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Nausea and Vomiting

Cancer and cancer treatment can cause nausea and vomiting. Depending on the type of cancer and treatment, some patients are at higher risk than others. It's important to understand why nausea and vomiting can happen, how they might be prevented, and when to get help.

[Understanding Nausea and Vomiting](#)

[Nausea and Vomiting Caused by Cancer Treatment](#)

[Medicines Used to Treat Nausea and Vomiting](#)

[Managing Nausea and Vomiting at Home](#)

Related Resource

[Flyer: What to Do for Nausea and Vomiting](#)

Video

This short video answers some of the most common questions people have when it comes to overcoming nausea and vomiting during cancer.

[Watch this video on YouTube](#)

Understanding Nausea and Vomiting

Many people with cancer will have nausea and vomiting. These symptoms are most often side effects of cancer treatment but can also have other causes.

- **Nausea** is feeling queasy, sick to your stomach or as if you might throw up.

- **Vomiting** is throwing up the food and liquid in your stomach. Nausea can lead to vomiting, and sometimes nausea and vomiting happen at the same time. But they can be totally separate problems, too.
- **Retching** is trying to vomit but nothing comes up from your stomach. This is also called gagging or dry heaves.

- [Types of nausea and vomiting in people with cancer](#)
- [What causes nausea and vomiting in people with cancer?](#)
- [Symptoms of nausea and vomiting](#)

Types of nausea and vomiting in people with cancer

Acute nausea and vomiting happen minutes to hours after treatment is given. It usually goes away within a day.

Delayed nausea and vomiting start more than 24 hours after treatment and can last for a few days. This happens most often with certain types of chemotherapy, such as cisplatin, carboplatin, cyclophosphamide (Cytosan) or anthracyclines such as doxorubicin.

Anticipatory nausea and vomiting happen before a treatment begins. This happens when a person comes across sights, sounds, and smells that their brain connects with nausea and vomiting. This happens most often in people whose nausea and vomiting were not well controlled during prior treatments.

Breakthrough nausea and vomiting happen even though treatment has been given to try to prevent it. When this happens, you may need more or other medicines to control current symptoms. And your cancer care team probably will need to change the medicines they give you for future treatments.

Refractory vomiting is what happens when the medicines you're getting to prevent or control nausea and vomiting are not working. This means you may need more or different medicines to stop the nausea and/or vomiting.

What causes nausea and vomiting in people with cancer?

Nausea and vomiting in people with cancer can be caused by many things, such as:

- Cancer treatment such as chemotherapy, radiation therapy, targeted drug therapy, or immunotherapy
- Cancer that affects the brain or abdomen (belly)
- Medicines used to help with side effects of cancer or treatment
- Medicines given for other health problems
- Bowel slowdown or blockage (obstruction)

[Constipation](#)¹

Nausea and vomiting can affect a person's quality of life. It can cause distress and may make a person wonder if they can continue treatment. For most people, nausea and vomiting can be controlled with medicines and other treatments that don't include medicines. Talk with your doctor or cancer care team about what can be done to prevent and manage any nausea and vomiting your treatment might cause.

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/side-effects/stool-or-urine-changes/constipation.html
2. www.cancer.org/cancer/managing-cancer/side-effects/infections.html
3. www.cancer.org/cancer/managing-cancer/side-effects/emotional-mood-changes/anxiety.html
4. www.cancer.org/cancer/managing-cancer/side-effects/pain.html
5. www.cancer.org/cancer/managing-cancer/side-effects/eating-problems/fluids-and-dehydration.html
6. www.cancer.org/cancer/managing-cancer/side-effects/fatigue-weakness-sleep.html
7. www.cancer.org/cancer/managing-cancer/side-effects/eating-problems/poor-appetite.html
8. www.cancer.org/cancer/managing-cancer/side-effects/eating-problems/weight-changes.html
9. www.cancer.org/cancer/managing-cancer/side-effects/eating-problems/fluids-and-dehydration.html

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Mathey K. Nausea and vomiting. In: Camp-Sorrel D, Hawkins RA, Cope DG, eds. *Clinical Manual for the Advanced Practice Nurse*. Oncology Nursing Society; 2022: 509-515.

National Cancer Institute (NCI). Nausea and Vomiting Related to Cancer Treatment (PDQ) – Health Professional Version. Cancer.gov. Accessed at <https://www.cancer.gov/about-cancer/treatment/side-effects/nausea/nausea-hp-pdq> on March 8, 2024.

National Comprehensive Cancer Network (NCCN). Anti-

Nausea and Vomiting Caused by Cancer Treatment

have nausea and vomiting. Some of these are:

- The dose of the chemotherapy and other anti-cancer medicines you get (higher doses can be more likely to cause nausea and vomiting).
- How the medicines are given (chemo given through a vein may cause nausea and vomiting faster than when it's given by mouth).
- Having a tumor in the brain, liver, or gastrointestinal tract may increase the risk for nausea and vomiting.
- Taking other medicines (such as pain medicines) that may cause or make nausea or vomiting worse.
- Being constipated.
- Having an infection.

Your risk of nausea and vomiting may also be affected by personal differences, such as if you:

- Are female
- Are younger than 50 years of age
- Had morning sickness during pregnancy
- Are very anxious or nervous
- Have had motion sickness (nausea from motion during travel, like in a car)
- Tend to vomit when you are sick
- Are a non-drinker or light drinker (of alcohol)
- Had nausea and vomiting during cancer treatment in the past

Radiation therapy

Nausea and vomiting can also be caused by [radiation therapy](#)⁵. The risk of having these side effects with radiation are related to:

The part of the body being treated. Nausea and vomiting happen more often when people get radiation to the abdomen (belly), liver, or brain. Nausea and vomiting also happen more often when people get radiation to their whole body (total body irradiation (TBI) to get ready for a [stem cell or bone marrow transplant](#)⁶).

The dose of radiation and the treatment schedule. The larger the dose of radiation, the higher the risk for nausea and vomiting. Radiation treatment is often given in smaller doses over a period of time to decrease this risk.

If chemotherapy is given along with the radiation. Getting radiation while also getting chemotherapy can increase the risk of nausea and vomiting.

Questions to ask about nausea and vomiting

Ask your cancer care team:

Is my cancer treatment likely to cause nausea and vomiting?

Hesketh PJ et al. Antiemetics: ASCO guideline update. *Journal of Clinical Oncology*. 2020;38(24). Accessed at <https://ascopubs.org/doi/10.1200/JCO.20.01296> on March 11, 2024.

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Medicines Used to Treat Nausea and Vomiting

It is important to control nausea and vomiting as much as possible. These symptoms can affect your daily life, and mental and physical health. Nausea and vomiting can cause cancer treatment delays and make it hard for you to continue treatment. Relieving these side effects can help you better deal with your treatments and keep them on schedule.

Many medicines are used to help prevent and control nausea and vomiting. Which ones you get will depend on how likely your treatment is to cause nausea and vomiting and how the medicines worked for you during past treatment.

- [Types of anti-nausea and vomiting medicines \(anti-emetics\)](#)
- [How are anti-emetics medicines given?](#)
- [Cost of anti-emetics](#)
- [How does my cancer care team know what anti-emetics to give to me?](#)

- [Treating nausea and vomiting caused by cancer medicines](#)
- [Treating nausea and vomiting caused by radiation therapy](#)

Types of anti-nausea and vomiting medicines (anti-emetics)

There are different pathways in your body that can cause nausea and vomiting. Some of these pathways are in the brain while others are in the digestive tract (esophagus, stomach, and intestines). Which pathways are affected depends on the treatment you are getting. Anti-emetics help block these pathways.

Anti-emetic medicines are grouped by how they work in the body to prevent nausea and vomiting. Each group of medicines works in a different way. They are often combined to be most effective.

The following anti-emetics are the ones used most often to prevent and treat nausea and vomiting.

Serotonin (5-HT₃) antagonists (examples include ondansetron, granisetron, dolasetron, and palonosetron)

- Work best when given on a schedule before and during chemo treatment.
- Don't make you sleepy but might cause headache and constipation.

NK-1 receptor antagonists (examples include aprepitant, rolapitant, fosaprepitant, and netupitant)

- Work best to prevent, not treat, nausea and vomiting.
- Most helpful in preventing delayed nausea and vomiting.

Steroids (Dexamethasone is the steroid used most often for nausea and vomiting).

- Most often given with other anti-emetic medicines to better prevent nausea and vomiting. Can cause indigestion so should be taken with food.
- Best taken in the morning as they can make it harder to go to sleep at night.
- Can cause hiccups and increase blood sugar. People with diabetes might need to watch their blood sugar more closely.

Olanzapine

Has been shown to be helpful with nausea and vomiting, especially when given

How are anti-emetics medicines given?

There are many ways to take anti-emetic medicines. Most often they are given through an IV (intravenously), by mouth as a pill or liquid, or as a tablet that dissolves under your tongue. Sometimes anti-emetics may also be given as a patch that sticks to your skin or as a suppository.

Your cancer care team will think about the following things when choosing the best way to give you anti-emetics.

- How likely it is that your cancer treatment will cause nausea and vomiting
- How bad your nausea and/or vomiting is
- The easiest way for you to take the medicine
- What you prefer
- Whether you need a medicine that lasts for a longer period (such as for preventing nausea and vomiting) or a medicine that works quickly (such as for breakthrough pain).
- Your medical insurance coverage and cost of the medicine

If the medicines used first don't work, your doctor can switch you to another medicine or add a new one. Another option is to give the medicines in a different way (by a different route).

Taking pills by mouth is often the best, easiest, and cheapest way to prevent nausea and vomiting. But if you're already vomiting, or you can't swallow and keep things down, the medicine might need to be given another way, such as by a patch or into a vein.

Let your cancer care team know if you are still having nausea and vomiting even with an anti-emetic treatment. There are many options and other medicines or ways of giving them might work better for you. Don't let nausea and vomiting keep you from being able to eat and drink. There are many medicines that can be used to prevent and treat these side effects.

Cost of anti-emetics

Medicines used to prevent and treat nausea and vomiting can be expensive. The cost to you will depend on:

- Whether you have prescription insurance and how much of the cost it covers
- Whether you are given a brand name or generic medicine (if available)

- How the anti-emetic is given (pill or liquid you swallow, by IV, or a patch on your skin)

You might need to get pre-approval from your health insurance or prescription plan before your anti-emetics will be covered. Ask your cancer care team about the cost of

- Ask how well any anti-nausea medicines have worked for you before
- Look at side effects of the anti-emetics
- Make changes as needed to help keep you from having nausea and vomiting

It's easier to prevent nausea and vomiting than stop it once it starts. That is why anti-nausea and vomiting medicines are often given on a regular schedule around the clock. Your cancer care team might tell you to take the medicines on a schedule even if you don't have any nausea or vomiting.

Sometimes, you may take the medicine on an "as needed" schedule. This means you take the medicine at the first sign of nausea to keep it from getting worse. Ask your cancer care team how you should take these medicines.

- Medicines to prevent nausea and vomiting should start before the treatment is given.
- Anti-emetics should continue as long as the cancer treatment is likely to cause nausea and vomiting. This can be different based on the treatment plan and medicines given.

Each time you start a new cycle of chemo, be sure to tell your cancer care team what did and didn't work the last time.

Treating nausea and vomiting caused by radiation therapy

If your radiation treatment is likely to cause nausea and vomiting, your cancer care team will give you medicines to help prevent it. Anti-nausea and vomiting medicines may be given by mouth, into a vein, or both.

Your cancer care team will look at several things when choosing the best plan to help prevent and manage nausea and vomiting.

- How likely your radiation treatment is to cause nausea and vomiting
- Your history of nausea and vomiting
- How well any anti-nausea medicines have worked for you before
- Side effects of the anti-nausea medicines

They will then make changes as needed to help keep you from having nausea and vomiting

Anti-nausea and vomiting medicines are often given on a regular schedule around the clock. Your cancer care team may tell you to take the medicines on schedule even if you don't have any nausea or vomiting.

Sometimes, you may take the medicine "as needed." This means you take the medicine at the first sign of nausea to keep it from getting worse. Ask your cancer care team the best way to take your anti-nausea and vomiting medicines.

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/treatment-types/complementary-and-integrative-medicine/marijuana-and-cancer/benefits-of-cannabis.html
2. www.cancer.org/cancer/managing-cancer/treatment-types/complementary-and-integrative-medicine/marijuana-and-cancer/cannabis-risks.html
3. www.cancer.org/cancer/managing-cancer/treatment-types/complementary-and-integrative-medicine/marijuana-and-cancer/cannabis-products.html

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Managing Nausea and Vomiting at Home

Taking medicine is the main part of managing nausea and vomiting. But there are other things you can do that can help as well.

- [Eating and drinking when you have nausea](#)
- [Tips if you are vomiting](#)
- [Complementary and integrative treatments for nausea and vomiting](#)
- [Call your doctor or cancer care team if you](#)
- [Go to the emergency room or call 911 if you](#)

Eating and drinking when you have nausea

You may not feel like eating or drinking when you have nausea and vomiting. But try to drink as much fluid as you can so that you don't get [dehydrated](#)¹. And eat enough so that your stomach isn't too empty. Try the following:

- Sip liquids slowly throughout the day. Cold, clear liquids may be the easiest on your stomach. (Clear liquids are those you can see through, such as ginger ale, apple juice, broth, tea, etc.)
- Eat small snacks and meals several times a day. If your stomach is empty, your

nausea might be worse.

- Eat bland foods that are easy on your stomach, such as crackers, toast, clear broth, plain yogurt, or sherbet.
- Eat something light like pretzels or crackers with medicines unless you have been told to take them on an empty stomach.
- Sour foods, such as sour candy, pickles, lemons, or lime might help with nausea.
- Eat foods when they are cool or at room temperature, so their smell isn't as strong.
- Try popsicles or gelatin.

Suck on hard candy with pleasant smells, such as lemon drops or mints, to help get rid of bad tastes.

tolerated.

- Try ice chips or frozen juice chips, which can be dissolved in your mouth, to get more liquids.

Complementary and integrative treatments for nausea and vomiting

Anti-nausea and vomiting medicines (anti-emetics) are the main treatments for nausea and vomiting. But some non-medicine treatments may also be used.

[Complementary and integrative treatments](#)² may be used alone for mild nausea or [anticipatory nausea and vomiting](#). These methods can also be used with anti-emetics if your cancer treatment is likely to cause nausea and vomiting.

These methods try to decrease nausea and vomiting by:

- Helping you feel relaxed
- Distracting you from what's going on
- Helping you feel in control
- Making you feel less helpless

If you'd like to try one or more of these methods, ask your cancer care team if the methods are safe for you. They may also be able to help you find a therapist trained in these techniques.

Studies have found that some integrative methods can be helpful for nausea and vomiting. These include:

Relaxation techniques

[Relaxation techniques](#)³ such as meditation (focusing the mind), breathing exercises, or progressive muscle relaxation (tensing and relaxing the muscles) can help decrease nausea and vomiting.

Biofeedback is sometimes used to support relaxation techniques for nausea and vomiting. It uses devices to look for signs of stress to help you focus on relaxation.

Guided imagery

[Guided imagery](#)⁴ helps people imagine that they are in a place that's relaxing for them. Imagining what you would feel, hear, see, and taste in the pleasant place, might help you mentally block the feelings of nausea and vomiting.

Acupuncture

Acupuncture is a traditional Chinese method in which very thin needles are put into the skin at certain points of the body. Some people have reported that acupuncture helped with their nausea. But research studies have not shown a clear benefit.

Acupuncture should only be done by a licensed, certified acupuncturist. Ask your cancer care team if it is safe for you to get acupuncture. Also ask for ideas about where to get acupuncture if you want to pursue it.

Other complementary and integrative methods

There are other methods that some reports say might help manage nausea and

3. www.cancer.org/cancer/survivorship/coping/practice-mindfulness-and-relaxation.html
4. www.cancer.org/cancer/survivorship/coping/practice-mindfulness-and-relaxation.html

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