after chemotherapy.

### **What is my main problem?**

I have cancer and have had chemotherapy (chemo) or radiation treatment. Cancer itself or its treatment may cause a drop in my white blood cells. This is called neutropenia. White blood cells help the body fight infection.

Neutrophils are one type of white blood cell. People with neutropenia have a low number of these white blood cells. When I have a low neutrophil count, it is very important to protect myself against infection. I must call my doctor as soon as I feel I may be getting an infection.

My doctor or nurse can tell me my absolute neutrophil count (ANC) after I have a blood test. If my ANC gets very low (below 500-1000), I should follow the advice in this plan to prevent getting infections.

### **What do I need to do?**

I need to avoid infections.

- Hand washing is the best way to stop the spread of infections. Hands can have many germs on them that can cause an infection. Germs on the hands can get into the mouth or nose easily. Washing my hands with liquid soap and water can help prevent infection.
  - Hand washing should be done:
    - Before eating, drinking, and taking medicine
    - After using the bathroom
    - Before touching food
    - Before and after any type of physical care (ex: mouth care)
    - Before and after touching the eyes, nose, or mouth
    - After touching things that may be dirty
    - After contact with pets
  - Wash my hands this way:
    1. Wet hands under a stream of warm water.
    2. Using soap, scrub for at least 15 to 30 seconds.
    3. Scrub under my nails daily and whenever they become dirty.
    4. Rinse well under a stream of warm water.
    5. Dry my hands with a paper towel.
    6. Use a paper towel to turn off the faucet.
  - Keep anti-bacterial wipes in my car, purse, or pocket for times when soap and water may not be available.
  - People who come in contact with me should wash their hands often.

- Be careful with visitors
  - Stay away from people who are coughing, sneezing, or sniffing. People who are sick should not visit me.
  - Avoid people who have had the intra-nasal flu vaccine for 7 days. Questions about other vaccinations should be discussed with my doctor.
  - Avoid contact with people who have had a chicken pox or shingles vaccine in the last 6 weeks and the smallpox vaccine for 3 to 4 weeks (until a scab falls off from their injection site).

- Avoid Crowds

Until my white blood cell count goes back to normal, I should be aware of how many people are near me. A crowd is more than 8 people in an average sized room (living room or family room). If I am out and strangers are within 3 feet of me, I am in a crowd. I should step back or walk away if there are strangers around me. I should avoid shaking hands with others. If I do shake hands, I need to wash my hands after.

I will carry a few masks with me when my white blood cell count is very low. Masks can be bought at most drug stores. I should wear a mask when I am in a crowd because I don't know who may have an infection. I do not need to wear a mask outdoors. A family member or housemate who has a cold or infection should wear a mask in my home.

**Definitely avoid:**

- Crowded theaters
  - Concerts
  - Bars
  - Crowded stores
  - Pet stores and large bird cages/chicken coops
  - Greenhouses, floral shops, conservatories
  - Swimming pools
- Prepare and Store Food Safely
- The foods I eat and the way I prepare them are an important part of trying to avoid infections when my blood counts are low. I will follow the tips below to be as safe as possible when I prepare and eat food.
- Wash hands, dishes, counters, and tables with hot soapy water before and after preparing food.
  - Don't use sponges or wooden cutting boards. These have germs on them that can get onto food.

- Use a clean dishcloth every day or a dish washer.
- Clean counter tops with cleaner and paper towels or disposable wipes.
- Keep all meat, fish and poultry (especially chicken) away from ready-to-eat foods. It's a good idea to put them in a sealed plastic bag in the refrigerator or freezer.
- Always defrost food in the refrigerator.
- Always cook food to the proper internal temperature.
- When reheating, bring liquids to a boil.
- Refrigerate or freeze leftovers within 2 hours. Do not use leftovers that have been in the refrigerator for more than 2 days.
- Do not eat from other people's plates, utensils, or glasses.
- Wash all fruits and vegetables prior to eating. (Wash with soap/water or with vinegar/water).

**Avoid the following foods:**

- **Unpasteurized** milk and milk product, yogurt, juices and cheese (such as brie, bleu cheese, sharp cheddar)
  - Raw or rare-cooked meats, fish, and eggs
  - Smoked or pickled fish
  - Sprouts
  - Cheeses with mold (Blue, Stilton, Gorgonzola); Feta, Mexican soft cheeses, Sharp cheddar; brie/camembert
  - Raw honey
  - Food prepared in unknown conditions
  - Pastries, rolls and other foods from self-service bins
  - Meat, cheese and sides from deli counters and salad bars (including macaroni salad and pasta salad and meats)
  - Unwashed raw fruits and vegetables
- **Take Good Care of My Mouth**

Good mouth care is very important. Dryness, soreness, or slight burning may be signs of mouth problems. It is important to look in my mouth every day so that I can see changes as early as possible. I will use a mirror and flashlight to look at my lips, gums, tongue, the inside of my cheeks, and the roof of my mouth. I will look for blisters, red areas, ulcers, white patches or coating, or bleeding. Report any of these changes to my nurse or doctor as soon as possible.

    - Brush my teeth gently with a very soft bristle toothbrush.

- Brush 30 minutes after meals and before going to bed.
  - Keep my toothbrush clean. Rinse with warm water and store in a clean, dry, open area.
  - After brushing my teeth, it's okay to rinse my mouth for 1 to 2 minutes with a mixture of a half-teaspoon of salt in 8 ounces of water. This could help prevent mouth sores.
  - Do not use mouthwash that contains alcohol. Alcohol is irritating and drying to the mouth.
  - If I wear dentures, I will clean my dentures every day. Brush them and then soak them in an effervescent denture cleaner for a few minutes. Rinse them well. Use fresh soaking solution every time I soak them. Try not to wear dentures that do not fit, they can irritate the gums. If necessary, contact my dentist to have my dentures fitted properly.
  - Keep my lips moist by using items like Chapstick™ or Vaseline™.
  - Check with my doctor or nurse before having any dental work done.
  - Tell my dentist about my neutropenia before my appointment.
- Protect My Skin

I will be careful to avoid cuts and scratches. Clean skin helps keep germs from entering my body. I will tell my nurse or doctor if I see any changes, such as:

- Redness
- Swelling
- Cuts
- Sores
- Drainage
- Rash
- Pain or tenderness

To keep my skin healthy, I will:

- Shower or bathe daily using mild soap.
- Not use bubble bath or perfumed soaps.
- Use a mild lotion for dry skin.
- Not use perfumed lotions.
- Clean any cut or scrapes with soap and warm water.
- Wear shoes or slippers when walking.

- Wash my hands before eating, before and after preparing food, and after going to the bathroom.
  - File nails instead of cutting and avoid making nails too short. Soften cuticles with lotion.
  - Avoid nail salons and “fake” fingernails, wraps, and tips.
  - Tell my doctor about any redness or swelling around the nails.
  - Use an electric razor when shaving.
  - Not squeeze blemishes.
  - Avoid gardening and mowing the lawn. Avoid cut flowers, dried flowers, or potted plants. Do not touch soil.
  - Avoid using sharp objects.
  - Not get a body piercing or tattoo. If I have pierced-body jewelry, speak with my doctor or nurse about removing it.
  - Keep my central line dressing dry, if I have one. Before showering I must tape waterproof material such as household plastic wrap over the dressing and injection cap.
- Prevent Lung Problems

I need to know the early signs of lung infection and report them to my doctor or nurse right away. Signs of lung infection include shortness of breath, new cough, coughing up mucus, and chest or back pain.

***I must avoid all of the following:***

- Crowds
- Dusty and stuffy areas, such as attics and basements.
- Smoking and places with cigarette smoke.
- Close contact with sick people.
- Grooming pets or cleaning bird cages, litter boxes, and fish tanks.
- Contact with farm animals and all types of birds. These animals may carry fungal, bacterial, and viral germs.
- If I have a pet at home, do not come in contact with its feces or urine. Do not allow the pet to lick my face. Be sure to wash my hands after touching my pet.
- Long periods of bed rest as this could cause pneumonia or blood clots.
- Hot and humid settings, such as saunas, hot tubs, greenhouses, and pools. Humidifiers must be emptied, dried, and refilled with clean fresh water daily.

- Prevent Bladder Infections
  - Drink plenty of fluids during the day.
  - Empty my bladder frequently.
  - After a bowel movement, it is important for both men and women to clean themselves with soap and water or alcohol-free cleansing wipes. Women should cleanse from front to back.

Urinary tract infections (UTI) are common among patients with low white blood cell counts. Symptoms of a UTI include:

- Painful or frequent urination
- Blood in the urine
- Lower back or abdominal pain
- Change in the odor or look of the urine

Report any of these symptoms to my doctor or nurse.

- Care of my genital/rectal area to prevent infection.
  - Eat more fiber to prevent constipation. Constipation can lead to straining. This can cause a tear in the rectal area or irritation of hemorrhoids.
  - After a bowel movement, it is important for both men and women to clean themselves with soap and water or alcohol-free cleansing wipes. Women should cleanse from front to back.
  - Drink at least 5 to 6 glasses of fluid every day, if you are not on a fluid restriction.
  - Do not use suppositories or enemas unless it's o.k. with my doctor.
  - For women, do not use douche.
  - For women, use sanitary pads instead of tampons during menstruation.
  - Women should check with their doctor or nurse before any gynecological exam or procedure is scheduled. Also, talk with your gynecologist about your neutropenia before your appointment.

- Follow These Recommendations about Sex during Treatment

During periods of very low neutrophil counts, sexual intercourse is not advised. Consult my doctor or nurse about when I can have sexual relations again. Women and men should report any signs of infection, such as

discharge, itching, odor, bleeding, or pain during intercourse. Preventive care measures include:

- Use a water-soluble lubricant (such as K-Y™ Jelly, Replens™) during intercourse to avoid a vaginal tear due to dryness.
- Both men and women should avoid oral and anal sex.
- Urinate after intercourse to decrease the risk of urinary infection.
- A condom should be used to protect against infection.

***I will call my doctor or nurse immediately if I have any of the following:***

- A temperature of 100.0° F or higher.
  - A fever is often the first sign of an infection. If I have an infection when my neutrophil count is low, I may not always recognize the usual warning signs (such as redness or swelling).
  - While I am at home, I should take my temperature daily. It is important to note that some medicines may cover up a fever or other signs of infection. These include: steroids, aspirin and aspirin containing products (like Bayer™), acetaminophen and acetaminophen-containing products (like Tylenol™ and Percocet™), ibuprofen and ibuprofen-containing products (like Advil™ and Motrin™).
- Chills
- A new or stubborn cough, stuffy or runny nose, sore throat, or ear pain.
- A toothache, white patches, red areas or sores in the mouth or throat.
- Feeling more tired and weak.
- Flushed skin or increased sweating
- A new rash or sore, or any redness or tenderness of the skin
- Redness, drainage, swelling, or tenderness in the area of wounds or piercings
- Slow healing of a wound or cut
- Burning or urgency with urination
- Redness, tearing, or draining of my eye
- Diarrhea
- Trouble waking up
- Redness, drainage, swelling, or pain near my central line.
- I have been near someone with a contagious disease or recent vaccination.

My doctor or nurse may give me more specific instructions.

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**Why is this important to me?**

An infection can be life-threatening when I have a low neutrophil count or are receiving chemotherapy.

## Caring for Myself after Chemo

### Resources for Staff

- [Low Bacteria Diet](#)- Nursing Reference Center Plus
- [Infections in Patients with Cancer: Managing](#)- Nursing Reference Center Plus
- [Neutropenia \(American Cancer Society\)](#)

### Teaching Tools (Items given to the patient)

- Caring for Myself after Chemo Education Plan

### References:

- [Low Bacteria Diet](#)- Nursing Reference Center Plus
- [Infections in Patients with Cancer: Managing](#)- Nursing Reference Center Plus
- [Immunosuppressed Patients](#)- Fred Hutchinson Cancer Research Center Diet Guidelines for Immunosuppressed Patients. Retrieved March 17, 2014
- Low Microbial Nutrition Therapy. Academy of Nutrition and Dietetics. (2014).
- Nutrition Therapy for Individuals with Suppressed Immunity. Academy of Nutrition and Dietetics. (2014).
- Neutropenic Diet Patient Education. (2014). Retrieved online at <http://www.upmc.com/patients-visitors/education/cancer/Pages/neutropenic-diet.aspx> UPMC Mercy 2014, Pittsburg, PA.
- Oncology Nurses Society

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