

Pain Management advanced level

Overview

Many people see pain as a symptom of some underlying problem that they should try to fix. But pain is much more than that.

While we have all experienced pain, the term remains difficult to define. According to the International Association for the Study of Pain, pain is *"an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage."*

There is no question that pain is a *sensation* in a part of the body, but it is always unpleasant, making it an *emotional* experience. All pain is subjective, meaning that the amount of pain each person feels is affected by his or her personal views, experience, or background.

Mayfield Clinic provides only surgical treatment for pain; however, there are numerous organizations that offer additional options. They are listed at the end of this document under Sources & Links.

Types of pain

Acute pain is directly related to tissue damage and has an obvious source; it can last for a moment, such as when a bee stings, or for months, as in the case of a severe burn or surgery. Pain signals are sent to the brain, but they become fewer as healing progresses. Also, acute pain is limited in duration and responds to treatment.

Chronic pain is persistent and harder to find the source. Sometimes after an acute injury has healed, pain signals continue to be sent to the brain. Chronic pain is often present in ongoing conditions such as arthritis or cancer. In some cases the pain comes and goes, or it may be present all the time. In addition to the real sensation of pain, chronic pain sufferers may fall into a cycle of pain, inactivity, sleeplessness, anger, and sadness.

Causes of pain

Pain is commonly caused by an injury, illness, or aging. Pain specialists classify pain as either mechanical, biochemical, or psychogenic. *Mechanical* pain comes from something obviously wrong in the body, such as an injury, tumor, or

degenerative disease such as arthritis. *Biochemical* pain can come from herniated discs when the disc material irritates nearby nerves. *Psychogenic* pain comes from the mind and is related to mental or emotional problems.

Most common forms of pain:

- Headache: tension headache, vascular headache, migraine
- Low back pain: sciatica (leg pain due to an irritated nerve in the spine)
- Cancer pain: constant pain caused by tumors compressing the spinal nerves, or scarring from previous radiation therapy
- Arthritis pain: osteoarthritis, rheumatoid arthritis
- Neurogenic pain: trigeminal neuralgia, shingles, amputated "phantom" pain
- Psychogenic pain: emotional distress that we cannot express that turns into physical pain

Where to get help?

When a person first experiences pain, the family doctor is usually consulted. If pain requires further evaluation, a consultation with a specialist such as a neurologist, physiatrist, or surgeon may be recommended to find and treat the source of pain. If the source of pain cannot be identified or treatment has not provided relief, you may be referred to a pain management specialist.

A doctor who specializes in the treatment of pain may be board certified by the American Board of Anesthesiology, American Board of Pain Medicine, or the American Academy of Pain Management.

What is pain management?

Pain management is an integrated approach to making pain tolerable by learning physical, emotional, intellectual and social skills. This may include exercise, physical therapy, medication, relaxation, acupuncture, behavior changes, biofeedback, hypnosis, and counseling. When you use pain management techniques, you stay in control of your own health. These techniques also help the brain produce its own pain medications called endorphins, which literally means "morphine within".

Self care

Stress is the number one obstacle to pain control. Pain increases when you are tense and stressed leading to emotional feelings of fear and helplessness. Relaxation exercises are one way of reclaiming control of your body. Deep breathing, visualization, and other relaxation techniques can help you to better manage the pain you live with.

Learning to live with chronic pain is not impossible; there are resources to help you. Look beyond your pain to the things that are important in your life. Set small goals for yourself. Choose to focus on what you can do, not what you can't. Pain does not have to be the center of your life.

Commit to living a healthy lifestyle by:

- getting enough sleep
- maintaining an appropriate weight
- eating a healthy diet
- refraining from harmful habits such as smoking, drinking alcohol, and drug use.

Exercise / physical therapy

No matter how much pain you're in, there are always gentle stretches and exercises you can do. Weak muscles feel more pain than toned flexible ones. Regular exercises can strengthen muscles that support your spine, easing pain and preventing further injury. Stretching exercises encourage your muscles to stay flexible. Your doctor can show you how to make modifications to your daily standing, sitting, and sleeping habits. For example, learning how to lift properly or sitting for shorter periods of time (see Physical Therapy). Check with your doctor before you begin any new exercise program.

Medication

Pain medications vary considerably. Specific types and causes of pain may respond better to one kind of pain medication than to another kind. Also, each person is slightly different in the way they respond to a pain medication. Chronic pain sufferers who are on medication may have breakthrough pain. These are uncontrolled severe flares of pain that "break through" the medication.

Medications used to treat pain include:

- *Analgesics*, such as acetaminophen (Tylenol) and tramadol (Ultram) can relieve pain but don't have the anti-inflammatory effects of NSAIDs.
- *Nonsteroidal anti-inflammatory drugs* (NSAIDs)—aspirin, ibuprofen (Motrin, Nuprin, Advil), naproxen (Naprosyn), and celecoxib (Celebrex) are examples of nonsteroidal anti-inflammatory drugs used to reduce inflammation and relieve pain. Long-term use of analgesics and NSAIDs may cause stomach ulcers as well as kidney and liver problems.
- *Muscle relaxants* such as diazepam (Valium),

clonazepam (Klonopin), cyclobenzaprine (Flexeril), and baclofen (Liorisol) can be used to treat pain associated with muscle spasms and spasticity.

- *Steroids* can be used to reduce the swelling and inflammation of the nerves. They are taken orally (as a Medrol Dose Pack) in a tapering dosage over a five-day period or as an injection directly into the source of pain. See epidural steroid injections and facet injections.
- *Anticonvulsants* such as phenytoin (Dilantin) and carbamazepine (Tegretol), gabapentin (Neurontin) can be used to relieve nerve pain as in trigeminal neuralgia.
- *Narcotics* (opioids) are very powerful pain relievers that actually deaden a person's perception of pain. They are used for a short period (2 to 4 weeks) after an acute injury or surgery. Common narcotics include codeine (Tylenol 3), meperidine (Demerol), propoxyphene (Darvocet), hydrocodone (Vicodin), and oxycodone (Percocet, Oxycontin). Sumatriptan (Imitrex) and naratriptan (Amerge) are used to relieve migraine headache. Narcotic medications cause impaired mental function, drowsiness, nausea, constipation, and sometimes addiction.

Surgical treatments

Surgery is considered once all appropriate nonsurgical and medical treatments have been explored. Because surgery involves cutting or interrupting the nerves that carry the pain signals, you may lose sensation in that area of your body.

- **Spinal cord stimulation** uses a small generator, implanted in your back or abdomen that transmits an electrical current to your spinal cord. The result is a tingling sensation instead of pain.
- **Intrathecal pain pumps** use a small pump that is surgically placed under the skin of your abdomen and delivers pain medication through a catheter directly to the area around your spinal cord.
- **Intradiscal Electrothermal Therapy (IDET)** uses heat delivered directly within the spinal discs to shrink the tears and fissures in the annulus and thermo-coagulate nerves to overcome discogenic lower back pain.
- **Percutaneous Stereotactic Rhizotomy (PSR)** uses a heating current to destroy the part of the nerve that causes pain. Most often used to relieve neuralgia (nerve pain).

Sources & Links

If you have more questions, please contact the Mayfield Clinic at 800-325-7787 or 513-221-1100. While Mayfield Clinic does **not** offer pain management as a service, the following organizations can help you find a pain care specialist in your area.

Associations & organizations

Academy of Medicine of Cincinnati
www.academyofmedicine.org

American Chronic Pain Association
www.theacpa.org

American Pain Foundation
www.painfoundation.org

American Academy of Pain Management
www.aapainmanage.org

American Pain Society
www.ampainsoc.org

National Foundation for Treatment of Pain
www.paincare.org

Other sources

The Mayday Pain Project
www.painandhealth.org

WebMD
my.webmd.com

National Library of Medicine, Pain Links
www.nlm.nih.gov/medlineplus/pain.html

Pain.com
www.pain.com

Psychology Information Online
www.psychologyinfo.com/treatment/pain

Glossary

acute: a condition of quick onset lasting a short time, opposite of chronic.

chronic: a condition of slow progression and continuing over a long period of time, opposite of acute.

endorphins: a natural hormone produced by the brain that produces a euphoric pain relieving effect similar to opiates.

intractable: difficult to control.

migraine: repeated or recurrent headache, associated with temporary changes in the diameter of the blood vessels in the head; the headache is usually preceded by an aura.

osteoarthritis: the progressive breakdown of cartilage between the joints causing bones to rub together. Most common form of arthritis.

sciatica: pain that courses along the sciatic nerve in the buttocks and down the legs. Usually caused by compression of the 5th lumbar spinal nerve.

shingles: (herpes zoster) an adult reactivation of a childhood chicken pox infection. However, instead of covering large parts of the body (as in chicken pox), the skin rash usually appears only on a small area of skin, in rows like shingles on a roof.

trigeminal neuralgia: a painful disorder of the fifth cranial nerve (trigeminal nerve). Irritation of this nerve can cause intense pain that usually affects one side of the face usually in the forehead, cheek, jaw, or teeth.

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