When she thinks back on it, Janine Willis figures the nightmare began 20 years ago, when she injured her neck in a relatively minor car accident. But an operation in 1992 seemed to resolve the problem, giving her five fantastic years. Then, in 1997, she re-injured herself pruning an apple tree in her backyard. And the downward spiral began.

For the next eight years, Ms. Willis, now 43, of Castro Valley, CA, visited dozens of health care professionals and underwent numerous treatments. She lost valuable years in her young children's lives and placed her marriage on autopilot as she moved through her days in a fog of pain.

Through it all, too exhausted from the pain and pills to even get out of bed some days, she still had to convince people that her pain was real. Despite the pills, the shots and the physical therapy, despite the fact that doctors couldn't find anything wrong with her neck anymore, she hurt. Really hurt.

She's not alone. A 2005 nationwide survey sponsored by Stanford University Medical Center, ABC News and USA Today found that more than half of all Americans have either on-again, off-again pain or daily chronic pain, with about four in 10 saying their pain interfered with work, mood, day-to-day activities, sleep and their overall enjoyment of life.

"Pain is a huge problem, just huge," says Sean Mackey, MD, PhD, an assistant professor of anesthesiology and pain medicine at Stanford University School of Medicine in Palo Alto, CA. "Chronic pain is one of the primary reasons patients go to see health care professionals, and the number one reason people are out of work in our society."

Overall, studies find, about 72 percent of chronic pain sufferers are women, with many chronic pain conditions, like migraines and fibromyalgia, much more common in women than men.5

Plus, studies find, women report more serious and more frequent pain than men, as well as pain that lasts longer. Women are also more likely to seek treatment for pain. Yet, women and minorities are also more likely than men to have their pain under treated.3,5

In fact, despite renewed attention to the topic in recent years, the under treatment of pain—in women and men—continues to be a significant problem in our culture.4

"All too often, pain management is poorly done," says Anita J. Tarzian, PhD, RN, a former hospice nurse who is now a health care ethics consultant. "There's so much injustice and ignorance in the health care community about pain, and so many misunderstandings. It's frustrating, and makes me angry when I think of people who could get relief but don't."

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Dr. Mackey is a little more optimistic. “We’re doing better than we used to,” he says, but he admits, “We still have a tremendous way to go.” On the bright side, he notes, “we’re starting to get the message out that chronic pain should be viewed as a disease in and of itself, and not just as a symptom of a disease.”

Defining Pain
So just what is pain? Well, that depends on who you are, where you are, how you were raised and what you’re doing when the pain strikes.

“Pain is, by its very nature, a subjective experience,” says Dr. Mackey. “It’s not like treating diabetes or hypertension, where we can measure blood pressure and blood sugar and directly correlate it with the symptoms.”

Acute pain is pain related to a specific cause, like burning your hand or breaking a leg. It occurs when electrical signals from the damaged tissue travel to the brain in a process called nociception. The pain itself doesn’t occur until those signals hit the brain. Or, as Dr. Mackey likes to say, “No brain, no pain.”

With chronic pain, however, the perception of pain can exist without the electrical stimulus. So, for instance, say you had a back injury that has now healed. But you still have the pain. That’s because your nervous system is now generating and sending electrical signals on its own to the brain, so you continue to perceive pain. It’s as if the feedback loop from the brain to the tissue and back again has become stuck in the “on” position.

Sometimes, both chronic and acute pain occur together, as with cancer pain. For Ms. Willis, the pain felt like being trapped and continually out of control. The worst part wasn’t just the pain itself, but its effect on her life. “Your family falls apart, your house falls apart,” she says.

Although she took numerous medications for the pain, the treatment was often as debilitating as the pain itself, leaving her tired and foggy. “I used to tell my doctors I felt like I was living my life in Jello,” she says.

And her doctors, while well-meaning, could often be quite condescending. “They’d say, ‘Your family is going to have to realize that you just can’t participate like you used to.’ And I’d say, ‘No. That’s not how I want to live my life. I’m not going to accept this.’”

Because she wouldn’t settle for less, she was often labeled a “bad patient,” Ms. Willis says.

That’s not unusual, says Dr. Tarzian, who wrote a seminal review article on the way the medical profession treats women with chronic pain. For instance, she noted, research finds that women in chronic pain experience “disbelief or other obstacles at their initial encounters with health care providers,” and that they’re more likely than men to be given tranquilizers and antidepressants for the pain than pain medication.

To reduce your risk of that type of encounter and insure your pain is treated seriously, Dr. Tarzian suggests women take these steps:

- Educate yourself about your pain and treatment options to help build your confidence when talking with health care professionals.
- Be prepared for a physician’s reluctance to prescribe opiates, and be ready with information to counter that reluctance, if opiates are an appropriate treatment option.
- Know that there almost always are options that can improve your quality of life and ability to function if you experience chronic pain, though there’s not always a guarantee that treatment will significantly reduce or eliminate it.
- Ask a friend or family member, even another medical professional, to help you get what you need, if you don’t feel you can speak up for yourself.
And if you have a bad experience with a medical professional, she suggests writing a letter to the state medical board. Medical boards are just beginning to sanction doctors for under treating pain these days.

**Treating the Pain**

Here again, women differ from men. Studies find that women differ in their response to some pain medications, says Dr. Mackey, specifically opiates, which seem to work best in men. Yet one class of opiate (nalbuphine [Nubain] and butorphanol [Stadol]) that binds to certain brain receptors seems to work best in women. Although the data is still preliminary, says Dr. Mackey, “clearly women are wired differently from men, and their response to medications may turn out to be much different.”

That’s one reason an individualized treatment plan for chronic pain is so important. Today, says Dr. Mackey, pain experts focus on four main areas from which to mix and match treatments: pharmacologic management, physical management, interventional management and psychological and behavioral management.

**Pharmacologic Pain Management**

Medications for treating acute and chronic pain range from aspirin (and other non-steroidal anti-inflammatory drugs) to muscle relaxants and opiates. Opiates, which all bind to specific receptors in the central nervous system, are available in a variety of different delivery methods: oral, injectable, rectal, transdermal (e.g., fentanyl patches) and intraspinal (e.g., implanted morphine pumps). Additionally, numerous drugs approved for other medical conditions have been found to work for pain, including antidepressants, antiarrhythmics (drugs used to correct irregular heart beat) and anticonvulsants (drugs used to prevent seizures). In fact, the first antidepressant approved by the U.S. Food and Drug Association (FDA) specifically for the treatment of painful diabetic peripheral neuropathy, duloxetine (Cymbalta), hit the market in late 2004.

**Physical Pain Management**

This includes such things as acupuncture, chiropractic, occupational and physical therapy, exercise and massage. All have various benefits, depending on the individual and the type of pain. Additionally, practitioners help educate individuals about body mechanics, pacing activities and setting goals to manage pain symptoms.

Several studies have demonstrated the effectiveness of acupuncture in chronic pain. An analysis of 22 studies on acupuncture found it relieved lower back pain better than no treatment at all, or a placebo treatment, while other studies find it also works well for osteoarthritis of the knee. Small wonder that the Stanford/ABC/USA Today poll on pain found five percent of American adults have turned to acupuncture for pain relief.

Another common treatment with good evidence behind it is transcutaneous electrical nerve stimulation, or TENS, in which a device delivers a mild electrical current to the outside of the body in the painful area, interfering with pain messages. The effects can last for hours or even days after the treatment ends in some people.

**Interventional Pain Management**

This is probably one of the fastest growing areas of pain management. It includes things as simple as injections of steroids directly into the spinal cord and injections of pain medication directly into the nerve triggering the pain to more invasive technologies like spinal cord stimulators, or neuromodulation, in which an implanted device sends a mild electrical current through the nerves to block pain signals from hitting the brain. This is the treatment that finally relieved Ms. Willis’ pain.

**Psychological and Behavioral Pain Management**

This involves various mind/body therapies ranging from cognitive behavioral therapy (CBT), in which you learn how your thoughts and feelings change your pain and how to control them, to relaxation.

Fewer than half of all patients who suffer from migraines receive the proper diagnosis.

The result?

Significant disability for migraine sufferers.

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**Pain Perception is Reality**

When it comes to pain, it's important to remember that perception is reality. Groundbreaking studies using a specialized MRI enable researchers to actually see pain in the brain. And that, in turn, is leading to some pretty amazing findings.

For instance, studies find that pain intensifies when you think about your pain. But, distracting yourself with music or even pleasant odors can reduce your perception of pain. Even anticipating pain—thinking that if you get up off the couch it's going to hurt—can cause mood changes and behavioral adaptations (i.e., you never get off the couch) that make your pain worse.

Sean Mackey, MD, PhD, and his colleagues at Stanford study two major areas of the brain involved with the perception of pain. One handles the sensory aspect of the pain—how it feels, the location, its quality and character—while the other is involved with the emotional aspect of pain, i.e., how you perceive the suffering from the pain.

Interestingly, this latter area of the brain also processes basic emotions such as fear, hate, love and anxiety. “So when we’re fearful or angry or stressed, these emotional areas of the brain get revved up and, lo and behold, they amplify the same areas of the brain involved with the processing of pain,” says Dr. Mackey. And, the pain gets worse.

The Stanford researchers have discovered something else: Chronic pain actually rewrites the circuits in the brain as a consequence of the pain itself. With treatment, however, these changes can be reversed.
Chronic pain actually rewires the circuits in the brain as a consequence of the pain itself. With treatment, however, these changes can be reversed.

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techniques, including meditation, mental imagery and biofeedback. One analysis of 25 clinical trials examining an array of mind/body interventions in managing rheumatoid arthritis found significant benefits in this approach, particularly for people recently diagnosed. Additionally, a National Institutes of Health Technology Assessment Panel found moderate to strong benefit for these techniques in the treatment of chronic pain.

Often, several mind/body approaches work best. For instance, in one study of osteoarthritis patients, those who learned about their disease, engaged in physical activity, problem solving, relaxation, and developed skills to communicate more effectively with family and health care professionals, reduced their pain and disability an average of 15 to 20 percent. Other studies find similar benefits using mind/body therapies for fibromyalgia, back pain and other forms of chronic and acute pain.

Even playing music can help, with studies finding it reduces the perception of pain in older adults with chronic osteoarthritis and in cancer patients. When played during or after surgery or painful medical procedures, patients have less pain and use less pain medication.

Overall, studies find that using several techniques together (physical, pharmacologic, interventional and psychological/behavioral) in an integrated comprehensive manner provides the best results.

Finding Relief

Despite the range of treatments available, chronic pain sufferers still have difficulty finding health care professionals who can effectively treat their pain. A 1998 survey by the Pain Foundation of America found that one in four have changed doctors at least three times.

Janine Willis lost track of the number of doctors she saw by the time the caseworker her HMO assigned to her case finally got her into the Stanford Pain Clinic.

"Many doctors specialize in only one type of pain treatment. There are few comprehensive pain clinics like Stanford’s, which take a holistic approach to pain management,” she explains.

Ms. Willis spent an entire day at the clinic undergoing evaluation, everything from detailed medical histories to a screening to see if opiate drugs worked for her (they didn’t). Finally, she got what she’d come for—a neuromodulation implant. The device was implanted on March 3, 2005, and as soon as it was turned on, the pain vanished. Today, Ms. Willis controls the level of stimulation herself, adjusting it depending on her pain and activities.

Only now that she can go to her kids’ soccer games, plant the huge vegetable garden the family used to have, and prune and care for the 30 fruit trees on their property, she says, does she realize how many aspects of her life the pain touched.

“Everyone is happy now,” she says. “There is just this new hopefulness.”

Resources

American Academy of Pain Management
www.aapainmanag.org
This professional organization for pain specialists offers consumers a database of pain centers and specialists.

American Chronic Pain Association
1-800-533-3231
www.theacpa.org
Provides support and information about living with chronic pain.

American Pain Foundation
1-888-615-7245
www.painfoundation.org
Offers “PainAid,” virtual support groups and community and clinical trial resources. Works to increase access to effective pain management.

American Pain Society
847-375-4715
www.ampainsoc.org
Offers information on pain-related treatments and research for professionals.

Cancer-Pain.org
www.cancer-pain.org
Provides interactive discussion groups and information to assist cancer-related pain management decision-making.

National Center of Complementary and Alternative Medicine
http://nccam.nih.gov
Resources and clinical trial information for pain management therapies such as acupuncture.

The National Pain Foundation
www.painconnection.org
An on-line education and support community for persons in pain, their families and health care professionals.

Women In Pain
www.womeninpain.org
An initiative designed to ensure the ethical and equal treatment of women in pain.