**Pain Management Medication Types**

**Types (classes) of pain medication**

Pain medications are drugs used to relieve discomfort associated with disease, injury, or surgery. Because the pain process is complex, there are many types of pain drugs that provide relief by acting through a variety of physiological mechanisms. Thus, effective medication for nerve pain will likely have a different mechanism of action than [arthritis](http://www.rxlist.com/script/main/art.asp?articlekey=7776) pain medication.

* Nonsteroidal anti-inflammatory drugs ([NSAIDs](http://www.rxlist.com/script/main/art.asp?articlekey=94691)) act on substances in the body that can cause inflammation, pain, and [fever](http://www.rxlist.com/script/main/art.asp?articlekey=361).
* Corticosteroids are often administered as an injection at the site of musculoskeletal injuries. They exert powerful anti-inflammatory effects. They can also be taken orally to relieve pain from, for example, arthritis.
* Acetaminophen increases the body's pain threshold, but it has little effect on inflammation.
* Opioids, also known as narcotic analgesics, modify pain messages in the brain.
* Muscle relaxants reduce pain from tense muscle groups, most likely through sedative action in the central nervous system.
* Anti-anxiety drugs work on pain in three ways: they reduce [anxiety](http://www.rxlist.com/script/main/art.asp?articlekey=42985), they relax muscles, and they help patients cope with discomfort.
* Some [antidepressants](http://www.rxlist.com/script/main/art.asp?articlekey=88888), particularly the tricyclics, may reduce pain transmission through the spinal cord.
* Some anticonvulsant drugs also relieve the pain of neuropathies, possibly by stabilizing nerve cells.
* **For what conditions are pain medications used?**
* Virtually any disease as well as most injuries and surgical procedures involve some degree of pain. It's not surprising, then, that pain medications, also known as analgesics, are among the most commonly used drugs in the U.S. Different medications are used depending on the type of pain. For minor complaints, such as muscle sprains or headaches, an over-the-counter (OTC) pain reliever will usually do. Prescription pain relievers, especially opiate analgesics -- are normally reserved for moderate-to-severe pain – such as that seen after surgery, trauma, or from certain diseases like [cancer](http://www.rxlist.com/script/main/art.asp?articlekey=13931) or [rheumatoid arthritis](http://www.rxlist.com/script/main/art.asp?articlekey=176804). Other common "painful" situations in which analgesics find use include labor, back pain, [fibromyalgia](http://www.rxlist.com/script/main/art.asp?articlekey=363), and [urinary tract infections](http://www.rxlist.com/script/main/art.asp?articlekey=513).
* **What are the differences among the types of pain medications?**
* Pain medications can be broadly classified into two categories: prescription and nonprescription. In the latter category are several mild anti-inflammatory drugs ([ibuprofen](http://www.rxlist.com/script/main/art.asp?articlekey=70121), naproxen), as well as acetaminophen. These are mainly meant for use with short-term, acute pain -- [menstrual cramps](http://www.rxlist.com/script/main/art.asp?articlekey=9814), tension headaches, minor sprains -- what are known colloquially as "everyday aches and pains." Over-the-counter pain relievers, especially acetaminophen, are also sometimes used to treat [chronic pain](http://www.rxlist.com/script/main/art.asp?articlekey=20502), such as that seen in arthritis. These drugs also lower fever and are often used for that purpose.
* The prescription arsenal against pain is extensive. It also includes some NSAIDs more powerful than their over-the-counter cousins as well as opioid analgesics. And then there are some unconventional analgesics – drugs which were not originally developed as pain-relievers, but which were found to have pain-relieving properties in certain conditions. For example, fibromyalgia pain medications include an antiseizure drug (pregabalin [[Lyrica](http://www.rxlist.com/script/main/art.asp?articlekey=71165)]) and an antidepressant (duloxetine hydrochloride [[Cymbalta](http://www.rxlist.com/script/main/art.asp?articlekey=67461)]).
* One major difference between anti-inflammatories and opioid analgesics is that the former have a "ceiling effect" -- that is, continuous dose escalation does not provide concomitant escalation in pain relief. One reason opioids are so useful in the treatment of chronic pain is that as tolerance to a dose develops, the dose can be raised. In fact, there is no limit to how high opioid dosing can go -– keeping in mind that higher doses can be associated with unpleasant and/or even dangerous side effects.

**What are the strongest pain medications?**

Opioid analgesics, in general, are the strongest pain-relieving medications. The benchmark drug in this class is morphine -- with other opioids falling above or below it in terms of pain-relieving potential. Near the bottom of the list is codeine, usually prescribed in combination with acetaminophen to relieve, for example, pain resulting from dental work. Codeine is only about 1/10th as powerful as morphine. Opioids more powerful than morphine include hydromorphone ([Dilaudid](http://www.rxlist.com/script/main/art.asp?articlekey=70051)) and oxymorphone ([Opana](http://www.rxlist.com/script/main/art.asp?articlekey=78426)). But the strongest opioid in community use is fentanyl which, in its intravenous form, is 70 to 100 times more potent than morphine. Fentanyl is also available as a long-release patch ([Duragesic](http://www.rxlist.com/script/main/art.asp?articlekey=69015)) and as a lozenge that dissolves in the mouth ([Actiq](http://www.rxlist.com/script/main/art.asp?articlekey=69008)). Sufentanil is even more powerful than fentanyl, but its use, at present is restricted to the intravenous route. However, a transdermal patch containing sufentanil is in clinical trials.

**What are the side effects of pain medications?**

**NSAIDs**

All NSAIDs come with the risk of gastrointestinal ulceration and bleeding. A newer class of anti-inflammatories, the COX-2 inhibitors, was developed to reduce this risk. It did not, though, eliminate it. In fact, another major issue emerged with these drugs: the possibility of severe and deadly vascular problems with long-term use, including [heart attack](http://www.rxlist.com/script/main/art.asp?articlekey=379) and [stroke](http://www.rxlist.com/script/main/art.asp?articlekey=489).

**Acetaminophen**

Most users of acetaminophen experience few, if any, side effects. But the drug can cause [liver](http://www.rxlist.com/script/main/art.asp?articlekey=191) damage, especially when taking too much or if taken with alcohol.

**Opioids**

Opioid analgesics commonly cause drowsiness, [dizziness](http://www.rxlist.com/script/main/art.asp?articlekey=97800), and respiratory [depression](http://www.rxlist.com/script/main/art.asp?articlekey=342). However, these side effects usually disappear with continued use. However, [constipation](http://www.rxlist.com/script/main/art.asp?articlekey=331), another common side effect, tends to persist. In addition, opioid use may lead to addiction or dependence. Other possible side effects of opioid analgesics include:

* Euphoria, dysphoria, agitation, seizures, hallucinations
* Lowered blood pressure and heart rate
* Muscular rigidity and contractions
* [Nausea and vomiting](http://www.rxlist.com/script/main/art.asp?articlekey=41943)
* Non-allergic [itching](http://www.rxlist.com/script/main/art.asp?articlekey=15781)
* Pupil constriction
* [Sexual](http://www.rxlist.com/script/main/art.asp?articlekey=42671) dysfunction
* [Urinary retention](http://www.rxlist.com/script/main/art.asp?articlekey=113304)

**Mixed opioid agonist-antagonists**

Patients can experience symptoms of opioid withdrawal if a straight opioid analgesic, such as morphine, is taken at the same time as an opioid agonist-antagonist drug. Some of these medications include pentazocine ([Talwin Nx](http://www.rxlist.com/script/main/art.asp?articlekey=73235), [Talacen](http://www.rxlist.com/script/main/art.asp?articlekey=75077), [Talwin Compound](http://www.rxlist.com/script/main/art.asp?articlekey=75084)), butorphanol, and nalbuphine ([Nubain](http://www.rxlist.com/script/main/art.asp?articlekey=72126)).

**Muscle relaxants**

The main side effect of muscle relaxants is drowsiness. This may be how they work to "relieve" pain. In addition, carisoprodol ([Soma](http://www.rxlist.com/script/main/art.asp?articlekey=66432)) use may lead to dependence because in the body it is converted into a drug similar to barbiturates; cyclobenzaprine ([Flexeril](http://www.rxlist.com/script/main/art.asp?articlekey=67440)) can cause [dry mouth](http://www.rxlist.com/script/main/art.asp?articlekey=43095), constipation, confusion, and loss of balance; methocarbamol ([Robaxin](http://www.rxlist.com/script/main/art.asp?articlekey=71494)) discolors the urine to green, brown, or black; both metaxalone ([Skelaxin](http://www.rxlist.com/script/main/art.asp?articlekey=71452)) and chlorzoxazone ([Parafon Forte](http://www.rxlist.com/script/main/art.asp?articlekey=66810), DSC) should be used with caution in those with liver problems.

**Anti-anxiety agents**

Anti-anxiety drugs also carry the risk of sedation, particularly if combined with certain other medications (such as opioid analgesics) or alcohol. Other possible side effects include psychological changes, [headache](http://www.rxlist.com/script/main/art.asp?articlekey=20628), nausea, visual problems, restlessness, and [nightmares](http://www.rxlist.com/script/main/art.asp?articlekey=37618). [Chest pain](http://www.rxlist.com/script/main/art.asp?articlekey=87510) and heart pounding are also possible.

**Antidepressants**

Some of the antidepressants used for pain relief are the older tricyclics. These come with numerous side effects classified as anticholinergic, including dry mouth, difficulty urinating, blurred vision, and constipation. Other possible side effects include lower blood pressure, fast heartbeat, [palpitations](http://www.rxlist.com/script/main/art.asp?articlekey=437), weight gain, and [fatigue](http://www.rxlist.com/script/main/art.asp?articlekey=120806).

A few of the newer antidepressants also reduce pain -- and with less risk of anticholinergic issues. Still, the serotonin norepinephrine reuptake inhibitors (SNRIs) may cause the following common side effects:

* [Anorexia](http://www.rxlist.com/script/main/art.asp?articlekey=276)
* Asthenia
* Constipation
* Dizziness
* Dry mouth
* Ejaculatory difficulties
* Headache
* [Insomnia](http://www.rxlist.com/script/main/art.asp?articlekey=47466)
* Nausea
* Nervousness
* Sweating

**Antiseizure agents**

Side effects associated with the anticonvulsants used for [pain management](http://www.rxlist.com/script/main/art.asp?articlekey=77988) commonly disappear over time. They include dizziness, drowsiness, and swelling of the lower extremities.

**Corticosteroids**

In general, short-term and/or low-dose corticosteroid use results in few side effects. But taking corticosteroids long-term can result in severe side effects, including:

* Adrenal insufficiency -- a condition in which the body cannot adequately respond to physical [stress](http://www.rxlist.com/script/main/art.asp?articlekey=488)
* Atherosclerosis
* Bone death
* [Cataracts](http://www.rxlist.com/script/main/art.asp?articlekey=314) and [glaucoma](http://www.rxlist.com/script/main/art.asp?articlekey=373)
* Elevated blood pressure
* Elevated blood sugar
* Fluid retention
* Gastrointestinal bleeding
* Mood changes
* [Osteoporosis](http://www.rxlist.com/script/main/art.asp?articlekey=434)
* Suppression of the immune system
* Trouble sleeping
* Weight gain
* Damage to local tissues

**What are the warnings/precautions with pain medications?**

**Acetaminophen** can be toxic to the liver and should be used with caution, if at all, in people with [liver disease](http://www.rxlist.com/script/main/art.asp?articlekey=110443). The maximum recommended dose of acetaminophen is 4 grams per 24 hours, but moderate-to-heavy alcohol drinkers need to have the dosage adjusted downward.

**NSAIDs** may cause bleeding in the stomach. To reduce this possibility, they should be taken with food. These drugs may cause [kidney failure](http://www.rxlist.com/script/main/art.asp?articlekey=10419) in those with kidney or liver disease. Also, some NSAIDs increase the risk of cardiovascular events.

**Opioid analgesics** may result in dependency. Operating a motor vehicle or machinery may be dangerous while using these pain medications because they can cause drowsiness. Opioids may slow down breathing. Mixing opioids with alcohol or certain other centrally-acting drugs could make this effect even worse.

Death and serious side effects have occurred with the use of **fentanyl transdermal patches**. Fentanyl patches are not recommended as starting therapy in inexperienced opiate users. Heat from the sun, hot baths, or heating pads can increase the speed of fentanyl release from patches.

Fentanyl buccal tablets have just one indication: treatment of breakthrough pain in cancer patients who are using and who have grown tolerant to opiates. Inappropriate use of fentanyl buccal tablets has resulted in death.

**Methadone** can affect the heart. Patients slated for methadone therapy should first have an EKG to check for abnormalities.

Most **muscle relaxants** cause drowsiness. Metaxalone and chlorzoxazone should be used with caution in people with liver disease. Dantrolene can be toxic to the liver. Carisoprodol use may result in dependence.

**Anxiolytics or anti-anxiety medications** -- especially the benzodiazepine class -- may cause drowsiness. Sudden withdrawal from these drugs can result in seizures and possibly death.

Some **antidepressant** medications may cause drowsiness. The older antidepressants (the tricyclics) interact with a wide array of drugs, sometimes with fatal results -- and they can affect the heart.

Patients using **anticonvulsants** as well as newer antidepressants should be monitored for signs and symptoms of suicidal thoughts.

Orally administered **corticosteroids** for acute inflammation should not, in general, be suddenly withdrawn. Doses are customarily tapered down over time and patients must follow instructions exactly.

**Pain medications list**

Examples of nonprescription pain medications include:

* Acetaminophen ([Tylenol](http://www.rxlist.com/script/main/art.asp?articlekey=65319))
* [Aspirin](http://www.rxlist.com/script/main/art.asp?articlekey=65438)
* Ibuprofen (Advil, Motrin IB)
* Naproxen (Aleve)

Examples of prescription medications include the following:

**Nonsteroidal anti-inflammatory drugs (NSAIDs)**

* Diclofenac ([Voltaren](http://www.rxlist.com/script/main/art.asp?articlekey=67853))
* Diflunisal ([Dolobid](http://www.rxlist.com/script/main/art.asp?articlekey=67909))
* Etodolac ([Lodine](http://www.rxlist.com/script/main/art.asp?articlekey=68791))
* Fenoprofen ([Nalfon](http://www.rxlist.com/script/main/art.asp?articlekey=69001))
* Flurbiprofen ([Ansaid](http://www.rxlist.com/script/main/art.asp?articlekey=69260))
* Ibuprofen (Motrin)
* Indomethacin ([Indocin](http://www.rxlist.com/script/main/art.asp?articlekey=70240), Indo-Lemmon)
* Ketorolac ([Toradol](http://www.rxlist.com/script/main/art.asp?articlekey=70576))
* Mefenamic acid ([Ponstel](http://www.rxlist.com/script/main/art.asp?articlekey=71263))
* Meloxicam ([Mobic](http://www.rxlist.com/script/main/art.asp?articlekey=71865))
* Nabumetone ([Relafen](http://www.rxlist.com/script/main/art.asp?articlekey=72069))
* Naproxen ([Naprosyn](http://www.rxlist.com/script/main/art.asp?articlekey=72161), Anaprox)
* Oxaprozin ([Daypro](http://www.rxlist.com/script/main/art.asp?articlekey=88743))
* Piroxicam ([Feldene](http://www.rxlist.com/script/main/art.asp?articlekey=73473))
* Sulindac ([Clinoril](http://www.rxlist.com/script/main/art.asp?articlekey=74972))
* Tolmetin ([Tolectin](http://www.rxlist.com/script/main/art.asp?articlekey=75491))

**COX-2 inhibitor**

* Celecoxib ([Celebrex](http://www.rxlist.com/script/main/art.asp?articlekey=67349))

**Opioid analgesics**

* Acetaminophen with codeine (Tylenol #2, #3, #4)
* Buprenorphine ([Butrans](http://www.rxlist.com/script/main/art.asp?articlekey=118549))
* Fentanyl transdermal patches (Duragesic)
* Hydrocodone with acetaminophen ([Lortab Elixir](http://www.rxlist.com/script/main/art.asp?articlekey=86799), [Vicodin](http://www.rxlist.com/script/main/art.asp?articlekey=70009))
* Hydrocodone with ibuprofen ([Vicoprofen](http://www.rxlist.com/script/main/art.asp?articlekey=76128))
* Hydrocodone (Zohydro)
* Hydromorphone ([Exalgo](http://www.rxlist.com/script/main/art.asp?articlekey=114677))
* Meperidine ([Demerol](http://www.rxlist.com/script/main/art.asp?articlekey=71326), Merpergan)
* Methadone ([Dolophine](http://www.rxlist.com/script/main/art.asp?articlekey=71480))
* Morphine and morphine sustained release ([MS-Contin](http://www.rxlist.com/script/main/art.asp?articlekey=71971), [Avinza](http://www.rxlist.com/script/main/art.asp?articlekey=65641), [Kadian](http://www.rxlist.com/script/main/art.asp?articlekey=79961))
* Oxycodone sustained release ([OxyContin](http://www.rxlist.com/script/main/art.asp?articlekey=72967))
* Oxycodone with acetaminophen ([Percocet](http://www.rxlist.com/script/main/art.asp?articlekey=72939))
* Oxycodone with aspirin ([Percodan](http://www.rxlist.com/script/main/art.asp?articlekey=72946))
* Oxycodone with ibuprofen ([Combunox](http://www.rxlist.com/script/main/art.asp?articlekey=67258))
* Oxymorphone (Opana, [Opana ER](http://www.rxlist.com/script/main/art.asp?articlekey=78433))
* Pentazocine (Talwin,)
* Propoxyphene with aspirin, propoxyphene with acetaminophen
* Tapentadol ([Nucynta](http://www.rxlist.com/script/main/art.asp?articlekey=108328), [Nucynta ER](http://www.rxlist.com/script/main/art.asp?articlekey=149078))
* Tramadol, tramadol with acetaminophen ([Ultram](http://www.rxlist.com/script/main/art.asp?articlekey=75540), [Ultracet](http://www.rxlist.com/script/main/art.asp?articlekey=75841))

**Mixed opioid agonist/antagonists**

* Pentazocine/naloxone (Talwin NX)
* Butorphanol
* Nalbuphine (Nubain)

**Antidepressants**

* Amitriptyline ([Elavil](http://www.rxlist.com/script/main/art.asp?articlekey=65109))
* Bupropion ([Wellbutrin](http://www.rxlist.com/script/main/art.asp?articlekey=78601))
* Desipramine ([Norpramin](http://www.rxlist.com/script/main/art.asp?articlekey=67706))
* Duloxetine (Cymbalta)
* Imipramine ([Tofranil](http://www.rxlist.com/script/main/art.asp?articlekey=70163))
* Venlafaxine ([Effexor](http://www.rxlist.com/script/main/art.asp?articlekey=68329))

**Anticonvulsants**

* Carbamazepine ([Tegretol](http://www.rxlist.com/script/main/art.asp?articlekey=78531))
* Clonazepam ([Klonopin](http://www.rxlist.com/script/main/art.asp?articlekey=67097))
* Gabapentin ([Neurontin](http://www.rxlist.com/script/main/art.asp?articlekey=69463))
* Lamotrigine ([Lamictal](http://www.rxlist.com/script/main/art.asp?articlekey=70674))
* Pregabalin (Lyrica)
* Tiagabine ([Gabitril](http://www.rxlist.com/script/main/art.asp?articlekey=69470))
* Topiramate ([Topamax](http://www.rxlist.com/script/main/art.asp?articlekey=75505))

**Fibromyalgia medication**

* Milnacipran ([Savella](http://www.rxlist.com/script/main/art.asp?articlekey=98133))

**Anxiolytics**

* Alprazolam ([Xanax](http://www.rxlist.com/script/main/art.asp?articlekey=64974))
* Diazepam ([Valium](http://www.rxlist.com/script/main/art.asp?articlekey=75918))
* Lorazepam ([Ativan](http://www.rxlist.com/script/main/art.asp?articlekey=71045))
* Triazolam ([Halcion](http://www.rxlist.com/script/main/art.asp?articlekey=75645))

**Muscle relaxants**

* [Baclofen](http://www.rxlist.com/script/main/art.asp?articlekey=85349) (Lioresal)
* Carisoprodol (Soma)
* Chlorzoxazone (Parafon Forte, DSC)
* Cyclobenzaprine (Flexeril)
* Dantrolene ([Dantrium](http://www.rxlist.com/script/main/art.asp?articlekey=67573))
* Metaxalone (Skelaxin)
* Methocarbamol (Robaxin)
* Orphenadrine ([Norflex](http://www.rxlist.com/script/main/art.asp?articlekey=72834))
* Tizanidine ([Zanaflex](http://www.rxlist.com/script/main/art.asp?articlekey=75435))

**Corticosteroids**

* Cortisone
* Prednisone
* [Prednisolone](http://www.rxlist.com/script/main/art.asp?articlekey=73690)
* [Dexamethasone](http://www.rxlist.com/script/main/art.asp?articlekey=67755)
* Methylprednisolone ([Medrol](http://www.rxlist.com/script/main/art.asp?articlekey=71536), [A-Methapred](http://www.rxlist.com/script/main/art.asp?articlekey=97731), [Depo Medrol](http://www.rxlist.com/script/main/art.asp?articlekey=67678), [Solu Medrol](http://www.rxlist.com/script/main/art.asp?articlekey=74762))
* Triamcinolone ([Allernaze](http://www.rxlist.com/script/main/art.asp?articlekey=97972), Aristospan 5 mg, [Aristospan Injection 20](http://www.rxlist.com/script/main/art.asp?articlekey=87472) mg, [Kenalog 10 Injection](http://www.rxlist.com/script/main/art.asp?articlekey=101671), Kenalog [Nasacort AQ](http://www.rxlist.com/script/main/art.asp?articlekey=72182))

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