

# Neutropenia

Low number of white blood cells in your blood

## What is neutropenia?

Neutropenia (noo-truh-pee-nee-uh) is when you have a low number of neutrophils (a type of white blood cell) in your blood.

Neutrophils are the cells in your body that fight infections or germs. A blood test called a Complete Blood Count (CBC) will show your cell count.

When your neutrophils are low, your body cannot fight infection very well. Infections can make you very sick quickly. They may cause you to miss your next treatment. Sometimes you might need a lower dose of your cancer treatment.

You will have your blood taken many times during your treatment.

Your health care team will monitor the number of neutrophils that you have in your blood. You may hear your health care team talking about your "counts" or "blood counts." They are talking about the number of different cells you have in your blood.

## What causes neutropenia?

Cancer and cancer treatments can cause neutropenia.

Sometimes, when you get a higher dose (amount) of a cancer treatment, you will get neutropenia.

If you have other health problems besides cancer, like HIV, you are at a higher risk of getting neutropenia.



## What is a neutropenic fever?

People with neutropenia may get a fever (temperature over 100.5 degrees Fahrenheit or 38 degrees Centigrade). This is a neutropenic fever. It is a sign of an infection. This is very serious and needs to be treated with antibiotics right away.

**Go to the nearest emergency room if you have a neutropenic fever.**

## What are the treatments for neutropenic fever?

The emergency room health care team will give you antibiotics to treat an infection.

You might need these tests to figure out what type of fever you have:

- Urine ("pee") culture (test to find germs in your pee)
- Blood culture (test to find germs in your blood)
- Chest x-ray
- Physical exam
- Blood tests to check your liver and kidney

## What are the treatments for neutropenia?

### Hematopoietic Growth Factors (GCSF)

If you have neutropenia, your health care team may give you hematopoietic growth factors. Growth factors are special proteins that can cause your bone marrow to make more white blood cells. Growth factors work like your own body does when it is healthy.

Growth factors are only used when necessary. They are not given to all patients. Your health care team will talk with you about what is best for you.

Growth factors are given using a needle. They are injected into your skin or into your vein.

### Side Effects of Growth Factors

Growth factors have side effects. These will be different for each person.

The most common side effect is bone pain. This may be a dull ache or discomfort in the bones of your back, arms, legs or hips.

Acetaminophen (Tylenol) can help with the pain. This pain is usually mild and goes away once you have stopped treatment with growth factors.

Sometimes the skin around the injection (needle) site can get red or itchy. This will go away when the injections are finished.

You might get fever and chills when you get growth factors.

Tell your health care team if you have any side effects.

## What can I do for myself?

### Watch for signs of Infection

If you have a fever over 100.5 degrees Fahrenheit or 38 degrees Centigrade while you are having chemotherapy treatment: **go directly to the nearest emergency room.**

Tell your health care team right away if you have any of these symptoms:

- Chills
- Sweating (more than is normal for you)
- Cough or shortness of breath
- Sore throat or sores in your mouth
- Redness or swelling of your skin or around sores on your skin
- Loose bowel movement (“poop”) or liquid stools (diarrhea)
- Trouble urinating (“peeing”), urinating more than is normal for you, or burning when you urinate
- Vaginal discharge or itching (more than is normal for you)
- Flu-like symptoms such as body aches and extreme tiredness.

### Prevent infection

It is very important that you stay as healthy as possible. Follow these steps to make sure you do not get an infection:

- Wash your hands very well before eating and after using the bathroom.
  - You can use a waterless cleaner (hand sanitizer) if you do not have soap and water.
  - Wash all sides of your hands, between your fingers, and your nails, for 15 seconds in total. Rinse soap off.
- Good mouth care is important. Brush your teeth with a soft toothbrush after eating and before bedtime.
- If you are having problems with your teeth, check with your doctor first before you see your dentist. Let your dentist know that you are getting cancer treatment.

- Take a warm shower every day. Hot showers may dry your skin. Pat your skin dry because rubbing it may also cause dryness.
- Try to stay away from people who are sick. Stay away from children and adults who have chicken pox, shingles or the measles.
- Try not to clean up after pets (cats and dogs) when they have a bowel movement (“go poop”). Also, do not clean fish tanks.
- If your bowel movements are harder than usual, try to be as gentle as possible. If you are not having bowel movements as you normally do, you may be constipated. Talk to your health care team about this.
- Talk to your health care team about sex. You may need more lubrication than you usually do. If you have sex, have a warm shower right afterward. Clean yourself well. If you have a very low white blood cell counts, do not have sex at all.

If you are unsure how to prevent infection, talk to your health care team.

### Practice good food safety

- Before making food, wash your hands and all surfaces with warm, soapy water.
- Always cook food to the safe internal temperature. Do not eat undercooked meat, eggs or seafood.
- Keep your raw foods, such as meat and eggs, away from cooked foods, fruit, and vegetables.
- Always refrigerate food and leftovers right away.
- Thaw frozen foods in the fridge.
- Do not eat deli meats, soft cheese and unpasteurized dairy or juice.

### Where can I learn more?

- BC Cancer Library Neutropenia pathfinder: [bccancer.libguides.com/pathfinder-neutropenia](http://bccancer.libguides.com/pathfinder-neutropenia)
- BC Cancer Supportive Care Services: [www.bccancer.bc.ca/supportivecare](http://www.bccancer.bc.ca/supportivecare)

