



Alternatives to Opioids for Chronic Pain Relief

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Chronic pain increases the risk for noncompliance with substance abuse treatment and complicates recovery efforts. An understanding of the alternatives to opiates for the treatment of chronic pain may help drug court professionals provide more effective assistance to their clients. This fact sheet provides basic information on alternatives to opioids for chronic pain management. It describes:

- Who is most likely to suffer from non-cancer-related chronic pain
- What sufferers themselves can do to manage chronic pain
- How drug court participants can relieve chronic pain without the use of opioids

Chronic Pain: Common Causes and Risk Factors

An estimated 39 to 100 million Americans are experiencing chronic pain at any given time (Gaskin & Richard, 2012; Kennedy, Roll, Schraudner, Murphy, & McPherson, 2014). *Chronic pain* means pain that continues for at least three months or past the normal time for tissue healing (Chou et al., 2015). It can be intermittent (occurring off and on) or persistent (constant or frequent; Kennedy et al., 2014). The most common conditions that cause chronic pain are arthritis/arthritis (joint pain and inflammation) and spinal conditions of the back and neck (Ashburn & Staats, 1999).

Other common causes of pain include (Institute of Medicine, 2011):

- Cancer
- Chronic interstitial cystitis
- Diabetic neuropathy
- Migraine and other serious headaches
- Endometriosis
- Fibromyalgia
- Heart disease (angina)
- Irritable bowel syndrome
- Other musculoskeletal disorders
- Postherpetic neuralgia
- Shingles
- Sickle-cell disease
- Stroke
- Temporomandibular joint disorder
- Trauma or postsurgical pain
- Vulvodynia (vulvar pain)



Risk factors for experiencing persistent pain include being age 60 to 69, female, Caucasian, obese, and in poor health. People experiencing psychological pain due to depression, anxiety, or chronic fatigue are much more likely than people without these problems to experience chronic persistent pain (Kennedy et al., 2014).

Pain is also common in those seeking treatment for substance use disorders. A recent study of patients seeking treatment found that 37% of those in the methadone maintenance treatment program and 24% of those admitted to inpatient treatment suffered from chronic pain (Rosenblum et al., 2003). Another study of patients entering alcohol treatment found that 34% reported moderate or greater pain experiences in the four weeks prior to treatment (Jakubczyk et al., 2015), and the authors found a significant correlation between decreased pain and decreased relapse (Jakubczyk et al., 2016). Unfortunately, people with substance use disorders are less likely to receive effective pain treatment (Rupp & Delaney, 2004).

In response to the desire to reduce suffering, and in an environment of intensive marketing by pharmaceutical companies, physicians are writing many more prescriptions for opioid or narcotic pain relievers than before, including drugs such as Vicodin (hydrocodone), OxyContin (oxycodone), Opana (oxymorphone), and methadone.

As a result, consumption of these medications has skyrocketed. The United States, with only 4.6% of the world's population, consumes 80% of the global opioid supply and 99% of the global hydrocodone supply (Manchikanti, Fellows, Ailinani, & Pampati, 2010). While these medications are appropriate for short-term use (e.g., to treat severe pain from injuries or postoperative pain), their long-term use is controversial due to adverse side effects and the risk of addiction (Dowell, Kunins, & Farley, 2013). So although opioid therapy is often a component of chronic pain management, non-opioid interventions may also be successful. If drug court

participants are made aware of alternatives to opioid treatment, they will be better able to advocate for appropriate treatment for themselves.

Interdisciplinary Pain Management

Pain is experienced by each person in a unique way. It can manifest as persistent pain, pain that ebbs and flows like a wave throughout life, pain that goes away temporarily but recurs, or pain-free intervals with occasional flare-ups. No one experiences exactly the same pain syndrome.

It is becoming increasingly evident that the management of chronic pain is best accomplished using an interdisciplinary approach. This approach includes multiple coordinated therapies (Ashburn & Staats, 1999; Institute of Medicine, 2011).

Depending on symptoms and diagnosis, the provider may advise a *stepped care* approach (Institute of Medicine, 2011; Von Korff & Moore, 2001) in which treatment intensity increases step by step if lower intensity interventions fail or do not have an adequate effect. The lowest intensity approach—Step 1—typically begins with a discussion of the causes of pain, non-opioid medications, and advice on how to resume normal activities. Step 2 may include one or a combination of self-management techniques, exercise, injection of pain-numbing and steroid medications into the affected area, therapeutic massage, acupuncture, physical therapy, and spinal manipulation. Nerve block therapy, implantable methods, and joint replacements are effective for some types of pain (Ashburn & Staats, 1999; Institute of Medicine, 2011). All of these approaches necessitate coordinating the efforts of the patient, doctor, and allied health professionals to improve outcomes.

Step 3 targets patients who need even more intensive interventions before they can return to normal activities in work and family life. These intensive interventions are often coordinated

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by interdisciplinary teams of specialists at specialized pain management clinics. Such treatment often includes medications, such as prescription anti-inflammatory and opioid medications.

Self-Management of Pain

Pain is a subjective experience that is affected by psychological and social factors. Chronic pain is rarely “curable”—patients typically will still have pain even with use of effective therapies. Therefore, optimal management of pain requires that patients learn strategies to help to cope with the pain and function despite it. This is called *self-management*. Self-management is about self-discovery—finding ways to heal one’s own body (Institute of Medicine, 2011). Self-management should be part of a wellness strategy that includes partnering with a health care provider. The self-management information that follows suggests some ways that others have found to:

- Reduce pain directly
- Maintain functioning and reduce risk of recurrence
- Cope with pain
- Address other concerns that contribute to pain

Reducing Pain Directly

A number of ways have been found to effectively eliminate or reduce pain without the use of opioids, including use of topical preparations and non-opioid medications.

Heat/cold applications

Some people find that hot baths or showers, a heating pad, cold packs, or hot/cold skin patches relieve their pain. These and locally applied creams are OK to use if they seem beneficial.

Medications

Certain over-the-counter medications may reduce or alleviate pain. They all have side effects and should be taken with care and under the direction of a health care provider. Aspirin, ibuprofen, and naproxen (Advil, Motrin, Aleve) are nonsteroidal anti-inflammatory medications that relieve pain by reducing inflammation. They also can cause stomach ulcers, bleeding, and harm the kidneys if taken in large doses or for long periods (Hernández-Díaz

& Rodríguez, 2000). Acetaminophen (found in Tylenol) treats pain without addressing its cause. Its main side effect is liver damage if taken in large doses.

Other medications require a prescription. Muscle relaxants—such as baclofen, carisoprodol, chlorzoxazone, cyclobenzaprine, metaxalone, methocarbamol, orphenadrine, and some benzodiazepines—require a prescription and can help get a patient over an acute episode by reducing muscle spasms (Wright, 2008). They also cause drowsiness, can be addictive, and have other side effects. Non-narcotic prescription medications that reduce transmission of pain impulses, such as antidepressants and anticonvulsants, have also shown some success in treating some forms of chronic pain. Patients can ask their health care provider about these medications.

Codeine, a relatively weak opioid, may be prescribed alone or in combination with aspirin, other anti-inflammatory medications, or acetaminophen. Stronger opioid pain medications, include oxycodone and hydrocodone, are generally not recommended to treat mild to moderate pain.

Opioids are still the most potent class of pain medication available and are generally safe when used as prescribed. However, they are controversial because of the possibility of misuse and potential serious side effects (American Congress of Obstetricians and Gynecologists, 2012; Broussard et al., 2011; Centers for Disease Control and Prevention, 2014; Institute of Medicine, 2011). In addition, they do not help heal the cause of pain but simply mask it, and thus they may lessen the chance that people with chronic pain will learn how to reduce their own pain and other symptoms (Chou & Huffman, 2007a; National Institute of Neurological Disorders and Stroke, 2014).

Maintaining Function and Reducing Risk of Recurrence

In addition to reduction in pain, the goal of chronic pain management is the relief of associated symptoms such as mood disorders and sleep disturbances, and a return to valued social, vocational, and recreational activities. Improving physical fitness (flexibility and strength) and losing weight may significantly reduce or eliminate pain, as well as provide relief for associated mood symptoms.



Exercise

Keeping active is a key ingredient for maintaining functioning in those with chronic pain. Exercise, such as walking, strengthening and stretching exercises, and yoga or Pilates classes, may be recommended if there are no acute symptoms from a recent injury (Sherman et al., 2011). Exercise helps keep weight off, makes a person feel stronger and sleep better, increases the levels of *endorphins* (natural painkillers in the body), and generally improves mood (Fentem, 1994; Vuori, Urponen, Hasan, & Partinen, 1988).

If their doctor approves, many people find it helpful to do something every day to stay strong, such as taking daily walks. Using a pedometer, they might start with about 2,000 steps and gradually increase to 10,000 steps, the equivalent of five miles of walking. On nonwalking days, some providers recommend 10 minutes of core (back and abdominal) muscle-strengthening exercises. These are available online (see the Resources section), from a health care provider, or a physical therapist. These activities can reduce pain symptoms and lessen the need for pain medications.

Weight loss

People who suffer from pain in their back or weight-bearing joints find that putting on even a few extra pounds can tip the balance from being painfree to experiencing a flare-up of pain (Han, Schouten, Lean, & Seidell, 1997). With arthritis pain, although subjective evidence suggests that staying thinner is helpful, studies have not demonstrated a direct relationship between weight loss and reduced pain.

Coping with Pain

Some of the most effective ways to alleviate pain involve learning to better coexist with it, rather than curing it. Relaxation and mindfulness-based interventions have many proven health benefits, including relief of the distress caused by pain (Cullen, 2011). These methods can be used at

Weight-Loss Tips

- Eat at least five servings of fruit and vegetables a day.
- Limit calories, eat out less, and avoid sugar-sweetened beverages.
- Drink alcohol in moderation. Gram for gram, it contains more calories than carbohydrates do.
- Eat meals and snacks on a regular schedule (do not skip meals) and choose foods within suggested calorie limits.
- Have an occasional splurge, but choose smaller portions.
- Remember that restaurant meals typically contain two or three times of the calories needed, or even more. Ask for a to-go package as soon as the server brings the food and put most of it there, out of sight, to enjoy later.

home and include distraction, guided imagery, progressive relaxation, and meditation.

All of these practices improve with time and devotion, and they may help people deal with the pain they are experiencing. Benefits can include improving people's outlook on life, helping them feel relaxed, and lowering their stress levels. For best results, the selected intervention(s) should be used once or twice daily (Cleveland Clinic, n.d.; Cullen, 2011; McCaffery, 1980).

Distraction

Many people have experienced the power of distraction as a way to temporarily reduce or eliminate the experience of pain. Distraction works by drawing attention away from the painful sensations to other matters. For example, if you have a headache, but then your best friend telephones, while you're talking you probably forget about your headache. playing video games or listening to music can take someone's mind off his or her pain.

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Distraction can be used with success to manage chronic pain (Fernandez & Turk, 1989; McCaffery, 1980).

Guided imagery

Guided imagery is another method used to manage chronic pain. It involves focusing on mental images that elicit healing feelings and can be done in as little as 10 to 20 minutes. Research suggests that guided imagery induces relaxation and gives people a greater sense of autonomy in relation to their pain management (Johnson, 2005).

Progressive relaxation

Pain can create tension, and physical tension makes pain worse. Progressive relaxation can help alleviate tension and thereby lessen pain. This technique involves slowly tensing and then relaxing each muscle group individually, starting with the toes and finishing with the head.

For those who might require assistance with progressive relaxation, trained therapists can use biofeedback instruments to help them gain greater awareness of their body. This form of therapy helps people change how their body deals with stress, for example, by teaching them how to decrease their heart rate and reduce muscle tension.

Meditation

Meditation is a way to slow down the racing mind. The two most commonly used techniques are *transcendental meditation*, in which the person repeats a single word or phrase (called a *mantra*) and is taught to allow other thoughts and feelings to pass, and *mindfulness meditation*, in which the person focuses exclusively on thoughts and sensations. This form of meditation is often taught in stress-reduction programs.

Addressing Other Concerns that Contribute to Pain

Studies show that certain illnesses, such as anxiety (Von Korff et al., 2005) and depression (Fishbain, Cutler, Rosomoff, & Rosomoff, 1997), are much more common in people with chronic pain than in others. Not only can these conditions develop in response to the suffering caused by pain, but having conditions like depression, anxiety, or chronic fatigue also increases the chance of someone developing persistent pain.

Most treatments for pain do not address these underlying problems, but they must be addressed for optimal outcomes. People who successfully deal with depression and anxiety have better pain outcomes than those who do not get help (Bigos et al., 1991). Other life problems that may contribute to making pain worse are distress; substance abuse (Wright, 2008), including tobacco use; and work-related problems (Linton, 2005). For those with chronic pain, it may help to see a counselor or therapist and to join a support group.

People with chronic pain also may suffer from “fun deprivation.” Chronic pain can prompt a retreat from normal daily life. People with chronic pain should be encouraged to do more of the things that give them pleasure.

Therapeutic Approaches to Pain Management

Allied health professionals (such as psychologists, physical therapists, and other clinical therapists) can also help people address chronic pain. Several options are described below.

Cognitive Behavioral Therapy

A person’s response to psychosocial stressors and his or her thoughts and beliefs about pain can affect pain symptoms. Cognitive behavioral therapy (CBT) focuses on patterns of beliefs, attitudes, and values that influence thinking. CBT helps people understand how their responses to life’s stressors can make pain better or worse.

The cognitive behavioral therapist teaches specific skills that people can use to cope with pain. Practicing these skills can help them change their thinking patterns, which affects their perception of and response to pain. There is good evidence that CBT is moderately effective for some chronic pain syndromes (Chou & Huffman, 2007b; Schonstein, Kenny, Keating, Koes, & Herbert, 2003).

Physical Therapy

It is common for people with chronic pain to worry that movement and exercise will cause their pain to worsen, but generally the opposite is true. Movement and return to normal activities of daily living as soon as possible is recommended (Feine & Lund, 1997; Institute of Medicine, 2011). This is why health care providers often refer their



patients to a physical therapist for instruction on ways to protect and strengthen the body. Physical therapy and recommended exercises have fair-to-good evidence supporting their usefulness in treating chronic low back pain (Nutter, 1988). This includes individualized plans, supervised exercise, stretching, and muscle-strengthening therapy (Nelson et al., 1999). In contrast, there is sparse evidence for the effectiveness of ultrasound, transcutaneous electrical nerve stimulation, or traction in relieving chronic pain.

Yoga

Some randomized clinical trials support the use of yoga for persistent pain. It has been shown that yoga can increase awareness of mental and physical states, which may help patients better understand their pain. Yoga has also been shown to increase the frequency of positive emotions, which could potentially be useful in helping patients cope successfully with their persistent pain (Wren, Wright, Carson, & Keefe, 2011).

Acupuncture

Acupuncture is the insertion of fine, solid metallic needles into, or through, the skin at specific sites. Needles are usually left in place for 15 to 30 minutes and are sometimes twirled by the practitioners. The needles also may be stimulated with electricity or heat. Typically, multiple acupuncture treatments are needed to treat chronic pain. Treatments may begin twice a week and taper off as symptoms improve.

Acupuncture is thought to have originated in China and is considered a complementary and alternative form of treatment because it is not based on Western medical science. Acupuncture is based on a theory that health exists when there is harmony among bodily fluids, the body itself, and nature. Lack of harmony is thought to cause blockage of the body's vital energy. This energy flows along 12 primary and 8 secondary pathways known as *meridians*. Insertion of needles at certain points along the meridians aims to bring back the normal flow of energy (KnowYourBack.org, n.d.; Vickers et al., 2012).

No one knows for sure how acupuncture works, but it is thought that acupuncture blocks the passage of pain sensations from the nerves in the back to the spinal cord and brain (KnowYourBack.org, n.d.). The needles also may stimulate the release of naturally occurring opioids (pain relievers) in the brain and stimulate tissues at the site of the needle puncture (KnowYourBack.org, n.d.; National Institute of Neurological Disorders and Stroke, 2014).

Acupuncture can be effective with other forms of treatment and by itself. Research indicates that it is successful for many health conditions that cause or contribute to pain when traditional therapies don't work. It can reduce pain, reduce levels of pain, and reduce the frequency of pain events such as migraines. The amount of success that can be achieved with acupuncture may depend on the level of the provider's experience and training. Studies in which acupuncture is compared with placing needles in non-meridian sites (sham treatment) are mixed as to whether acupuncture is better than placebo acupuncture. Studies also suggest that acupuncture may be more effective at relieving pain than improving function. High-quality studies are needed that compare acupuncture with no treatment and sham treatment (Ash et al., 2000; Chou et al., 2007; National Center for Complementary and Integrative Health, 2016; Vickers et al., 2012).

People with bleeding disorders, those taking anticoagulants, or those who have a current skin infection or trauma should not receive acupuncture therapy (KnowYourBack.org, n.d.). Certain medications, such as aspirin, acetaminophen, ibuprofen, and others, may be taken while undergoing acupuncture treatments to help reduce or alleviate pain. However, all those medications have side effects and should be taken under the direction of a health care provider and following label guidelines.

Spinal Manipulation Therapy

Spinal manipulation therapy (SMT) aims to adjust the spine and move the vertebrae into alignment

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using direct force. Adjustments can involve twisting, pulling, or pushing on the areas thought to cause pain. The movements are thought to loosen and move spinal bones into a better position and thereby reduce or eliminate pain. These manipulations can be carried out by a chiropractor, osteopathic doctor, physiatrist, or physical therapist. Therapy is typically provided in a limited number of treatment sessions.

In controlled studies, SMT has produced small-to-moderate clinical benefits (Harvey, Burton, Moffett, & Breen, 2003). There is no overwhelming evidence that SMT is either superior or inferior to other effective treatments for relieving pain and improving function in patients with chronic pain (Assendelft, Morton, Yu, Suttorp, & Shekelle, 2003; Barclay, 2011; Rubinstein, van Middelkoop, Assendelft, de Boer, & van Tulder, 2011).

Massage Therapy

Therapeutic massage is also a useful option that helps some people and may be an important part of a treatment package for chronic pain. Massage done by a trained massage therapist has been shown to be more effective in trials than massage done by an untrained massage therapist (Chou & Huffman, 2007b). Evidence also supports the use of massage therapy for low back and shoulder pain and suggests it may benefit patients with fibromyalgia and neck (Cherkin et al., 2011; Institute of Medicine, 2011). However, recommendations are based on a small number of studies.

Conclusion

The management of chronic pain is complicated. When it is experienced by a person with a co-occurring substance use disorder, evaluation and treatment becomes a complex challenge. Some people may struggle to enter sustained recovery because pain may increase with withdrawal; some may have difficulty discerning whether pain is related to their substance use or is a separate issue; and some may find their recovery threatened when pain necessitates treatment. Drug court professionals do not bear responsibility for directing pain treatment or management, but understanding approaches for pain management, including alternatives to opioid treatment, will enable them to advocate for appropriate treatment and help participants receive effective pain treatment.

Resources

Drug Misuse in the Workplace

To address prescription drug abuse in the workplace, the Substance Abuse and Mental Health Services Administration (SAMHSA) established the Preventing Prescription Abuse in the Workplace (PAW) program. This program provides technical assistance to workplaces and SAMHSA grantees across America to reduce prescription drug misuse.

PAW has developed more than 30 fact sheets and issue briefs, including these:

- How to Handle Leftover Meds
- Managing Chronic Low Back Pain While Minimizing Use of Dangerous Prescription Opioids
- Pregnancy and Prescription Drug Abuse
- Prescription Drug Misuse Among College Students
- Prescription Drug Misuse Among Older Adults: Understanding the Problem
- Screening for Prescription Drug Use Problems

These fact sheets are available at publichealth.hsc.wvu.edu/icrc/prevention-of-prescription-drug-abuse-in-the-workplace/samhsa-fact-sheets

Opioid Toolkit

SAMHSA also has produced an Opioid Overdose Prevention Toolkit, which equips communities and local governments with material to develop policies and practices to help prevent opioid-related overdoses and deaths, and addresses issues for first responders, treatment providers, and those recovering from opioid overdose. The toolkit is available at store.samhsa.gov/product/Opioid-Overdose-Prevention-Toolkit-Updated-2014/SMA14-4742

Additional Resources

Diet

ChooseMyPlate.gov (U.S. Department of Agriculture, n.d.)

Meditation

Why Meditation? (Manocha, 2000)

Self-management techniques

Guided Imagery (How to Cope with Pain, n.d.)

Self-Management (Butler, n.d.)



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