

NCCN Guidelines for Patients®

Version 1.2016

Nausea and Vomiting

SUPPORTIVE CARE BOOK SERIES



Available online at NCCN.org/patients





Nausea and Vomiting

Dealing with the health problems caused by cancer or its treatment can be overwhelming. The goal of this book is to help you get the best care for preventing nausea and vomiting (antiemesis) related to cancer treatment. This book also explains which treatments are recommended by experts in cancer on reducing nausea and vomiting.

The National Comprehensive Cancer Network® (NCCN®) is a not-for-profit alliance of 27 of the world's leading cancer centers. Experts from NCCN have written guidelines for doctors to prevent nausea and vomiting in people with cancer. These guidelines suggest what the best practice is in cancer care. The information in this patient book is based on the antiemesis guidelines written for doctors.

This book focuses on preventing and treating nausea and vomiting in people with cancer. Key points of the book are summarized in the related **NCCN Quick Guide™**. NCCN also offers patient resources on supportive care for adolescents and young adults, and cancer treatment guidelines for many cancer types. Visit [NCCN.org/patients](https://www.nccn.org/patients) for the full library of patient books, summaries, and other resources.

Credits

NCCN aims to improve the care given to patients with cancer. NCCN staff work with experts to create helpful programs and resources for many stakeholders. Stakeholders include health providers, patients, businesses, and others. One resource is the series of books for patients called the NCCN Guidelines for Patients®. Each book presents the best practice for a type of cancer. The patient books are based on clinical practice guidelines written for cancer doctors. These guidelines are called the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®). Clinical practice guidelines list the best health care options for groups of patients. Many doctors use them to help plan cancer treatment for their patients.

Panels of experts create the NCCN Guidelines®. Most of the experts are from NCCN Member Institutions. Panelists may include surgeons, radiation oncologists, medical oncologists, and patient advocates. Recommendations in the NCCN Guidelines are based on clinical trials and the experience of the panelists. The NCCN Guidelines are updated at least once a year. When funded, the patient books are updated to reflect the most recent version of the NCCN Guidelines for doctors. For more information about the NCCN Guidelines, visit NCCN.org/clinical.asp.

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Supported by NCCN Foundation®



NCCN Foundation supports the mission of the National Comprehensive Cancer Network® (NCCN®) to improve the care of patients with cancer. One of its aims is to raise funds to create a library of books for patients. Learn more about the NCCN Foundation at NCCN.org/foundation.

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Who should read this book?

This book is designed for people with cancer on how to avoid or reduce nausea and vomiting related to cancer treatment. It may also be useful for caregivers, family, and friends who want to help them.

Where should you start reading?

This depends on what you need to know! Each topic is described at the start of Parts 1 through 5. Page numbers are listed so you can flip right to information you need. Your treatment team can also point out the sections that apply to you.

Does the whole book apply to you?

Nausea and vomiting caused by cancer treatment can greatly affect your quality of life. This book will address ways to prevent and treat nausea and vomiting. This can be done with medication or other forms of therapy.

The information in this book is based on science and the experience of NCCN experts. Feel free to skip over sections that don't apply to you. And always, keep in mind that this book does not replace the suggestions of your doctors. If other suggestions are given, feel free to ask your treatment team questions.

Help! What do these words mean?

In this book, many medical words are included. These are words that you will likely hear from your treatment team. Most of these words may be new to you, and it may be a lot to learn.

Don't be discouraged as you read. Keep reading and review the information. Don't be shy to ask your treatment team to explain a word or phrase that you do not understand. Words that you may not know are defined in the text or in the *Dictionary*.

Words in the *Dictionary* are underlined when first used on a page. Acronyms are also defined when first used and in the *Glossary*.

Acronyms are short words formed from the first letters of several words. One example is CINV for chemotherapy-induced nausea and vomiting.

Nausea and vomiting



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- 6 What is nausea and vomiting?
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Nausea and vomiting is a common side effect of cancer treatment.

Part 1 talks about what causes nausea and vomiting, as well as what nausea and vomiting can do to your body.

What is nausea and vomiting?

It can be overwhelming to learn all the possible side effects that can happen from your treatment. Cancer treatment can harm the healthy tissue in your body. This harm can cause side effects. Because of this possible harm, a cancer doctor (oncologist) or nurse may share with you a list of common side effects. Others may share the whole list of side effects. The side effects can range from more or less likely to occur.

One person may have some side effects while another person has none. Either way, it is helpful to do some research on side effects.

You can learn:

- What to expect from treatment
- How to prevent side effects
- How to treat and cope with side effects

It is important to include side effects in your care plan. Antiemesis is the medical term used by doctors for preventing nausea and vomiting. This book will prepare you to talk with your doctors about your options. These options include how to prevent and treat nausea or vomiting. In some cases, you may need to find ways to cope with the side effect of nausea or vomiting.

Nausea is that feeling you have when you are going to throw up. You feel sick to your stomach and may not know how to describe the feeling. Vomiting (emesis) is throwing up what is in your stomach. It usually comes out of your mouth and can also come out through your nose. You can gag or try to bring up the contents of the stomach but nothing comes out. This is called dry heaving. Nausea and vomiting can happen together or one without the other.

Some general causes of nausea and vomiting are:

- Disease
- Infection or a virus
- Food poisoning
- Medicine
- Motion sickness
- Morning sickness (with pregnancy)
- Intense pain
- Cancer treatment

For this book we will focus on cancer treatment and how it causes nausea and vomiting. Nausea can come on quickly or be delayed. Delayed nausea is more common when related to cancer treatment. If the nausea is delayed it can be more intense and harder to treat.

Some facts about nausea and vomiting

- ✓ Nausea is more likely to happen in younger people than in older people with cancer.
- ✓ People with cancer have said that nausea can be worse than vomiting.
- ✓ Preventing nausea is key. Once the nausea starts it is hard for it to stop.



How it starts

Vomiting is when your stomach empties what is inside. Vomiting is caused by signals that come from:

- The CTZ (**chemoreceptor trigger zone**) in the brain that helps the body recognize and get rid of toxic or dangerous substances
- Throat and GI tract (gastrointestinal tract-organs through which food passes)
- The outer layer that coats the brain (cerebral cortex)

The signals go from the vomiting center in the brain to your salivation center (where saliva is made) in your mouth. They then go to your stomach muscles, your breathing center, and the nerves in your brain. Your doctor can give you anti-nausea and vomiting drugs (antiemetics) to stop these signals.

This is the science behind the nausea and vomiting you have. Nausea and vomiting can be hard to stop, which is why the word "prevent" is important in side effect care. Your medical team is there to help you feel better. The goal is to prevent and treat side effects that can make you feel lousy.

Stay on track

When it comes to your treatment plan, it is very important to your doctors that you stay on track. He or she doesn't want something like nausea or vomiting to stop or delay your treatment. That being said, advances have been made in the treatment for nausea and vomiting. These advances help find better ways to prevent or treat these unwanted side effects.

Clinical trials (research studies) find these advances to manage side effects like nausea and vomiting. Ask your doctor or nurse if a clinical trial may be an option for you. There may be clinical trials where you're getting treatment or at other treatment centers nearby. See Part 5 for websites where you can search clinical trials for nausea and vomiting.

What can nausea and vomiting do to your body?

Even though nausea and vomiting are common side effects, they can be serious and cause harm to your body. These side effects can make you feel sick, and change or put a stop to your daily routine. Nausea and vomiting can also hold up your treatment schedule.

Nausea and vomiting can cause you to:

- Be low in minerals (electrolytes) that your body needs
- Not want to eat
- Lose fluids (become dehydrated)
- Miss out on vitamins or minerals you need from food or drink
- Lose energy and not be able to do your daily activities
- Have wounds that heal slowly
- Possibly tear the tube-shaped organ between the throat and stomach (esophagus)
- Not function like you normally do in your mind and body

Some people with cancer may have nausea and vomiting, and some may not experience it at all. If you have it and don't try to stop it, the nausea and vomiting can get worse with time. You can become dehydrated and need IV (intravenous) fluids. That is why it is important to talk to your doctor or nurse about nausea and vomiting before you start treatment.

What is antiemesis?

Antiemesis is the prevention of nausea and vomiting. It is a medical term used by doctors. It is a part of your care plan because nausea and vomiting can be related to certain kinds of cancer treatment. The goal of your care is to prevent nausea and vomiting. Your doctors will provide treatment and help you cope if prevention does not work.

The first step is for your doctors to learn all they can about you. This includes your medical history of nausea and vomiting. Other things your doctor will think about when planning how to prevent nausea and vomiting are found in [Guide 1](#).

Guide 1. Things your doctor will consider when making a plan

Cancer treatment information:

- The type of treatment you will get
- How much of the treatment you will get (dose)
- When and how often you will get the treatment (schedule)
- How the treatment will be given to you (for example, in pill form or into a vein by IV)

Things specific to you:

- Age
- Gender (male or female)
- Past cancer treatments
- History of drinking alcohol
- Current medications

Review

- Nausea is that feeling you have when you are going to throw up.
- Vomiting (emesis) is throwing up what is in your stomach.
- People with cancer are at risk for having side effects like nausea and vomiting from cancer treatment.
- Antiemesis is the prevention of nausea and vomiting.

2

Causes



2 Causes

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Many things can cause nausea and vomiting.

Part 2 looks at which cancer treatments can cause nausea and vomiting. Nausea and vomiting can happen before, during, and after treatment.

What causes nausea and vomiting in people with cancer?

Nausea and vomiting are two of the more common side effects a person with cancer can have. It can happen from the cancer itself, health problems caused by cancer, and from cancer treatment.

Possible causes of nausea and vomiting in people with cancer include:

- Anxiety
- Infection
- Balance issues
- Cancer that spreads to the brain (metastatic cancer)
- Lack of minerals in your body (electrolyte imbalance)
- Other drugs' side effects (for example, drugs for pain)
- Your small intestine or large intestine (bowel) is blocked or you are very constipated
- Food staying in your stomach too long
- Abnormal buildup of fluid (ascites) in the belly area (abdomen)

What cancer treatments can cause nausea and vomiting?

People with cancer are at risk of having side effects like nausea and vomiting from radiation or systemic therapy. For example, radiation therapy to the upper abdomen or whole body can cause nausea and vomiting.

Systemic therapy travels throughout your body to treat cancer cells. Some types can cause nausea and vomiting. The systemic therapies that can cause these side effects are chemotherapy, targeted therapy, and immunotherapy.

Below is a list of cancer treatments that can cause nausea and vomiting:

Radiation therapy uses high-energy particles or rays to kill cancer cells.

Chemotherapy includes drugs that disrupt the life cycle of cancer cells.

Targeted therapy seeks out and blocks how cancer cells grow and move in the body.

Immunotherapy is designed to boost immune activity. It helps the immune system find and attack cancer cells.

Whether given alone or together, these treatments can cause nausea and vomiting. These side effects can happen before, during, or after treatment.

The risk of nausea and vomiting

NCCN experts create treatment guidelines for doctors to use when preparing a treatment plan. Chemotherapy drugs can be put into 4 groups and used for this plan. These groups tell the doctor how likely the drug is to cause nausea and vomiting.

Chemotherapy drugs that cause nausea and vomiting are grouped as:

- ✓ High risk
- ✓ Moderate risk
- ✓ Low risk
- ✓ Minimal risk

It is important for your doctor to understand the risk of nausea and vomiting for each type of cancer drug you get. The doctor can plan to prevent it by checking the level of risk. He or she will also look at what other causes could put you at risk for nausea and vomiting. The other causes are discussed in *Part 1, Nausea and Vomiting*.



Guide 2. Types of chemotherapy-induced nausea and vomiting

Types	Details about the types
Acute happens within a few minutes or several hours of treatment.	<ul style="list-style-type: none"> • This type usually stops within the first 24 hours of treatment. • The level of intensity of acute nausea and vomiting will go down (peak) after 5–6 hours. • This type is caused by a history of nausea and vomiting, the type of cancer treatment, and amount given. • Chemotherapy given for more than one day can cause this type. • It usually occurs in woman young than 50 years of age who: <ul style="list-style-type: none"> ◦ Only drink small amounts of alcohol. ◦ Have a history of being sick from motion. ◦ Had morning sickness (nausea and vomiting) during pregnancy.
Delayed occurs more than 24 hours after treatment is given.	<ul style="list-style-type: none"> • This type happens with chemotherapy drugs like cisplatin, carboplatin, cyclophosphamide, and doxorubicin. • For cisplatin, the vomiting gets to its highest intensity 48–72 hours after it is given. It can then last for 6–7 days. • Chemotherapy given for more than one day can cause this type.
Anticipatory happens before the next treatment is given.	<ul style="list-style-type: none"> • This type is based on a bad past experience when getting treatment. You feel the bad experience all over again. • Nausea is more common than vomiting with this type. • Younger people with cancer are more likely to have this type because: <ul style="list-style-type: none"> ◦ They can be given more intense than usual (aggressive) treatments. ◦ It can be harder for younger people to control vomiting.
Breakthrough refers to nausea and vomiting that happens despite trying to prevent it with drugs.	<ul style="list-style-type: none"> • Anti-nausea and vomiting drugs called antiemetics are used to treat this type.
Refractory refers to nausea and vomiting that keeps happening even when using drugs to stop or prevent it.	<ul style="list-style-type: none"> • The nausea and vomiting will keep happening with each following treatment. • The treatment for the nausea or vomiting is not working in the body.

What are the types of nausea and vomiting?

Cancer treatments like chemotherapy and radiation therapy can bring on nausea and vomiting. The risk of having these side effects depends on the specific treatment type and area it reaches in your body. The types of nausea and vomiting related to treatment are called CINV (chemotherapy-induced nausea and vomiting) and radiation-induced nausea and vomiting.

CINV

Chemotherapy is a systemic therapy that attacks fast-dividing cancer cells. It can also damage normal cells in the process. This damage to the normal cells causes side effects. When nausea and vomiting are caused by chemotherapy it is called CINV. The term "induced" means "to bring on something."

The types of CINV are called acute, delayed, anticipatory, breakthrough, and refractory. [See Guide 2](#) for detailed information on the types of CINV.

Radiation-induced nausea and vomiting

Radiation therapy can be given from a machine outside the body. This is called external beam radiation therapy. Nausea and vomiting are more likely to happen when radiation is used to treat the upper abdomen or whole body. The risk for nausea and vomiting gets higher as the doses of radiation get larger and reach more areas of tissue in the body.

Upper abdomen radiation: The digestive organ that absorbs nutrients from food you eat is called the small intestine. It has rapidly dividing cells, which makes it sensitive to a treatment like radiation therapy. Radiation aims to kill the cancer cells that are rapidly dividing. The radiation may reach and damage healthy tissue, causing side effects.

Whole body radiation: Radiation may be given to someone who is preparing for a bone marrow transplant. A bone marrow transplant is a cancer treatment that destroys the soft tissue in the middle of your bones (bone marrow) with chemotherapy or radiation. The damaged bone marrow is then replaced with healthy bone marrow. Side effects like nausea and vomiting can happen during this whole body treatment.

Chemoradiation: Nausea and vomiting can happen when chemotherapy and radiation are given together. If this happens, anti-nausea and vomiting drugs can be given. The type, dose, and timing of these drugs is based on how likely the chemotherapy will cause these side effects.



Level of risk

To prevent nausea and vomiting, your doctor can make a plan with anti-nausea and vomiting drugs. If you are getting more than one cancer drug, your doctor will base your plan on the drug with the highest risk. Your doctor will also consider other factors that put you at risk for nausea and vomiting. [See Guide 1](#) on page 9.

To assess the level of risk, your doctor will also consider the form of chemotherapy. Forms include pills or liquid. The liquid chemotherapy is given through an IV.

For pills that have a high to moderate risk, your doctor can give you anti-nausea and vomiting drugs on a schedule. For pills that have a low to minimal risk, your doctor can give you anti-nausea and vomiting drugs as needed. When given as needed, this can be every 4 or 6 hours, or daily.

Prevention is recommended for IV chemotherapy that can cause acute and delayed nausea and vomiting. For IV chemotherapy that has a high to low risk, you have more than one option. For IV chemotherapy that has a minimal risk, you may not get any anti-nausea and vomiting drugs.

You can also get a type of drug called a histamine H2 antagonist (H2 blocker) or proton pump inhibitor before your cancer treatment. The H2 blocker or proton pump inhibitor can reduce the stomach acid that can cause a symptom like heartburn.

Review

- Nausea and vomiting caused by systemic therapies like chemotherapy is called CINV (chemotherapy-induced **nausea** and **vomiting**).
- The types of CINV are called acute, delayed, anticipatory, breakthrough, and refractory.
- Nausea and vomiting may happen when radiation is used to treat the upper abdomen or whole body.

Preventing and treating



3 Preventing and treating

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You and your doctor can make a plan.

Part 3 gives you information about anti-nausea and vomiting drugs. You will also learn about complementary therapy for nausea and vomiting.

How are nausea and vomiting prevented?

Doctors need to think about many things when deciding how to prevent nausea and vomiting. Research has been done to find new or better ways to prevent nausea and vomiting. The kind of treatment you get should fit your specific needs. Drugs and other types of therapy like meditation or breathing exercises can be used to prevent or treat nausea and vomiting.

Things your doctor considers when planning to prevent nausea and vomiting:

- Your past use of anti-nausea and vomiting drugs
- Your type of cancer treatment
- Your level of risk for nausea and vomiting from the cancer treatment

The side effects you're likely to have depend on the type of cancer treatment you get.

Some chemotherapies can cause more side effects than drugs that seek out cancer cells, such as targeted therapy and immunotherapy. Higher doses of cancer drugs may also cause more severe side effects.

After the last dose of chemotherapy, the possibility you will start vomiting lasts for at least 3 days for high risk chemotherapy drugs. It can last for 2 days for moderate risk chemotherapy drugs. If needed, anti-nausea and vomiting drugs can be given after you start your cancer treatment.

Planning ahead

When your doctor aims to prevent, he or she needs to plan ahead. He or she will need to look at the whole picture from before cancer treatment until the last dose. Your doctor can use a treatment guide to know:

- What drug to give you
- The side effects of the drug
- The time to give it to you (for example, 24 hours before cancer treatment)
- How much you will need (dose)

Keeping you safe . . .

Your doctor and pharmacist need to check that the anti-nausea and vomiting drug will not react with other medicine you take. He or she will ask you to follow the recommended dose on the package insert that comes with the drug.

How are nausea and vomiting treated?

Sometimes despite using the anti-nausea and vomiting drugs and other therapy, nausea and vomiting can still happen. The plan changes from preventing nausea and vomiting to reducing these side effects. If you can't take a pill by mouth due to the nausea or vomiting, the doctor can give it by IV, injection, on the skin, or through the rectum (end part of the intestine). It is usually given through the rectum or IV when a pill can't be taken.

You may get anti-nausea and vomiting drugs around the clock. The doctor can also give you fluids to replace what you have lost and make sure you stay hydrated. This may be a time your doctor needs to try different drugs or use more than one drug at a time. One drug may not work during one cycle (round) of cancer treatment. If this happens, it is good to try a new one at the next visit. For example, you might have CINV that continues despite the use of anti-nausea and vomiting drugs.

Your doctor will assess the cause before your next treatment. There could be causes other than cancer treatment. Other causes could be another disease, the cancer itself, lack of minerals in your body, or GI problems. Your treatment team has a lot of experience and paths they can take to help with side effects.

Medicine is the main treatment

Medicine is the main treatment for nausea and vomiting. You may have to try one or more anti-nausea or vomiting drugs to find which is most helpful for you. Some are given before treatment (pre-treatment) and some are given after.

Guide 3. Common anti-nausea and vomiting drugs

Type of drug	Generic name	Brand name
Serotonin (5-HT₃) antagonist	dolasetron	Anzemet®
	granisetron	Kytril® Sancuso® (for the skin patch version of this drug)
	ondansetron	Zofran®
	palonosetron	Aloxi®
Neurokinin-1 (NK-1) antagonist	aprepitant	Emend®
	fosaprepitant	
	netupitant	Akynzeo® (brand name for netupitant combined with palonosetron)
	rolapitant	Varubi™
Adrenocortical steroid	dexamethasone	Decadron®
Atypical antipsychotic	olanzapine	Zyprexa® Zydis®
Benzodiazepine	alprazolam	Niravam™, Xanax XR®, Xanax®
	lorazepam	Ativan®
Phenothiazine	prochlorperazine	Compazine®
	promethazine	Phenergan®
Cannabinoid	dronabinol	Marinol®
	nabilone	Cesamet®
Other	metoclopramide	Reglan®
	haloperidol	Haldol®
	scopolamine	Transderm Scōp®

Some medication might not work for you. Be honest with your medical team about how you are feeling. Sharing your side effects and tracking how you feel, let's say in a journal or app, may help find the pattern. You want to pay close attention to when you are nauseated or actually vomit. [See Guide 3](#) for a list of common anti-nausea and vomiting drugs you may hear about from your doctor, pharmacist, or even other people you know with cancer.

Getting the medicine

Keep in mind, like any drug, they are many types and even certain ways they are given. For example, your doctor may suggest granisetron or ondansetron with or without dexamethasone for radiation-induced nausea and vomiting. If you have acute (or sudden) nausea and vomiting, you may be given ondansetron, granisetron, dolasetron, or palonosetron to prevent it. Your doctor will go with what is proven to work in preventing the type of nausea and vomiting. He or she will move on to the next drug or combination of drugs if the first try didn't work.

Some drugs come in different forms. This includes pills, liquid [injected into a vein (IV) or muscle (IM; intramuscular), rectal suppository (inserted into the rectum), or transdermal (patch on the skin). The treatment may be taken at a certain time of the day. This might be in the AM or PM, once a day, or more than once a day. Usually, the drugs are given before your cancer treatment. For example, for anticipatory nausea and vomiting, your doctor can consider giving you an anxiety-reducing drug (benzodiazepine). You would take it the night before chemotherapy and again 1–2 hours before chemotherapy. If you have questions about how much or when to take any type of anti-nausea or vomiting drugs, ask your doctor or pharmacist for more information.

Other therapy for nausea and vomiting

Other ways to prevent nausea and vomiting are complementary therapy. They can be used with the

drug or alone to help treat nausea and vomiting.

Complementary therapies are meant to be used alongside standard therapies, most often to prevent or reduce side effects. They can be very helpful for coping with side effects like nausea. Some types of complementary therapy used to treat nausea and vomiting are:

Relaxation techniques – breathing exercises, focusing the mind (meditation), or tensing and relaxing the muscles.

Hypnosis – trance-like state of deep relaxation guided by a trained specialist.

Guided imagery – focusing on positive images in your mind.

Music therapy – therapy using music.

Acupuncture and acupressure – needles (acupuncture) or pressure (acupressure) for healing.

Let the doctor know . . .

You may think about trying complementary therapy. Let your doctor and pharmacist know if you want to use other types of complementary therapies like nutritional supplements, vitamins, or herbs. These therapies may not help and can interfere with some cancer treatments.

To learn more, ask your doctor or nurse about complementary therapy. If you are interested, ask for a referral to a specialist who gives complementary therapy. Some cancer centers or local hospitals offer supportive care programs with therapy like this for people with cancer.

Complementary therapy for anticipatory nausea and vomiting

If you have anticipatory nausea and vomiting it may be good to try a complementary therapy. Some complementary therapies can be used along with anti-nausea or vomiting drugs your doctor prescribes.

Anticipatory nausea and vomiting can happen before the next treatment is given. Prevention is important for this type of nausea and vomiting. Hypnosis and guided imagery have shown to be helpful for anticipatory nausea and vomiting. Ask your doctor if you want to use any type of complementary therapy.

Review

- Drugs and other types of therapy like meditation or breathing exercises can be used to prevent nausea and vomiting.
- Some chemotherapies can cause more side effects than drugs that seek out cancer cells, such as targeted therapy and immunotherapy.
- You may have to try one or more anti-nausea or vomiting drugs to find which is most helpful for you.
- Complementary therapies are meant to be used alongside standard therapies, most often to prevent or reduce side effects.

4

Coping



4 Coping

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- 28 Where can you go for more information?
- 28 Review



Learn how to cope with nausea and vomiting.

Part 4 helps you think about things you can do to cope with nausea and vomiting. You will also find where you can go for more information.

What can you do to cope with nausea and vomiting?

Taking good care of yourself is the most important thing you can do at this time. This might mean getting yourself healthier to prepare for treatment and staying on track with your treatment plan. It is also a good idea to talk to your treatment team. You can reach out to the people in your life when you need help.

- Let friends and loved ones do your grocery shopping or even help you prepare a meal.
- Let your team be your support and help you find resources about nausea and vomiting.
- Be honest and share how your body is feeling with your doctor and your loved ones.

Finding ways to cope can take time. Having the support of your treatment team, family, and friends can help you focus on the most important person—you.

Talk with your doctor

You may be reminded of many things to do during the treatment phase of your cancer journey. One important reminder is to take your anti-nausea and vomiting drugs as prescribed. Another is to stick with your treatment plan for nausea and vomiting. Tell the doctor if your plan is not working.

It is good to be open with your doctor about any side effects you have. Even something like heartburn can be confused with nausea. In this case, the doctor might be able to try an antacid therapy that calms the stomach acid. He or she may be able to give you a specific drug or help you find other ways to cope.

Find ways to cope

You can try different ways to cope with nausea and vomiting. Some things can be done on your own, while others will need to be done with the support of your treatment team.

Here are some things you can try that may help with nausea and vomiting:

- Eat small meals throughout the day.
- Avoid foods that make you feel nauseated (for example, greasy or strong-smelling foods).
- Eat your food at room temperature.
- Follow the directions on your medicine (for example, don't eat 2 hours before treatment).
- Drink plenty of water and other fluids (for example, ginger ale may help with nausea).
- Talk to a registered dietitian or qualified nutritionist who knows how to care for people with cancer.
- Ask a family member or friend to help you learn more about complementary therapies.

For more information on eating:

Go to the National Cancer Institute's *Eating Hints: Before, During, and After Cancer Treatment* at <http://www.cancer.gov/Publications/patient-education/eating-hints>.

Here you can learn more about eating small meals, having a full liquid diet, and avoiding foods that make you feel sick.



Another thing you can do in between visits is make a list of questions to bring with you. You can review the questions with your doctor. For a list of helpful questions, see Part 5 of these patient guidelines.

Keep a diary of your side effects

Think about ways to track your side effects. You may want to keep a weekly diary like the one shown below. You can also create your own way to track nausea, vomiting, or any side effects you experience.

Date	Nausea Time/Other	Vomiting Time/Amount	Notes
SAMPLE DAY June 5, 2016	6-7 pm/didn't last long	7 pm/once	Threw up after taking my chemo pill

Where can you go for more information?

Many cancer centers or local hospitals have complementary therapy programs that offer acupuncture, yoga, and other types of therapy. The goal is to prevent or help you cope with side effects. You can also speak with a social worker, psychologist, or other mental health professional if you have any issues or need guidance. There may be national organizations or local groups in the community who can give information in booklet form (like this one). You can search online resources, or find free support groups in your area. (See *Part 5, Resources*).

Doctors also need to do their part and stay on top of the latest data from research done on anti-nausea and vomiting therapies. Ask your doctor about current information on how to prevent and treat nausea and vomiting. Learn about online and print resources on side effects. Discuss and decide with your treatment team what works best for you when it comes to side effect care.

Review

- Taking good care of yourself is the most important thing you can do at this time.
- It is important to take your anti-nausea and vomiting medicine as prescribed.
- Many cancer centers or hospitals have complementary therapy programs.

5

Resources



5 Resources

30 Questions to ask your doctors

34 Web resources

34 Review



Side effect care is important.

Parts 1 through 4 of this book are meant to help you learn what causes treatment-related nausea and vomiting. They may also help you talk to your doctor about anti-nausea and vomiting therapies.

Part 5 will give you sample questions for the doctor along with web resources on side effect care.

The information in this resource section might help you find out which cancer therapies can cause nausea and vomiting, help you connect with an online support group for dealing with side effects, or find a healthy eating plan to follow. These are only a few examples of how the resources in Part 5 can help you. First, let's start with talking to your doctors about side effect care.

Questions to ask your doctors

You may meet with experts from many fields of medicine during this time. Make it a goal to have helpful talks with each person along the way. Get your questions ready before your visit and repeat back what answers you hear. You can also record your talks and take notes at each visit. It may be helpful to have a family member or friend with you for support.

The questions below are suggestions for the side effects you read about in this book. Feel free to use these questions or come up with your own questions for your doctor and other members of your treatment team.

Questions about side effects

1. What side effects can I expect?
2. When can they start?
3. How long will they last?
4. What can I do to prevent side effects?
5. When should I call the doctor about my side effects?
6. Are there any drugs that will treat these side effects?
7. Are there any complementary therapies that might help?
8. Do you know of any specialists who give complementary therapy?
9. What long-term side effects can happen?

Questions about nausea and vomiting

1. Will the cancer treatment cause nausea and vomiting?
2. If so, when will it start? How long can it last?
3. What can I do to prevent nausea and vomiting?
4. Is there medicine I can take? Or complementary therapy I can try?
5. What can I eat or drink to help with nausea and vomiting?
6. Should I change my diet?
7. Can you help me find a registered dietitian or qualified nutritionist?
8. Where can I get more information on nausea and vomiting?

Questions I want to ask the doctor

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

Web resources

American Cancer Society

Chemotherapy Side Effects Worksheet

www.cancer.org/acs/groups/content/@nho/documents/document/acsq-009502.pdf

Nausea and Vomiting

www.cancer.org/treatment/treatmentsandsideeffects/physicalsideeffects/nauseaandvomiting/index

Nutrition for the Person With Cancer During Treatment: A Guide for Patients and Families

www.cancer.org/acs/groups/cid/documents/webcontent/002903-pdf.pdf

National Cancer Institute

Complementary and Alternative Medicine for Patients

www.cancer.gov/about-cancer/treatment/cam/patient

Nausea and Vomiting

www.cancer.gov/about-cancer/treatment/side-effects/nausea

Nausea and Vomiting (PDQ®) – Patient Version

www.cancer.gov/about-cancer/treatment/side-effects/nausea/nausea-pdq

NCI-Supported Clinical Trials

www.cancer.gov/about-cancer/treatment/clinical-trials/search

Nutrition in Cancer Care (PDQ®) – Patient Version

www.cancer.gov/cancertopics/pdq/supportivecare/nutrition/Patient/page1

National Comprehensive Cancer Network

Clinical Trials

https://www.nccn.org/patients/resources/clinical_trials/find_trials.aspx

National Institutes of Health

Clinical Trials

www.clinicaltrials.gov

University of California San Francisco Medical Center

Diet for Cancer Treatment Side Effects

www.ucsfhealth.org/education/diet_for_cancer_treatment_side_effects/index.html

Nutrition and Coping with Cancer Symptoms

www.ucsfhealth.org/education/nutrition_and_coping_with_cancer_symptoms/index.html

Review

- Shared decision-making is a process in which you and your doctors plan treatment together.
- Asking your doctors questions is vital to getting the information you need to make informed decisions.

Glossary

Dictionary Acronyms

Dictionary

abdomen

The belly area between the chest and pelvis.

acupressure

Pressure used for healing the body.

acupuncture

Needles used for healing the body.

antiemesis

The prevention of nausea and vomiting.

antiemetic

A drug used to treat nausea and vomiting.

ascites

Abnormal buildup of fluid in the belly area (abdomen) or pelvis.

bone marrow

The soft, sponge-like tissue found in the center of most bones, where blood cells are formed.

bone marrow transplant

Procedure that gives blood or bone marrow stem cells intravenously to restore cells that have been destroyed by cancer or its treatment.

bowel

Another name for the intestine. Also called the gut.

central nervous system

The brain and spinal cord.

cerebral cortex

The thin coating that lines the cerebrum in the brain.

chemotherapy

Drugs that kill cancer cells by damaging or disrupting the life cycle of cancer cells so they can't increase in number.

chemotherapy-induced nausea and vomiting (CINV)

Nausea and vomiting brought on by chemotherapy.

clinical trial

Research study on a test or treatment to assess its safety or how well it works.

complementary therapy

Treatment given along with standard treatment.

external beam radiation therapy

Treatment with radiation received from a machine outside the body.

gastrointestinal (GI) tract

The group of organs through which food passes after being eaten.

guided imagery

Focusing on positive images in your mind.

hypnosis

Trance-like state of deep relaxation.

immunotherapy

Treatment that uses the body's natural defense against disease.

infection

An illness caused by germs.

intravenous (IV)

Receipt of a substance by a needle inserted into a vein.

intramuscular (IM)

Receipt of a substance by an injection into a muscle.

intravenous (IV) chemotherapy

Drugs given by a needle or tube inserted into a vein.

large intestine

The digestive organ that prepares unused food to leave the body.

long-term side effect

An unhealthy or unpleasant physical or emotional response to treatment that continues for months or years after finishing treatment.

medical history

All health events and medications taken to date.

metastatic

Containing cancer cells that have spread from the first tumor.

music therapy

Therapy using music.

nausea

Feeling like one is going to throw up.

oncologist

A doctor who specializes in cancer.

psychologist

A doctor who specializes in the study of the mind and human behavior.

quality of life

The satisfaction with one's well-being.

radiation-induced nausea and vomiting

Nausea and vomiting brought on by radiation therapy.

radiation therapy

The use of radiation to treat cancer.

rectum

The last part of the large intestine.

side effect

An unhealthy or unpleasant physical or emotional response to treatment.

small intestine

The digestive organ that absorbs nutrients from eaten food.

social worker

An expert in meeting social and emotional needs.

stomach

An organ of the digestive system that turns solid food into a liquid form.

systemic therapy

Drugs that are used to treat cancer cells throughout the body.

targeted therapy

Treatment with drugs that target a specific or unique feature of cancer cells.

transdermal

Through the skin.

treatment plan

A written course of action through cancer treatment and beyond.

vein

A tube-shaped vessel that carries blood from anywhere in the body to the heart.

vomiting

Throwing up what is in your stomach. Also called emesis.

Acronyms

CINV

chemotherapy-induced nausea and vomiting

CNS

central nervous system

CTZ

chemoreceptor trigger zone

GI

gastrointestinal

IM

intramuscular

IV

intravenous

NCCN Abbreviations and Acronyms

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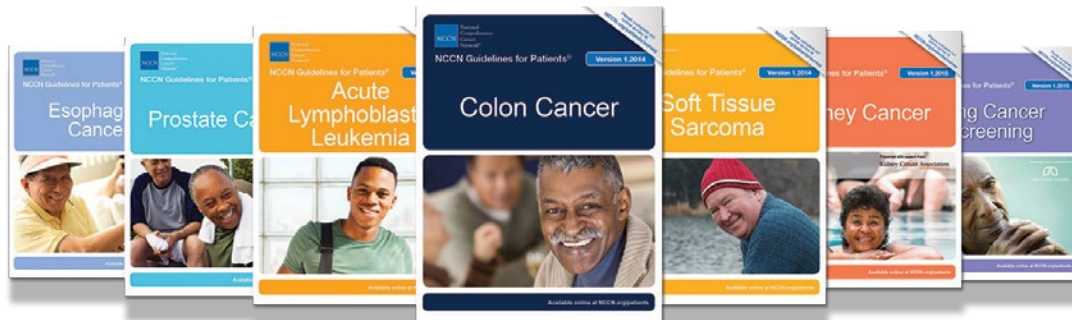
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with Cancer
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 Carcinoma in Situ (Stage 0)
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 Stage III Breast Cancer
 Stage IV Breast Cancer
Chronic Lymphocytic Leukemia
Chronic Myelogenous Leukemia
Colon Cancer
Esophageal Cancer

Hodgkin Lymphoma
Kidney Cancer
Lung Cancer (Non-Small Cell Lung
Cancer)
Lung Cancer Screening
Malignant Pleural Mesothelioma
Melanoma
Multiple Myeloma
Myelodysplastic Syndromes
Nausea and Vomiting

Non-Hodgkin's Lymphomas
 Diffuse Large B-cell Lymphoma
 Follicular Lymphoma
 Mantle Cell Lymphoma
 Mycosis Fungoides
 Peripheral T-cell Lymphoma
Ovarian Cancer
Pancreatic Cancer
Prostate Cancer
Soft Tissue Sarcoma
Stomach Cancer

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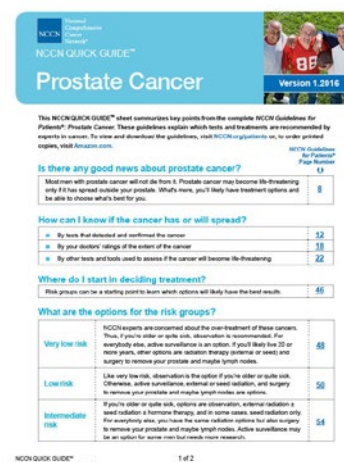
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