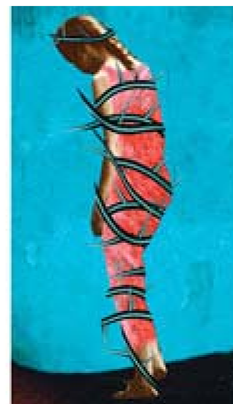
Ladies' Home Journal

Ouch! Ouch! Ouch! Ouch! How to Relieve Chronic Pain

A National Epidemic

One afternoon in 1997, Janine Willis hurt herself pruning an apple tree in her backyard. "I fell only a few feet but I landed on my butt on the cement, which sent shock waves through my whole spine," says Willis, now 44, of Castro Valley, California. What should have resulted in some bruises wound up reawakening an old back injury and catapulting Willis into a world of agonizing pain. "I felt as though I was reentering a nightmare," she says.



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Spinal fusion surgery had healed her back pain the first time, but this time there was no visible damage and no surgical fix to try. For the next several years she shuttled from doctor to doctor, trying everything -- pills, shots, physical therapy, chiropractic, acupuncture, biofeedback. "The pain response in my body just wouldn't turn off," says Willis. Sometimes she had burning, searing spasms in her spine; other times, an immense pressure at the base of her skull. She was in a narcotized haze from heavy-duty painkillers much of the day. She tossed and turned at night; she didn't have the energy to parent her two children, now 16 and 14; her husband took over the chores; and she spent most days curled up on the couch with an ice pack. "The pain sucked my life away," she says. "I felt like I was circling the drain."

More than 50 million Americans suffer from chronic or recurrent pain. It's the nation's leading cause of disability and costs employers more than $60 billion a year in productivity. It can rob a person of his or her ability to work, sleep soundly, have satisfying personal relationships, or enjoy the simplest of pleasures. Yet only one in four sufferers will receive proper treatment, according to the American Pain Foundation.

"Pain remains one of the most undertreated ailments in society and very often pain complaints are swept under the rug," says Mark Allen Young, MD, a physical medicine and rehabilitation specialist in Baltimore, author of *Women and Pain*, and former editor-in-chief of the *Journal of Practical Pain Management*. That's because both doctors and patients tend to dismiss pain as the natural result of an injury or illness, which will end when they recover.

Ignoring Chronic Pain

But keeping a stiff upper lip can be disastrous: Recent studies show that pain that lingers untreated for more than three months can actually change the hard wiring in the brain, triggering permanent changes in the way the body responds to pain signals. This both intensifies the experience of pain and risks making the condition chronic. "If pain is not nipped in the bud with aggressive treatment, it becomes much more difficult to treat," Dr. Young says.

Fortunately, a growing number of doctors recognize that pain is a debilitating medical condition in itself and sometimes must be treated separately from what triggered it. What's more, some insurance companies may cover the costs of pain-management programs. And in California, to get their license renewed physicians need to take a course in pain management, which enhances their ability to keep acute pain from becoming chronic.

If you sense that you might be developing a chronic pain problem that your current pain regimen hasn't been able to stave off, start by asking your primary-care physician to refer you to a pain specialist or clinic. If your doctor doesn't know one, look for a pain-treatment center at local hospitals or medical centers.

Although there isn't one magic pill that will vanquish acute, recurrent, or chronic pain, doctors now have a broad array of options that blend alternative therapies with traditional medicine. "We can't cure chronic pain," says Anthony H. Guarino, MD, a pain-management specialist at the Washington University School of Medicine, in St. Louis, "but we can manage it and greatly improve a patient's quality of life."

Janine Willis has benefited from the new focus on pain management. In March 2005 doctors at the Stanford University Pain Management Center, in Stanford, California, implanted a nerve stimulator in her spine to block the transmission of pain signals. "Now my pain is tolerable," she says. "I'm thankful every day that my husband and kids didn't give up on me. I can now enjoy their soccer games, make sure everyone has clean laundry, and do all those little things you take for granted to be sure your family is comfortable."

How Pain Can Become Permanent

Once the wiring of the nervous system changes in response to prolonged pain, "the pain you feel doesn't correspond to

what is going on in your body," says James N. Dillard, MD, a rehabilitation-medicine specialist in New York City and author of *The Chronic Pain Solution*. A few become so hypersensitive that even the slightest touch or vibration can be excruciating. "Fifteen years ago people who had these complaints were sent to psychiatrists," says Dr. Dillard. "But now we know that the nervous system is very adaptable, and that the pain pathways can ramp up and amplify the signals."

Every person has a unique susceptibility to pain. Some people can be seriously hurt yet recover quickly, while others are incapacitated by a relatively minor mishap. "People may be genetically predisposed, or a past history of injuries may make them more susceptible," says Linda LeResche, ScD, an epidemiologist and professor in the department of oral medicine at the University of Washington, in Seattle.

Unrelenting pain can erode health and age people prematurely. The release of stress hormones in reaction to pain weakens the immune system, which compromises our ability to fight disease. A year or more of chronic pain can cause brain shrinkage that's 5 to 11 percent beyond what normal aging would take away, according to a 2004 Northwestern University study. Researchers suspect that the cumulative stress of coping with pain wears out brain nerve cells. "The long-term damage can trigger a self-perpetuating cycle of pain, making the condition more intractable," says A. Vania Apkarian, PhD, a pain specialist at the Northwestern University Feinberg School of Medicine, in Chicago.

Chronic pain also spawns an escalating cascade of psychological and emotional problems. Pain sufferers can't sleep, which makes them irritable, anxious, and depressed. One-third report they can't function normally and sometimes feel so bad they want to die.

Breaking the Pain Cycle

Breaking the vicious cycle of pain can be challenging. "By the time patients are referred to our clinic, many of them have been in pain for five years or more," says Carmen R. Green, MD, a pain-medicine physician at the University of Michigan, Ann Arbor. Once experts determine the source of trouble, they tailor a treatment program to a patient's medical and psychological history. Finding a pain solution is highly individual; what works for one person may not be successful for another, even when both have the same problem.

Physicians usually employ a two-step process. Unless the pain is relatively mild, they first try to soothe -- or at least lessen -- it with an individualized combination of painkilling drugs and other techniques. Then they create a comprehensive pain-management plan that mixes traditional and complementary therapies to help people resume a normal life.

Step 1: Lower the Pain Level

Before someone can get started on long-term strategies, his or her pain has to be at least manageable. Physicians will start by reviewing a patient's current ways of seeking relief. They may try upping the dosage of medications such as ibuprofen or acetaminophen. Specific problems can call up a wide range of other drugs: antiseizure medications to ease pain triggered by nerve damage (from shingles or neuropathy from diabetes) or steroid injections for arthritis or back pain to reduce swelling, which eases pressure on nerves. Antidepressants, such as Prozac, or sleeping pills can help people in pain get a restorative night's sleep so they start to feel better during the day. For tension headaches and migraines doctors may use the wrinkle-eraser Botox, an injectable toxin that paralyzes cramped muscles.

For people in constant, severe pain, specialists turn to opiates, though many physicians are reluctant to prescribe these medications because they can be addictive and leave users nauseated and groggy. But they can soothe pain that milder drugs don't help. Doctors may try morphine, oxycodone, or the longer-acting methadone, better known for weaning addicts off heroin. Skin patches containing fentanyl, another opiate, can also provide round-the-clock relief.

Step 2: Establishing Long-Term Treatment

Once a person's pain has been stabilized, physicians experiment with an array of treatments, depending on the condition's root cause. If they can, they wean patients off opiates, substituting less-powerful medications if still needed. Their arsenal includes a range of mainstream and mind-body strategies.

Mainstream Therapies

In addition to continuing some form of prescription drugs, patients may get some combination of the following:

- ***Injections and nerve blocks.*** Local anesthetics, such as procaine, sometimes in combination with cortisone-like medicines, can be injected around nerve roots and into muscles or joints. These shots can ease swelling, irritation, muscle spasms, and the abnormal nerve activity that can make people miserable.
- ***Electrical stimulation.*** Transcutaneous electrical nerve stimulation uses a small battery-operated device that alleviates pain by externally stimulating nerve fibers through the skin. For more debilitating and intractable pain, doctors may surgically implant brain stimulators inside the spinal cord that deliver timed electrical impulses to interfere with the transmission of pain signals.
- ***Physical therapy.*** All too often pain sufferers become sedentary because they're afraid of injuring themselves further. This contributes to weight gain and an overall physical deterioration that just exacerbates their pain. In fact,

exercise may be as beneficial as heavy-duty medications at easing symptoms because it is energizing and may promote the release of endorphins, the body's natural painkillers. Doctors may prescribe a gentle exercise program, such as aquatic therapy, to get even patients crippled by agonizing pain moving again. "Regaining function is key to overcoming chronic pain," says Scott Fishman, MD, an anesthesiologist and psychiatrist who is chief of pain medicine at the University of California, Davis, and past president of the American Academy of Pain Medicine.

- ***Heat.*** In a study of 110 men and women suffering from osteoarthritis of the knee, patients got greater pain relief from using heat wraps than from taking ibuprofen, the usual treatment for this type of pain. "Heat wraps seem to work by blocking pain signals and they also stimulate healing by increasing blood flow," says John Mayer, PhD, an exercise physiologist and research director at San Diego's U.S. Spine & Sport Foundation.

Mind-Body Methods

- ***Massage therapy.*** Deep-tissue massage loosens clenched muscles and other tight tissues, which otherwise ratchet up pain. The rubbing sensation also seems to stop pain messages from reaching the brain. A 2004 study of 1,290 cancer patients at Memorial Sloan-Kettering Cancer Center, in New York City, revealed that a massage significantly reduced pain for two days or longer. "It was quite amazing," says study author Barrie Cassileth, PhD, chief of Integrative Medicine Service at Memorial Sloan-Kettering. "Human touch is extremely important and has physiological implications."
- ***Acupuncture.*** The ancient Chinese therapy, which involves inserting very thin needles at pressure points in the skin, can ease intractable pain in some people. Experts don't know exactly why acupuncture works, but research suggests the physical stimulation triggered by the needles affects the nervous system and promotes the release of endorphins and other natural opioids produced by the body. Even pain caused by nerve damage, which is difficult to control with conventional pain meds, can be eased if not eliminated altogether with acupuncture, says Dr. Cassileth.

In a landmark 1987 Kaiser Permanente study, for example, researchers compared four groups of women who had menstrual pain. They received either acupuncture, a placebo form of acupuncture, extra office visits, or no extra treatment. Ninety-one percent of the women in the acupuncture group cut their pain in half compared with only 36 percent of the control groups. And the acupuncture patients were able to cut their use of painkillers by 41 percent in the nine months following the treatment.

More recently a 2004 Duke University study involved 75 breast-cancer patients who were treated with either a high-tech acupuncture-like therapy or conventional medications to control postsurgical nausea and vomiting. A day after the procedure about three-quarters of the women who received acupuncture had no symptoms compared with half of the women who took drugs.

- ***Other complementary-medicine techniques.*** These may divert sufferers' attention from pain to pleasurable thoughts. Options include hypnosis, meditation, music and art therapy, deep breathing, and guided imagery (a self-hypnosis method in which a patient uses positive images to relieve pain).

In one 2005 study by Stanford University researchers, for example, patients were actually taught to watch their brain on pain via functional magnetic resonance imaging. Subjects saw a representation of their brain activity in the form of burning flame. They learned to make the flame go up or down by thinking. Their pain would correspondingly go up or down. "Over time people slowly gained better control of the brain region -- it is like going to a gym and working out a muscle," says researcher Sean Mackey, MD, PhD, associate director of the Stanford University Pain Management Center, in Stanford, California. "These research results lend further validation to many of the techniques that pain psychologists use, such as guided imagery and stress reduction, to bridge the mind-brain connection."

- ***Psychological counseling.*** "Patients are often reluctant to see a pain psychologist because they feel doctors don't believe they have a physical problem," says Dr. Fishman. "But emotions like depression or anger can increase pain's decibel level." Counseling can help relieve these feelings and lower pain.

Women, Men, and Pain

"Women suffer more from pain-related conditions, yet their pain complaints receive less attention compared to those of men," says Carmen R. Green, MD, a pain-medicine physician at the University of Michigan, Ann Arbor. "Unfortunately, some physicians stereotype women as complainers. As a result, women are suffering needlessly."

Compared with men, women have lower pain thresholds -- the minimum amount of pain needed to make them say "ouch" -- and a lower pain tolerance, which is the maximum intensity or duration of pain one can endure. Women report being in pain more often, their pain tends to be more severe and persistent, and they suffer more frequently from chronic pain disorders, such as migraine headaches, arthritis, TMJ (temporomandibular joint pain in their jaws), carpal tunnel syndrome, irritable bowel syndrome, urinary tract infections, joint pain, and fibromyalgia (a muscle-ache disorder). The question is why. Here's the latest thinking:

- ***Hormonal differences.*** "Estrogen and progesterone can alter pain signals," says Baltimore pain specialist Mark Allen Young, MD. "Where a woman is in her menstrual cycle can profoundly alter her pain threshold and tolerance."

Three times as many women as men are crippled by migraine headaches, for example, and these may worsen during pregnancy and at menopause. Women also suffer from the painful bone-thinning disorder osteoporosis at a much younger age, and in far greater numbers, than men do.

- ***The body-brain connection.*** Imaging studies reveal that chronic pain affects the brain regions that regulate emotions. A 2006 Stanford University study even suggests that the more fearful and anxious we are, the greater our sensitivity to pain. "Our perception of pain is directly linked to individual differences in fear and anxiety," says Stanford's Dr. Sean Mackey. Women may feel pain more keenly because it's more culturally acceptable for women to express these emotions.

Experts now believe the experience of pain is strongly influenced by a complex interplay of several factors: the actual physical stimulus (whether it's getting a root canal or stubbing a toe), the past history of pain (the brain's so-called pain memories of old injuries), and our appraisal of the current situation. In other words, if we're insecure or in jeopardy, pain can seem more intense than it would if we felt safe.

Because women have evolved to be hyper-vigilant about dangers in their environment, their antennae are more finely tuned, which can amplify their perception of pain. 'If you think of pain as the central nervous system's response to threats, women have been given permission to identify more potential harm in a lot more situations because they're looking for it," says Karen J. Berkley, PhD, professor of neuroscience at Florida State University, in Tallahassee.

The Exercise Effect

Who she is: Cindy Steinberg is in her 40s and lives in Lexington, Massachusetts, with her husband and 13-year-old daughter.

Her pain profile: In 1995 Steinberg was a high-powered executive who loved her job so much she never took a sick day -- until a filing cabinet fell on her back at work, tearing the ligaments in her spine. The tissues in her back mended within a few months of her injury, but for some reason the pain never stopped. "It seemed to take on a life of its own long after the original injury healed, and it become engraved in my nervous system," Steinberg says. At work she increasingly had trouble sitting upright for more than an hour because of the searing muscle spasms in her back. Yet MRI tests couldn't find anything wrong.

What she tried: Steinberg took prescription-strength doses of anti-inflammatory medications, got nerve-block injections, and went to physical therapy. But her agony just escalated, forcing her to quit her job five years ago. "I don't think my pain was adequately treated," she says. "I was shocked at how little knowledge about pain management there was among doctors."

How she finally found relief: Steinberg discovered a pain-management specialist who devised a regimen that works for her. Until December 2004 she took narcotic painkillers during the day. Now she just takes a muscle relaxant in the evenings. Four times a week she spends 45 minutes in the local pool working with a physical therapist. She walks regularly and avoids sitting upright for longer than 90 minutes. "My spine is still really unstable and it's difficult for me to hold my back up," she says. "But I'm no longer in constant, excruciating pain."

Best piece of advice:

The Power of Guided Imagery

Who she is: Jani Larsen, 44, is married with one son and lives in Rio, Wisconsin.

Her pain profile: While in the military, Larsen dislocated her elbow during a training exercise in 1985. The elbow was reset at the base hospital, where she spent a week recuperating, but she still lived with a numbness and tingling that radiated from her elbow to her fingers. After leaving the service she became a human resources manager and worked on a computer all day long, which exacerbated her condition. By 1995 the pain "was like a mad dog that just gnawed at me all day long," recalls Larsen, who was popping ibuprofen like breath mints. Her doctor referred her to an orthopedist, who discovered the elbow had become severely arthritic and the protective coating surrounding the nerves had worn off. Because she was so stressed out she began gaining weight, which made the pain worse.

What she tried: Doctors at the Department of Veterans Affairs gave her potent narcotics and anti-inflammatory medications but told her there wasn't much else they could do. Desperate, she had a nerve stimulator implanted, but it didn't work correctly, making the problem worse.

How she finally found relief: After years of enduring agonizing pain, Larsen burst into tears in her neurologist's office in June 2003 and confessed to feeling suicidal. The doctor referred Larsen to a psychiatrist, who diagnosed her with severe depression brought on by the chronic pain. Antidepressants calmed her anxieties, while a combination of the painkiller morphine and Neurontin, an antiseizure medication, helped deaden the nerve pain. Larsen also discovered the American Chronic Pain Association. She joined one of its online support groups and bought a guided imagery CD from the organization.

"I was willing to try anything and I was amazed it worked," says Larsen, who listens to the CD four times a night to help her fall asleep. While it doesn't dampen the pain, it diverts her attention and takes enough of the edge off so that she can rest. If her pain shoots up during the day she also turns to the trusty CD. As a dividend, she dropped 50 pounds in the past year and a half without dieting because she is no longer so stressed.

Best piece of advice: "Instead of pushing it away, accept that the pain will always be there," says Larsen. "Then you'll be able to find ways of dealing with it."

The Implant Solution

Who she is: Mary Vargas, a 33-year-old attorney, is married with two kids and lives in Emmitsburg, Maryland.

Her pain profile: A severe whiplash injury after a car accident in the summer of 1996 left her in agonizing pain. Her neck and shoulders became so weakened that she couldn't turn her head because the pain would make her vomit.

What she tried: Her internist prescribed pain pills and recommended waiting it out because the injury would heal within six months. By January 1997 Vargas realized she was getting worse, not better, and started seeing her third physical therapist. One pain specialist gave her "trigger point" injections of Marcaine in her muscles; a second checked for damage to her facet joints, the bones behind the disks in the spine. She also tried biofeedback, transcutaneous electrical nerve stimulation (which delivers electrical impulses via pads placed on the skin), and prolotherapy (injecting irritants into the area to develop protective tissue). Nothing helped. "I couldn't sleep, I was depressed, and my pain was off the charts," says Vargas.

How she finally found relief: In December 1999 doctors surgically implanted a spinal-cord stimulator, a battery-operated device that uses electrical current to block the transmission of pain signals from the brain to the body. Within a few months Vargas was able to stop taking most of her pain medications and now uses just a fentanyl patch for continuous relief. "This has given me my life back," says Vargas, "and most days my pain is about a one or a two."

Best piece of advice: "I thought you went to a doctor and she'd fix it for you," says Vargas. "But now I realize you have to be your own advocate."

Pain Relief Resources

American Academy of Pain Medicine (www.painmed.org) is a professional group that offers consumers information on pain-control methods and has a directory of pain-medicine physicians.

American Chronic Pain Association (www.theacpa.org) is a consumer group that provides pain-management information for professionals and patient guides that list pain-management options. ACPA sponsors more than 400 support groups nationwide.

American Pain Foundation (www.painfoundation.org) is an advocacy and education group. It offers a pain-information library and provides pain-relief resources for military veterans and online chat rooms.

The National Pain Foundation (www.painconnection.org) provides guides to pain-treatment strategies and links to online support groups.

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Find more information on relieving pain >>

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