



Pain Control: A Guide for Those With Cancer and Their Loved Ones

What do I need to know about pain control?

This information is written to help people with cancer learn about pain control. Reading this can help you:

- Work with your doctors, nurses, and pharmacists to find the best ways to control your pain.
- Know about different types of pain and how each type is treated.
- Learn about different types of pain medicines.
- Know about other ways to help manage pain.
- Take your medicines safely.
- Talk with your doctors and nurses about your pain and how well your treatment is working.

Having cancer does not always mean having pain. But for people who do have pain, there are many different kinds of medicines, different ways to take the medicines, and non-drug methods that can help relieve pain.

Pain can affect all parts of your life. If you have pain, you may not be able to take part in your normal day-to-day activities. You may have trouble sleeping and eating, and be irritable with the people you love. It is easy to get frustrated, sad, and even angry when you are in pain. Family and friends do not always understand how you are feeling, and you may feel very alone in your distress.

You should never accept pain as a normal part of having cancer. All pain can be treated, and most pain can be controlled or relieved. When their pain is controlled, many people can sleep and eat better, enjoy being with family and friends, and continue with their work and hobbies.

Only you know how much pain you are in. Telling your doctor and nurse when you are in pain is very important because pain is easier to treat when it first starts. It can also be an early warning sign of the side effects of your cancer treatment or some other problem. Together, you, your nurse, and your doctor can talk about how to treat your pain. *You have the right to be treated for your pain, and you should insist on it.*

Facts about cancer pain treatment

Cancer pain can almost always be relieved or lessened.

There are many medicines and methods that can be used to control cancer pain. You should expect your health care team to work with you to keep you as comfortable as possible. But no one doctor can know everything about all medical problems, and sometimes pain is a subject they don't know as much about. Even though a lot of progress has been made, some doctors and nurses do not know the best ways to treat cancer pain.

If you are in pain and your doctor has nothing more to offer, ask to see a pain specialist or have your doctor consult with a pain specialist. Pain specialists may be oncologists, anesthesiologists, neurologists, neurosurgeons, other doctors, nurses, or pharmacists. A pain control team may also include psychologists and social workers.

If you have trouble finding a pain program or pain specialist, contact a cancer center, a hospice, or the oncology department of your local hospital or medical center. They should be able to recommend someone to you.

Controlling your cancer pain is part of your cancer treatment.

Your doctor wants and needs to hear about what works for your pain and what does not. Knowing about the pain will help your doctor know more about how the cancer and the treatment are affecting your body. Talking about pain will not distract your doctor from treating the cancer.

Keeping pain from starting and keeping it from getting worse are the best ways to control it.

Pain is best relieved when treated early. You may hear some people refer to this as "staying on top of the pain." Do not try to hold off as long as possible between doses. Pain may get worse if you wait. Then it may take longer, or you may need larger doses, for your medicine to give you relief.

You have a right to ask for pain relief.

Talking about your pain is not a sign of weakness. Not everyone feels pain in the same way. There is no need to "tough it out" or be "brave" if you seem to have more pain than other people with the same kind of cancer. In fact, as soon as you have any pain you should speak up. Remember, it is easier to control pain right when it starts rather than waiting until it becomes severe.

People who take cancer pain medicines the way the doctor or nurse tells them to rarely become addicted to them.

Addiction is a common fear of people taking pain medicine. Such fear may even keep people from taking the medicine. Or it may cause family members to encourage you to

hold off as long as you can between doses.

Addiction is defined as uncontrollable drug craving, seeking, and continued use. When *opioids* (also known as narcotics) -- the strongest pain relievers available -- are taken for pain, they rarely cause addiction as defined here. When you are ready to stop taking opioids, the doctor will lower the amount of medicine you are taking over a few days or weeks. By the time you stop using it completely, your body has had time to adjust. Talk to your doctor, nurse, or pharmacist about how to take pain medicines safely and about any concerns you have about addiction.

Most people do not get "high" or lose control when they take cancer pain medicines the way they are told to.

Some pain medicines can cause you to feel sleepy when you first start taking them. This feeling usually goes away within a few days. Sometimes you become drowsy because now that the pain is under control, you are able to catch up on the much-needed sleep you missed when you were in pain. Sometimes, people get dizzy or feel confused when they take pain medicines. Tell your doctor or nurse if this happens to you. Changing your dose or type of medicine can often solve these problems.

Side effects from pain medicines can be managed and often even prevented.

Some medicines can cause nausea and vomiting, itching, constipation, or drowsiness. A few can cause liver or kidney damage. (We will talk about these in more detail later in "What are the side effects of pain medicine?" in the section "Common questions about taking pain medicines.") Your doctor or nurse can help you manage these side effects. But some of these problems go away after a few days of taking the medicine. And many side effects can be managed by changing the medicine, the dose, or the times when the medicine is taken. Others, like constipation, can often be prevented with stool softeners and other measures.

Your body does not become immune to pain medicine.

Pain should be treated early, and stronger medicines should not be saved for later. It is important to take whatever medicine is needed when it is needed. Your body may get used to the medicine you are taking so the medicine may not relieve the pain as well as it once did. This is called *tolerance*. Tolerance is seldom a problem with cancer pain treatment because your doctor can increase the amount of medicine you are taking or add other medicines. Some people are alarmed by this because they are afraid it means they are addicted, but it is not the same thing. It only means that your body has learned to adjust to the drug in your system over time.

When pain is not relieved, you may feel:

- Tired
- Depressed
- Angry
- Worried
- Lonely

- Stressed

When cancer pain is relieved, you are more able to:

- Enjoy being active.
- Sleep better.
- Enjoy family and friends.
- Eat better.
- Enjoy sexual intimacy.
- Prevent depression.

What causes pain in people with cancer?

Pain is most often caused by the cancer itself. But pain can also be caused by the treatment or the tests done to diagnose cancer. You may also have pain that has nothing to do with your cancer or its treatment. Like anyone, you can get headaches, muscle strains, and other aches and pains.

Pain from the cancer

Whether you have pain and the amount of pain you have depends on the type of cancer, its stage (extent), and your pain threshold (tolerance for pain). Most of the pain occurs when a tumor presses on bones, nerves, or body organs. People with advanced cancer are more likely to have pain.

Spinal cord compression: When a tumor spreads to the spine, it can press on the spinal cord. This is called *spinal cord compression*. The first sign of the compression is usually back and/or neck pain, sometimes with pain or weakness in an arm or leg. Coughing, sneezing, or other movements often make it worse. If you have this pain, get help right away. This compression must be treated quickly to keep you from losing control of your bladder or bowel or being paralyzed. Your doctor can treat the cause of the pain and also give you medicine to relieve the pain. If you are treated for the compression soon after the pain begins, you can usually avoid serious outcomes such as bladder or bowel problems. Treatments usually involve radiation therapy to shrink the tumor. Or you may have surgery to remove the tumor, which is then followed by radiation.

Bone pain: This type of pain can happen when cancer spreads to the bones. Treatment may be aimed at controlling the cancer, or it can focus on the affected bones. External radiation may be aimed at the weakened bone. Sometimes a radioactive medicine is given that settles in the affected areas of bone and helps to make them stronger. Bisphosphonates are other medicines that can help make diseased bones stronger and help keep bones from breaking. These are examples of treatments that are aimed at

stopping the cause of the bone pain. You may still need opioids or other pain medicines, but sometimes these treatments can greatly reduce your pain.

Pain from procedures and surgery

Procedures and testing: Some tests used to diagnose cancer and to see how well the treatment is working are painful. If you and your doctors agree that such a procedure is needed, concern about pain should not keep you from having it done. Any pain you have during and after the procedure can usually be relieved. Your needs and the type of procedure to be done should dictate the kinds of medicine you can get for the pain. You may be told that the pain from the procedure can't be avoided or that it won't last long. Even so, you should ask for pain medicine if you need it.

Surgical pain: Surgery is often used to treat cancers that grow as solid tumors, but other treatments such as radiation or chemotherapy may also be given. Depending on the kind of surgery you have, some amount of pain is usually expected. Doctors prescribe pain medicines so that you do not have to be in pain when your surgery is over. If you tell your doctor or nurse that you are hurting after surgery, you can almost always get medicine to treat it right away. Pain due to surgery can last from a few days to a few weeks, depending on how extensive the surgery was.

Phantom pain: This is a longer-lasting effect of surgery, beyond the usual surgical pain. If you have had an arm, leg, or even a breast removed, you may still feel pain or other unusual or unpleasant feelings that seem to be coming from the absent (phantom) body part. Doctors are not sure why this happens, but phantom pain is real; it is not "all in your head."

No single pain relief method controls phantom pain in all patients all the time. Many methods have been used to treat this type of pain, including pain medicine, physical therapy, antidepressant medicines, and transcutaneous electric nerve stimulation (TENS). If you are having phantom pain, ask your doctor or nurse what can be done.

Pain from other cancer treatments

Some of the side effects that occur with chemotherapy and radiation treatments may cause pain for some people. Pain can even cause some people to stop treatment if it is not managed. Talk to your doctor or nurse about any changes you notice or any pain you have. Here are some examples of pain caused by treatment:

Peripheral neuropathy (PN): This condition refers to pain, burning, tingling, numbness, weakness, clumsiness, trouble walking, or unusual sensations in the hands and arms or legs and feet. Peripheral neuropathy can be caused by certain types of chemotherapy, though vitamin deficiencies, the cancer, and other problems can also cause it. Be sure and tell your doctor right away if you notice these kinds of problems.

Mouth sores (stomatitis or mucositis): Chemotherapy can cause sores and pain in the mouth and throat. The pain can be bad enough that people have trouble eating and drinking.

Radiation mucositis and other radiation injuries: Pain from external beam radiation depends on the part of the body that is treated. It can cause skin burns, mucositis (mouth sores), and scarring -- all of which can result in pain. The throat, intestine, and bladder are also prone to radiation injury, and you may have pain if these areas are treated.

Treating cancer pain

Your doctor will want to find out more about what is causing your pain because that will affect how the pain is treated. Drugs, procedures, cancer treatments, or even surgeries may be used in special ways to manage your pain.

If you have severe pain, your doctor or your cancer team will want to find treatment that best relieves your pain with the fewest side effects. You will need to stay in touch and let the doctor know how the pain treatment is working and how you are doing day to day. The goal is an effective pain control plan that works for you.

Cancer pain is usually treated with drugs that are called *analgesics*. You can buy some very good pain relievers without a prescription or doctor's order (for example, aspirin, acetaminophen, or ibuprofen). These medicines are also called non-prescription or over-the-counter (OTC) analgesics. OTC pain medicines can be used alone for mild pain, and along with other medicines for more severe pain. For other medicines, you will need a prescription. Ask your doctor, nurse, or pharmacist for advice before you take any medicine for pain, since some of them can interact with cancer drugs or worsen certain problems. Medicines are mostly safe when they are used properly, but they can be very harmful if not managed carefully.

For some conditions, medicines and non-medical treatments may not work well. But there are special pain treatments that can often be used for these kinds of cancer pain. For instance, doctors may use things like:

- Radiation to shrink the tumor
- Surgery to remove all or part of the tumor
- Nerve blocks in which medicine is injected into or around a nerve or into the spine to block the pain
- Neurosurgery, where nerves are cut to relieve the pain

There are other methods that may be used. See the section called "Other medical methods to relieve pain" for details.

You may also use non-medical treatments such as relaxation techniques, biofeedback, guided imagery, and others along with the medicines. See the section called "Non-medical treatments for pain."

Developing a plan for pain control

The first step in developing a plan is talking with your doctor, nurse, and pharmacist about your pain. You need to be able to describe your pain to your family or friends, too.

You may want to have your family or friends help you talk to your health care team about your pain, especially if you are too tired or in too much pain to talk to them yourself.

Using a pain scale is helpful in describing how much pain you are feeling. To use the Pain Intensity Scale below, try to assign a number from 0 to 10 to your pain level. If you have no pain, use a 0. As the numbers get higher, they stand for pain that is getting worse. A 10 means it is the worst pain you can imagine.

0	1	2	3	4	5	6	7	8	9	10
No pain										Worst pain

For example, you could say, "Right now, my pain is a 7 on a scale of 0 to 10."

You can use the rating scale to describe:

- How bad your pain is at its worst
- How bad your pain is most of the time
- How bad your pain is at its least
- How your pain changes with treatment

Tell your doctor, nurse, pharmacist, and family or friends:

- Where you feel pain
- What it feels like -- for instance, sharp, dull, throbbing, gnawing, burning, shooting, steady
- How strong the pain is (using the 0 to 10 scale)
- How long it lasts
- What eases the pain
- What makes the pain worse
- How the pain affects your daily life
- What medicines you are taking for the pain and how much relief you get from them

Your doctor, nurse, and pharmacist may also need to know:

- The medicines you are taking now, including vitamins, minerals, herbs, and non-prescription medicines
- The pain medicines you have taken in the past, including what has worked and not worked for you. You may want to keep records of this information.
- Any known allergies to medicines, foods, dyes, or additives

When you go to the doctor, bring all your medicines, vitamins, minerals, herbs, and non-prescription drugs with you. Show them to the doctor and explain how you take them. Questions you may want to ask your doctor or nurse about pain medicine:

- How much medicine should I take? How often can I take it?
- If my pain is not relieved, can I take more?
- If the dose should be increased, by how much?
- Should I call you before increasing the dose?
- What if I forget to take it or take it too late?
- Should I take my medicine with food?
- How much liquid should I drink with the medicine?
- How long does it take the medicine to start working?
- Is it safe to drink alcohol, drive, or operate machinery after I have taken this pain medicine?
- What other medicines can I take with the pain medicine?
- What medicines should I stop taking or avoid while I'm taking the pain medicine?
- What side effects from the medicine are possible, how can I prevent them, and what should I do if I have them?

Keep a record of your pain.

You may find it helpful to keep a record or a diary to track details about your pain and what works best to ease it. You can share this record with those caring for you. This will help them figure out what method of pain control works best for you. Your records can include:

- Words to describe the pain
- Any activity that seems to increase or decrease the pain
- Any activity that you cannot do because of the pain
- The name, dose, and time you take your pain medicines
- The times you use other pain-relief methods (such as rest, relaxation techniques, distraction, skin stimulation, or imagery)
- The number you rate your pain at the time you use a pain-relief measure (medicine or method to reduce pain)
- Pain rating 1 to 2 hours after using the pain-relief measure

- How long the pain medicine works
- Pain rating throughout the day (to get an idea of your general comfort)
- How pain interferes with your normal activities, such as sleeping, eating, sex, or working
- Any side effects you have that may be from the medicines

Below is an example of how you might set up your pain diary:

Date & time	Pain score (0 to 10)	Where pain is and how it feels (ache, sharp, throbbing, shooting, etc.)	What I was doing when it began	Name, time, and amount of medicine taken	Non-drug techniques I tried	How long the pain lasted	Other notes
3/12 7:40a.m.	8	Stabbing pain in right side under my arm	Getting out of bed	2 Percocet at 7:45a.m.	Deep breathing	About 35 min.	Pain came down to a 3, and I was able to get up and shower at 8:30.

Your type of pain affects the treatment you will need.

Pain may be acute or chronic. *Acute pain* is severe and lasts a fairly short time. It is most often a sign that the body is being injured in some way, and the pain generally goes away as the injury heals. *Chronic or persistent pain* lasts for long periods of time. It may range from mild to severe. You will notice that we talk here mostly about chronic pain, because it can disrupt your life if it is not well treated.

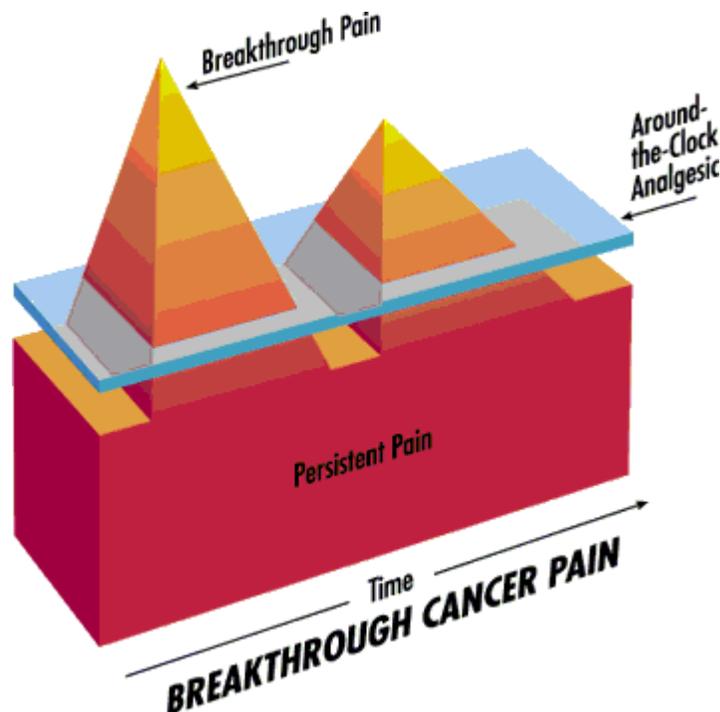
Some people with chronic pain that is mostly controlled by medicine can have breakthrough pain. This is when moderate to severe pain "breaks through" or is felt for a short time. It is common for people with chronic pain that is being treated to have episodes of breakthrough pain, which is discussed in more detail in the next section.

Learning about breakthrough pain

People with cancer pain often notice that their pain changes throughout the day. Many people with chronic cancer pain (pain that lasts longer than 3 months) have 2 types of pain -- persistent pain and breakthrough pain. Persistent or continuous pain is usually controlled by pain medicines taken around the clock (on a regular schedule).

Breakthrough pain is pain that is not controlled by the regular doses of pain medicines.

Breakthrough pain is a flare of pain that happens even though you are taking pain medicine regularly for persistent pain. It's called breakthrough pain because it "breaks through" the pain relief you get from the regular pain medicine schedule. Breakthrough pain may be different for each person, and the person usually cannot predict when it will happen. As a rule, it comes on quickly, lasts as long as an hour, and feels much like persistent pain except that it is more severe or intense. It may happen many times a day, even when the right dose of medicine is given for the chronic pain.



Breakthrough pain is shown in the picture above as spikes through the relief provided by the around-the-clock analgesic (pain medicine to treat persistent pain). Breakthrough pain varies in intensity and usually cannot be predicted.

Breakthrough pain usually has the same cause as persistent pain. It may be the cancer itself or it may be related to cancer treatment. Some people have breakthrough pain during a certain activity, like walking or dressing. For others, it happens unexpectedly without any clear cause.

Different ways to treat chronic and breakthrough pain

Treating chronic pain: Drugs used to treat chronic or persistent pain need to work for a long time. They are called long-acting or sustained-release drugs and are taken at regular times or around the clock. You take these pain medicines on a schedule -- even if you are not having pain at the time the medicine is due. By taking these drugs on a schedule, you can maintain a fairly constant level of pain relief through the day and night. These drugs may be given in the form of tablets or capsules taken every 8 to 12 hours or through a skin patch that is worn for several days. Again, these drugs are taken on a schedule and not just when you are in pain. The medicines used to treat chronic pain are long-acting drugs. They are slowly released into the body and keep pain at a lower level over a long period of time. Drugs for breakthrough pain are different.

Treating breakthrough pain: Breakthrough pain is best treated with pain medicines that work quickly and for a short period of time. They are usually taken as needed, which means that they should be used as soon as you notice breakthrough pain. These short-acting drugs (sometimes called *rescue medicines*) work faster than those used to manage constant pain. They also stay in your body for a shorter time and often cause fewer side effects.

You should take your short-acting medicine when you first notice pain so that it can start to work to relieve your pain. Do not let the pain build up and become too severe, because it will be much harder to get under control. Follow the directions given to you. If the usual dose does not relieve your breakthrough pain, or if you think you are having breakthrough pain too often, tell your doctor or nurse. They may need to adjust the dose or frequency of your regular pain medicine. You may also want to take a dose of your breakthrough medicine to prevent pain before it starts if you know that you are likely to have breakthrough pain during or after a certain activity.

Common questions about breakthrough pain

Why did my doctor prescribe 2 different opioid pain medicines?

Since chronic pain and breakthrough pain are different types of pain, they need different types of medicine. Chronic pain is usually treated with long-acting drugs that are taken regularly to prevent as much pain as possible. Medicines for chronic pain take some time to work, but help to control your pain for hours or even days. Breakthrough pain is treated with short-acting drugs that are taken only when you need them. Drugs used to treat breakthrough pain start working faster to control severe flare-ups of pain then get out of your system quickly. These 2 types of pain medicine work together to treat both your chronic pain and your breakthrough pain.

If I have breakthrough pain, does it mean that the pain medicine I am using regularly for my chronic pain is not working well?

No. Breakthrough pain is an intense flare-up of pain that is usually more severe than chronic pain. Remember, breakthrough pain is common in people with cancer pain. It can happen even when a person is taking the right dose of pain medicine on a regular schedule for their chronic pain.

Still, let your doctor or nurse know if you are having more breakthrough flare-ups and just how often you need your breakthrough medicine. Sometimes you may need a larger dose of your chronic pain medicine.

How can I be sure that I'm getting the right dose of breakthrough pain medicine?

Your breakthrough pain medicine should relieve most of your breakthrough pain without causing unacceptable side effects, such as extreme drowsiness. If your breakthrough pain medicine does not relieve your breakthrough pain or if you have breakthrough pain more than 4 times a day, contact your doctor or nurse. They may need to adjust your dose or type of pain medicines to help you get the best pain relief.

Can I take my chronic pain medicine and my breakthrough pain medicine at the same time during the day?

Yes, if you need to. You may have breakthrough pain just before or after taking your regular pain medicine. At such times, you should take your breakthrough pain medicine and keep taking your chronic pain medicine on schedule. Always follow the directions given to you by your doctor or nurse.

If you notice that you often have breakthrough pain right before your usual dose of chronic pain medicine, talk to your doctor or nurse. They may need to adjust the dose, timing, or frequency of your chronic pain medicine. If you have any questions about when to take either your chronic or breakthrough pain medicines, contact your doctor or nurse to discuss your pain medicine schedule.

What if I need a different pain medicine?

If one medicine or treatment does not work, there is almost always another one that can be tried. If the schedule or way that you are taking medicine does not work for you, it can be changed, too. Talk to your doctor or nurse about finding the pain medicine or method that works best for you. You may need a different pain medicine, a combination of pain medicines, or a change in the dose or timing of your pain medicines if:

- Your pain is not relieved.
- Your pain medicine does not start working within the time your doctor said it would.
- Your pain medicine does not work for the length of time your doctor said it would.
- You have breakthrough pain more than 4 times a day, or it's getting worse, or it's not relieved with the short-acting medicine you are taking for it.
- You have side effects. Side effects such as sleepiness, nausea, and itching usually go away after your body adjusts to the medicine. Let your doctor know if these bother you.
- You have serious side effects such as trouble breathing, dizziness, and rashes. Call your doctor right away if any these start.
- The schedule or the way you are taking the medicine does not work for you.

- Pain interferes with your normal activities, such as eating, sleeping, working, and sex.

To help make the most of your pain control plan:

- Take your pain medicine on a regular schedule (around the clock) to help control chronic pain. Take it when it is time to take it -- even if you are not having pain.
- Do not skip doses of your scheduled medicine. The more pain you have, the harder it is to control.
- If you have breakthrough pain, use your short-acting medicine as your doctor suggests. Don't wait for the pain to get worse -- if you do, it can be harder to control.
- Be sure only one doctor prescribes your pain medicine. If another doctor changes your medicine, the two doctors should discuss your treatment with each other.
- Don't run out of pain medicine. Remember that prescriptions are needed for opioid pain medicines -- the doctor can't call them in, and drugstores don't always have them in stock. It can take a few days to get the medicine, so give yourself time for delays.
- Store pain medicines safely away from children, pets, and others who might take them.
- Never take someone else's medicine. Medicines that helped a friend or relative may not be right for you.
- Do not use old pain medicine or medicine leftover from other problems. Drugs that worked for you in the past may not be right for you now.
- Pain medicines affect different people in different ways. A very small dose may work for you, while someone else may need to take a much larger dose to get pain relief.
- Remember, your pain control plan can be changed at any time.

Medicines used to relieve pain

The type of medicine and the way the medicine is given depend on the type and cause of pain. For example, chronic pain is best relieved by methods that deliver a steady dose of pain medicine over a long period of time, such as a patch that releases medicine through the skin or slow-release pills. On the other hand, breakthrough pain is best treated with medicines that work fast (quick release), but stay in the system only for a short time. Below is an overview of the types of medicines used to relieve pain. More detailed explanations can be found under "Which medicines will I be given?" in the section "Common questions about taking pain medicines."

For mild to moderate pain

Non-opioids: Acetaminophen (Tylenol) and non-steroidal anti-inflammatory drugs (NSAIDs), such as aspirin and ibuprofen, are often used.

You can buy many of these over the counter (without a prescription). For others, you need a prescription. Check with your doctor before using these medicines. NSAIDs can slow blood clotting. This may be a problem if you are having surgery or getting chemotherapy. NSAIDs may also cause harmful effects if you take them while you take certain other medicines.

For moderate to severe pain

Opioids (also known as narcotics): Morphine, fentanyl, hydromorphone, oxycodone, and codeine

You need a written prescription for these medicines. Non-opioids may be used along with opioids for moderate to severe pain to get the best effect.

For breakthrough pain

Rapid-onset opioids: Fast-acting oral morphine; fentanyl in a lozenge or "sucker" form (These forms of fentanyl are absorbed from your mouth as you suck on them -- they are not swallowed.)

You need a written prescription for these medicines. A short-acting opioid, which relieves breakthrough pain quickly, is often used with a long-acting opioid for chronic pain.

For tingling and burning pain

Antidepressants: Amitriptyline, nortriptyline, and desipramine

You need a prescription for these medicines. Antidepressants are prescribed to relieve certain types of pain. Taking an antidepressant does not mean that you are depressed or have a mental illness.

Anti-convulsants (anti-seizure medicines): Carbamazepine, gabapentin, and phenytoin

You need a prescription for these medicines. Despite the name, anti-convulsants are not only used for convulsions (seizures), but also to control burning and tingling (nerve) pain.

For pain caused by swelling or pressure

Steroids: Prednisone, dexamethasone

You need a prescription for these medicines. They are most often used to lessen swelling, which often causes pressure and pain.

Common questions about taking pain medicines

How is pain medicine given?

Some people think that if their pain becomes severe, they will need to get injections or "shots" of pain medicine. In fact, shots are rarely given to relieve cancer pain. There are many other ways you can take pain medicine.

Oral -- means the drug is taken by mouth, either by being swallowed or melted in the mouth. Medicine is given as a liquid, pill, capsule, or in transmucosal form (the drug is in a lozenge or "sucker" and absorbs directly through the tissues of the mouth).

Skin patch -- a clear, bandage-like patch placed on the skin, which slowly but constantly releases the medicine through the skin for 2 to 3 days. This form of medicine is less likely to cause nausea and vomiting.

Rectal suppositories -- medicine that dissolves in the rectum and is absorbed by the body

Injections

- Subcutaneous (SC) injection -- medicine is put just under the skin using a small needle.
- Intravenous (IV) injection -- medicine goes right into a vein through a needle, port, or catheter.
- Intrathecal and epidural injections -- medicine is put into the fluid around the spinal cord (intrathecal) or into the space around the spinal cord (epidural).

Pump, or patient-controlled analgesia (PCA) -- with this method, you have control over the amount of pain medicine you take. When you need pain relief, you press a button to get a pre-set dose of pain medicine through a computerized pump. (The pump carefully controls how much you can get at a time, so you cannot take too much.) The pump is connected to a small tube going into your body. The medicine goes into a vein (intravenously), just under the skin (subcutaneously), or into the area around the spine.

What are the side effects of pain medicine?

Each type of pain medicine has its own side effects, even those that you can buy over the counter. Some, such as aspirin or ibuprofen (and others in that family of drugs), can cause stomach irritation, or even bleeding, and should be taken with food. Side effects are listed in more detail below for each group of drugs.

Many side effects from opioid pain medicine can be prevented. Constipation, for instance, is easier to prevent than to treat. Most doctors will start you on a plan to prevent constipation at the same time they start your opioid pain medicines. Some mild side

effects such as nausea, itching, or drowsiness, often go away without further treatment after a few days, as your body adjusts to the medicine. Let your doctor or nurse know if you are having any side effects and ask for help in managing them.

More serious side effects of pain medicine are rare. As with the more common ones, they often happen in the first few hours of treatment. They include trouble breathing, dizziness, and rashes. If you have any of these side effects, you should call your doctor right away.

If you take any medicines to calm you down (sedatives or tranquilizers), use alcohol, or take sleeping pills, you raise your risk of serious side effects from opioids. People have died from combining these substances with opioids. Talk to your doctor about them before you start taking opioids for pain.

Keep in mind that you usually cannot take aspirin, ibuprofen, and other NSAIDs when you are having chemotherapy. If you are getting cancer treatment, talk to your doctor before you take any non-prescription pain relievers.

Will taking 2 different opioid pain medicines cause more side effects?

This is usually not a problem. In fact, long-acting and short-acting drugs are used together so that you will have fewer side effects. Most people only have breakthrough pain a few times a day and the breakthrough pain is usually much more severe than their chronic pain. By taking a short-acting medicine for breakthrough pain, you get extra medicine only when you need it. Most of the time you can expect the same types of side effects from breakthrough pain medicines as from long-acting medicines.

Which medicines will I be given?

In many cases, non-opioids are all you will need to relieve your pain, especially if you "stay on top of the pain" by taking them regularly. These medicines are stronger pain relievers than most people realize. For example, certain doses of opioids given by mouth are no more effective than 2 or 3 regular tablets of aspirin, acetaminophen, or ibuprofen.

If you do not get pain relief from non-opioids, opioids will usually give you the relief you need. Most side effects from opioids can be prevented or controlled. You should talk to your doctor, nurse, or pharmacist about taking opioids along with non-opioids. The 2 types of medicine relieve pain in different ways and have different side effects. Aspirin, acetaminophen, or ibuprofen taken 4 times a day might help you reduce or even avoid the need for stronger pain relievers. And many people who take opioids can get more relief if they keep taking regular doses of aspirin, acetaminophen, or ibuprofen.

Some pain medicines combine an opioid and a non-opioid, like aspirin or acetaminophen, in the same pill. Ask your doctor, nurse, or pharmacist how much aspirin or acetaminophen, if any, is in your prescription. They can help you figure out how much of these medicines you can take together safely. Other classes of medicines, such as

antidepressants and anti-convulsants, may also be needed to relieve certain types of cancer pain.

Non-opioid pain medicines

Non-opioids control mild to moderate pain. Some can be bought without a prescription. For some examples of common non-opioids used today and their side effects, look at Table 1.

Table 1. Non-opioids -- Acetaminophen and NSAIDs

TYPE	ACTION	SIDE EFFECTS
Acetaminophen (Tylenol)	Reduces pain and fever	<p>Large doses (more than 4 grams in 24 hours) can damage the liver or kidneys.</p> <p>Use by persons who have 3 or more alcoholic drinks per day may cause liver damage.</p> <p>Acetaminophen reduces fever, so ask your doctor what to do if your body temperature is higher than normal (98.6°F or 37°C) while you are taking this medicine.</p>
<p>NSAIDs (Non-steroidal anti-inflammatory drugs)</p> <p><u>Over the counter:</u></p> <p>Aspirin</p> <p>Ibuprofen (Motrin)</p> <p>Ketoprofen</p> <p>Naproxen sodium (Aleve or Naprosyn)</p> <p><u>Prescription:</u></p> <p>Diclofenac (Voltaren)</p> <p>Etodolac (Lodine)</p> <p>Fenoprofen calcium</p> <p>Indomethacin (Indocin)</p> <p>Ketorolac (Toradol)</p> <p>Meclofenamate sodium (Meclomen)</p> <p>Nabumetone (Relafen)</p> <p>Naproxen</p> <p>Oxaprozin (Daypro)</p> <p>Piroxicam (Feldene)</p>	Reduce pain, inflammation, and fever	<p>Can irritate the stomach</p> <p>Can cause bleeding of the stomach lining, especially if combined with alcohol or if you smoke</p> <p>Can cause kidney problems</p> <p>Avoid these drugs if you are on anti-cancer drugs that may cause bleeding, or if you are taking blood thinners, steroids, blood pressure medicines, or lithium.</p> <p>Aspirin and NSAIDs reduce fever, so ask your doctor what to do if your body temperature is higher than normal (98.6°F or 37°C) while you are taking one of these medicines.</p> <p>NSAIDs may increase your risk of stroke or heart attack.</p>

Sulindac (Clinoril)		
Tolmetin sodium (Tolectin)		

Brand-name drugs and generic drugs

Drugs may have as many as 3 different names: brand, generic, and chemical. Drug companies give their products brand names, and some products have more than one brand name. You should also know that the same brand name may be used on different drugs, since the name belongs to the company. You will want to read the labels to see what ingredients are in each medicine. Chemical names are long and tend to be hard to pronounce. The Food and Drug Administration (FDA) approves the generic, shortened names by which drugs are usually known. Here's an example:

Brand names: Tylenol, Tempra, Liquiprin, Anacin, Paramol (and many more)

Generic name: acetaminophen

Chemical name: N-(4-hydroxyphenyl) acetamide

Many pain relievers are available under both generic and brand names. We have included some of the more common generic names with their common brand names in parentheses in Table 1. Your doctor, nurse, or pharmacist can tell you the generic and common brand names of any medicines you are taking. It is always good to know both because you may hear either name when talking about your medicines. Knowing both names may also keep you from getting confused when keeping track of prescriptions and pill bottles.

Generic drugs usually cost less than brand-name ones. Sometimes medicines can have the same generic name, but are made by different companies. Because the companies may produce the medicines differently, they may differ slightly in the way they are absorbed by the body. For this reason, your doctor may sometimes prefer that you take a brand-name drug. Ask your doctor, nurse, or pharmacist if you can use a less costly medicine. Pharmacists are careful to get high-quality generic products, so it is often possible to substitute a generic.

Along with the main substance (for example aspirin, acetaminophen, or ibuprofen), some brands contain substances called additives. Common additives include:

- Buffers (such as magnesium carbonate or aluminum hydroxide) to decrease stomach upset
- Caffeine to act as a stimulant and lessen pain
- Antihistamines (such as diphenhydramine or pyrilamine) to help you relax or sleep

Medicines with additives can cause some side effects you wouldn't expect from the main drug. For example, antihistamines sometimes cause drowsiness. This may be all right at bedtime, but it could be a problem during the day. Also, additives tend to increase the cost of non-prescription pain relievers. They can also change the action of other medicines you may be taking or even keep your body from absorbing the other drug.

When you start a new drug, always talk with your doctor or pharmacist about what you are already taking to see if the combination can cause harmful effects.

Plain aspirin, acetaminophen, or ibuprofen probably works as well as the same medicines with additives. But if you find that a brand with certain additives is a better pain reliever, ask your doctor, nurse, or pharmacist if the additives are safe for you. Talk with them about any concerns you may have about the drugs contained in your non-prescription pain medicines.

Non-steroidal anti-inflammatory drugs

Non-steroidal anti-inflammatory drugs (NSAIDs) work a lot like aspirin (see list in Table 1). Either alone or used with other medicines, NSAIDs can help control pain and inflammation. Before you take any NSAIDs or other non-opioids, ask your doctor, pharmacist, or nurse if it is safe for you to take it with your other medicines, and how long you can take it.

Precautions when taking NSAIDs

Some people have problems that NSAIDs may make worse. In general, NSAIDs should be avoided by people who:

- Are allergic to aspirin or any other NSAIDs
- Are on chemotherapy
- Are taking steroids
- Are taking blood pressure medicines
- Have stomach ulcers or a history of ulcers, gout, or bleeding disorders
- Are taking prescription medicines for arthritis
- Are taking oral medicine (drugs by mouth) for diabetes or gout
- Have kidney problems
- Will have surgery within a week
- Are taking blood-thinning medicine
- Are taking lithium

Be careful about mixing NSAIDs with alcohol -- taking NSAIDs and drinking alcohol can cause stomach upset and raise the risk of bleeding in the stomach. Smoking may also increase this risk. NSAIDs may also raise your risk of heart attack or stroke, especially if you take them a long time.

Side effects of NSAIDs

The most common side effect from NSAIDs is upset stomach, especially in older people. Taking NSAIDs with a snack or just after a meal may lessen your chance of stomach

problems. Ask your pharmacist to tell you which NSAID products are less likely to upset your stomach.

NSAIDs also keep platelets from working the way they should. Platelets are the blood cells that help blood clot after an injury. When platelets don't work as they should, bleeding takes longer to stop.

NSAIDs can also irritate the stomach and cause bleeding. If your stools become darker than normal or if you notice unusual bruising -- both signs of bleeding -- tell your doctor or nurse. Other side effects include kidney problems and stomach ulcers. NSAIDs can sometimes cause you to retain fluids and worsen heart failure. They also can affect the actions of other drugs. There are other less common side effects of many NSAIDs that happen in some people.

Acetaminophen

This medicine relieves pain much the same way NSAIDs do, but it does not reduce inflammation as well as NSAIDs. People rarely have side effects from the usual dose of acetaminophen. But liver and kidney damage may result if you use large doses of this medicine every day for a long time or drink alcohol with the usual dose. Even moderate amounts of alcohol (3 drinks per day) can lead to liver damage in people taking acetaminophen. You will also want to be sure you are not taking other drugs with added acetaminophen. See the section called "Aspirin, acetaminophen, and ibuprofen in other medicines" below.

Your doctor may not want you to take acetaminophen regularly if you are getting chemotherapy because it can cover up a fever. The doctor needs to know about any fever because it may be a sign of infection, which needs to be treated.

Aspirin, acetaminophen, and ibuprofen in other medicines

Some opioid medicines also contain aspirin or acetaminophen (Tylenol). A few also contain ibuprofen. This can pose dangers for people who take it without knowing about the extra medicine.

If one of your doctors does not want you to take aspirin or ibuprofen, or if you can't take NSAIDs for some other reason, be sure to check the drug labels carefully.

If one of your prescription medicines has acetaminophen in it, and you also take over-the-counter acetaminophen for pain, you can get too much without knowing it. Too much acetaminophen can damage your liver.

If you are not sure if a medicine contains aspirin, acetaminophen, or ibuprofen, ask your pharmacist.

If you take any non-prescription medicine for a cold, sinus pain, or menstrual symptoms while you are taking pain medicines, read the label carefully. Most of these drugs are combination products that contain aspirin, ibuprofen, or acetaminophen. Check with your pharmacist to find out what you can safely take with your pain medicines.

Opioid pain medicines

These medicines are used alone or with non-opioids to treat moderate to severe pain. Opioids are much like natural substances (called endorphins) made by the body to control pain. Some work better than others in relieving severe pain. These medicines were once made from the opium poppy, but today many are synthetic, that is, they are made by drug companies.

Common opioids by generic name with brand names in parentheses:

- Codeine
- Hydromorphone (Dilaudid, Exalgo)
- Levorphanol (Levo-Dromoran)
- Methadone (Dolophine, Methadose)
- Morphine (Apokyn, Avinza, Kadian, MS-Contin, Embeda, Ora-Morph, and others)
- Oxycodone (OxyContin, OxyIR, Roxicodone)
- Meperidine (Demerol)
- Oxymorphone (Opana)
- Fentanyl (Duragesic, Actiq, Fentora, Onsolis)

Common combination opioid and acetaminophen or NSAID preparations:

- Codeine may have aspirin or acetaminophen (Fiorinal with Codeine has aspirin; Capital with Codeine suspension, Tylenol #3, and Tylenol #4 have acetaminophen).
- Oxycodone may have aspirin, acetaminophen, or ibuprofen (Percodan has aspirin; Percocet, Roxicet, Roxilox, Oxycet, and Tylox have acetaminophen; Combunox has ibuprofen).
- Hydrocodone may have acetaminophen, or ibuprofen (Vicodin, Zydone, Anexsia, Cogesic, Norco, and Lortab have acetaminophen; Vicoprofen and Reprexain have ibuprofen).

Opioid tolerance

People who take opioids for pain sometimes find that over time they need to take larger doses. This may be due to an increase in the pain or the development of drug tolerance. Drug tolerance happens when your body gets used to the opioid you are taking, and it takes more medicine to relieve the pain as well as it once did. Many people do not

develop a tolerance to opioids. But if tolerance does develop, usually small increases in the dose or a change in the kind of medicine will help relieve the pain.

Increasing the doses of opioids to relieve increasing pain or to overcome drug tolerance does NOT mean that a person is addicted.

How to get proper pain relief with opioids

When a medicine does not give you enough pain relief, your doctor may prescribe a higher dose or tell you to take it more often. When your health care team is working closely with you, doses of strong opioids can be raised safely to ease severe pain. Do not increase the dose of your pain medicine on your own. If dose changes do not work, your doctor may prescribe a different or additional drug. Some opioids are stronger than others, and you may need a stronger one to control your pain.

If your pain relief is not lasting long enough, ask your doctor about extended-release medicines. These can control your pain for a longer period of time. Morphine and oxycodone are made in extended-release forms. Also, a skin patch that slowly releases the opioid fentanyl can be used.

If your pain is controlled most of the time, but you sometimes have breakthrough pain, your doctor may prescribe a fast-acting medicine, such as immediate-release morphine. This will give you faster pain relief right when it is needed.

Be safe when taking opioids.

Doctors carefully watch you and adjust the doses of pain medicine so you do not take too much. For this reason, it is important that only one doctor prescribe your pain medicines. If you are working with 2 or more different doctors, be sure that one does not prescribe opioids for you without talking to the others about it.

If you drink alcohol or take tranquilizers, sleeping pills, antidepressants, antihistamines, or any other medicines that make you sleepy, tell your doctor how much and how often you do this. Combinations of opioids with alcohol or tranquilizers can be dangerous. Even small doses may cause problems. Using such combinations can lead to overdoses and symptoms such as weakness, trouble breathing, confusion, anxiety, or more severe drowsiness or dizziness.

Side effects of opioids

Not everyone has side effects from opioids. The most common side effects are usually drowsiness, constipation, nausea, and vomiting. Some people might also have dizziness, itching, mental effects (such as nightmares, confusion, and hallucinations), slow or shallow breathing, or trouble passing urine.

Drowsiness

When you first start taking them, opioids may cause drowsiness, but this usually goes away after a few days. If your pain has kept you from sleeping, you may sleep more for a few days after starting opioids while you "catch up" on your sleep. Drowsiness will also lessen as your body gets used to the medicine. Call your doctor or nurse if you still feel too drowsy for your normal activities after you have been taking the medicine for a week.

Sometimes it may be unsafe for you to drive a car, or even to walk up and down stairs alone. Avoid operating heavy equipment or performing activities that require you to be alert.

Here are some ways to handle drowsiness:

- Wait a few days and see if it goes away.
- Check to see if other medicines you are taking can also cause drowsiness.
- Ask the doctor if you can take a smaller dose more often or an extended-release opioid.
- If the opioid is not relieving the pain, the pain itself may be wearing you out. In this case, better pain relief may result in less drowsiness. Ask your doctor what you can do to get better pain relief.
- Sometimes a small decrease in the dose of an opioid will still relieve your pain without drowsiness. If the drowsiness is very bad, you may be taking more opioid than you need. Ask your doctor about lowering the amount you are now taking.
- Ask your doctor about changing to a different medicine.
- Ask your doctor if you can take a mild stimulant such as caffeine during the day.
- If drowsiness is bad or if it suddenly begins to be a problem after you have been taking opioids for a while, call your doctor or nurse right away.

Constipation

Opioids cause constipation in most people. This is because opioids slow the movement of stool through the intestinal tract, which allows more time for water to be absorbed by the body. The stool then becomes hard. It is best to start a laxative, stool softener, or other treatment to keep your bowels moving when you start taking opioids regularly. Constipation can often be prevented or controlled.

After checking with your doctor or nurse, try the following to prevent constipation:

- Talk with your doctor about stool softeners and laxatives. Ask how often and how much you should take.

- Drink plenty of liquids. Eight to ten 8-ounce glasses of fluid each day can help keep your stools soft. This is a very important step -- if your stool is dry, it will be hard.
- Eat foods high in fiber or roughage such as uncooked fruits (with the skin on), vegetables, and 100% whole-grain breads and cereals.
- Add 1 or 2 tablespoons of unprocessed bran to your food. This adds bulk and promotes bowel movements. Keep a shaker of bran handy at mealtimes to make it easy to sprinkle on foods. Be sure to drink plenty of water when you eat bran so that it softens in the bowel.
- Exercise as much as you can. Talk with your doctor about what kind of exercise is best for you. Walking is often a good start if you haven't exercised recently.
- Eat foods that have helped you relieve constipation in the past.
- If you haven't been getting out of bed, try to use the toilet or bedside commode when you have a bowel movement, even if that is the only time you get out of bed.

If you are still constipated after trying all the above measures, ask your doctor about changing your stool softener or laxative. Check with your doctor or nurse before taking any laxative or stool softener on your own. If you have not had a bowel movement for 2 days or more, call your doctor.

Nausea and vomiting

Nausea and vomiting caused by opioids will usually go away after a few days of taking the medicine. The following ideas may help:

- If you have more nausea when you are up or walking around but not when you're lying down, stay in bed for an hour or so after you take your pain medicine. This type of nausea is like motion sickness. Sometimes over-the-counter medicines such as meclizine (Bonine or Antivert) or dimenhydrinate (Dramamine) help this type of nausea. Check with your doctor or nurse before taking these medicines, since they can cause problems for some people.
- If pain itself is causing the nausea, using opioids to relieve the pain usually makes the nausea go away.
- Medicines that relieve nausea can be prescribed if you need them. Talk with your doctor or nurse if you can't hold down foods or liquids for a full day, or if nausea lasts more than a few days.
- Ask your doctor or nurse if the cancer, another medical problem, steroids, chemotherapy drugs, or aspirin might be causing your nausea. Constipation may also worsen nausea.

Some people think they are allergic if they have nausea after they take an opioid. Nausea and vomiting alone usually are not allergic reactions. But a rash or itching along with nausea and vomiting may be an allergic reaction. If this happens, stop taking the

medicine and call your doctor right away. If you have swelling in your throat, hives (itchy welts on the skin), or trouble breathing, get help right away.

When you no longer need opioids

You should not suddenly stop taking opioids. People who stop taking opioids are usually taken off the medicine gradually so that their bodies will have time to adjust to it. If you stop taking opioids suddenly and develop a flu-like illness, excessive sweating, diarrhea, or any other unusual reaction, tell your doctor or nurse. These symptoms can be treated and tend to go away in a few days to a few weeks. Again, slowly decreasing your opioid dose over time usually keeps these kinds of symptoms from happening.

Other types of pain medicine

Many different types of medicines can be used along with (or instead of) opioids to help relieve cancer pain. Some of these medicines relieve pain or increase the effect of opioids. Others lessen the side effects of opioids. Table 2 shows the classes of non-opioid drugs that your doctor might prescribe to help you get the best pain relief with as few side effects as possible.

Table 2. Other medicines commonly used to relieve cancer pain

DRUG CLASS	GENERIC NAME	ACTION	SIDE EFFECTS
Antidepressants	amitriptyline (Elavil), nortriptyline (Pamelor), desipramine	Used to treat tingling or burning pain from damaged nerves. Nerve injury can be caused by surgery, radiation therapy, chemotherapy, or the cancer itself.	Dry mouth, sleepiness, constipation. Drop in blood pressure with dizziness or fainting when standing. Blurred vision, trouble passing urine. Patients with heart disease may have an irregular heartbeat.
Antihistamines	hydroxyzine (Atarax, Vistaril), diphenhydramine (Benadryl)	Help control nausea and help people sleep. Help control itching.	Drowsiness, dry mouth and nose, irritability, restlessness, nervousness, trouble passing urine
Anti-anxiety drugs	diazepam (Valium), lorazepam (Ativan)	Used to treat muscle spasms that often go along with severe pain. Also lessen anxiety.	Drowsiness. May cause urinary incontinence (loss of bladder control).
Stimulants and amphetamines	caffeine, dextroamphetamine (Dexedrine), methylphenidate (Ritalin), modafinil (Provigil)	Increase the pain-relieving action of opioids and reduce the drowsiness they cause.	Irritability, rapid heartbeat, decreased appetite
Anti-convulsants	carbamazepine (Tegretol), clonazepam (Klonopin), gabapentin (Neurontin),	Help to control tingling or burning from nerve pain caused by the cancer or	Liver problems, low red and white blood cell counts. Gabapentin may cause

	phenytoin (Dilantin)	cancer therapy.	sleepiness and dizziness.
Steroids	dexamethasone (Decadron), prednisone	Help relieve bone pain, pain caused by spinal cord and brain tumors, and pain caused by inflammation. Increase appetite.	Fluid build-up in the body, increased blood sugar, stomach irritation, confusion. changes in behavior, trouble sleeping.

Other medical methods to relieve pain

Some people have pain that is not relieved by drugs or non-medical methods. When this happens, other treatments can often be used to reduce pain.

Stopping pain impulses from going through the nerves

Surgery

Pain cannot be felt if the nerve pathways that carry pain impulses to the brain are interrupted. To block these pathways, a neurosurgeon may cut nerves, usually near the spinal cord. When the nerves that relay pain are cut, feelings of pain, pressure, and temperature can no longer be felt. Only surgeons with special skills, who are also experts in pain management, should do this kind of surgery. These surgeons normally work with other pain specialists to explore other methods of pain control before they cut nerves.

Nerve block

A nerve block is a procedure where a local anesthetic (a numbing drug), which may be combined with a steroid, is injected into or around a nerve or into the space around the spinal cord to block pain. After the injection, the nerve is no longer able to relay pain so the pain is relieved for some time. For longer-lasting pain relief, phenol or alcohol can be injected. A nerve block may cause muscle paralysis or a loss of all feeling in the affected area.

Spinal analgesia

Low doses of pain medicine may be injected into the fluid around the spine (called intrathecal injection). If this works, a tube and a pump may be placed to deliver the pain medicine right into the spinal fluid to control the pain. Morphine is often used for this purpose, and you can still have side effects like itching and constipation. Surgery is done to put the small pump into your body.

Epidural

Certain kinds of pain may respond to pain medicine that is injected into the space around the layers of the spine. If this works, a pump can be implanted so that you can get pain

medicines right around the nerves. This may cause numbness or weakness of the treated area.

More cancer treatment may be given to shrink the tumor.

Sometimes, even when cancer treatment cannot cure the cancer, it can shrink the size of a tumor that is pressing on nerves and organs and causing pain. Chemotherapy, hormone therapy, or radiation may be used in this way. Radioactive injections are sometimes used when the cancer has spread to many places in the bone -- the radioactive drug settles in the bones near the cancer and helps to stop its growth and relieve pain. In a few cases, other treatments like radiofrequency ablation can be used in certain areas of the body. In this treatment, electrodes are put in near the tumor to heat and destroy the cancer.

Non-medical treatments for pain

Non-medical treatments are now widely used to help manage cancer pain. Many techniques are used along with pain medicine, though they can also be used alone for mild pain or discomfort. Some people find they can take a lower dose of pain medicine when using these techniques. These methods include: relaxation, biofeedback, imagery, distraction, hypnosis, skin stimulation, transcutaneous electric nerve stimulation (TENS), acupuncture, exercise or physical therapy, and emotional support and counseling.

You may need the help of health professionals -- social workers, physical therapists, psychologists, nurses, or others -- to learn to use these techniques. Family and friends can also help. To find out who specializes in these techniques and which organizations know about them:

- Talk with your doctor or nurse.
- Contact a local hospice, cancer treatment center, or pain clinic.
- Visit your local bookstores or library.

You can also contact the National Center for Complementary and Alternative Medicine Clearinghouse toll free at 1-888-644-6226 or check their Web site at <http://nccam.nih.gov>. If you cannot find what you need on the Web site, you can also contact them via email at info@nccam.nih.gov to learn more about these techniques.

Pain may be a sign that the cancer has spread, an infection has started, or there are problems caused by the cancer treatment. Because of this, you should report any new pain problems to the doctor or nurse before trying any non-medical treatments to relieve the pain.

Some general guidelines for managing pain with non-medical methods include:

- Try different methods to learn which ones work for you.

- Try using a non-medicine method along with your medicine. For instance, you might use a relaxation technique (to lessen tension, reduce anxiety, and manage pain) at the same time you take medicine.
- Know yourself and what you can do. Often when people are rested and alert, they can use a method that demands more attention and energy. When tired, people may need to use a method that requires less effort. For example, try distraction when you are rested and alert; use hot or cold packs when you are tired.
- Be open-minded and keep trying. Keep a record of what makes you feel better and what doesn't help.

Try each method more than once. If it doesn't work the first time, try it a few more times before you decide it is not helping you.

Relaxation

Relaxation helps relieve pain or keep it from getting worse by reducing muscle tension. It can help you fall asleep, give you more energy, make you less tired, reduce your anxiety, and help other pain-relief methods work better. Some people, for instance, find that taking pain medicine or using a cold or hot pack works faster and better when they relax at the same time.

How to use relaxation

Relaxation may be done sitting up or lying down. Choose a quiet place whenever possible. Close your eyes. Do not cross your arms and legs because that may cut off circulation and cause numbness or tingling. If you are lying down, be sure you are comfortable. Put a small pillow under your neck and under your knees or use a low stool to support your lower legs.

There are many relaxation methods. Here are some for you to try:

Visual concentration and rhythmic massage:

- Open your eyes and stare at an object, or close your eyes and think of a peaceful, calm scene.
- With the palm of your hand, firmly massage near the area of pain in a circular movement. Avoid red, raw, or swollen areas. You may wish to ask a family member or friend to do this for you.

Inhale/tense, exhale/relax:

- Breathe in deeply. At the same time, tense your muscles or a group of muscles. For example, you can squeeze your eyes shut, frown, clench your teeth, make a fist, stiffen your arms and legs, or draw up your arms and legs as tightly as you can.

- Hold your breath and keep your muscles tense for a second or two.
- Let go. Breathe out and let your body go limp.

Slow, rhythmic breathing:

- Stare at an object or close your eyes and focus on your breathing or on a peaceful scene.
- Take a slow, deep breath and, as you breathe in, tense your muscles (such as your arms).
- As you breathe out, relax your muscles and feel the tension draining.
- Now stay relaxed and begin breathing slowly and comfortably. Focus on your breathing, taking about 9 to 12 breaths a minute. Breathing too fast or too deeply can cause dizziness or other symptoms.
- To keep a slow, even rhythm as you breathe out, you can say silently to yourself, "In, 1, 2; out, 1, 2." It may be helpful at first if someone counts out loud for you. If you ever feel out of breath, take a deep breath and then continue the slow breathing. Each time you breathe out, feel yourself relaxing and going limp. If some muscles, such as your shoulder muscles, are not relaxed, tense them as you breathe in and relax them as you breathe out. Do this only once or twice for each muscle group.
- Continue slow, rhythmic breathing for a few seconds up to 10 minutes, depending on your need.
- To end your slow, rhythmic breathing, count silently and slowly from 1 to 3. Open your eyes. Say silently to yourself, "I feel alert and relaxed." Begin moving about slowly.

Other methods you can add to slow, rhythmic breathing:

- Imagery. See the section called "Imagery."
- Listen to slow, peaceful music through an earphone or headset.
- Progressive relaxation of body parts: Once you are breathing slowly and comfortably, you may relax different body parts, starting with your feet and working up to your head. Think of words such as limp, heavy, light, warm, or floating. Each time you breathe out, you can focus on one area of the body and feel it relaxing. Try to imagine that the tension is draining from that area. For example, as you breathe out, feel your feet and ankles relaxing; the next time you breathe out, feel your calves and knees relaxing, and so on up your body.
- Ask your doctor or nurse to recommend relaxation CDs for you. These recordings provide step-by-step instructions in relaxation techniques.

Precautions

Some people who have used relaxation for pain relief have noticed some common problems and have suggested the following ideas:

- Relaxation may be hard to use when you have severe pain. If you have this problem, use quick and easy relaxation methods such as visual concentration with rhythmic massage or breathe in/tense, breathe out/relax. Or you can wait until your pain medicine starts to help your pain before you start with the relaxation methods.
- Sometimes breathing too deeply for a while can cause you to feel short of breath. If this happens to you, take shallow breaths and/or breathe more slowly.
- You may fall asleep. This can be a good thing if you are ready to go to bed. If you do not wish to fall asleep, sit in a hard chair while doing the relaxation exercise or set a timer or alarm.

If you have trouble using these methods, ask your doctor, nurse, social worker, or pain specialist to refer you to someone who is experienced in relaxation techniques. Do not keep using any technique that increases your pain, makes you feel uneasy, or causes unpleasant effects.

Biofeedback

You will need the help of a licensed biofeedback technician to learn this technique. With the help of special machines that give you instant feedback on the state of your body, you can learn to control certain body functions such as heart rate, blood pressure, and muscle tension. Biofeedback is sometimes used to help people learn to relax. You can use biofeedback to help you relax and cope with pain. This technique is usually used with other pain-relief methods.

Imagery

Imagery is using your imagination to create mental pictures or situations. The way imagery relieves pain is not fully understood, although it may be simply a combination of relaxation and distraction. Imagery can be thought of as a deliberate daydream that uses all of your senses -- sight, touch, hearing, smell, and taste. Some people believe that imagery is a form of self-hypnosis.

Certain images may reduce your pain both during imagery and for hours afterward. If you must stay in bed or can't leave the house, you may find that imagery helps you feel less closed in -- you can imagine and revisit your favorite spots in your mind. Imagery can help you relax, relieve boredom, decrease anxiety, and help you sleep.

How to use imagery

Imagery usually works best with your eyes closed. You may want to use one of the above relaxation techniques before you try imagery. The image can be something like a ball of

healing energy moving through your body, or a picture drawn in your mind of yourself as a person without pain. (For example, imagine that you are cutting the wires that send pain signals from each part of your body to your brain.) Or think of a pleasant, safe, relaxing place or activity that has made you happy. Exploring this place or activity in your mind can help you feel calm.

Here is an exercise with the ball of energy.

- Close your eyes. Breathe slowly and feel yourself relax.
- Focus on your breathing. Breathe slowly and comfortably from your abdomen (belly). As you breathe in, say silently and slowly to yourself, "In, 1, 2." As you breathe out, say, "Out, 1, 2." Breathe in this slow rhythm for a few minutes.
- Imagine a ball of healing energy forming in your lungs or on your chest. It may be like a white light. It can be vague -- it does not have to be clear or vivid. Imagine this ball forming, taking shape.
- When you are ready, imagine that the air you breathe in blows this healing ball of energy to the area of your pain. Once there, the ball heals and relaxes you.
- When you breathe out, imagine the air blows the ball away from your body. As it goes, the ball takes your pain with it.
- Repeat the last 2 steps each time you breathe in and out.
- You may imagine that the ball gets bigger and bigger as it takes more and more discomfort away from your body.
- To end the imagery, count slowly to 3, breathe in deeply, open your eyes, and say silently to yourself, "I feel alert and relaxed." Begin moving about slowly.

Problems that may occur with imagery are much like the ones that occur with the relaxation techniques.

Distraction

Distraction means turning your attention to something other than the pain. People use this method without realizing it when they watch television or listen to the radio to take their minds off a worry or their pain.

Distraction may be used alone to manage mild pain or used with medicine to manage brief episodes of severe pain, such as pain related to procedures. Distraction is useful when you are waiting for pain medicine to start working. If the pain is mild, you may be able to distract yourself for hours. Distraction can be a powerful way of relieving even the most intense pain for a while.

How to use distraction

Any activity that you must focus on can be used for distraction. Distractions can be internal, such as counting, singing to yourself, praying, or repeating statements in your head such as "I can cope." Or distractions can be external, such as needlework, model building, or painting. Losing yourself in a good book might divert your mind from the pain. Watching TV and listening to music are also good distraction methods. Slow, rhythmic breathing can be used as a distraction or relaxation method. Visiting with friends or family is another useful distraction technique.

You may find it helpful to listen to rather fast music through a headset or earphones. To help keep your attention on the music, tap out the rhythm. This technique does not require much energy, so it may be very useful when you are tired.

After using a distraction technique, some people report that they are tired, irritable, and feel more pain. If this happens to you, you might want to be careful about which distraction methods you use and when you use them.

Hypnosis

Hypnosis is the trance-like state of high concentration in which you are awake but calm and still. In this relaxed state, a person becomes more open to suggestion. Hypnosis can be used to block the awareness of pain, to substitute another feeling for the pain, and to change the feeling to one that is not painful. You can be hypnotized by a person trained in hypnosis, often a psychologist or psychiatrist. You can also be trained to hypnotize yourself.

During hypnosis, many people feel much like we do when we begin to wake up in the morning. We can't quite open our eyes, but are very aware. We can hear sounds inside or outside our house. Our eyes stay closed, and we feel as though we either can't or don't want to wake up and open our eyes.

A trained hypnotherapist can teach people to put themselves in a hypnotic state, to make positive suggestions to themselves, and to leave the hypnotic state when they're ready.

Choose a hypnotherapist who is licensed in the healing arts or who works under the supervision of someone who is licensed. To find a therapist skilled in hypnosis, ask your pain control doctor, or contact a larger cancer center near you.

Skin stimulation

In this series of techniques, pressure, warmth, or cold is used on the skin, while the feeling of pain is lessened or blocked. Massage, pressure, vibration, heat, cold, and menthol preparations can also be used to stimulate the skin. These techniques also change the flow of blood to the area that is stimulated. Sometimes skin stimulation will get rid of pain or lessen pain during the stimulation and for hours after it is finished.

Skin stimulation is done either on or near the area of pain. You can also use skin stimulation on the side of the body opposite the pain. For example, you might stimulate the left knee to decrease the pain in the right knee. Stimulating the skin in areas away from the pain can be used to increase relaxation and may relieve pain.

What you should know about skin stimulation

If you are having radiation therapy, check with your doctor or nurse before using skin stimulation. You should not put ointments, salves, menthol, or liniments on the treatment area, and you should not use heat or extreme cold on treated areas. If you are getting chemotherapy, check with your doctor before using hot or cold packs.

Massage: Using a slow, steady, circular motion, massage over or near the area of pain with just your bare hand or with any substance that feels good, such as talcum powder, warm oil, or hand lotion. Depending on where your pain is, you may do it yourself or ask a family member, friend, or a massage therapist to give you a massage. Some people find brushing or stroking lightly more comforting than deep massage. Use whatever works best for you.

Precautions: If you are having radiation therapy, avoid massage in the treatment area as well as in any red, raw, tender, or swollen areas. Check with your doctor as noted above.

Pressure: To use pressure, press on various areas over and near your pain with your entire hand, the heel of your hand, your fingertip or knuckle, the ball of your thumb, or by using one or both hands to encircle your arm or leg. You can test this by applying pressure for about 10 seconds to see if it helps. You can also feel around your pain and outward to see if you can find "trigger points," small areas under the skin that are very sensitive or that cause more pain. Sometimes gradual pressure on the trigger points is helpful to relieve pain. Pressure usually works best if it is applied as firmly as possible without causing more pain. You can use pressure for up to 1 minute. This often will relieve pain for several minutes to many hours after the pressure is released.

Vibration: Vibration over and near the area of the pain may bring short-term relief. For example, the scalp attachment of a hand-held vibrator often relieves a headache. For low back pain, a long, slender battery-operated vibrator placed at the small of the back may be helpful. You can use a vibrating device such as a small battery-operated vibrator, a hand-held electric vibrator, or a large heat-massage electric pad.

Precautions: If you are having radiation therapy, avoid vibration in the treatment area. Do not use a vibrator on the stomach or over red, raw, tender, or swollen areas.

Cold or heat: As with any of the techniques described, you should use what works best for you. Heat often relieves sore muscles. Cold lessens the feeling of pain by numbing the painful area. You can also switch back and forth between heat and cold for added relief in some cases.

For cold, try gel packs that are sealed in plastic and stay soft and flexible even when frozen. You can get them at drugstores and medical supply stores. They can be used again and stored in the freezer. You may want to wrap the pack in a towel to make it more comfortable. An ice pack, ice cubes wrapped in a towel, frozen peas, or water frozen in a paper cup also works.

Precautions: If you start to shiver when using cold, stop right away. Do not use cold so intense or for so long that the cold itself causes more pain.

Avoid cold over any area where you are getting radiation treatments and for 6 months after it has ended.

If you are getting chemotherapy, check with your doctor before using a cold pack.

Do not use cold over any area where your circulation or sensation is poor.

Do not apply cold for more than 5 to 10 minutes at a time.

To use heat for pain relief, a heating pad with a moisture option is handy. You can also try gel packs heated in hot water; hot water bottles; a hot, moist towel; a regular heating pad; a hot bath or shower; or a hot tub to apply heat. You might want to try one of the heat patches you can buy at the drugstore. For aching joints, such as elbows and knees, wrap the joint in a lightweight plastic wrap (tape the plastic to itself). This retains body heat and moisture.

Precautions: Do not use a heating pad on bare skin. Do not fall asleep with the heating pad turned on. Be very careful if you are taking medicines that make you sleepy or if you do not have much feeling in the area.

Do not use heat over a new injury because heat can increase bleeding -- wait at least 24 hours.

Avoid heat over any area where you are getting radiation treatments and for 6 months after treatment has ended.

Do not use heat over any area where your circulation or sensation is poor.

Do not apply heat for more than 5 to 10 minutes at a time.

Menthol: Many menthol preparations -- creams, lotions, or gels -- are available for pain relief. When they are rubbed into the skin, they increase blood circulation to the affected area and produce a warm (or sometimes cool), soothing feeling that lasts for several hours.

To use menthol, test your skin by rubbing a small amount of the substance in a circle about the size of a quarter in the area of the pain (or the area you want to stimulate). This will let you know whether menthol is uncomfortable to you or irritates your skin. If the menthol does not create a problem, rub some more into the area. The feeling from the menthol slowly increases and remains up to several hours. If you are concerned about the odor bothering others, you can use the menthol when you are alone, perhaps in the evening or overnight.

Precautions: Do not rub menthol near your eyes, over broken skin, a skin rash, or mucous membranes (such as inside your nose or mouth, or around your genitals and rectum).

Make sure you do not get menthol in your eyes. Wash your hands well with soap and warm water after using menthol.

Do not use menthol on the skin of the treatment area during radiation therapy.

If you have been told not to take or are allergic to aspirin, check with your doctor before using menthol. Many menthol preparations contain an ingredient much like aspirin. A small amount of this aspirin-like substance may be absorbed through the skin.

Transcutaneous electric nerve stimulation (TENS): This is a technique in which mild electric currents are applied to some areas of the skin through electrodes attached to a small power pack. The feeling is described as a buzzing, tingling, or tapping feeling. The small electric impulses seem to interfere with pain sensations. The current can be adjusted so that the sensation is pleasant and relieves pain. Pain relief often lasts beyond the time that the current is applied. Your doctor or a physical therapist can tell you where to get a TENS unit, and how to use it.

Acupuncture

In acupuncture, very thin needles are put into the body at certain points and at various depths and angles. Each point is thought to control the feeling of pain in a different part of the body. When the needle is inserted, some people feel a slight ache, dull pain, tingling, or electrical sensation for a few seconds. Once the needles are in place, they should not hurt anymore. The needles are usually left in place for 15 to 30 minutes, depending on the condition treated. It does not hurt when the needles are removed. Acupuncture is now widely available, but it should only be done by a licensed acupuncturist. Ask your doctor, nurse, or social worker where to get acupuncture.

Precaution: If you are getting chemotherapy, talk to your doctor before starting acupuncture.

Emotional support and counseling

If you feel anxious or depressed, your pain may feel worse. Pain also can make you feel worried, depressed, or easily discouraged. Some people feel hopeless or helpless. Others may feel embarrassed, inadequate, angry, frightened, lonely, or frantic. These are all normal feelings.

Finding support

Try to talk about your feelings with someone you feel comfortable with -- doctors, nurses, social workers, family or friends, a member of the clergy, or other people with cancer. You may also wish to talk to a counselor or a mental health professional. Your

doctor, nurse, or the social services department at your local hospital can help you find a counselor who is specially trained to help people with chronic illnesses.

You may want to try a support group where people with cancer meet and share their feelings about how they are coping with cancer pain. Support groups can be face-to-face meetings, or you can meet in a group online. For information about support groups in your community and online, ask your doctor, nurse, or hospital social worker or call us at 1-800-227-2345. Also, many newspapers carry a special health supplement with information about where to find support groups.

Research on pain control methods

Patient studies -- called clinical trials -- have helped doctors find better ways to treat cancer and lower cancer death rates in the United States. Clinical trials have also led to better pain control methods, such as continuous pain-medicine infusion pumps (patient-controlled analgesia or PCAs), which were first developed in the early 1980s.

In cancer research, a clinical trial is designed to show how a new cancer strategy -- for instance, a promising drug, a new diagnostic test, or a possible way to better treat cancer - affects the people who receive it. These studies are the final step in the process of developing new drugs and finding better ways to fight diseases and their symptoms.

Clinical trials are being done to look for better ways to manage cancer pain. For more information about current research on pain control methods, contact the American Cancer Society or the National Cancer Institute.

The American Cancer Society offers a clinical trials matching service that can help you find a clinical trial that is right for you. You can reach this service at 1-800-303-5691 or on our Web site at www.cancer.org/clinicaltrials. From the information you give about your cancer type, stage, and previous treatments, this service compiles a list of clinical trials that match your medical needs. The service will also ask where you live and whether you are willing to travel so that it can look for a treatment center you can get to.

You can also get a list of current clinical trials by calling the National Cancer Institute's Cancer Information Service toll free at 1-800-4-CANCER (1-800-422-6237) or by visiting the NCI clinical trials Web site at www.cancer.gov/clinical_trials.

Additional resources

More information from your American Cancer Society

We have selected some related information that may also be helpful to you. These materials may be viewed on our Web site or ordered from our toll-free number at 1-800-227-2345.

Pain Diary

Peripheral Neuropathy Caused by Chemotherapy

A Message of Hope: Coping With Cancer in Everyday Life (also available in Spanish)

Caring for The Patient With Cancer At Home: A Guide for Patients and Families (also available in Spanish)

Bone Metastasis (also available in Spanish)

Advanced Cancer (also available in Spanish)

Health Professionals Associated With Cancer Care

We also have more detailed information on most of the **drugs and methods** discussed in this document. Please call us at 1-800-227-2345 or visit www.cancer.org to learn more.

National organizations and Web sites*

Along with the American Cancer Society, there are many other sources of information about cancer and pain, including those listed here.

National Cancer Institute

Toll-free number: 1-800-422-6237 (1-800-4-CANCER)

TTY: 1-800-332-8615

Web site: www.cancer.gov

Provides accurate, up-to-date information on cancer to patients, their families, and the general public. Information specialists translate the latest scientific information into understandable language and respond in English, Spanish, or on TTY equipment.

National Center for Complementary and Alternative Medicine (NCCAM)

Toll-free number: 1-888-644-6226

TTY: 1-866-464-3615

Web site: <http://nccam.nih.gov>

Part of the National Institutes of Health (NIH), NCCAM facilitates research and evaluation of complementary and alternative medicine (CAM) healing practices and shares this information with the public.

**Inclusion on this list does not imply endorsement by the American Cancer Society.*

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.

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