Memorial Sloan Kettering Cancer Center

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)

- 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 keywords.
  - Call bells
- If you have an IV or central line, keep the area clean and dry. Tell your healthcare provider if you have redness, swelling, warmth, pain, or drainage near the site.
- 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.

- Do not have any dental work or procedure done that isn't urgent. Talk with your healthcare provider before having any procedure done.
- Do not eat food from outside unless your healthcare provider says it's OK.
- Do not eat raw meats, raw fish, or raw eggs. For more information about food safety guidelines to follow when you have neutropenia, read the resource *Food Safety During Cancer Treatment* (www.mskcc.org/pe/food-safety).
- Do not share your forks, spoons, cups, or anything else you use to eat or drink.
- Do not get a manicure, pedicure, wax, or tattoo without the approval of your healthcare provider.
- Do not 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.
- Do not touch any animal waste products (such as litter boxes, fish tanks, or pet cages).
- Do not 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).
- Ask your healthcare provider if you can:
    - Use tampons.
    - Use dental floss.
    - Use suppositories (solid medications that dissolve).
    - Have enemas.
    - Participate in sexual activity.

# When to call your healthcare provider

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 questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

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

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