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Patient education: Neutropenia and fever in people being treated for cancer (The Basics)

[Written by the doctors and editors at UpToDate](#)

What is neutropenia? — Neutropenia is a condition in which the blood does not have enough cells called "neutrophils." Neutrophils are a type of white blood cell. They help your body fight infections.

Neutropenia can happen to people being treated for cancer. That's because the medicines used to kill cancer cells or stop them from growing (called "chemotherapy") impair the body's ability to make all blood cells, including neutrophils.

People who get neutropenia because of their cancer treatment can get infections easily. In many cases the only sign of these infections is fever. This is called "neutropenic fever" or "febrile neutropenia." Fever in someone with neutropenia is very serious.

Should I see a doctor or nurse? — Go to the emergency room right away if you have received chemotherapy within the last 6 weeks (or if you have been told you have neutropenia) and you:

- Have a fever of 101.0°F (38.3°C) or higher, taken by oral thermometer, at any time
- Have a fever of 100.4°F (38.0°C) or higher, taken by oral thermometer, and it lasts for 1 hour or longer

If you have been told that you have neutropenia or you received chemotherapy less than 6 weeks ago, you should also tell your doctor or nurse if you get any of the following symptoms:

- Chills or sweating
- Sore throat, sores in the mouth, or a toothache
- Stomach pain
- Pain in the anal area
- Pain or burning when urinating, or frequent urination
- Diarrhea or sores around the anus
- Cough or shortness of breath
- Redness, swelling, or pain of your skin, especially around a cut, wound, or place where you had a tube in your vein (called an "IV")
- Unusual vaginal discharge or itching

How is neutropenic fever treated? — Many people are treated in the hospital with antibiotics that go into an IV. Some people can instead go home and take antibiotic pills after being seen in the clinic or after having a short stay in the hospital.

If you have neutropenic fever, it is very important to start antibiotics as soon as possible. Any delay in starting treatment could lead to a widespread infection or even death.

Can neutropenic fever be prevented? — In some cases, doctors prescribe antibiotics to people who are at high risk of infection **before** they get a fever. Also, in some cases, doctors can prescribe medicines that help the body make more neutrophils. But these medicines are not appropriate for everyone who is treated for cancer.

If you are being treated for cancer, the most important thing you can do is to protect yourself from getting an infection in the first place. Here are some things you should do:

- Wash your hands often with soap and water. You can also use alcohol hand rubs.
- Avoid crowded places and people (especially children) who are sick.
- Do not share food, cups, utensils, or other personal items, such as toothbrushes.
- Shower or bathe every day and use lotion to keep your skin from getting dry and cracked.
- Cook meat, eggs, and fish all the way through to kill any germs.
- Carefully wash raw fruits and vegetables before eating them.
- Wear gloves when handling waste from dogs, cats, or other pets. Then wash your hands right afterwards.
- Use gloves to garden, or avoid gardening.
- Brush your teeth and gums every day with a soft toothbrush. If your doctor or nurse recommends it, use a mouthwash to prevent mouth sores.
- Keep surfaces (such as kitchen counters) in your home clean.
- Get the flu shot every year.
- Don't go outside barefoot.

Your doctor or nurse might give you other suggestions to help prevent infections, too.

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