

PAIN MANAGEMENT



Pain is the most common reason for seeking medical attention. Not everyone responds the same way to pain, making it a highly individualized experience. An amazing number of Americans go through life with pain, or confront pain, periodically. Estimates indicate that low back pain disables five million people in the U.S. — 40 million suffer from recurrent headaches and 66 million have arthritis, one-third of whom cut back on their daily activities due to pain. (See chapters on The Back, Arthritis, Mental and Sleep Disorders.) Pain accounts for about 25 percent of all U.S. sick days (more than \$3 billion in sick pay each year).

In the past decade, scientists have learned much more about how pain works in the nervous system and are better able to design drugs to treat it. The major pharmaceutical companies are planning and developing new pain medications.



PAIN AND TREATMENT

Pain Origin The feeling of pain occurs when nerve endings detect damage to the body. The free nerve endings (pain receptors) sense this change. These pain receptors are widespread and are specialized free-nerve endings that respond to extremes in temperature, pressure, and the chemicals released from damaged cells. They transmit the location and intensity of the pain to the brain and may stimulate the release of pain-blocking endorphins. Pain-relieving drugs function by inhibiting pain impulses. Various hormones can stimulate nerves near the injury. Aspirin inhibits prostaglandin. Researchers are designing drugs to block these hormones that trigger pain. Pain is a personal matter and no two persons react the same.

Incoming Message An incoming pain message is processed at “control centers” in the spinal cord and then relayed to the brain. If pain persists, chemicals build up and sensitize the spinal nerves so the signals from the injured area become increasingly more painful. This pain is not only physical pain, but has psychological components, as well.

Inside the Brain There is no single pain attention meter in the brain. Pain is felt only once the nerve signal reaches both the thalamus, the sensory center, and the cortex, where higher thought occurs.

Pain Relief The brain can partly control how much pain one feels. In dire situations, brain signals can trigger the release of natural painkillers in the spinal cord. Natural pain relief (naturally occurring opiates), including endorphins and enkephalins, are more powerful than any opiates made from plants (eg, opium). Research companies are testing treatments involving these pain relievers.

New Drugs Morphine acts on nerve cells to dull the perception of pain. There is a level of misunderstanding about narcotic treatment. Although they can be abused and are not appropriate in all painful conditions, when properly prescribed by doctors, their use almost never leads to addiction. Nevertheless, an “environment of fear” has affected the public and some doctors and patients unnecessarily reject them, fearing they will cause addiction. People do not become “zombies” when opiates are taken as prescribed — and people function better when they are pain free.

Anxiety and Pain The pain, the sensitivity of the patient to pain, the possible side effects or treatment, and the personal motivation to continue to be active all interact. There is a direct connection between acute pain and pain anxiety, an emotion that accompanies most feelings of pain. Fear of a dreaded disease can cause incurable pain and cause the pulse and breathing to quicken, increase sweating, and tense muscles. This, however, is true only for acute and anxiety pain. Chronic pain does not cause these misconceptions.



TYPES OF PAIN

■ ACUTE PAIN

This tends to occur suddenly, often as the result of a specific event, and may last minutes or weeks. Sudden, severe pain of no known cause that has never occurred before, may require medical attention.

■ LOCAL PAIN

This occurs in a relatively small, confined area of the body and is self limited in time and intensity. This type of pain can often be managed with ice, heat, and over the counter analgesics. Be certain to rule out fractures (see Extremities chapter) before using self motivated pain management.

■ REFERRED PAIN

This is a pain that occurs at different parts of the body from an injury or diseased part. For example, a toothache may cause pain to an ear. Angina may cause pain in the chest but also to the shoulder, back, or down the arm.

■ GENERALIZED PAIN

This pain is spread throughout the body and is a diagnosis that is difficult to make. When this occurs, pain may be caused by psychological or stress-induced pain syndromes.

■ CHRONIC PAIN

This occurs as a symptom to an underlying disease or problem and usually lasts 1) longer than the expected time required for healing, or 2) more than six months. Chronic pain can be barely noticeable or excruciating, and it can range from constant, minute to minute, or to every other day. Chronic pain syndrome causes change in a person, including physical problems (sleep and appetite disturbances, fatigue, psychological problems, family problems, and social withdrawal). There is no permanent cure for severe chronic pain. Researchers are, however, discovering new treatments for long-term pain from conditions such as arthritis, cancer, back ailments, or multiple traumas. Pain may become a fact of life and something you learn to live with. Referral to a chronic pain center may be worthwhile. Be cautious with easily obtained narcotic prescriptions. Patients with chronic pain may benefit from alternative medical approaches such as meditation, biofeedback, massage, yoga, and other methods to help Patients with chronic pain may benefit from alternative medical approaches such as medication, biofeedback, massage, yoga, and other methods to help reduce stress, which tends to aggravate pain.



ACUTE ABDOMINAL PAIN

A variety of sources can cause pain in the abdomen. If you experience sharp, unrelenting pain in the abdomen and pelvis, seek medical evaluation promptly.

■ APPENDICITIS

The appendix is a small appendage attached to the intestine and it has no known function in the body. When the appendix becomes inflamed, it is a medical emergency requiring immediate treatment. The classic symptoms begin with a dull pain around the navel, gradually followed by tenderness in the right lower quadrant of the abdomen. Fever, lack of appetite, and constipation are other symptoms. If appendicitis is suspected, seek medical help. (See Digestive System chapter.)

■ CYSTITIS

Painful urination and pain over the pelvis, occasionally radiating to the flanks with fever and chills, suggest cystitis. Consult your physician. While waiting for treatment, drink plenty of water and other fluids. Over the counter analgesics may be helpful. (See Urinary System chapter.)

■ DIVERTICULITIS

This is an inflammation in the wall of the colon. Severe, cramping pain; (more severe on the left) may indicate an inflammation. Occasionally, the diverticulitis leads to a rupture of the colon wall causing peritonitis, which is a medical emergency. Seek medical help immediately. (See Digestive System chapter)

■ GALLSTONES, CHOLECYSTITIS

An intense pain in the right upper quadrant of the abdomen that is felt in the right shoulder may signal gallbladder or bile duct disease. If a small cholesterol stone is passed through the bile duct, that pain may be acute, then subside to only soreness. Nausea, vomiting, and loss of appetite is not unusual. Seek medical help for these symptoms. (See Digestive System chapter.)

■ GASTROENTERITIS

This is a common and uncomfortable ailment. Characteristic signs are nausea, vomiting, and diarrhea with a possible low grade fever. In an adult, it usually lasts about 36 hours. If longer, consult your physician. (See Digestive System chapter)



■ KIDNEY AND URETERAL STONES

Severe flank pain on urination, blood in the urine, or severe pain that moves down from the flank to the groin, vulva, or testicle, could indicate a stone. This intensely painful kidney condition is resolved with the passing of the stone, removed with surgery or with lithotripsy. Seek emergency treatment. (See Urinary System chapter.)

■ OVARIAN CYSTS

Many ovarian cysts are minor problems that present only mild discomfort when ovulation occurs. Occasionally, a nonphysiological cyst will twist, rupture, or rapidly enlarge causing abdominal and pelvic pain requiring immediate medical intervention. Ultrasound imaging and laparoscopy can help in a diagnosis and treatment with minimal side effects. (See Reproductive System chapter, Female.)

■ PANCREATITIS

Intense, constant abdominal pain, lasting many hours or even days may signal pancreatitis. The pain may radiate through to the back and into the chest. It may occur with drinking large amounts of alcohol. Pancreatitis is an inflammation of the pancreas. The pancreas secretes digestive enzymes and insulin. Seek your physician's help. (See Digestive System chapter.)

■ PERFORATED PEPTIC ULCER

An ulcer located in the lower part of the stomach or the initial part of the duodenum that erodes through the wall of the intestine is referred to as having perforated and is life-threatening. The symptom is intense pain, generally in the upper abdomen. Usually, emergency surgery is necessary to close the leak. (See Digestive System chapter.)

■ PYELONEPHRITIS

If the symptoms of cystitis with worsening flank pain, fever and chills occur, you may have pyelonephritis. This is serious since the infection in the kidneys may result in a blood-borne infection. Seek medical care promptly. (See Urinary System chapter.)

■ RUPTURED ECTOPIC PREGNANCY

An ectopic pregnancy develops outside of the uterine cavity, most often in the fallopian tube. The location will not tolerate the growth of the pregnancy and a rupture often occurs. The symptoms are abdominal cramping, vaginal bleeding, dizziness and weakness, occasionally with shock. This can be life-threatening and requires immediate medical help. (See Maternity/Newborn and Reproductive System chapter, Women's Health.)



ACUTE CHEST PAIN

Chest pain is one of the most difficult symptoms to interpret. Everything from simple indigestion, coughing (fractured rib or sore chest muscles), or angina from coronary artery disease can be causal. The pain and fear of a heart attack provokes significant anxiety.

■ HEART ATTACK

A heart attack occurs when an artery that supplies oxygen to the heart muscle becomes blocked. A heart attack may be preceded by chest pain (angina pectoris) for days or weeks, following exertion, or even at rest. During a heart attack, the muscle (myocardium) gradually dies, which produces painful symptoms. This is a medical emergency. Do not try to drive yourself to the hospital. (See Heart and Blood Vessels chapter.)

■ PNEUMONIA WITH PLEURISY

Pneumonia describes a variety of infections of the lungs. When chest pain occurs in the presence of fever, chills, productive cough, and difficulty breathing, pneumonia must be considered. When pleurisy occurs, the membranes around the lung become irritated and painful, particularly when breathing. If you suspect pneumonia and pleurisy, seek help immediately. (See Respiratory System chapter.)

■ PULMONARY EMBOLISM

An embolus is a small accumulation of foreign material (usually a blood clot) that blocks a pulmonary artery and causes lung tissue death (infarction). The origin of the clot is usually from a pelvic or leg vein (thrombophlebitis). This syndrome presents as sudden, sharp chest pain that begins or worsens with a deep breath or cough, a cough that produces blood, rapid heartbeat, anxiety, and excessive sweating. Seek help immediately. (See Respiratory System chapter.)

■ OTHER CAUSES

Chest pain may be the result of other causes, such as tearing of the large artery, the aorta (aortic aneurysm), heartburn, or regurgitation of the stomach contents into the esophagus. Since the diagnosis is not possible without medical evaluation, seek medical help promptly.



ACUTE EXTREMITY PAIN

Sudden unexplained pain in the arms, legs, hands, and feet may be indications of medical problems requiring treatment.

■ ACUTE ARTERIAL OCCLUSION

Sudden, severe pain accompanied by paleness and coldness in the arm or leg may indicate a blocked (occluded) artery. The most common cause is arteriosclerosis. Because of the risk of gangrene or need for amputation, immediate medical treatment is needed. (See Heart and Blood Vessels chapter.)

■ THROMBOPHLEBITIS

When a deep vein blood clot occurs in an extremity (usually the leg), thrombophlebitis would be considered. Tenderness with pain and swelling of the thigh or calf is usually present. Because of the risk of a pulmonary embolism from the clot breaking away, seek immediate medical help. (See Heart and Blood Vessels chapter.)

■ ACUTE EAR PAIN

Pain experienced in the ear with no history of trauma or foreign objects placed in the ear, with a sense of fullness, and diminished hearing may be from a middle ear infection (otitis media) and an ear, nose and throat (ENT) physician should be notified. The pain may be accompanied by a fever. Children with ear pain are likely to cry and tug at their ears. Consult your physician without delay. If there is a delay in seeing a physician, place a warm (not hot) moist cloth over the ear and take aspirin or other over the counter analgesics to relieve the discomfort. Do not use drops before being evaluated by a physician.

ACUTE HEAD PAIN

Everyone has had a headache at one time or another. Most headaches are minor, pass quickly, and are forgotten. The headache, however, may be a symptom of a more serious and dangerous condition. The most common types of head pain are:

■ CEREBRAL OR SUBARACHNOID HEMORRHAGE

Bleeding into the brain may be signaled by sudden, severe headaches, frequently with vomiting, deterioration of vision or speech within a few minutes or an hour, sudden weakness, loss of sensation in a limb (arm/leg), acute onset of double vision, and loss of consciousness. Emergency treatment is extremely important.



■ DENTAL ABSCESS

In addition to having a headache, if you experience persistent throbbing pain in a tooth, find chewing painful, or have sensitivity to liquids or hot and cold foods, you may have a dental abscess. Fever and swelling around the tooth are common symptoms. See your dentist immediately.

■ MENINGITIS

Severe headache accompanied by fever, vomiting, confusion, drowsiness, and perhaps a stiff neck may indicate meningitis. Seek emergency care immediately.

■ MIGRAINE HEADACHE

An intense head pain, often on one side of the head and accompanied with nausea and vomiting is an indication of migraine headache. It is often a throbbing pain and occasionally the sufferer will visualize sparkling lights or black spots in the field of vision. Avoiding bright light helps. If you suspect a migraine headache, see your physician for two reasons: 1) confirm that it is a migraine, and 2) receive appropriate management. (See Brain and Nervous System chapter.)

LOCAL PAIN SYNDROMES

Local pain is in one specific region, such as the pain from everyday cuts, scrapes, wounds, or sprains that often do not require a trip to the emergency room. Proper care is essential, however, to avoid infection or other complications. When pain is consistent with a minor injury, there are a variety of aids to reduce pain safely and efficiently. Sudden increase in pain, associated with swelling, can be a warning. If this occurs, it may often mean an infection (fever) or more tissue damage (undiagnosed fracture) than is suspected. Seek medical attention if this occurs. Strategies for relief of local pain while waiting for medical help, or managing the pain from minor injuries include the following:

- ◆ Assess the location for signs of infection, fracture, or lack of mobilization.
- ◆ Ice (for the first 24 hours) to reduce swelling and pain, followed by alternative heat and ice to reduce pain and swelling.
- ◆ Take it easy. Rest, elevate the painful area if on an extremity, and immobilize by wrapping, splinting, and/or supporting with a comfortable dressing.
- ◆ Over the counter analgesics, including acetaminophen, aspirin (for adults), or NSAID are safe if there are no allergies.



GENERALIZED PAIN

Generalized pain is a discomfort felt all over the body with no specific central location. This is brought on by diseases such as arthritis, lupus erythematosus, cancer, or massive trauma. An important key to manage this pain is identifying the cause (establish a diagnosis) and then treating the disease.

PAIN MANAGEMENT

Researchers have learned that two kinds of nerve fibers carry pain signals to the spinal cord, where they are relayed by other nerve cells to the brain. They are studying ways to block or reduce the intensity of these signals. Using the MRI machine, scientists can see portions of the brain "light up" when pain is felt, even in the so-called "phantom pain" from an amputated limb.

The recent understanding of pain has drastically changed in the last 10 years and millions of Americans who suffer needlessly from agonizing pain can get relief safely, thanks to new scientific knowledge.



PRESCRIPTION DRUGS

Analgesics are substances that give temporary relief from pain without causing loss of consciousness. There are two kinds. One is habit-forming (narcotics), usually given for severe pain, which acts on the central nervous system. The other does not have these side effects (non-narcotics) and targets where the pain is located. Aspirin and other nonprescription drugs work by blocking the body's production of prostaglandin (hormone like substances produced in the body and released by damaged cells). Acetaminophen works by blocking pain impulses in the brain and preventing the perception of pain. Some people are highly sensitive to certain compounds contained in analgesics or other painkillers, which may cause severe side effects or reactions. If there are no known side effects, your physician may recommend and/or prescribe the following:

Non-narcotic Analgesics The most commonly used of these analgesics are aspirin (and other salicylates), acetaminophen, NSAID (nonsteroidal anti-inflammatory drugs), such as ibuprofen — available in prescription and nonprescription forms. In addition to controlling pain, these analgesics lower fever and fight inflammation.

Narcotic Analgesics These drugs include the opiates and opioids that are natural or artificial forms of opium, such as codeine or morphine. They are usually used on a short-term basis to control severe pain resulting from cancer, a broken bone, or surgery.

Combination of Non-narcotics and Narcotic Analgesics Many prescriptions are a combination of narcotics and non-narcotic and include acetaminophen and codeine, aspirin and codeine, propoxyphene and aspirin, caffeine and butalbital. These drugs are used as an alternative to those that contain only narcotics for pain that is not alleviated by non-narcotic drugs.

Corticosteroid These are made from synthetic hormones and used to treat bronchospasm (asthma), immunosuppression (to reduce swelling in injuries such as brain concussion), and the painful inflammatory stages of autoimmune diseases, such as rheumatoid arthritis.

Local Anesthetics These drugs are locally acting and can be injected to deaden the nerve so pain is not felt (as during a dental procedure). An anesthetic can also be injected into a joint or back to block the sensation of pain. Trigger point injections can be used with physical therapy to improve mobilization.

Antidepressants These are helpful in the management of chronic pain. They not only act as an antidepressant, but low doses interfere with pain messages traveling to the spinal cord.

Trigger Point Injections Trigger point injection therapy is the injection of a painkilling substance deep into the muscle tissue that is located over a localized area of pain. This injection often provides immediate pain relief. The effects of these injections are increased, and provide longer pain relief when combined with simple physical therapy treatments that are given to heal the pain-causing injury.



OVER THE COUNTER ANALGESICS AND PAIN MANAGEMENT

There are many over the counter analgesics that have different doses and may be helpful to relieve repetitive pain or acute pain. The side effects and cost must be considered, along with the effectiveness of the drug for each person's individual pain. The label should be read thoroughly. The recommended dosage and risks of side effects appear in the labeling. Other than acetaminophen, the drugs are in a class of anti-inflammatory drugs as well as analgesics. Examples are:

Acetaminophen (eg, Tylenol) This is the most widely used “nonaspirin” pain reliever. It does not work to relieve inflammation but is least likely to cause stomach irritation or gastrointestinal bleeding. It is not advised for those who consume three or more alcoholic beverages a day because of the risk of liver damage.

Aspirin Aspirin is usually the least expensive. It is effective at treating a wide variety of pain, but its blood thinning capabilities increase the risk of gastrointestinal and other bleeding. It should not be given to children or teens for chicken pox or flu. (See Children's Health, Reye's Syndrome.)

Ibuprofen (Advil, Motrin) This is generally a good choice for long term use, (eg, for arthritis pain), because it has a lower risk of side effects and has an “anti-inflammatory effect.”

Ketoprofen (Orudis KT, Actron) This is the newest over the counter pain drug. It is effective in treating arthritis and other pain with anti-inflammatory effect.

Naproxen (Aleve, Naproxen) This causes a greater risk of ulcers and kidney damage when taken frequently, but is effective in treating arthritis and other pain.



NONDRUG THERAPY

Once considered offbeat, these therapies are now being used at major medical centers nationwide. Potentially addicting drugs are often prescribed but are not always the best way to relieve chronic pain. A person with chronic pain will often continue to suffer while taking pain medication. Even when the medication does relieve pain, it may dull concentration and disrupt sleep.

Some drug-free treatments are just as good for certain pain reduction as drug therapy and often carry less risk to the patient than the medications. The success rate varies, however, combining nondrug therapy with other forms of therapy may enhance the management.

Acupuncture A National Health Institute panel gave acupuncture the "thumbs-up" as a way to relieve nausea and pain.

Heat One of the most ancient ways to decrease pain is with the use of heat. No one knows why heat makes pain decrease and it is doubtful that heat speeds up repair of an injury. Simple methods, such as heating pads, moist heat, or hot water bottles can reduce pain due to such injuries as torn muscles, bruises, and arthritis. Ultrasound treats pain in the joints or bones by raising the temperature in deep structures under the skin.

Cold Cold is also an ancient treatment. Applying cold constricts local blood vessels and makes the area numb. Researchers believe that cold is similar to acupuncture as it may block the pain signals. Massaging an ice cube on the back of the hand between the thumb and index finger has been used to decrease dental pain. Ice also relieves pain and swelling from sprains, bumps, and bruises.

Electrostimulation Transcutaneous electrical nerve stimulation (TENS) units (across the skin) are available by prescription. The unit sends a small electrical current pulse (less than ten percent of a 60 watt light bulb) that stimulates the nerve fibers just under the skin, blocking pain signals to the nerves. The unit is worn on a belt and the electrodes are placed over the wound or area of pain, or over the acupuncture point near the pain. The pain is relieved while the unit is turned on, or shortly after it is turned off. Many patients report that a TENS unit loses its therapeutic abilities after a year of use. The nerves may start ignoring the stimulation and the pain signals once again break through.

Relaxation and Behavioral Techniques This type of treatment teaches a patient to use their mind to lessen or eliminate pain, especially chronic pain. Although this is not successful for everyone, behavioral pain relief methods can replace medications. These techniques should be taught at a professional facility by professional therapists.

Biofeedback Biofeedback uses the mind to control the body when tension is the cause of pain, rather than arthritis, cancer, or nerve damage. Some people react to stress by tightening head and face muscles, resulting in tension headaches; others dilate and constrict blood



vessels causing migraines. Biofeedback uses electronic “feedback” (beeps and flashing lights from a machine) to teach patients how to control those physical processes. Thermal feedback informs patients of the skin temperature in their hands and is used mostly for migraines.

Electromyographic Biofeedback This alerts patients to muscle strain and works especially well for jaw, neck, and shoulder pain, or tension headaches. In one study, chronic headache sufferers who completed six to 20 biofeedback sessions, reduced headache-related doctor visits by an average of 75 percent and the use of medications by 56 percent. After being attached to sensors that monitor body readings, patients are able to see or hear muscle tension, temperature, and other body processes. With practice, patients eventually gain enough control over the process to change what they see or hear on the monitors. For example, temperature biofeedback is used for the treatment of migraine headaches. The temperature sensors show that as blood vessels narrow, body temperatures decrease. Patients learn to increase blood flow with biofeedback, and by controlling their thinking, they can decrease the occurrence of painful migraines.

Visualization This is a mental technique similar to biofeedback. Athletes use visualization to enhance their performance. Over and over in their minds they see the perfect pitch or precise pole jump. One type of visualization called “guided imagery” gives the patient a visual goal to accomplish, such as picturing being free of pain by evoking imagery that is incompatible with the pain. Researchers believe that visualization techniques cause the body to become less stressed.

Relaxation Relaxation is the release of stress, anxiety, and often pain. Relaxation techniques include deep breathing, muscle relaxation techniques, and meditation. One of the best ways to relax is to meditate. Sit or lie down in a comfortable position, relaxing all muscles. Breathe at a relaxed rate through the nose, releasing all thoughts from your brain. Some people repeat one word over and over, focusing their attention on that word. This is usually done for about 20 minutes; however, there is no real set time to use relaxation techniques. Each individual develops his or her own rhythm of relaxation.

Hypnosis By using this form of relaxation, a patient can shut out distraction and focus on one subject, such as getting rid of pain. Not everyone is a candidate for hypnosis because it is necessary to be receptive to suggestion. After the cause of the pain is diagnosed, hypnosis may be used as an alternative to treat the pain. It is used mainly for chronic pains, such as recurring headaches; or for relaxation, such as helping a woman in labor relax and experience less pain during childbirth.



PHYSICAL TECHNIQUES AND SPECIALISTS

Anesthesiologists Anesthesiologists originated the idea for the modern pain clinic. They spearheaded the movement in this country to treat chronic pain in a multi-disciplinary setting. Those that treat pain have completed special training and are Board Certified in Pain Management.

Exercise People with chronic pain tend to avoid exercise, and lose muscle strength, endurance, and flexibility. Consequently, when they first start to exercise again, it may actually hurt. Over time, as the body becomes more conditioned, exercise will relieve chronic pain. In a recent study reported in the *Annals of Internal Medicine*, patients with arthritis in one or both knees were divided into two groups. Both received medications, with only one group assigned to a fitness walking program. After eight weeks, the exercisers were able to walk 18 percent farther than when they started, were using less medication, and had less pain. For years, doctors have told patients, “If it hurts, don’t do it.” In some syndromes, such as fibromyalgia, when it seems to hurt all over, some patients simply stop exercising and have harmful results. Now, in pain clinics, patients are told they have to stretch and lift five-pound weights to improve. As a result, patients are gaining strength and returning to their normal activities. Chronic pain sufferers should begin with gentle exercises (eg, easy stretches, slow walking, leisure swimming, and light weight lifting). Exercise is thought to relieve pain by forcing a patient to concentrate on something other than pain. Vigorous exercise causes the body to release natural painkillers into the bloodstream, thus decreasing pain. Exercise, such as running, walking, skiing, and hiking increase cardiovascular and overall endurance. Weight-training increases muscular strength and decreases the chance of painful injuries because the body is in better shape. Exercise can include some of the more gentle motions that benefit organs and the internal body structures. Some yoga instructors also use deep breathing and meditation with more traditional yoga exercising.

Massage We have all rubbed our shoulder or stretched a sore hamstring to relieve pain. For deeper pains, such as backaches, trained professionals use techniques that apply mechanical pressure to relieve pain. Some massage the area of pain, while others use pressure on various body parts.

Physical Therapy Physical therapists are trained professionals who treat the musculoskeletal system. They cannot diagnose medical problems or prescribe medications. They use their hands and technology to treat a wide variety of pain including cancer, strained or sprained muscles, and lower back pain. Techniques, such as exercise programs, ultrasound, massage, and heat and cold applications are used.

Physiatry Physiatrists are medical doctors who use physical methods and agents to treat patients suffering from pain. Physical medicine emphasizes rehabilitation and uses other health care professionals in a team approach to diagnose and treat pain.



ALTERNATIVE HEALTH TECHNIQUES

Alternative health methods provide an alternative to drugs and drug therapy. Numerous healing techniques are used to relieve pain.

Acupuncture This is an ancient Chinese healing art. Acupuncture uses various techniques, including the insertion of various sized needles at specific points on the body (called meridians). Classic text describes 365 acupuncture points, each associated with specific organs. The needles allow the body to “flow.” Researchers believe that acupuncture may work because the stimulating needles cause the release of endorphins that lessen the pain and give the patient a feeling of well-being.

Acupressure Very similar to acupuncture, acupressure is a method of using pressure to work on the meridians of the body for specific pain symptoms or disorders.

Hydrotherapy Hydrotherapy uses water to reduce pain by relieving the constant pressures on certain parts of the body. The most common types of treatment are swimming and water exercises, often for chronic back pain.

Mindfulness Meditation Chronic pain sufferers often tell themselves, “This will go on forever; I can't do anything anymore.” Such thoughts can actually make their pain worse. Mindfulness meditation helps patients become aware of their thoughts and the effect of those thoughts on their lives. Some patients describe a process called “uncoupling,” where they realize their thoughts and feelings about pain are different from the pain itself. Once they look at pain as completely dominating their life, they find they have resources to deal with the pain. For example, a person with severe chronic pain should lie down for 40 minutes, relax, and “observe” his or her thoughts. As a result, patients can begin to exercise and return to a full, vigorous life. Meditation is not a substitute for standard medical treatment, but a complement to it. In one study, 72 percent of those who learned to meditate reported a 33 percent reduction in the intensity of the pain they felt.

Life Style Changes Good pain management programs teach people better ways to work and get a good night's sleep. Lifestyle changes (eg, lifting properly or supporting your lower back with a rolled towel while driving) can put a person back in control of their lives. Often, many of us acquire work habits, such as “hunching” over a computer, which makes pain worse. Sitting up straight, resting the feet on a small stool to take pressure off the spine is often helpful. Short breaks during the day help immensely, as does stretching the neck and shoulder muscles. In the evening, relax after dinner by reading or taking a walk. At night, sleep with a cervical pillow that supports the neck.



SURGERY FOR PAIN

Surgery to relieve pain is usually the last resort for treatment. It may seem as if cutting a nerve will cause the feeling of pain to disappear. In reality, cutting or severing nerves to relieve pain usually leads to other complications, such as numbness and other uncomfortable sensations that may be impossible to treat. A nerve block is a tool that is used to locate the nerve causing the pain. A physician will inject local anesthetics into a nerve and if the pain stops, it is determined the nerve causing the pain has been located. This also enables a physician to determine whether or not neurolysis surgery (destruction of the nerve) is required.

PSYCHOLOGICAL HELP

Pain does not always follow the path of the body functions — the patient's mental state also has a direct effect on a perception of pain. In many cases, an injured patient's pain is the emotional distress as well as the physical injury. Because of this direct link between pain and emotion, doctors realize that some patients' pain (especially chronic pain) may be helped using psychological help. Many chronic pain patients experience feelings of depression, anger, and anxiety. They may also have problems with sleep. Both one-on-one and group therapy treatments may be beneficial.

AVAILABLE RESOURCES

[Rehabilitation Accreditation Commission](#) (520-325-1044)

[American Chronic Pain Association](#) (916-632-0922)

[American Pain Society](#) (708-966-5995)

[Commission on Accreditation of Rehabilitation Facilities](#) (800-444-8991)

[American Academy of Physical Medicine and Rehabilitation](#) (312-922-9366)

[Chronic Pain Support Group](#) (216-657-2948)

[National Committee on the Treatment of Intractable Pain](#) (301-983-1710).