

# **Medications for chronic pain**

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When it comes to treating chronic pain with medications, there are many to choose from. Different types of pain medications are used for different pain conditions. You may have to try a few types, or even a combination of a few, to achieve relief and lessen any likelihood of unwanted side effects. Some medications start working right away while others may take weeks to reduce the pain.

## **How will medication reduce my pain?**

Medications will not cure your condition, but may help to do one or more of the following:

1. Decrease pain caused by damage to tissues such as muscles, bone, joints, ligaments and organs. This type of pain is called nociceptive pain.
2. Reduce pain as a result of damage to nerves or the central nervous system, called neuropathic pain.
3. Decrease inflammation caused by certain conditions such as Rheumatoid Arthritis or musculoskeletal injuries.
4. Improve sleep, anxiety or depression.

Pain varies from person to person. When it is severe, it can limit daily routines at home and at work. Pain also can affect the way a person feels about their well-being. The goals of using pain medications in chronic pain are to decrease pain and improve function with the least possible side effects. How well the medication works varies with each person. Therefore, you may need to try several different medications to find which one works best.

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## **Using a balanced approach to lessen pain**

Unfortunately, seldom does medication alone completely take away chronic pain. When a pain medication is recommended, it is on a trial basis. This is to see if it helps control the pain and help you to lead a more functional, meaningful life. Taking pain medication along with physical rehabilitation and self-management strategies is generally more effective in restoring your ability to function most fully.

## **Over-the-Counter (OTC) Medications**

Over-the-counter medications can be purchased without a prescription. It is important that you understand the side effects of OTC medications and that your health care provider knows what you take.

Anti-inflammatory Drugs or NSAIDs (nonsteroidal anti-inflammatory drugs) and Acetaminophen (Tylenol) are common OTC medications often used for mild to moderate chronic pain. They may be used alone or combined with other pain medications. They may also be used to control breakthrough pain.

## **NSAIDs**

### **What conditions are helped by taking NSAIDs?**

NSAIDs reduce inflammation, which causes symptoms such as pain, swelling, warmth and fever.

NSAIDs are often used to treat conditions such as arthritis pain, menstrual pain and headaches as well as pain due to inflammation.

### **How do NSAIDs work?**

NSAIDs work by inhibiting an enzyme that helps make specific chemicals in the body responsible for pain and inflammation.

## **Common side effects of NSAIDs**

- NSAIDs can reduce the stomach's protective mucous layer and natural protection against irritation of the stomach lining from stomach acid.
- Side effects include stomach upset, ulcers and bleeding as well as increased potential for bruising. The risk of side effects increases with age, dose and how long you take them.
- It is best to take these medications on a full stomach to decrease stomach upset.

If you have a past history of ulcers, kidney problems, heart disease, high blood pressure or over the age of 60, you have to be careful taking ASA (Aspirin), Ibuprofen or Naproxen. It is best to talk with your health care provider about the risks and benefits of these medications.

## **Stronger NSAIDs**

Stronger NSAIDs are also available by prescription and are normally used after injuries or for arthritis pain. Your doctor may prescribe a medication to protect your stomach when you take these medications.

## **Caution**

There is an upper limit to the effectiveness of these medications. Increasing the amount you take beyond a certain point does not increase pain relief.

## **Topical (applied on the skin) NSAIDs**

NSAIDs are available in topical form usually a cream, gel or spray. They act on pain receptors within the skin and underlying tissue. They are applied directly on the skin over the pain area. They are safer to use as very little drug enters the bloodstream and is less likely to produce side effects or drug interactions.

Topical forms of NSAIDs may take several days to reach their full effects. They have been proven effective for conditions such as osteoarthritis and rheumatoid arthritis. The NSAID, diclofenac, is available by prescription as Pennsaid (1.5% solution) and over-the-counter as Voltaren Emulgel (1.16%).

## **Capsaicin**

Capsaicin, the active ingredient in chili peppers, is available both OTC and by prescription. It works by blocking specific channels on nerve fibers that are responsible for sensing pain.

The lower concentration (0.025%) is effective for arthritis pain while the higher one (.075%) is often prescribed for neuropathic pain, such as Shingles. For the first few days of use, it may result in intense burning where it is applied. It takes several days before pain relief is achieved.

Your doctor may also write a prescription for a topical medication, which combines several types of pain relievers together into one. This topical medication is made by your community pharmacist.

## **Acetaminophen**

### **What conditions are helped by taking acetaminophen?**

It is commonly used to treat both acute pain from headache, toothache or muscle strains and chronic pain due to back pain or osteoarthritis.

### **How does acetaminophen work?**

Acetaminophen is different in that it increases the body's pain threshold, but it has little effect on inflammation. Acetaminophen also reduces fever and can be found in many cold and flu medications.

Several pain medications contain Acetaminophen such as Oxycocet, Percocet, Endocet, Tramacet and Tylenol #1, #2, #3 and #4. These medications often contain 325 mg of Acetaminophen per tablet. ASA (aspirin) is also available with low dose codeine without prescription.

### **Common side effects of acetaminophen**

Acetaminophen can cause liver problems if you take too much, especially in people who misuse alcohol.

## **Caution**

It is advisable never to take more than 4000 mg of Acetaminophen a day as this can cause liver problems. If you have liver disease, abuse alcohol or are elderly or on warfarin, the maximum daily dose is lower.

## **Muscle Relaxants**

Some examples of muscle relaxants include baclofen, cyclobenzaprine and tizanidine.

### **What conditions are helped by taking them?**

Some chronic pain conditions are associated with muscle spasms.

These medication are used to help relieve spasms, pain and tightness of muscles. They can help people with multiple sclerosis, spinal cord injuries, and other nerve and muscle conditions.

## **Caution**

Many medications are marketed as muscle relaxants, however most do not have any direct action on muscle and work at the level of the brain. Most muscle relaxants are sedating and may cause dizziness or impair your concentration. Avoid driving or other activities requiring alertness until your response to the medication is known.

## **Prescription medications for pain**

### **Opioids**

Some examples of opioids are codeine, oxycodone, morphine, hydromorphone, fentanyl, methadone and buprenorphine.

Opioids are a group of medications prescribed to improve your ability to be active and reduce pain. On average, pain scores improve by about 30%, however there is a wide range of response: some people achieve 50% or higher pain relief, while others report no pain relief at all. Some studies, but not all, have shown that opioid medications help patients become more active.

The use of longer acting opiates, pill or patches, taken regularly, are often recommended for chronic pain to provide more consistent pain relief throughout the day. Shorter acting opiates are often used to manage breakthrough pain and are taken on an as needed basis.

### **What conditions are helped by taking them?**

Opioids can be helpful for some people with moderate to severe chronic pain. While on opioids you need to be carefully watched by your doctor. Some opioids are derived from the poppy plant while others are synthetically manufactured. Our body also generates its own (endogenous) opioids called endorphins, enkephalins and dynorphins.

### **How do they work?**

All opioid medications have similar effects in the body. Opioid medications work by binding to opioid receptors in the brain, spinal cord, and other areas of the body. They reduce the sending of pain messages to the brain and reduce feelings of pain.

How strong, how fast and how long they last vary from one opioid to another. They are available in various forms such as pill, injectable and skin patch. The dose of these medications are often increased gradually until acceptable pain relief is achieved or unwanted persistent side effects occur.

### **Common side effects**

There are side effects from opiates, but they can be mostly controlled with increasing the dose slowly. Common side effects include: nausea, constipation, drowsiness, dizziness and dry-skin/itching.

### **Caution**

There is a small possibility of developing addiction while taking opioids. About 3 people out of 100 (3%) of pain patients become addicted to prescription opioids, while another 11 people out of a hundred (11%) show behaviours that could suggest addiction, such as taking more of their medication more often than was prescribed.

## **Addiction and physical dependence**

Addiction is a disease that is caused by many factors such as hereditary influences. Addiction means having cravings for the drug that is not related to the need for pain relief or uncontrolled urge to take the drug. Risk for addiction is higher in those with a personal or family history of addiction to alcohol or other drugs.

Physical dependence is a common effect of taking opioids and occurs when our body becomes used to the medication over a period of time. As a result, a withdrawal reaction is possible when suddenly stopping these drugs after continued use. Reactions feel like flu-like symptoms. Withdrawal is not dangerous but it can be very uncomfortable. Therefore, if the opioid is not providing adequate pain relief or improving your quality of life, it is important to talk to your doctor and come off these drugs slowly.

**Always keep opioid medication and all medication in a safe place, away from children or others who may take them.**

## **Antidepressants**

Antidepressant medications include:

- tricyclics (TCAs) such as amitriptyline or nortriptyline
- serotonin norepinephrine reuptake inhibitors (SNRIs) such as duloxetine, venlafaxine

### **What conditions are helped by taking them?**

- They work best to manage pain associated with fibromyalgia, headache, and nerve damage.
- They are less likely to be helpful for acute musculoskeletal sports-type injuries.

### **How do they work?**

Antidepressants have an effect on pain independent from their effect on mood. Therefore, they may be used to treat chronic pain even if you do not suffer from depression. Often lower doses than those used to treat depression are taken to manage pain.

By increasing levels of serotonin and norepinephrine at nerve endings, these medications can strengthen the pathway that inhibits pain signaling.

Some antidepressants may be helpful for chronic pain as they reduce anxiety and improve sleep without the risks of habit-forming pain medications.

Treating the depression in patients with chronic pain may also help decrease the perception of pain.

### **Common side effects**

Common side effects include: drowsiness, dry mouth, dizziness, and constipation. These side effects either improve with time or can be managed.

### **Caution**

Like opioids, antidepressants have to be started at low doses and increased slowly.

## **Anticonvulsants (Antiepileptic)**

Two of the most common anticonvulsants used to treat chronic pain are Gabapentin (Neurontin) and Pregabalin (Lyrica).

### **What conditions are helped by taking them?**

These medications work best to treat certain types of nerve pain that feels sharp, and burning (neuropathic pain).

### **How do they work?**

Anticonvulsants work to suppress the nerve signals and dampen pain messages going to your brain. It may take several weeks of continued use to achieve adequate pain relief from this group of medications as the amount needs to be slowly increased as tolerated to the appropriate dose.



## **Common side effects**

Common side effects are drowsiness and dizziness and often go away or diminish with time.

Other side effects include dry mouth, swelling of the extremities, blurred vision and concentration or attention difficulties.

## **Medical Cannabis**

Our clinic also provides education on medical cannabis. If you are interested in learning more about the potential medical benefits as well as the health risks, please contact our clinical pharmacist.