Consumer Reports

BEST BUY DRUGS™

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Treating Chronic Pain:

The Opioids

Comparing Effectiveness, Safety, and Price










Our Recommendations

Don't take an opioid painkiller to treat chronic pain until you have tried other, less risky, pain relievers – such as acetaminophen, a non-steroidal anti-inflammatory drug (NSAID), or salsalate.

Some kinds of chronic or periodic pain in particular – such as nerve pain, migraines, or fibromyalgia – are best treated with other types of drugs, not opioids. Talk with your doctor about non-drug measures, too. Studies show they can ease chronic pain, either alone or in combination with drugs. These include cognitive behavioral therapy, exercise, spinal manipulation, and physical rehab programs.

The weight of medical evidence indicates that while opioids are highly effective – and usually the drugs of choice – in relieving acute severe pain, they are only moderately effective in treating long-term chronic pain, and their effectiveness can diminish over time.

In addition, while the long-term use of opioids has not been well studied, it has been linked to: (1) a decrease in sex hormones leading to both a loss of interest in sex and impaired sexual function; (2) a decline in immune function; and (3) an increase the body's sensitivity to pain.

Opioids can also be addictive and are prone to abuse and misuse. They are rarely addictive if you genuinely need one to control pain, however.

If other options fail, your doctor may consider an opioid since controlling pain is always a medical priority. Taking effectiveness, safety and side effects, dosing flexibility and convenience, and cost into account, we have chosen the following opioids as *Best Buys* for people with moderate to severe chronic pain when other pain relievers fail to bring adequate relief:

- *Generic codeine with acetaminophen*
- *Generic morphine extended release*
- *Generic oxycodone extended release*
- *Generic oxycodone with acetaminophen*

These four medicines have a long track record and provide good value. They range widely in monthly cost, depending on dosing regimen. But most low-dose regimens will run you less than $150 a month.

High doses and some extended release formulations of these medicines can be quite expensive. If you need to take high doses, we advise speaking with your doctor or pharmacist about which opioid has the lowest cost under your insurance plan. If you have to pay out-of-pocket, take care to avoid the high-cost versions of our *Best Buy* medicines.

There is no reason to take the brand-name versions of our *Best Buys*, or any opioid for that matter. That includes well-know brands such as OxyContin, Percocet, and Vicodin.

This report was released and last updated in April 2008.

Welcome

There is arguably nothing worse than pain. Uncontrolled pain can take over your life. You just want it to stop. Fortunately, medical science has developed a range of effective pain killing medicines.

This report evaluates and compares 12 of those painkillers belonging to a group of drugs called the opioids. These drugs are the strongest pain medicines available. At comparable doses they are substantially stronger than other pain relieving medicines, such as aspirin, acetaminophen (Genapap, Panadol, Tylenol and generic) and the NSAIDs (non-steroidal anti-inflammatory drugs), which include such commonly used medicines as ibuprofen (Advil, Motrin and generic) and naproxen (Aleve, Naprosyn and generic).

The opioids are used to treat both acute and chronic pain. Acute pain occurs suddenly, often as a result of an illness (appendicitis, for example), injury (such as a fractured or broken bone), or surgery. Acute pain can be short-term but may also last a few days or even weeks. For example, following major surgery, you may need strong pain relief for a week or two until your body heals. Indeed, one hallmark of acute pain is that once the injury is healed, the pain usually goes away.

In contrast, chronic or recurrent pain often persists long after an injury has healed. Put another way, it's pain that continues when it should not. Chronic pain can also mysteriously occur when no specific injury, wound, illness, or disease is identified; such cases can often be traced to nervous system injury or problems. Chronic pain is often defined another way as well: as any pain that lasts longer than three to six months. Thus, acute pain can become chronic just by virtue of how long it lasts.

If you have pain that has lasted months, even at a low level, you should not continue to treat it yourself with over-the-counter pain relievers. See a doctor. First, the pain may be signaling an underlying disease. And second, nonprescription pain drugs pose risks, especially at high doses, and can cause serious problems when taken daily or regularly over long periods.

In addition to acute and chronic pain, there is a third general type of pain – that associated with terminal or very serious illnesses, and particularly cancer. Opioids are commonly prescribed for what is called "palliative" care, meaning that it is directed at keeping you comfortable and as pain-free as possible. Pain at the end of life can be both acute and chronic, and managing it has become a special area of medicine and hospice care.

This report focuses on the use of opioids in the treatment of chronic pain that is *not* associated with terminal illness or cancer. For example,

chronic pain is common among people who have osteoarthritis, rheumatoid arthritis, fibromyalgia, injuries to their back, injuries to their limbs and muscles, and damage to their nerves or nervous system from diseases (like diabetes or after an episode of shingles).

While there are many issues surrounding the appropriate use of opioids to treat acute pain and pain at the end of life, the use of these potent drugs to ease pain in these circumstances is generally well accepted. After all, an aspirin is not likely to work against the pain of a broken bone.

In contrast, many problems – medical and social – surround the use of opioids to treat people who have chronic pain. Five problems loom large: (1) There are no hard and fast medical rules about the appropriate use of opioids in treating chronic pain; (2) opioids are potentially addictive and widely abused or misused as "recreational" drugs, which causes its own set of medical and social problems; (3) the body can build up tolerance to opioids which can make higher doses necessary for some people; (4) overdoses (unintentional and intentional) can occur; and (5) the opioids have some nasty side effects.

Yet, at the same time, most doctors agree that opioids can play a critical role in helping people who are in chronic pain. Indeed, the "under-use" of these medicines is discussed and debated as vigorously these days as their overuse and abuse. This debate emerges from agreement that in the past doctors were often reluctant to use opioids to treat non-cancer chronic pain, and recent evidence showing that, even today, too many people with chronic pain don't get adequate pain control.

Other Medicines

Contrary to popular belief, doctors don't view the opioids as the only drugs for chronic pain, even if it is moderate to severe. Many people believe that the non-opioid pain relievers such as aspirin, acetaminophen, and the NSAIDs are only for mild or "everyday" pain and head or muscle aches, and that a "strong drug" such as an opioid is what's needed for more severe pain. But studies show quite conclusively that the readily available and inexpensive nonprescription pain drugs can provide meaningful (if not always complete) relief when used at medium to high doses. This is discussed in more detail in the next section.

In addition, other kinds of drugs are often pressed into duty to treat chronic pain. These include antidepressants, muscle relaxants, tranquilizers, a group of drugs called the triptans (for migraines), certain anticonvulsants (used to treat nerve pain, fibromyalgia and migraine) and skin patches and creams containing pain relievers such as lidocaine and nupercaine.

Along with acetaminophen and the NSAIDs, all these medicines work to relieve pain by acting directly on nerves. In fact, for some patients, the

non-opioid drugs do much more to treat or ease the underlying cause of pain than the opioids do. They also have drawbacks, however, when used daily or regularly over long periods.

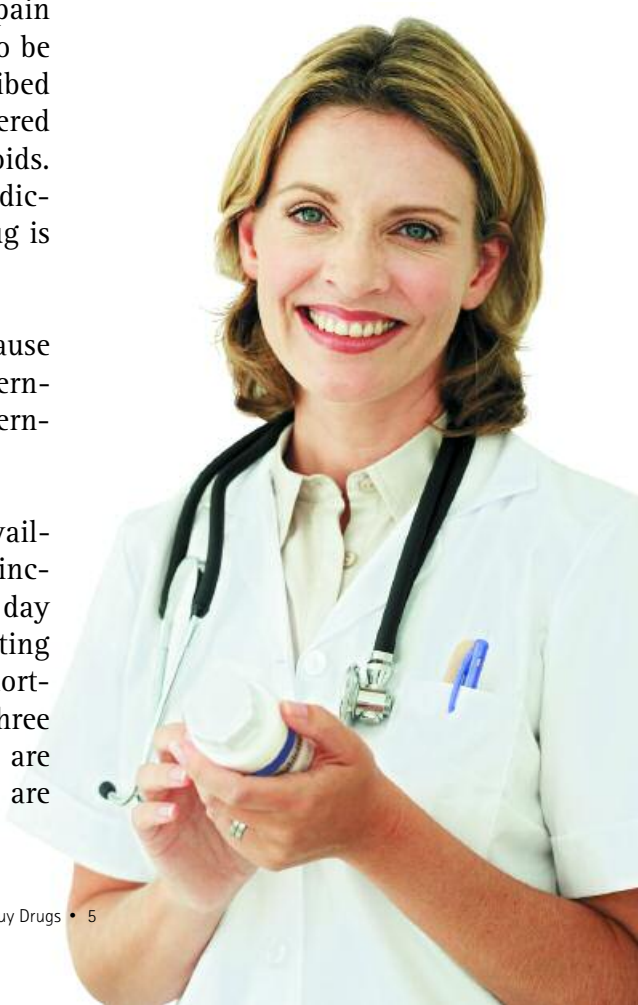
It's also common for doctors to prescribe several types of drugs for patients with chronic pain. Indeed, many pain pills are combinations of drugs, and many of the most popular combination products contain a non-opioid pain reliever, such as acetaminophen, with an opioid.

In addition, in recent years it has become very common for doctors to prescribe other, non-drug treatments for people with chronic pain – often in the context of "pain management" programs. Indeed, pain specialists agree that drugs alone are rarely enough to manage chronic pain over the long-term. Among other treatments are: behavioral interventions such as biofeedback, relaxation therapy, yoga, and psychotherapy; complementary and alternative treatments such as acupuncture; and physical medicine treatments such as chiropractic treatment, massage, and occupational therapy. This report does not evaluate these treatments or compare them to drugs. We would note, however, that recent studies indicate that such treatments often help people cope with chronic pain and can reduce the amount of pain experienced. (See the back pain sidebar on page 13.)

The opioids are a complicated group of drugs. Some, such as morphine and codeine, are "natural" products derived directly from poppy plants. Others are partly synthetic, and still others are totally synthetic – which means they are chemically manufactured. Some, such as codeine and hydrocodone, are available primarily in combination with other pain relievers (usually aspirin or acetaminophen); this allows the opioid to be used at a lower dose, with less risks. Others opioids are usually prescribed as single ingredient products. One drug, tramadol (Ultram), is considered "atypical" because it works in a slightly different way than other opioids. It has sometimes been promoted to doctors as posing less risk of addiction; that's probably true but the evidence for it is weak and the drug is not without risks.

Because of their potential for abuse as recreational drugs and because they can be addictive, the opioids are classified by the federal government as controlled substances. This means that pharmacies and government agencies monitor opioid prescriptions quite closely.

The opioids differ in their rate of action in the body. Also, they are available in short-acting, long-acting, and fast-acting forms. These distinctions are quite important. They have to do with how many times a day you take a pill, and also the success of your pain control. Long-acting opioids are generally taken one to three times in 24 hours while short-acting opioids are to be taken more frequently – as often as every three to four hours (even at night). The so-called fast-acting formulations are newer and all contain the drug fentanyl; they act in minutes and are designed to treat breakthrough pain.



The 12 opioid drugs, and the different versions of them, vary greatly in price. But the dose you need to take will dictate the cost to a large extent. The costs of the opioid drugs are presented in the table beginning on page 16. The opioid drugs evaluated in this report are:

Generic Name(s)	Brand Name (s) Long-acting forms	Brand Name (s) Short-acting forms	Available as a Generic?
Codeine, Dihydrocodeine		Tylenol #3 and others	Yes
Fentanyl	Duragesic (patch)	Actiq (lozenge) Fentora (tablet)	Yes
Hydrocodone*		Vicodin Zydone	Yes
Hydromorphone		Dilaudid	Yes
Levorphanol		Levo-Dromoran	Yes
Meperidine		Demerol, Meperitab	Yes
Methadone	Dolophine, Methadose		Yes
Morphine	Avinza, Kadian, MS Contin CR, OraMorph SR	Morphine IR	Yes
Oxycodone	OxyContin	Endodan, Percocet, Percodan, Roxicodone	Yes
Oxymorphone	Opana ER	Opana	No
Propoxyphene, Dextropropoxyphene		Darvon, Darvocet	Yes
Tramadol	Ultram ER	Ultram, Ultracet	Yes

* Available only in combination with aspirin or acetaminophen.
CR=controlled release; SR=sustained release; IR=immediate release; ER=extended release

As you can see, all but one of the opioids are available in generic form. In many cases, the difference in price between the brand-name and generic is considerable. In other cases, the difference is relatively small.

This report is part of a Consumers Union and *Consumer Reports* project to help you find safe, effective medicines that give you the most value for your health care dollar. To learn more about the project and other drugs we've evaluated, go to www.CRBestBuyDrugs.org.

You can also get a copy of three other reports on our Web site that deal with treating pain. One compares the NSAIDs. A second compares the anti-convulsant (anti-seizure) drugs. And the third evaluates the triptans in the treatment of migraine headaches. This report and the others should greatly help you talk with your doctor about how best to manage your pain.

This report was released and last updated in April 2008.

What Are the Opioids and Who Needs One?

The opioids work by changing the way pain is experienced and "felt." They literally block pain signals to and in the brain. They also have sedative effects which can improve ability to rest and sleep.

If you have been diagnosed with chronic pain, you have numerous treatment options. Your first decision is whether to take any pain medicines at all. That decision almost always revolves around how severe your pain is and whether you are able to work and live fairly normally with the pain. Since pain is an entirely subjective experience, only you and your doctor can reach this decision. But pain specialists now emphasize that some people with mild and even moderate chronic pain can manage well without taking any pain medicines regularly – and may experience significant improvements in pain and ability to function with other non-drug treatments (including exercise, lifestyle adjustments, behavioral therapy, acupuncture, and massage).

Many people, however, can not tolerate persistent or intermittent pain – even if it is mild – and they choose to take a drug to help manage it. If that describes you, an opioid should *not* be your or your doctor's first choice of pain reliever.

Instead, we recommend trying acetaminophen first. This pain reliever has a long safety track record, is available without a prescription, and is inexpensive. Even at moderate doses, it can be quite effective. If you need higher doses, or if you find that you need to take it everyday for pain, consult with your doctor about acetaminophen's link to liver damage. Though rare, this can be serious. The risk is greater at higher doses and also in people who drink heavily or have existing liver damage or disease.

Therefore, we urge you to keep close track (write it down) of the amount of acetaminophen (or any pain reliever) you take. For adults, the maximum recommended dose is 4 grams in 24 hours. That's eight extra-strength (500mg) tablets. Acetaminophen should not be used by people who drink heavily.

When an NSAID May Be Better

If your mild chronic pain is not sufficiently controlled by acetaminophen, or involves inflammation (see the box on page 11), talk with your doctor about trying an NSAID. For reasons still unclear, some people respond better to one NSAID over another. There's no way to know besides trying them out. We advise starting with naproxen (Aleve and generic) or a prescription drug called salsalate.

Both these drugs have anti-inflammatory effects, are inexpensive, and provide some unique benefits. Naproxen has the advantage of being available without a prescription (though higher dose pills require a prescription). It also has been associated in several studies with less risk of heart attack and stroke compared to the other NSAIDs. Salsalate is an aspirin-like drug which studies suggest may pose less risk of stomach upset and bleeding compared to aspirin and other NSAIDs. But we would note that definitive studies have never proven this conclusively. Nor have they shown salsalate to have the heart-protective effects of aspirin.

Ibuprofen (Advil, Motrin and generic) is another common and good choice if naproxen or salsalate don't work for you. Aspirin is not the best choice in treating chronic pain since the larger doses typically needed for pain relief and easing inflammation may pose a higher risk of stomach bleeding and upset compared to naproxen, salsalate or other NSAIDs.

As mentioned in the Welcome section, studies show that the non-opioid drugs can provide potent pain relief that rivals opioids for people with mild to moderate pain. There are, however, very few studies comparing the non-opioids with the opioids, and none that compare the two over a long period of time.

An NSAID Caution

The *Consumer Reports Best Buy Drugs* report on the NSAIDs (available at www.CRBestBuyDrugs.org) discusses the trade-offs with these anti-inflammatory and painkilling drugs. But we'd include one important note here: for most people, the recently well-publicized heart and stroke risk posed by NSAIDs is small. And periodic short-term use does not appear to add to risk at all.

But for people who already have heart disease or heart disease risk factors, such as high blood pressure, diabetes or high cholesterol, the risk is much greater. Thus, before you start taking an NSAID on a regular basis for chronic pain, and particularly if you are taking high doses, you should be fully evaluated for heart disease and your risk of heart disease and stroke. This is especially advisable for older people who are both more prone to chronic pain, and more likely to be at higher risk of heart attack and stroke.

If your chronic pain, whether mild or severe, is related to nerve damage or a disease that has damaged nerves, talk to your doctor about the antidepressant and anticonvulsant drugs. Many people with chronic "nerve pain" – such as the pain associated with shingles or diabetes – get significantly more relief from anticonvulsants than from acetaminophen or an NSAID. Gabapentin is often prescribed, for example, for diabetic neuropathy and one of the anticonvulsants (Lyrica) is also now approved to treat a condition called fibromyalgia; this condition is characterized primarily by chronic pain.

When an Opioid May be Needed

If none of the options discussed above work, or if your chronic pain is truly severe and debilitating, opioids are an option your doctor will consider. But before prescribing one, he or she may require some information and simple tests.

For example, you may be asked to keep a pain diary for a few weeks (using a frequency chart and pain severity scale of zero to 10 where zero is no pain and 10 is the worst pain you can imagine). Keeping track will give your doctor more detailed information on your pain "patterns." He or she may also give you one or more pain/quality-of-life scale tests. This helps clarify how pain is affecting your life. Your doctor is also likely to ask you about past and present pain drug or alcohol use, and may ask you to submit a urine specimen to test for drug abuse.

Your doctor is trying to make absolutely sure that the benefits of an opioid will outweigh the risks. In fact, it's your doctor's responsibility to determine if you are at high risk of abusing opioids before prescribing them.

Your doctor is also likely to follow the general dictum that surrounds the use of opioids, at least for the initial prescription: prescribe the lowest possible dose for the shortest possible time.

How Effective Are Opioids?

Unfortunately, while opioids are highly effective in relieving acute pain, they are only moderately effective in treating long-term chronic pain, and their effectiveness may diminish over time. What does this mean?

- First, some people find that opioids don't relieve all of their pain. For example, a person who had a pain score of 7 on a zero-to-10 scale could have a score of, say, 4 to 5 after taking an opioid. Improvement, to be sure, but not an elimination of all pain. This can be disappointing.
- Second, some people may have to take doses so large to get adequate pain relief that side effects become a problem and outweigh the benefit.
- Third, some people are so bothered by the side effects, even at lower doses, that they stop taking the drug.
- Fourth, over time, some people with chronic pain build up a "tolerance" to an opioid. That means they have to take more of it to get the same pain relief. Most doctors are uncomfortable increasing doses past a certain point because the risks of side effects and other problems increases with higher doses.
- Fifth, long-term opioid use can cause what doctors call "opioid-induced hyperalgesia". This is when opioid use over months or even years actually increases the body's sensitivity to pain. This well documented but still poorly understood problem worries many doctors.

Tolerance and/or pain sensitivity do not develop in all chronic pain patients. Both are risks. Indeed, common practice these days is to try and stabilize you on an optimal dose of an opioid and then not increase the dose even if full pain relief is not achieved.

When tolerance does occur, many doctors believe that switching you to another opioid is an option. There's little hard evidence on this, unfortunately, but clinical experience over many years suggests that it works for some patients.

Also, even when tolerance is not a factor, if you are not responding well to one opioid and a dosage increase fails to control your pain, your doctor may choose to try another opioid. The rationale for that approach is that some people simply respond better to one opioid than another. And trial and error is the only way to find that out.

So, summing up, three big challenges exist when you start taking an opioid. One is to find the right drug. The second is to find the right dose. And the third is to monitor and minimize side effects. There's more about side effects below and in the box on page 10.

How Long Can You Take an Opioid?

For many of the reasons mentioned above, many doctors are not comfortable treating chronic pain with opioids over very long periods – months or years on end.

The main reason is that, despite the widespread use of opioids for decades, there is little evidence about their long-term safety. The vast majority of studies on the drugs have lasted less than a year. And while there is no evidence that opioids adversely effect the brain, kidneys, liver or other organs when taken long-term, there is strong and troubling evidence that they do affect the production of certain hormones, including testosterone, and can lead to impaired sexual function. This effect is not permanent. Opioids have also been shown to adversely affect the immune system in people with HIV infection and AIDS.

So, doctors treating people with chronic pain face a dilemma. Uncontrolled pain takes a terrible toll on both the body and mind and many doctors are willing to prescribe opioids for longer periods to relieve pain despite the problems cited above and the lack of evidence of long-term safety.

One common approach to lessen the risk of long-term problems with opioids is to encourage drug holidays. This means stopping the drugs or taking lower doses, if only temporarily.

Side Effects – How Bad?

All of the opioids can cause side effects. One recent review of studies found that about 50 percent of people taking an opioid to treat chronic pain experienced at least one adverse event or problem. Among "common" side effects, nausea was the most prevalent (21%), followed by constipation (15%), dizziness (14%), and excessive sedation (14%) (some sedation is experienced by almost all people taking opioids). Itching and vomiting were also fairly common.

In studies, one in five people stopped taking an opioid because of side effects.

Side effects are much more common when opioids are combined with alcohol. Studies and common practice also tell us that some opioid side effects can be worsened by other drugs, especially tranquilizers such as diazepam, sedatives (barbituates) and antihistamines.

Some side effects ease over time – nausea, for example. And others, such as constipation, can be reduced with other drugs (such as laxatives and stool softeners). But many are simply a part of taking an opioid and you have to adapt to them. For example, drowsiness and sedation can make many daily activities difficult, especially if you take larger doses. You can not drive and concentration on work can be difficult.

That's why many chronic pain patients complain that while opioids help them cope with the pain, they do not always improve quality of life. Indeed, it's why opioids can become "part of the problem" for many people in chronic pain who previously led, or want to lead, active lives. Already more likely to be unemployed or find it difficult to sustain a career, the opioids can add to the problem.

As mentioned above, the opioids affect hormone levels and immune function. Sexual problems resulting from reduced testosterone are of particular concern. This includes decreased sex drive and difficulty achieving orgasm. There is little evidence on the variability of this side effect. Some people are more affected than others, and some care about the effect more than others. Long-term use of an opioid raises the risk of experiencing decreased sexual desire.

The box on the next page listing side effects does not mention tolerance, abuse, physical dependence or addiction. These are indeed possible adverse events that can happen when you take opioids. But we view them differently. See the discussion in the sidebar on page 14.

Choosing an Opioid – Our *Best Buy* Picks

Unfortunately, the research comparing the opioids to each other in the treatment of people who have chronic pain is quite limited. That means that, in terms of effectiveness, one opioid may be better than another – either overall or in treating certain types of pain or certain people – but the medical evidence just does not exist to prove it.

That said, the evidence that does exist suggests pretty strongly that when comparable doses of any of the opioids are used, the relief from pain is about the same. The opioids also seem to produce similar results when quality of life is the main outcome measured.

Thus, there is not enough evidence from the research to say that one opioid is more effective or better than any other in treating people who have chronic pain.

There is also little hard evidence about just how the opioids compare to each other in terms of long-term safety and side effects when used to treat people with chronic pain. Three opioids present specific safety issues, however, which are discussed in the "Safety" section below.

Long-Acting, Short-Acting, and Fast-Acting

Studies also indicate no difference between similar doses of long-acting opioids and short-acting opioids in pain relief achieved.

But the short-acting formulations present some problems in the treatment of chronic pain. First, you'll have to take more pills per day. Thus, you may be more likely to miss a dose. This, in turn, puts you at higher risk of pain resurgence or "breakthrough" pain when the affect of the last pill wears off.

Second, there is suggestive but inconclusive evidence (and many doctors believe) that the long-acting drugs create less euphoria and thus pose less risk of addiction.

That's why, in practice, most doctors today primarily prescribe long-acting (extended release) opioids for people with chronic pain. They are more convenient, avoid pain breakthroughs, and may have less addiction potential.

But it's important for you to know that studies which directly compared some of the long-acting drugs to the short-acting ones found no difference in pain relief. For example, people with chronic pain got no more relief when they took long-acting oxycodone (OxyContin) compared to short-acting oxycodone combined with acetaminophen (Percocet).

Studies comparing long-acting morphine to short-acting oxycodone, long-acting dihydrocodeine to dextropropoxyphene, and long-acting codeine to short-acting codeine plus acetaminophen found the long-acting drug somewhat better, but in all of these studies the dose of the long-acting drug was higher than the dose of the short-acting drug. As a result, it's not clear whether the better pain control was because the drug was more effective or because the dose was higher.

One opioid – fentanyl – is available in formulations that are custom-made to be very fast acting. It's formulated as a lollipop and as a tablet that dissolves in your mouth. Both provide very potent relief that lasts for about an hour. These medicines were originally approved in the 1990s to treat breakthrough cancer pain. But doctors now prescribe them often to treat people with other kinds of acute breakthrough pain, including that associated with chronic pain.

The medicines – Actiq and generic, and Fentora – are very expensive. (See the separate cost table for

Adverse Effects of the Opioids

Many decline over time and/or can be alleviated with other drugs.

- Constipation
- Nausea and vomiting
- Itching
- Agitation
- Slowed breathing
- Dizziness
- Drowsiness, sedation
- Depression
- Memory impairment
- Increased pain sensitivity
- Decreased testosterone levels
- Decreased sex drive and impaired sexual function
- Irregular menstruation
- Adverse effect on the immune system
- Possible increased risk of fractures

Pain and Inflammation: What's the Link?

Inflammation is intertwined with pain. It can occur at the site of an injury, such as when you suffer a blunt force trauma, sprain or fracture, and the local tissues swell up. But inflammation can also occur as the result of a disease process. This occurs in joints if you have an attack of gout or in the stomach if you have gastritis or colitis. It can also accompany infection. Inflammation is usually present if you have redness, swelling or tenderness.

The best initial treatment of acute swelling and tissue inflammation is something called RICE. This stands for Rest, Ice, Compression, and Elevation. Along with that, we advise taking a non-steroidal anti-inflammatory, or NSAID. NSAIDs target inflammation and act to reduce or control it while acetaminophen does not. But NSAIDs do not relieve the pain that accompanies inflammation any better than acetaminophen.

Since acetaminophen is a safer drug to start with, this presents a choice dilemma. If your pain involves inflammation, should you take an NSAID instead of acetaminophen? Unfortunately, there is a paucity of research on this issue. All we can offer is this rule of thumb: If the injury or other cause of your pain is mild and does not involve visible inflammation or swelling, or that swelling is minor, try acetaminophen first. If the cause of your pain involves visible inflammation and swelling, you may want to take an NSAID initially. You can then switch to acetaminophen if you still need a pain killer after a few days.

Opioids are not anti-inflammatory. They are pure pain killers. Apart from all their other downsides, that limits their use in treating conditions like osteoarthritis which involve the interplay of inflammation and pain. That said, when pain involving inflammation is severe, pain control trumps treating the inflammation – and an opioid may be just what is needed for a short period to help your body recover.

Fentanyl on page 19.) They are also highly amenable to addiction and recreational drug abuse. Indeed, there's been widespread concern that they are over-prescribed and inappropriately prescribed – to patients who don't really need a fast-acting opioid.

Given their expense and potential for abuse, and the risk of respiratory depression they pose, we'd recommend a careful discussion with your doctor if he or she prescribes Actiq, Fentora or generic fentanyl.

Patch vs. Pill

Several recent studies have compared the fentanyl patch with long-acting morphine. The fentanyl patch is expensive while long-acting morphine is available as an inexpensive generic. Importantly, the studies have found no differences between the two in pain control or measures of function. In addition, while fewer people using the patch developed constipation, more stopped using the patch because of side effects than stopped taking long-acting morphine pills. Some opioid patches have also been recently linked to a higher risk of excess drug entering the body; this led to a recall of most patches from pharmacies.

In other studies, long-acting oxymorphone (Opana ER), which is very expensive, was similar to long-acting oxycodone on measures of both pain and function. Oxycodone is available as a generic and less expensive.

Safety

As mentioned previously, a substantial gap in the research on opioids exists around their safe use over the long-term. In addition, there are very few studies comparing the drugs on long-term use, to see if one or more might be safer than another.

For example, while evidence indicates that medical emergencies related to opioids (misuse, overdoses and suicide attempts) are on the rise in the last decade, studies do not clearly show that this is due more to one opioid than any other. In addition, there is no information about whether the opioids differ in terms of the risk of addiction they pose. As a result,

you should make the assumption that they don't differ in this regard.

Three opioid have special safety issues:

(1) *Meperidine (Demerol)* is not prescribed often these days because if can increase heart rate and has been linked to a higher risk of seizures and neuromuscular problems. It can also interact dangerously with other drugs, including some antidepressants.

(2) *Propoxyphene (Darvon)* is not widely prescribed for long-term use either. It, too, has been linked to a higher risk of seizures and neuromuscular problems.

(3) *Methadone* can be a useful opioid in some circumstances and is very inexpensive, but it is not a good choice for long-term use because it can build-up unpredictably in the body, resulting in dangerously high blood levels and potentially deadly slowed breathing. Several states have reported an increasing number of deaths among methadone users in recent years, possibly related to this effect.

Thus we do not recommend these three opioids for initial treatment of chronic pain. (Your doctor may consider trying methadone if you fail to get benefit from other opioids.)

Perhaps an even worse gap in our knowledge about opioids is that there is no evidence about whether one opioid is more effective or safer than any other among different age or race groups, in women versus men, or when patients have other medical conditions in addition to their chronic pain.

Most doctors are extra cautious in prescribing opioids for chronic pain in people over age 65 or so. They worry that older people will be more vulnerable to the side effects of opioids, particularly the risk of falls and slowed respiration. However, there is no conclusive evidence of these effects, and pain groups urge doctors not to stint on using opioids when appropriate for older people in chronic pain.

Our Picks

Our final criterion for comparing the opioids is cost. The table on page 16 presents the monthly cost of all the opioids, at many different (but not all) dosing regimens. As you can see, equivalent doses of different opioids, as well as different brands of the same opioid, vary substantially in price. Generic versions are available for all but one of the opioids, but some are substantially less expensive while others cost only marginally less than the original brand.

Taking effectiveness, safety and side effects, dosing flexibility and convenience, and cost into account, we have chosen the following opioids as *Best Buy Drugs* for people with moderate to severe chronic pain when other pain relievers fail to bring adequate relief.

- *Generic codeine with acetaminophen*
- *Generic morphine extended release*
- *Generic oxycodone extended release*
- *Generic oxycodone with acetaminophen*

These four medicines have long track records, provide good value, and their use is well understood by most doctors. They range widely in monthly cost, depending on dosing regimen. But most low-dose regimens will run you less than $150 a month or so.

High doses and some extended-release formulations of these medicines can be quite expensive. If you need to take high doses, we'd advise speaking with your doctor or pharmacist about which opioid has the lowest cost under your insurance plan. If you have to pay out of pocket, you have a large motivation to avoid the high-cost versions of some of the options we have chosen.

There is no reason to take the brand-name version of our *Best Buys*, or any opioid for that matter. The name recognition of several brand-name opioids is high and leads some people to request those drugs if they need a strong pain reliever. This has been especially the case over the last decade with OxyContin, Percocet, and Vicodin. Indeed, many people are not aware that these drugs are available in generic form. They thus end up confused about what they are prescribed, since the brand and generic names are hard to keep straight. For example, it can be hard to keep straight that oxycodone is the generic of OxyContin.

We have included two short-acting drugs among our picks – codeine with acetaminophen and oxycodone with acetaminophen. We do so because these are low-cost drugs and because some doctors prefer to start people on a short-acting medicine.

The other two are long-acting opioids and are the ones your doctor is more likely to prescribe if you truly need an opioid for long-term chronic pain control.

We don't choose a *Best Buy* patch or fast-acting opioid (version of fentanyl). Some people with chronic pain may benefit from these medicines. But neither the evidence nor their cost permits a choice of a *Best Buy* among the options available in these categories. Generic versions of fast-acting fentanyl cost about the same, but, again, we think these drugs are overused among people with chronic non-cancer-related pain.

Back Pain: When Are Opioids Necessary?

Back pain is the most common kind of chronic pain and the fifth most common reason people visit doctors in the U.S. Almost everyone experiences back pain at some time, and tens of millions of people have periodic or persistent back pain. In one recent survey, a quarter of adult Americans reported at least one day of back pain in the previous three months, with 8 percent saying the pain was severe.

In 2006 and 2007, a team of researchers sponsored by the American Pain Society and the American College of Physicians undertook a comprehensive and detailed review of existing medical studies on the treatment of back pain. The results were published as a series of papers in an October 2007 issue of the journal *Annals of Internal Medicine*.

The results and conclusions:

- The evidence is strong that acetaminophen, NSAIDs, and muscle relaxants are effective against both acute and chronic back pain. But the magnitude of the pain relief was "moderate" (an improvement of 10 to 20 points on a 100-point scale of pain).
- For most people, the best first line medicines are acetaminophen and NSAIDs. Muscle relaxants are linked to sedation which can impair normal functioning.
- Tricyclic antidepressants can play a role in treating chronic back pain, but the evidence is more mixed. They should be reserved for people who don't respond to acetaminophen or NSAIDs.
- There is some evidence that opioids, tramadol, benzodiazepines, and an anti-seizure drug called gabapentin are effective in treating acute or chronic back pain, but this evidence is less convincing and consistent than for acetaminophen and NSAIDs.
- Opioids are effective for short-term back pain relief but studies of their long-term effectiveness are inconsistent and "unclear." They are not a recommended first-line treatment.
- Substance use disorders are common in people taking opioids for back pain, and "aberrant medication taking behaviors" (overuse and abuse, taking more than prescribed, getting drugs from more than one doctor, giving or selling your pills to friends) have been reported in up to 24 percent of people taking an opioid.
- Drugs called corticosteroids are not effective against back pain, and the evidence is consistent on this.
- The evidence is good that cognitive behavioral therapy, exercise, spinal manipulation, and formal rehabilitation programs are effective in reducing low back pain that lasted more than 4 weeks. The benefits were moderate (10 to 20 points movement on a 100 point pain scale).
- Such non-drug treatments can be combined with drugs in the treatment of chronic back pain.
- There is some evidence that acupuncture, massage, or yoga are effective in easing back pain that has lasted more than 4 weeks, but this evidence is less convincing and consistent than the evidence for the above-mentioned non-drug treatments.
- Applying a heating pad is the only non-drug treatment that helps reduce acute back pain that lasted 4 weeks or less.

Will I Become Addicted?

Opioids have long sparked fears of addiction, among both patients and doctors. Indeed, studies in recent years have shown that fear of addiction led both to be leery of these strong pain relievers.

It is now clear that the risk of addiction when opioids are used to treat true pain was exaggerated. That does not mean the risk is zero, though. But most of it, studies show, is tied to poorly monitored opioid use and to people who have a previous history of drug abuse.

Understanding the risk of opiod addiction requires knowing the distinction between addiction, physical dependence, psychological dependence, and tolerance. If you are prescribed an opioid, we urge you to discuss this issue and these concepts with your doctor and find relevant reading matter. We give you a capsule briefing here:

Physical dependence is when the body becomes accustomed to a drug. Another word for it is habituation. This happens with all the opioids and to all people who take them for more than a week or so. It does not mean you are "addicted." In practical terms, it means when you stop taking the drug, your body will have to adjust. You may have some "withdrawal" symptoms, such as sweating, shakiness, irritability, restlessness, feeling jittery, insomnia, cold flashes, and involuntary muscle movements.

People differ in the degree to which they experience these symptoms. A lot depends on the dose you have been taking and for how long. Withdrawal can be significantly eased by gradually lowering the dose over time until you stop.

Addiction is when you become psychologically dependent on a drug. It involves elements of physical dependence, but goes beyond that. You lose the ability to control the amount of drug you take, and your ability to make judgments about that. For example, you'll take the drug independent of your level of your pain.

Who becomes addicted? Experts believe some people are genetically susceptible to becoming addicted to opioids. But there's no test for this – yet. People who have a history of drug or alcohol abuse are at much greater risk of addiction.

In general, if your pain is severe and treated over a relatively short time (weeks or a few months), you are less likely to become addicted, or feel any euphoria when you take an opioid (though you may enjoy the sedation and calming effect). About 3 in 1,000 people taking high doses of opioids for short periods become addicted, studies show.

Tolerance is the term used to describe the fact that many drugs have decreasing affects over time. With opioids, this is both good and bad. Good because your may have fewer side effects as your body adjusts to the drug; bad because the pain relief declines, too. To sustain the pain relief, a higher dose is needed. So you can see, tolerance complicates both physical dependence and the risk of addiction. Higher doses lead to more physical dependence, tougher withdrawal, and a greater risk of addiction.

All these problem make it essential to take opioids with care and under the watchful eye of a doctor who knows how to tell when you may be getting addicted. Family and friends should also be on alert. Tell-tale signs of addiction: craving the drug, asking for more of it than you really need for pain relief, running out of a month's supply in two to three weeks, not being able to function well and increased sedation and sleepiness.

Common Types of Pain and Drugs to Treat Them*

Type of Pain	Best Initial Treatment	If That Doesn't Work + Comments
Headache	Acetaminophen, or an NSAID[1] if that does not work	See a doctor if headaches are severe, persistent, or accompanied by fever or vomiting, or you have difficulty with speech or balance. Don't self-medicate for more than two weeks.
Migraines	Acetaminophen, NSAIDs, Excedrin, Triptans	A triptan is needed if the others don't work, especially if migraines are frequent and/or severe.
Menstrual cramps	NSAIDs	Several are marketed for cramps but any NSAID will probably work.
Pain due to minor trauma (bruises, scrapes, minor sprains)	Acetaminophen, NSAIDs	Opioids are not recommended.
Pain due to moderate or severe trauma (wounds, burns, fractures, severe sprains)	Opioids	Typically short-term, up to two weeks
Post-surgical pain – minor	Acetaminophen, NSAIDs	Opioids rarely needed.
Post-surgical pain – moderate to severe	Opioids	Combinations of opioids may be prescribed if pain is severe
Muscle aches	Acetaminophen, NSAIDs	If inflammation involved, NSAIDs may work better.
Muscle pulls	NSAIDs, muscle relaxants	If inflammation involved, NSAIDs may work better. Short-term use only.
Pain due to osteoarthritis	Acetaminophen, NSAIDs	See a doctor if pain persists.
Sprains	NSAIDs	Opioids may be needed for severe sprains
Toothaches and pain following dental procedures	Acetaminophen, NSAIDs	Opioids may be needed if pain is severe; short-term use.
Pain due to heartburn or GERD[2]	Antacids, H2 Blockers, Proton Pump Inhibitors (e.g. Prilosec OTC)	This type of pain is best addressed by drugs that resolve the cause. Heartburn that lasts more than a week needs medical attention. Aspirin and NSAIDs should be avoided.
Chronic back pain	Acetaminophen, NSAIDs	Opioids may be necessary if other drugs do not control pain and pain is persistent. (See sidebar on page 13)
Pain from a kidney stone	Acetaminophen, NSAIDs, Opioids	Opioids usually needed if pain is severe
Nerve pain[3]	Acetaminophen, NSAIDs, Anticonvulsants	Opioids are sometimes used, but only if anticonvulsants have been tried and don't work. Antidepressants are another option.
Pain due to fibromyalgia[4]	Antidepressants, Anticonvulsants	Opioids have not proved effective in treating fibromyalgia.

* Important Note: *The information in this table is not comprehensive. It is meant as general guidance and reflects typical medical practice. It should not substitute for a doctor's advice. If you have pain that lasts for more than 10 days, see a doctor. The table is based on numerous sources and does not reflect analysis or input from the Drug Effectiveness Review Project. Always follow the labelling or package insert information on nonprescription and prescription drugs you use to treat pain.*

1. Includes aspirin and aspirin-like drugs such as salsalate, naproxen (Aleve).
2. GERD=Gastroesophageal Reflux Disease, also referred to as stomach acid reflux.
3. Associated with diabetic neuropathy, shingles, injury-related nerve damage, compression of nerves in the spine, and nerve damage associated with cancer or HIV infection.
4. Fibromyalgia is a condition marked by muscle and joint tenderness and pain. Fatigue can also be present. The cause is unknown. The symptoms it produces and their severity vary widely from person to person.

The Opioids – Dosing and Costs*

Generic Name and Strength	Brand Name(s)[1]	Frequency of Use Per Day[2]	Total Daily Dose[3]	Average Monthly Cost[4]
Codeine plus acetaminophen – pills and liquid				
Codeine 30mg plus acetaminophen 300mg	Tylenol No. 3	4	120mg	$99
CR BEST BUY Codeine 30mg plus acetaminophen 300mg	APAP with codeine	4	120mg	$31
Codeine 60mg plus acetaminophen 300mg	Tylenol No. 4	6	360mg	$235
CR BEST BUY Codeine 60mg plus acetaminophen 300mg	APAP with codeine	6	360mg	$38
Codeine 12mg/5ml plus acetaminophen 120mg/5 ml oral solution	Tylenol Elixir	6	72mg	$156
CR BEST BUY Codeine 12mg/5 ml plus acetaminophen 120mg/5 ml oral solution	APAP with codeine Elixir or Generic Elixir	6	72mg	$83
Fentanyl patches				
Fentanyl extended release 25mcg/hour	Duragesic	One patch every 72 hours	600mcg	$240
Fentanyl extended release 25mcg/hour	Generic	One patch every 72 hours	600mcg	$143
Fentanyl extended release 50mcg/hour	Duragesic	One patch every 72 hours	1200mcg	$426
Fentanyl extended release 50mcg/hour	Generic	One patch every 72 hours	1200mcg	$262
Hydrocodone plus acetaminophen – pills				
Hydrocodone 5mg plus acetaminophen 500mg	Lortab	4	20mg	$184
Hydrocodone 5mg plus acetaminophen 500mg	Vicodin	4	20mg	$180
Hydrocodone 5mg plus acetaminophen 500mg	Co-Gesic	4	20mg	$81
Hydrocodone 5mg plus acetaminophen 325mg	Anexsia	6	30mg	$146
Hydrocodone 5mg plus acetaminophen 325mg	Generic	6	30mg	$134
Hydrocodone 7.5mg plus acetaminophen 500mg	Lortab	4	30mg	$173
Hydrocodone 7.5mg plus acetaminophen 500mg	Generic	4	30mg	$59
Hydrocodone 10mg plus acetaminophen 660mg	Vicodin HP	4	40mg	$196
Hydrocodone 10mg plus acetaminophen 660mg	Generic	4	40mg	$79
Hydrocodone 10mg plus acetaminophen 650mg	Generic	4	40mg	$70
Hydromorphone – pills				
Hydromorphone 8mg	Dilaudid	4	32mg	$228
Hydromorphone 8mg	Generic	4	32mg	$78

The Opioids – Dosing and Costs*

Generic Name and Strength	Brand Name(s)[1]	Frequency of Use Per Day[2]	Total Daily Dose[3]	Average Monthly Cost[4]
Levorphanol – pills				
Levorphanol 2mg	Generic	4	8mg	$136
Levorphanol 2mg	Generic	6	12mg	$204
Meperidine – pills				
Meperidine 50mg	Demerol	6	300mg	$290
Meperidine 50mg	Meperitab	6	300mg	$144
Meperidine 50mg	Generic	6	300mg	$164
Meperidine 100mg	Demerol	6	600mg	$537
Meperidine 100mg	Meperitab	6	600mg	$165
Meperidine 100mg	Generic	6	600mg	$240
Methadone – pills				
Methadone 5mg	Methadose, Dolophine, or Generic	4	20mg	$23
Methadone 10mg	Methadose, Dolophine, or Generic	4	40mg	$28-$38
Morphine – pills				
Morphine extended release 30mg	Kadian	1-2	30-60mg	$130-$266
Morphine extended release 60mg	Avinza, Kadian	1	60mg	$237-$250
Morphine extended release 60mg	Kadian	2	120mg	$499
Morphine extended release 80mg	Kadian	1-2	80mg-160mg	$336-$672
Morphine extended release 100mg	Kadian	1-2	100-200mg	$450-$900
Morphine extended release 200mg	Kadian	1-2	200-400mg	$950-$1900
Morphine extended release 15mg	MS-Contin	1-3	15-45mg	$48-$144
CR BEST BUY Morphine extended release 15mg	Generic	1-3	15-45mg	$26-$76
Morphine extended release 30mg	MS-Contin	1-3	30-90mg	$78-$234
CR BEST BUY Morphine extended release 30mg	Generic	1-3	30-90mg	$43-$129
Morphine extended release 60mg	MS-Contin	1-3	60-180mg	$145-$435
CR BEST BUY Morphine extended release 60mg	Generic	1-3	60-180mg	$75-$225
Oxycodone – pills				
Oxycodone extended release 10mg	OxyContin	2	20mg	$127
Oxycodone extended release 20mg	OxyContin	2	40mg	$227

The Opioids – Dosing and Costs*

Generic Name and Strength	Brand Name(s)[1]	Frequency of Use Per Day[2]	Total Daily Dose[3]	Average Monthly Cost[4]
Oxycodone extended release 40mg	OxyContin	2	80mg	$395
Oxycodone extended release 80mg	OxyContin	2	160mg	$735
CR BEST BUY Oxycodone extended release 10mg	Generic	2	20mg	$86-$100[5]
CR BEST BUY Oxycodone extended release 20mg	Generic	2	40mg	$157-$175
CR BEST BUY Oxycodone extended release 40mg	Generic	2	80mg	$270-$307
Oxycodone extended release 80mg	Generic	2	160mg	$522-$556
Oxycodone 5mg plus acetaminophen 325mg	Percocet	4	20mg	$391
CR BEST BUY Oxycodone 5mg plus acetaminophen 325mg	Generic	4	20mg	$61
Oxycodone 7.5mg plus acetaminophen 500mg	Percocet	4	30mg	$442
CR BEST BUY Oxycodone 7.5mg plus acetaminophen 500mg	Generic	4	30mg	$139
Oxycodone 4.8mg plus aspirin 325mg	Percodan	4	19mg	$208
Oxycodone 4.8mg plus aspirin 325mg	Generic or Endodan	4	19mg	$137
Oxycodone 5mg	Roxicodone	4	20mg	$61
Oxycodone 15mg	Roxicodone	4	60mg	$151
Oxycodone 30mg	Roxicodone	4	120mg	$290
Oxycodone 5mg	Generic	4	20mg	$45
Oxycodone 15mg	Generic	4	60mg	$86
Oxycodone 30mg	Generic	4	120mg	$147
Oxymorphone – pills				
Oxymorphone 5mg	Opana	4	20mg	$336
Oxymorphone 10mg	Opana	4	40mg	$676
Oxymorphone extended release 5mg	Opana ER	2	10mg	$131
Oxymorphone extended release 10mg	Opana ER	2	20mg	$245
Oxymorphone extended release 20mg	Opana ER	2	40mg	$434
Oxymorphone extended release 40mg	Opana ER	2	80mg	$788
Propoxyphene – pills				
Propoxyphene 65mg	Darvon	4	260mg	$133
Propoxyphene 65mg	Generic	4	260mg	$51
Propoxyphene napsylate 100mg	Darvon-N	4	400mg	$228
Propoxyphene napsylate 100mg	Generic	4	400mg	$30

The Opioids – Dosing and Costs*

Generic Name and Strength	Brand Name(s)[1]	Frequency of Use Per Day[2]	Total Daily Dose[3]	Average Monthly Cost[4]
Tramadol – pills				
Tramadol 50mg	Ultram	4	200mg	$196
Tramadol 50mg	Generic	4	200mg	$62
Tramadol extended release 100 mg	Ultram ER	1	100mg	$128
Tramadol extended release 200 mg	Ultram ER	1	200 mg	$209
Tramadol extended release 300 mg	Ultram ER	1	300 mg	$290

* Selected doses. There are literally dozens of dosing formulas for most of the medicines listed in this table. For space reasons, we have limited our list to selected doses of both brand and generics.

1. "Generic" indicates it's the generic version of this drug.
2. As typically and generally prescribed. Means number of pills unless otherwise noted.
3. Total daily dose of opioid only.
4. Prices reflect nationwide retail average for August 2007, rounded to the nearest dollar. They are derived by *Consumer Reports Best Buy Drugs* from data provided by Wolters Kluwer Health, a healthcare information company. Source® Pharmaceutical Audit Suite (PHAST). Wolters Kluwer Health is not involved in our analysis and recommendations.
5. Oxycodone extended release tablets in all strengths are made by many generic companies. We present the range of costs.

Fast-Release Fentanyl for Breakthrough Pain**

Generic Name and Strength	Brand Name	Cost Per Dose
Fentanyl lozenge 200mcg	Actiq	$26
Fentanyl lozenge 400mcg	Actiq	$37
Fentanyl lozenge 600mcg	Actiq	$49
Fentanyl lozenge 800mcg	Actiq	$53
Fentanyl lozenge 200mcg	Generic	$20
Fentanyl lozenge 400mcg	Generic	$27
Fentanyl lozenge 600mcg	Generic	$32
Fentanyl lozenge 800mcg	Generic	$35
Fentanyl tablet 100mcg	Fentora	$17
Fentanyl tablet 200mcg	Fentora	$19
Fentanyl tablet 400mcg	Fentora	$27
Fentanyl tablet 600 mcg	Fentora	$36
Fentanyl tablet 800 mcg	Fentora	$44

** These medicines are approved primarily – and mostly used – to treat breakthrough cancer pain. But doctors can and do prescribe them for people with other kinds of breakthrough pain, including chronic pain that can flare up. They provide potent relief for about an hour. They are very expensive. As you see, the cost is given per dose, not per month, since these medicines are not intended for regular use. Patients simply have them on hand in case they experience breakthrough pain. Doctors start by giving the lowest dose possible. Not all strengths are presented in this table, for space reasons. Actiq and the generic version of Actiq are made as a lollipop. Fentora is a tablet that dissolves in the mouth.

Talking With Your Doctor

It's important for you to know that the information we present in this report is not meant to substitute for a doctor's judgment. But we hope it will help your doctor and you arrive at a decision about whether you need an opioid, and, if so, which one and what dose may be best for you.

Bear in mind that many people are reluctant to discuss the cost of medicines with their doctors and that studies show doctors do not routinely take price into account when prescribing medicines. Unless you bring it up, your doctors may assume that cost is not a factor for you.

Many people (including many physicians) also believe that newer drugs are always or almost always better. While that's a natural assumption to make, the fact is that it's not true. Studies consistently show that many older medicines are as good as, and in some cases better than, newer medicines. Think of them as "tried and true," particularly when it comes to their safety record. Newer drugs have not yet met the test of time, and unexpected problems can and do crop up once they hit the market.

Of course, some newer prescription drugs are indeed more effective and safer. Talk with your doctor about the pluses and minuses of newer versus older medicines, including generic drugs.

Prescription medicines go "generic" when a company's patents on a drug lapse, usually after about 12 to 15 years. At that point, other companies can make and sell the drug.

Generics are almost always much less expensive than newer brand name medicines, but they are not lesser quality drugs. Indeed, most generics remain useful medicines even many years after first being marketed. That is why today about half of all prescriptions in the U.S. are for generics.

Another important issue to talk with your doctor about is keeping a record of the drugs you are taking. There are several reasons for this:

- First, if you see several doctors, they may not always tell each other which drugs have been prescribed for you.
- Second, it is very common for doctors today to prescribe several medicines for you before finding one that works well or best, mostly because people vary in their response to prescription drugs.
- Third, more and more people today take several prescription medications, nonprescription drugs and supplements all at the same time. Many of these interact in ways that can be very dangerous.
- And fourth, the names of prescription drugs—both generic and brand—are often hard to pronounce and remember.

For all these reasons, it's important to keep a list of the drugs you are taking, both prescription and nonprescription and including dietary supplements.

Always be sure, too, that you understand the dose of the medicine being prescribed for you and how many pills you are expected to take each day. Your doctor should tell you this information. When you fill a prescription at the pharmacy, or if you get it by mail, you may want to check to see that the dose and the number of pills per day on the pill bottle match the amounts that your doctor told you.

How We Picked the *Best Buy* Drugs

Our evaluation is based on an independent scientific review of the evidence on the effectiveness, safety, and adverse effects of the opioids. A team of physicians and researchers at the Oregon Health & Science University Evidence-based Practice Center conducted the analysis as part of the Drug Effectiveness Review Project, or DERP. DERP is a first-of-its-kind 13-state initiative to evaluate the comparative effectiveness and safety of hundreds of prescription drugs.

A synopsis of DERP's analysis of the opioids forms the basis for this report. A consultant to *Consumer Reports* Best Buy Drugs is also a member of the Oregon-based research team, which has no financial interest in any pharmaceutical company or product.

The full DERP review of the opioid drugs is available at http://www.ohsu.edu/drugeffectiveness/reports/final.cfm. (Note: this a long and technical document written for physicians.)

The prescription drug costs we cite were obtained from a healthcare information company that tracks the sales of prescription drugs in the U.S. Prices for a drug can vary quite widely, even within a single city or town. All the prices in this report are national averages based on sales of prescription drugs in retail outlets. They reflect the cash price paid for a month's supply of each drug in August, 2007.

Consumers Union and *Consumer Reports* selected the *Best Buy Drugs* using the following criteria. The drug had to:

- Be as effective or more effective than the other opioids
- Have a safety record equal to or better than other opioids
- Be priced reasonably relative to other opioids

The *Consumers Reports Best Buy Drugs* methodology is described in more detail in the methods section at www.CRBestBuyDrugs.org.

About Us

Consumers Union, publisher of *Consumer Reports*® magazine, is an independent and nonprofit organization whose mission since 1936 has been to provide consumers with unbiased information on goods and services and to create a fair marketplace. Its website is www.consumersunion.org. The magazine's website is www.consumerreports.org.

Consumer Reports Best Buy Drugs® is a public education project administered by Consumers Union. Two outside sources of generous funding made the project possible. They are a major grant from the Engelberg Foundation, a private philanthropy, and a supporting grant from the National Library of Medicine, part of the National Institutes of Health. A more detailed explanation of the project is available at www.CRBestBuyDrugs.org.

Using and Sharing this Report

This report should not be viewed as a substitute for a consultation with a medical or health professional. The information is meant to enhance communication with your doctor, not replace it. Use of our drug reports is also at your own risk. Consumers Union can not be liable for any loss, injury, or other damages related to your use of this report.

We also strongly recommend that you not make changes to your medicines without consulting a physician.

We followed a rigorous editorial process to ensure that the information in this report and on the *Consumer Reports Best Buy Drugs* website is accurate and describes generally accepted clinical practices. If we find, or are alerted to, an error, we will correct this as quickly as possible. However, *Consumer Reports* and its authors, editors, publishers, licensors and any suppliers cannot be responsible for medical errors or omissions, or any consequences from the use of the information on this site.

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References

The first reference on this list is to the Drug Effectiveness Review Project report on opioid drugs. This report was the main resource for our evaluation. We refer you to that report for a comprehensive list of studies and medical literature citations. The other references we list here are the principle sources of information used to produce this Consumer Reports Best Buy Drugs *analysis of the opioids.*

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