

## cancer.org | 1.800.227.2345

# **Chemotherapy Side Effects**

The information below describes side effects that might be caused by traditional or standard chemotherapy. There are also other drugs that are used to treat cancer in different ways, including targeted therapy<sup>1</sup>, hormone therapy, and immunotherapy<sup>2</sup>.

## Why does chemo cause side effects?

Cancer cells tend to grow fast, and chemo drugs kill fast-growing cells. But because these drugs travel throughout the body, they can affect normal, healthy cells that are fast-growing, too. Damage to healthy cells causes side effects. Side effects are not always as bad as you might expect, but it's normal to worry about this part of cancer treatment.

The normal cells most likely to be damaged by chemo are:

- Blood-forming cells in the bone marrow
- Hair follicles
- Cells in the mouth, digestive tract, and reproductive system

Some chemo drugs can damage cells in the heart, kidneys, bladder, lungs, and nervous system. Sometimes, you can take medicines with the chemo to help protect your body's normal cells. There are also treatments to help relieve side effects.

Doctors try to give chemo at levels high enough to treat cancer, while keeping side effects at a minimum. They also try to avoid using multiple drugs that have similar side effects.

#### What do I need to know about side effects?

- Every person doesn't get every side effect, and some people get few, if any.
- The severity of side effects (how bad they are) varies greatly from person to person. Be sure to talk to your cancer care team about which side effects are most common with your chemo, how long they might last, how bad they might be, and when you should call the doctor's office about them.
- Your doctor may give you medicines to help prevent certain side effects before they happen.
- Some chemo drugs cause long-term side effects, like heart or nerve damage or fertility problems. Still, many people have no long-term problems from chemo. Ask your doctor if the chemo drugs you're getting have long-term effects.

While side effects can be unpleasant, they must be weighed against the need to kill the cancer cells.

Be sure to talk to your cancer care team about which side effects are most common with your chemo, how long they might last, how bad they might be, and when you should call the doctor's office about them.

## How long do side effects last?

Many side effects go away fairly quickly, but some might take months or even years to go away completely. These are called late effects.

Sometimes the side effects can last a lifetime, such as when chemo causes long-term damage to the heart, lungs, kidneys, or reproductive organs. Certain types of chemo sometimes cause delayed effects, such as a <u>second cancer</u><sup>3</sup> that may show up many years later.

People often become discouraged about how long their treatment lasts or the side effects they have. If you feel this way, talk to your cancer care team. You may be able to change your medicine or treatment schedule. They also may be able to suggest ways to reduce any pain and discomfort you have.

#### What are common side effects of chemo?

Most people worry about whether they'll have side effects from chemo, and, if so, what they'll be like. Here are some of the more common side effects caused by chemotherapy:

- Fatigue
- Hair loss
- · Easy bruising and bleeding
- Infection
- Anemia (low red blood cell counts)
- Nausea and vomiting
- Appetite changes
- Constipation
- Diarrhea
- Mouth, tongue, and throat problems such as sores and pain with swallowing
- Peripheral neuropathy or other nerve problems, such as numbness, tingling, and pain
- Skin and nail changes such as dry skin and color change
- Urine and bladder changes and kidney problems
- · Weight changes
- Chemo brain, which can affect concentration and focus
- Mood changes
- Changes in libido and sexual function
- Fertility problems

Your doctor can talk with you about the safety of using other medicines, vitamins, and supplements while you are being treated for cancer.

How vitamins affect chemotherapy drugs

- Intense chills
- Pain or soreness at the chemo injection site or catheter site
- Unusual pain, including intense headaches
- Shortness of breath or trouble breathing (If you're having trouble breathing call 911 first.)
- Long-lasting diarrhea or vomiting
- Bloody stool or blood in your urine

Ask your cancer care team if there are any other problems they should know about right away.

## **Hyperlinks**

- 1. <u>www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html</u>
- 2. <u>www.cancer.org/treatment/treatments-and-side-effects/treatment-types/immunotherapy.html</u>
- 3. <u>www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/second-cancers-in-adults.html</u>
- 4. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html

LeFebvre KB, Brassil KJ, eds. *Chemotherapy and Immunotherapy Guidelines and Recommendations for Practice*. Pittsburgh, PA: Oncology Nursing Society; 2019:25-50.

Chu E, DeVita VT. *Physician's Cancer Chemotherapy Drug Manual, 2019.* Burlington, MA: Jones & Bartlett Learning; 2019.

Olsen MM, Naseman RW. Chemotherapy. In Olsen MM, LeFebvre KB, Brassil KJ, eds. *Chemotherapy and Immunotherapy Guidelines and Recommendations for Practice*. Pittsburgh, PA: Oncology Nursing Society; 2019:61-90.

Last Medical Review: November 22, 2019 Last Revised: May 1, 2020

#### Written by

The American Cancer Society medical and editorial content team <a href="https://www.cancer.org/cancer/acs-medical-content-and-news-staff.html">(www.cancer.org/cancer/acs-medical-content-and-news-staff.html)</a>

Our team is made up of doctors and oncology certified nurses with deep knowledge of cancer care as well as journalists, editors, and translators with extensive experience in medical writing.

American Cancer Society medical information is copyrighted material. For reprint requests, please see our Content Usage Policy (www.cancer.org/about-us/policies/content-usage.html).

cancer.org | 1.800.227.2345