Neutropenia – What you need to know

What is neutropenia?

- There are three main types of cells in your blood: white blood cells, red blood cells and platelets.

- Neutrophils are a type of white blood cell that helps your body fight infections.

- Neutropenia is when you have a low number of neutrophils in your blood. When your neutrophils are low, your body can get infections very easily and you may get very sick. It can be harder for your body to fight off infections and you may take longer to get better.

What causes neutropenia?

- Cancer and cancer treatments such as chemotherapy can cause neutropenia.

- Your health care team will tell you if you are at risk for getting neutropenia.

How do I know if I have neutropenia?

- A blood test called a complete blood count (CBC) shows the number of neutrophils in your blood.

- If the number of neutrophils in your blood is too low, it means you have neutropenia.

- You will have your blood tested many times during your cancer treatment if you are at risk for getting neutropenia.

- Your health care team will tell you if your blood test shows that you have neutropenia.

When you have neutropenia, you need to watch for signs of infections.

Getting an infection when you have neutropenia is a medical emergency. Even if you do not feel sick, you need to get help right away.

There are signs of infections that you can watch out for. Check your temperature to see if you have a fever and speak to your health care team or get emergency help right away if you notice any of these things:

- Feeling unwell

- Feeling hot (like you may have a fever)

- Chills or shaking

- Sweating more than normal

- Burning feeling when peeing or peeing more often

- Redness, heat, swelling and fluid coming from a wound on your skin

- New cough

- Cough with thick and sticky yellow or green coloured fluid

- Sore throat or sores in your mouth with a fever

- Diarrhea (watery poo) with a fever

- Unusual vaginal fluid or itching around your vagina

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If you feel unwell you should always check for a fever. Things to know about fever:

- **Always** check your temperature to see if you have a fever before taking any medications for fever or pain (such as acetaminophen (Tylenol) or ibuprofen (Advil)).

- Fever can be a sign of infection that may need treatment right away. If you take these medications before you check for fever, they may lower your temperature and you may not know you have an infection.

How to check for fever

- Keep a digital (electronic) thermometer at home and take your temperature if you feel hot or unwell (for example, chills, headache, mild pain). It is best to use a thermometer that takes your temperature from your mouth rather than forehead or ear.

- Do not eat or drink anything hot or cold just before checking your temperature.

- You have a fever if the temperature taken in your mouth is:

    38.3°C (100.9°F) or higher at any time

    OR

    38.0°C (100.4°F) or higher for at least 1 hour

- Take your temperature every day when you have neutropenia or whenever you feel unwell.

***If you do have a fever:* Try to contact your health care team. If you are not able to talk to them for advice, you MUST get emergency medical help right away.**

What is neutropenic fever?

- If you have neutropenia and develop a fever, it is called a neutropenic fever. It is a sign of an infection. This is very serious and needs to be treated with antibiotics (medication for an infection) right away.

What are the treatments for neutropenic fever?

- If you have neutropenic fever, your health care team will give you a dose of antibiotics right away in the emergency room or at an urgent care clinic.

- Your health care team will also do tests to try and find out what type of infection you have. They may:
    - test your urine (pee)
    - test your blood
    - do a chest X-ray and
    - do a physical (body) exam

These tests will help the health care team pick the antibiotics that will work best to treat the infection you have.

- Your health care team will decide the safest way for you to have your antibiotic treatment.
    - You may have to stay in the hospital for your antibiotic treatment.
    - You may stay at the hospital for a short time (many hours to a few days) to make sure that you start to get better.
    - You may be allowed to go home after you were given your first dose of antibiotics and at least 4 hours has passed.

- If you are told that it is safe for you to go home, you will be given a prescription for antibiotics to take at home. You will need to go to a pharmacy to pick up your antibiotics before you go home.

How to treat a neutropenic fever once you are at home?

Your health care team will explain to you how and when you should take your antibiotics. It is very important that you follow these instructions.

If you are having treatment for neutropenic fever at home, you must:

- Have a digital thermometer to take your temperature. Use an oral thermometer (temperature taken from your mouth) rather than forehead or ear thermometer.

- Have a family member or caregiver available to help you at all times.

- Have access to a phone and transportation at all times.

- Be able to take your antibiotics as you were told by your health care team.

- Be able to go to the hospital for regular check-ups.

- Go to the hospital if you start to feel worse, your fever goes up, or you have any new signs of infection.

Your health care team will tell you when to stop taking your antibiotics. Do not stop taking your antibiotics until they tell you it is safe to stop.

To help prevent you from getting neutropenic fever again, your cancer treatment may be changed or delayed for a few days (usually a week). You may get a lower dose of the same treatment or you may need to change to a different treatment. You may get medication to help keep your neutrophil levels high and to help lower your chance of getting another infection.

If I am at risk for neutropenia or have neutropenia, what can I do to help prevent infections?

If you have been given medications to take before your cancer treatment (such as antibiotics), take them as you were told by your health care team.

You may be given medication after each cancer treatment to increase your neutrophils. Your health care team will tell you if you need this type of medication.

There are many other things you can do to help keep from getting infections:

Wash your hands and body and stay away from germs:

- Wash your hands often with soap and water, before eating and after using the toilet. Keep your hands away from your mouth.

- Clean scrapes or cuts on the skin quickly with soap and water or saline.

- Stay away from places like busy shopping malls or movie theatres while your neutrophil counts are low.

- Do not touch animal droppings (poo), cat litter boxes, fish tanks or bird cages. (If you must clean up after an animal, wear gloves).

- Do not work in the garden or touch soil unless you are wearing gloves.

Mouth Care:

- Keep your mouth clean and moist. Ask your health care team for information on good mouth care habits.

- Check with your health care team before going to your dentist or having other health care for your mouth.

Eating and drinking:

- Eat a healthy diet. Wash all fruits and vegetables. Avoid raw meat, raw fish and soft cheeses. Cook your food to a safe temperature. Follow general food safety rules.

- Drink 6-8 cups of liquid (juice or water) each day, unless your health care team has given you other instructions.

- Do not share drinking glasses or cutlery.

Vaccines:

- Talk to your health care team before getting any vaccines.

- Inactivated vaccines (like the flu shot) are safe and can help you to stay healthy. Talk to your health care team to find out the best timing for you to get any inactivated vaccines.

- You should not get a live vaccine (such as chicken pox, polio or measles vaccines). Stay away from people who got a live vaccine recently.

Try not to get cuts or tears to your anal (bum) area:

- Do not strain if you are having trouble going poo. You can ask your health care team to give you medication to help make it easier for you to poo.

- Do not use rectal suppositories or enemas (medication used in your bum to help you poo) when your neutrophils are low.