



PATIENT & CAREGIVER EDUCATION

Neutropenia (Low White Blood Cell Count)

This information explains what neutropenia (low white blood cell count) is and how to prevent an infection while you have neutropenia.

About Neutropenia

Neutropenia (new-tro-PEE-nia) is when you have a low number of neutrophils (a type of white blood cell) in your blood. Neutrophil levels are considered low if they're below 500 cells/mm³. It's common to have neutropenia after certain types of cancer treatments.

Neutrophils help your body fight infection. When you have neutropenia, you have a higher risk of getting an infection. A fever of 100.4° F (38.0° C) or higher, is usually the first sign of an infection. To prevent infection, you must follow the instructions in this resource until your neutrophil count returns to normal.

Watch for any signs of infection listed in this resource. If you have any signs or symptoms of an infection, call your healthcare provider. Be sure to take your temperature orally (by mouth), as directed by your healthcare provider. Call your healthcare provider if it's 100.4° F (38° C) or higher.

Practice Good Hygiene

If you have neutropenia, it's important to follow good hygiene. Follow the guidelines in this section. For more information about hand hygiene, read *Hand Hygiene and Preventing Infection* (www.mskcc.org/pe/hand_hygiene)

- Shower with a 4% chlorhexidine gluconate (CHG) solution antiseptic skin

cleaner (such as Hibiclens®). Rub the 4% CHG solution gently over your body from your neck to your feet. Don't put it on your face or genital area. To learn more about showering with Hibiclens, read *How to Shower Using Hibiclens®* (www.mskcc.org/pe/hibiclens).

- If you have a Central Venous Catheter (CVC), speak with your healthcare provider before showering. For more information about showering, watch *Showering While You Have a Central Venous Catheter (CVC)* (www.mskcc.org/pe/shower_cvc).
- Moisturize your skin daily to prevent dry or cracked skin.
- Wash your hands using antibacterial soap. This type of soap is better at killing germs.
 - To wash your hands, wet your hands with warm water and then rub your hands with soap for at least 20 to 30 seconds. Rinse your hands well under warm running water. Dry your hands with a clean paper towel.
- Use an alcohol-based hand sanitizer (such as Purell®) after shaking hands and after contact with young children.
 - To use an alcohol-based hand sanitizer, cover both your hands with the hand sanitizer and rub them together until for 20 to 30 seconds.
- Wash your hands with alcohol-based hand sanitizer or antibacterial soap after touching high-contact surfaces including:
 - ATMs
 - Doorknobs
 - Telephones
 - Elevator buttons
 - Computer keyboards
- Brush your teeth after each meal. Use an ultra-soft toothbrush. For more information, read the “Caring for your mouth” section in *Allogeneic Stem Cell Transplant: A Guide for Patients & Caregivers* (www.mskcc.org/pe/allogeneic_guide)

How to Prevent Infection

Here are some ways you can prevent infection:

- Avoid having visitors who have a cold or recently had an infection.
- Wear a mask when you go out in public places, use public transportation, or are in crowded areas. This will help protect you from catching a cold or other respiratory infection.
- Don't have any dental work or procedure done that isn't urgent. Talk with your healthcare provider before having any procedure done.
- Ask your healthcare provider if you can:
 - Use tampons
 - Use dental floss
 - Use suppositories (solid medications that dissolve)
 - Have enemas
 - Participate in sexual activity
- Don't eat raw meats, raw fish, or raw eggs. For more information about food safety guidelines to follow when you have neutropenia, read our resource *Low-Microbial Diet* (www.mskcc.org/pe/low_microbial_diet).
- Don't share your forks, spoons, cups, or anything else you use to eat or drink.
- Don't get a manicure, pedicure, wax, or tattoo without the approval of your healthcare provider.
- Don't shave your scalp. Try to avoid shaving any other part of your body. If you must shave, use an electric razor.
- Wash your hands after touching any animals.
- Don't touch any animal waste products (such as litter boxes, fish tanks, or pet cages).
- Don't garden, handle soil, dried flowers or fresh flowers.
- Talk to your healthcare about shots that you can get to help prevent infection

(such as the flu shot).

Call Your Healthcare Provider if You Have Any of the Following Signs of Infection:

- A fever of 100.4° F (38° C) or higher
- Shaking chills
- Nausea and vomiting (throwing up) that doesn't get better
- Flushed face
- Sweats
- Cough
- Lightheadedness or dizziness
- Diarrhea (loose or watery bowel movements)
- Constipation (having fewer bowel movements than usual)
- Mouth sores
- Headache
- New pain
- Irritability
- Pain or burning during urination (peeing)
- Feeling tired, especially if you also have flu-like symptoms (such as a fever, sore throat, or chills)

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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