



Chemotherapy

What It Is, How It Helps

What's in this guide

If your doctor has told you that you have cancer, you may have a lot of questions. Can I be cured? What kinds of treatment would be best for me? Will it hurt? How long will treatment take? How much will it cost? How will my life change while I'm being treated and after the treatment ends? These are all normal questions for people with cancer.

This guide will explain one type of treatment – chemotherapy – a little better. We'll try to help you know what chemotherapy is and what it will be like.

If you have more questions, ask your doctor or nurse to help you. It is always best to be open and honest with them. That way, they can help you decide which treatment is best for you.

Questions about chemotherapy

What is chemotherapy?

Chemotherapy is the use of strong drugs to treat cancer. You will often hear chemotherapy called “chemo,” but it is the same treatment.

Chemo was first used to treat cancer in the 1950s. It has helped many people live full lives. The chemo drugs your doctor or nurse gives you have been tested many times. Research shows they work to help kill cancer cells.

What does chemo do?

There are more than 100 chemo drugs used today. Doctors choose certain types of drugs based on the kind of cancer you have and its stage (how much cancer is in your body).

Chemo can be used for different reasons. Your doctor will discuss these with you before you start treatment.

Chemo may be used to:

- Keep the cancer from spreading.
- Slow the cancer's growth.
- Kill cancer cells that may have spread to other parts of the body.
- Relieve symptoms such as pain or blockages caused by cancer.
- Cure cancer.

Will chemo be my only cancer treatment?

Sometimes chemo is the only cancer treatment needed. More often, it is part of a treatment plan that can include surgery and radiation therapy.

Here's why:

- Chemo may be used to shrink tumors before surgery or radiation.
- It may be used after surgery or radiation therapy to help kill any cancer cells that are left.
- It may be used with other treatments if the cancer comes back.

How does chemo work?

The body is made up of millions of normal healthy cells. Cancer starts when something causes a normal cell to become a cancer cell. This cancer cell then grows out of control and makes more cancer cells. Each type of cancer affects the body in different ways. If cancer is not treated, it can spread and affect the rest of your body.

Your doctor may suggest chemo to cure your cancer. Sometimes the goal is to slow the growth of the cancer. Other times the goal may be to reduce symptoms caused by growing tumors so that you feel better. Chemo is often used to fight cancers that have spread to other parts of the body (*metastasized*). Be sure to talk to your doctor about the goal of your treatment.

Chemo kills cancer cells. These drugs can affect normal cells, too. But most normal cells can repair themselves.

Your treatment will probably use more than one chemo drug. This is called *combination chemotherapy*. The drugs work together to kill more cancer cells.

How is chemo given?

Most chemo drugs are given in one of these ways:

- Sometimes chemo is a pill or liquid. You just swallow it as your doctor prescribes. You can take it at home, but you must be careful to follow the directions.
- Chemo can be given like a flu shot. The shots may be given in your doctor's office, a hospital, a clinic, or at home.
- Most often, chemo drugs are put into your vein through a needle or tiny plastic tube called a *catheter*. This is called IV (intravenous) chemo.
- Other types of chemo can be put right into the spine, chest, or belly (abdomen), or rubbed on the skin.

You may get chemo once a day, once a week, or even once a month. It depends on the type of cancer you have and the drugs you are getting. Chemo is usually given with breaks between treatment cycles. This break gives your body time to rebuild healthy new cells and helps you regain your strength. How long you get chemo depends on the type of cancer, your treatment goals, and how your body responds to the drugs.

Does chemo hurt?

There may be a little pain when a needle is used (just like getting your blood taken for lab work can sting), but the drugs themselves should cause no pain. If you do feel pain, burning, coolness, or anything new when getting your treatment, tell your doctor or nurse right away.

Can I take my other medicines while I'm taking chemo?

Some other medicines can affect your chemo. Be sure to tell your doctor or nurse about all the drugs you take. Don't forget prescription drugs and all the others you can get without a prescription. Also, tell them about vitamins, herbs, and anything else you take for your health. Make and keep a list of all the drugs you take. Keep this list up to date and share it with all your doctors.

Your doctor can tell you whether it's OK to take these drugs while you get chemo. Once your treatments begin, be sure to check with your doctor before you start to take any new medicines, and before you stop taking the ones you now take.

How will I know if my chemo is working?

The doctors and nurses on your cancer team will watch the progress of your treatment by doing physical exams, blood tests, and x-rays. Ask your doctor to explain any test results to you, and how they show progress in your treatment. Keep in mind that the side effects you may feel do not mean that the treatment is – or is not – working.

How much does chemo cost?

How much chemo costs depends on a lot of things, such as which drugs are used, how you get them, and how often you get them. You can ask your doctor about cost and, if you need it, where to get help paying for chemo.

If you have health insurance, check to see if it pays for your drugs. You will want to keep your health insurance, even if you must be out of work for treatment. If you have health insurance through your job, don't quit until you find a way to keep your insurance. See if you can take Family Medical Leave or if you are protected under the Americans with Disabilities Act. You can call us at 1-800-227-2345 to learn more.

If your insurance does not cover treatment, or if you have been denied payment, talk to your doctor and nurse. You may also want to talk to a patient support person at your treatment center. This person can help you look into government programs, like Medicare or Medicaid, or find other agencies that may help you. Drug assistance programs are also offered through the companies that make the drugs.

Cancer treatment can cost a lot. It is good to know what kind of coverage you have and what financial help you may be able to get.

What should I ask my doctor?

Because cancer is different for each person, your chemo will be planned just for you. Work with your doctor to decide what's best for you. Ask questions. Ask the doctor, nurses, and others on your team all the questions you need to. They know the most about chemo and how it works.

Be ready. Write down your questions ahead of time and take them with you. Don't be afraid to say you are confused or need more information. Nothing you say will sound silly or strange to your health care team. They know you want to learn as much about chemo as you can. All patients getting chemo have questions. Here are some questions you might want to ask:

- What is the goal of chemo in my case?
- How will we know if the chemo is working?
- After chemo, will I be cured?
- Are there other ways besides chemo to treat my cancer?
- If chemo does not work, are there other treatments for me?
- How will I get chemo, how often, and for how long?
- What side effects should I watch for? Should I call you if I have any of these side effects even at night or on a weekend?
- Is there anything I should do to get ready for treatment?

- Will I need surgery or radiation? If so, when and why?
- Does my insurance cover chemo? If not, how will I pay for it?
- Will I still be able to work (or go to school) during treatment?

Will I be able to work during treatment?

During chemo, many people can keep doing the things they were doing, such as going to work or school. The side effects of chemo keep some people from their normal routines. Also, some treatments require that you stay in the hospital.

If chemo affects your work or play, you may need to make some changes. One way to do this is to get your chemo late in the day or right before the weekend, so it does not affect your daily routine as much.

Fatigue – feeling tired – is a common side effect of chemo. This can make it hard to put in a full day’s work or do other things you want to do. You might try changing your work hours either by working part time or working different hours so that you can get the rest you need.

Federal and state laws may require your employer to allow flexible work hours during your treatment. If you’d like to know more about your rights at work, call your American Cancer Society toll free at 1-800-227-2345, or email us by clicking on the “Contact Us” button on www.cancer.org.

What about chemo side effects?

Chemo drugs are very strong. They kill any cell that is growing fast, even if it’s not a cancer cell. So, some of the normal, healthy cells that grow quickly can be damaged. This can cause side effects. Still, some people have no side effects at all.

Ask your doctor and nurse what side effects you might expect from the type of chemo you will get.

If you have bad side effects, your doctor may do blood tests to find out if you need a lower dose of chemo drugs, or if you need longer breaks between doses. Keep in mind that even if chemo causes a few problems, the “good” for you will likely outweigh the “bad” of the side effects.

For most people, side effects will go away in time after their treatments end. How long it will take is different for each person. Some side effects can take longer to go away than others, or they might not go away at all. If you start to feel upset or sad about how long treatment is taking or the side effects you have, be sure to talk to your doctor. Your doctor or nurse may be able to help you with side effects.

Common chemo side effects

Nausea and vomiting

Some chemo drugs can cause nausea and vomiting. These symptoms often start a few hours after treatment and last a short time. In some cases, they may last for a few days. Be sure to ask your doctor if your chemo might cause this and what you can do about it. If your doctor gives you medicine for nausea and vomiting, be sure to take it as prescribed. Tell your doctor or nurse right away if the medicine isn't working. Call your doctor if you have been vomiting for more than one day or if you cannot keep liquids down.

Hair loss

Some chemo can cause you to lose your hair. You may lose the hair on your head, face, arms, armpits, and groin. You may lose hair slowly or almost overnight. Not all chemo drugs have this effect, and some only cause the hair to thin out. Your doctor can tell you what to expect from the chemo drugs you're taking. In most cases, hair grows back after chemo. But the texture and color may be different.

Ask your doctor or nurse for tips on taking care of your hair and scalp during chemo. Some people who lose their hair choose to wear head covers, such as caps, scarves, and turbans, or wigs and hairpieces. Many health plans cover at least part of the cost of a wig or hairpiece. Also, you can deduct these costs from your income taxes.

Bone marrow changes

The bone marrow is the liquid inner part of some bones. It is where all of your blood cells are made (red blood cells, white blood cells, and platelets). It is often affected by chemo, which can cause your blood cell counts to drop.

- **Red blood cells** carry oxygen from the lungs to all parts of the body. During chemo, the bone marrow may not be able to make enough red blood cells. Not having enough red blood cells is called *anemia* (uh-NEE-me-uh). This can make you feel short of breath, weak, and tired. It can also make your skin, mouth, or gums look pale.
- **White blood cells** fight infection. Chemo lowers the number of your white blood cells, which makes you less able to fight infections. Your doctor or nurse may suggest ways to avoid infection, such as staying away from people with colds or fevers, staying away from crowds of people, and washing your hands often.
- **Platelets** form blood clots that stop bleeding from cuts or bruises. If your bone marrow cannot make enough platelets, you may bleed too much, even from small cuts. If your platelet count is very low, you will need to be very careful. Even brushing your teeth too hard could cause your gums to bleed. So, you might need to use a soft-bristle toothbrush or one made from foam. Check with your doctor or nurse about flossing.

These effects on the bone marrow will not last long. Your doctor will do blood tests to see when your bone marrow is making new blood cells again. And there are treatments that can be used if your blood cell counts get too low.

Mouth and skin changes

Some chemo drugs can cause sores in the mouth and throat. Good mouth care is helpful while you are being treated. Be sure to brush your teeth and gums after each meal. It's a good idea to see your dentist before starting chemo. Your dentist can show you the best ways to take care of your teeth and gums during treatment.

Minor skin problems – such as redness, itching, peeling, dryness, and acne – can also happen in some people. Most skin problems are minor, but some need to be treated at once. Some patients have allergic reactions to chemo. This can cause hives (or skin welts), itching, or trouble breathing. Chemo is usually given in the doctor's office or clinic where the nurse or doctor can watch you for this type of reaction. These problems must be treated quickly.

Ask your doctor or nurse for tips on taking care of your mouth and skin while you're getting chemo. If you have any side effects, tell your cancer care team about them right away. There are often things they can do to help you and keep the problems from getting worse.

Changes in your sex life

Sometimes sexual desire is low or even gone for some time, but it comes back when treatment ends. Some drugs given during chemo may affect a woman's hormones, causing hot flashes and dryness of the vagina.

Most patients can have sex during treatment, but some don't feel like it for some time. This does not mean that something is wrong. To learn more about the sexual effects of cancer treatments and how to deal with them, please call us at 1-800-227-2345 for our free booklets called *Sex and Men With Cancer* or *Sex and Women With Cancer*.

Most chemo can cause birth defects if a woman gets pregnant during treatment. Some chemo can affect a man's sperm, which may cause problems if he fathers a child during treatment. Ask your doctor about what kind of birth control you should use and how long you need to use it.

Fertility problems

Some chemo drugs can leave you unable to have children. This effect does not always go away after treatment is over. If you think you may want to have children in the future, tell your doctor before you start treatment. To find out more about having children, call us for a copy of *Fertility and Cancer: What Are My Options?*

Memory changes

Cancer and its treatment can affect your thinking. In rare cases, this can last for a long time after treatment. Memory and being able to concentrate or think can change. This happens more often in treatments that use large doses of chemo drugs. Many patients who have this call it “chemo brain” or “chemo fog.” Doctors are not sure why this happens to some people who get chemo but not to others. Other cancer treatments can also affect the brain. If you notice this during your treatments, talk to your doctor. There are health care workers who can help you with mental exercise programs and other types of treatment to lessen these effects.

Emotional changes

Chemo and cancer can also affect a patient’s emotions. Chemo changes your normal routine and can make it harder to get things done. You may notice a weaker sense of well-being and some strain on how you get along with others. But there are ways to cope with these things. Talk to your doctor or nurse about counseling, support groups, and things you can do as part of your daily routine to help relieve stress and relax.

Your friends and family can give you emotional support during treatment, too. But your loved ones may not feel sure how to talk to you about cancer and chemo. It’s good to let them know it’s OK to talk about these things.

Can chemo’s side effects be prevented and treated?

The good news is that there are things you can do to prevent or reduce most chemo side effects. Be sure to talk with your doctor or nurse if you are bothered by side effects.

Remember that not everyone gets the same chemo drugs. Chemo given for some cancers may cause more side effects than chemo for other cancers. Your general state of health and fitness will also affect how your body reacts to chemo. Some people are able to go on with what they always do while getting chemo. You may not have to stop working or go on a special diet.

On the other hand, some people need to be in the hospital so that doctors can watch them closely and treat certain side effects. And most people have to change their work schedules to get chemo. Ask your doctor and nurse what you’ll be able to do while you’re being treated – on chemo days and in between treatments.

What can I do to take care of myself during chemo?

During your chemo, take special care of yourself. Your doctor or nurse will give you tips on how to do that. But there are some basic things you should do, such as:

- **Get plenty of rest.** You may feel more tired than normal during treatment. Give yourself time for rest breaks when you need them.
- **Eat healthy foods.** It's important for your body to get enough protein and calories to rebuild the healthy cells that it loses during treatment. Your doctor, nurse, or dietitian may work with you to make sure you are eating the right foods to get what you need. If you have trouble eating or don't feel like eating, talk to your doctor or nurse.
- **Get exercise and fresh air if your doctor says you should.** Exercise can help reduce stress and fatigue, and can help you feel like eating. Check with your doctor about your exercise plan to make sure it's OK.
- **Ask your doctor or nurse about alcohol.** Small amounts of beer or wine may help you relax and help you feel hungry. But alcohol can cause problems with some chemo medicines. Your health care team can tell you if it's OK for you to drink.
- **Check with your doctor or nurse before taking vitamins or supplements.** There is no "magic" diet, herb, or substance that can cure cancer, no matter what anyone claims. If you already take vitamins or supplements, tell your doctor what you take and ask if it's OK to keep taking them.
- **Keep thinking about the treatment goals.** Dealing with chemo can be hard. A good way to handle the effects of chemo is to remind yourself why you're getting it.
- **Learn more about your cancer and treatment.** The more you know, the better you will be able to cope.
- **Take time to enjoy your hobbies.** Doing the things you enjoy doing can help you cope with chemo, too.

Will chemo affect my family?

Cancer isn't catching, so you can be close to family and friends. Having chemo won't harm anybody else either. Depending on how your body reacts to the drugs, people may not notice you are on chemo at all. If you have side effects, your family and friends can do things to help. When someone asks, "How can I help?" have a few ideas ready.

- You may not feel like eating very much, so ask loved ones to take turns cooking foods that you think you can eat.
- You might get tired after each treatment and need extra rest. Ask your friends and neighbors to do little jobs for you until you feel better.

Keep in mind that your family cares about you, and they may feel nervous about your cancer and the chemo. Let your family and friends know how much their support means to you. Be honest about how you feel. Get into the habit of talking things over with your loved ones so they can share your ups and downs.

There will be times when the people closest to you feel tired or sad, too. You can help them feel better by reminding them how important they are to you. You can also point out how much their support and help means to you.

Follow-up care

What does “follow-up” mean?

No matter what type of cancer you have had, after your chemo treatments end you will still need to see your doctor. Your doctor will check your progress and help you deal with any problems you may have. Once the treatment is over, there is a chance that the cancer might come back. There is no way to know if this will happen to you, but your doctor will want to watch for this. This part of your treatment is called follow-up care.

Here are some questions you might want to ask your doctor after chemo:

- When can I go back to doing my normal activities?
- How often will I need to see you?
- Which tests will be done and why?
- Do I need to be on a special diet?
- What should I watch for to know if the cancer is back?

When should I call the doctor?

After treatment, you may be more aware of your body and any day-to-day changes in how you feel. If you have any of the problems listed below, tell your doctor or nurse at once.

- Pain that does not go away, or pain that is getting worse
- New lumps, bumps, or swelling
- Nausea, vomiting, diarrhea, not wanting to eat, or trouble swallowing
- Weight loss when you are not trying to lose weight
- Fever or cough that doesn't go away
- New rash, new bruises, or bleeding
- Any other signs that your doctor or nurse wants to know about

How can I learn more about my cancer and cancer treatment?

If you would like more information on chemo, please call us for a free copy of *Understanding Chemotherapy: A Guide for Patients and Families*. We also have detailed information about each chemo drug used during your treatment.

No matter who you are we can help. Contact us anytime, day or night, for information and support. Call us at **1-800-227-2345**, or visit www.cancer.org. We want to help you get well.

For cancer information, answers, and support, call your American Cancer Society 24 hours a day, 7 days a week at 1-800-227-2345.

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1 · 800 · ACS-2345 or www.cancer.org