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# GOT CHRONIC PAIN?

## WE CAN HELP!

Use our guide to the newest, safest & most effective treatments



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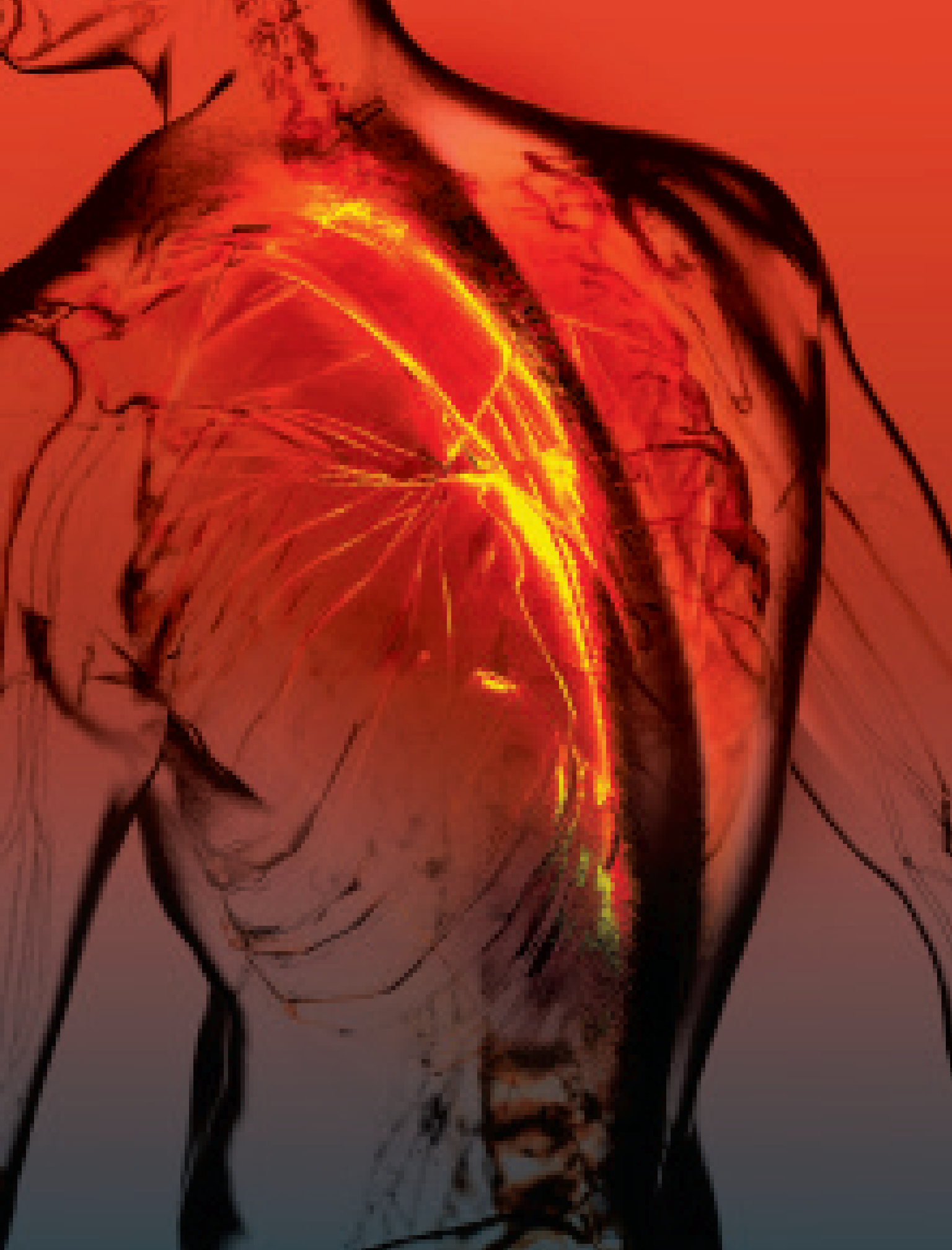
## REAL PAIN RELIEF, NOW!

1 IN 5 AMERICANS

has chronic pain, and many are desperate for safe and effective treatments. As awareness of the dangers of opioids grows, we explore the latest research on supplements, massage, aquatic exercise, sleep, and more.

**BY TERESA CARR**

ILLUSTRATIONS BY BRYAN CHRISTIE DESIGN



## 1.

As a teenager, Michael Davis was a competitive soccer player, a runner, and “a bit of a daredevil.” Around this time, he remembers, a dull, throbbing ache took hold in his back. He didn’t think much of it at first. But after a few years, the ache had escalated to frequent headaches and shooting pain, first down his right leg, then into his neck and shoulders. His daily life was marked by chronic discomfort and pain.

Years after the first signs, X-rays revealed the culprit to be earlier, undiagnosed fractures in Davis’ lower vertebrae. The initial injury had healed, but the damage left nerves still signaling pain, which spread and worsened.

“I was an upbeat kid, but I became more of a pessimist,” says Davis, now 27, who lives in Dallas. “In my darkest moments, I just wanted to retreat from life.”

Chronic pain is a common problem for Americans, touching all age groups and demographics. A report from the Centers for Disease Control and Prevention last fall estimated that 1 in 5 adults—about 50 million Americans—reported hurting every day or almost every day in the previous six months. Nearly 20 million reported pain so severe it limited their ability to work, socialize, and even take care of themselves and their family.

Davis eventually found relief, using physical therapy, yoga, and other strategies we’ve detailed in this guide. But by the time he found a way out, pain had ruled his life for over a decade.

#### A SHORTAGE OF EXPERTISE

For years, Davis bounced around among healthcare providers as he searched for a way to stop the pain. Surgeons operated on his spine and shoulder. He underwent nerve-block treatments, and injections of steroids and blood platelets. Nothing helped.

Medications—including over-the-counter pain relievers, muscle relaxants, opioids, and others—provided some relief, he says, but the pain always came roaring back. “It was like putting a Band-Aid on a gunshot wound.”

People with chronic pain frequently have trouble accessing the right care, says Daniel Clauw, M.D., director of the Chronic Pain and Fatigue Research Center at the University of Michigan Medical School. “One problem is that there are far too few trained pain specialists,” he says.

According to one report prepared for Congress by a task force of 29 experts, “for every physician certified in pain care,

there are more than 28,500 Americans living with chronic pain.”

Many primary care doctors “learned to treat chronic pain the same way they treat short-term pain from surgery or an injury—with opioids,” Clauw says. But most evidence shows these potent drugs don’t work well against long-term pain, and they come with the risk of addiction, misuse, and overdose. From 2012 to 2017, as opioids came under increased scrutiny, the number of doctors writing new prescriptions dropped by nearly one-third, according to a recent analysis of insurance claims published in the *New England Journal of Medicine*.

Safer, more effective, often non-pharmaceutical alternatives are gaining favor. In a 2017 *JAMA* review, Clauw and colleagues outlined an approach for treating chronic pain that can include surgery and medication but relies primarily on other treatments, such as counseling, mindfulness and meditation, hands-on therapies, and exercise.

Mounting evidence shows that this combination of strategies, some of which are covered by insurance, works well against chronic pain.

### WHY THERE'S NO PERFECT PILL

Davis began to get his life back after he stopped looking for a silver-bullet cure, such as surgery or the perfect drug. Instead, he built a plan with pieces of what he had learned from practitioners—and trial and error—along the way.

Now an accountant at a large firm, Davis adjusted his workspace so that he wasn’t hunched over or straining. He also worked with a physical therapist to develop a regimen of exercises and stretches to fit in during short breaks in his workday. He started and ended each day with a few minutes of yoga, followed a healthy diet, and got enough sleep.

Gradually, his pain eased. After three or four months he stopped taking opioids—which he’d taken intermittently to control major spikes in pain—and now only occasionally takes an over-the-counter pain reliever. “I’ve

become more attuned to my body,” he says. “When I have a flare-up, I know the stretches that will help.” Today, while he still has some pain, “it’s levels down from where it used to be. Just to be able to run again—it’s amazing.”

Davis’ journey into and eventually out of chronic pain reflects the latest understanding of why pain can linger or increase after an injury has healed—and what it takes to get better, says David Tauben, M.D., chief of pain medicine at the University of Washington School of Medicine.

“Pain is an alert, a signal from the brain that there’s something really wrong you need to pay attention to for your survival, be that a rock in your shoe or a broken ankle,” he says. Typically, the pain fades after you address the problem and the body has a chance to heal. But sometimes the nervous system malfunctions, he says. “It gets stuck in the position of ‘I hurt and I’m in danger.’”

Medications can help ease the pain, but calming the nervous system requires nondrug measures, Tauben says. Treatment plans vary, he says, but they’re based on the same core elements: medical treatment for underlying health problems, physical activity to help restore function, and psychological counseling to help you identify and change thought patterns and behavior that can worsen pain.

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# 50 million

Number of Americans who reported hurting every day (or almost every day) in the previous six months.

Source: CDC 2016 National Health Interview Survey.

### MAKE A PERSONALIZED PLAN

For many chronic pain sufferers, it can be challenging to find effective long-term care that is also covered by insurance. States are pushing insurers to cover more nondrug treatments, and patients can access some resources on their own through community centers, books, and apps. Still, “talking and listening to pain patients and working through all of the nondrug and non-opioid options” is time-consuming for doctors and not especially lucrative, Clauw says.

Even so, some medical professionals, particularly primary care physicians, are starting to focus on noninvasive and non-opioid options to treat pain. In 2017, the American College of Physicians, which represents primary care doctors, issued guidelines for treating back pain that recommended nondrug measures as the first option.

“Shop around until you find a doctor who will take time to listen to you,” says Jill Schneiderhan, M.D., co-director of integrative family medicine at the University of Michigan Medical School. If you can’t find a clinic that specializes in treating pain, Schneiderhan says a good primary care doctor can also help you find a network of practitioners with different areas of expertise—including a physical therapist, for example—who can collaborate on your treatment.

Our guide on the following pages examines the risks and benefits of three types of treatments: sleep, exercise, and hands-on therapies; drugs and supplements; and surgeries and injections. You should work with your doctor to figure out the combination of treatments that makes the most sense for you.

Schneiderhan also recommends talking to your doctor about how you’ll measure progress. Reducing pain is important, but the most important goal might be improving your ability to move through your daily activities. “Pain can vary widely,” she says. “If we just focus on that, we miss the bigger picture: that there’s this living we are trying to do.”



# 2.

## Massage, Mindfulness, Sleep, Posture Therapies & More

**ANY SINGLE NONDRUG** approach to treating chronic pain, such as acupuncture or yoga, might offer only modest benefits. But research suggests that combining the treatments is the key to lasting pain relief. “The current state of treatment in chronic pain is that we have a lot of treatments that work a little bit,” says Clauw, at the University of Michigan.

As you and your doctor develop a treatment plan, don’t hesitate to discard a strategy that offers no improvement after a few weeks, he says. Move on and try something else.

### **DON'T SKIMP ON SLEEP**

Numerous studies have shown that poor sleep can worsen pain, in part because exhaustion can adversely affect brain function. “I can’t help you manage your pain if your brain is on fire,” says Tauben, the University of Washington doctor.

Tauben and other experts CR interviewed say that getting enough sleep can be challenging for people with chronic pain but that it should be one of the first goals in a treatment plan. A psychologist or counselor who specializes in chronic pain can help devise strategies for better sleep, such as sleeping in a dark, quiet room and limiting the use of devices and caffeine before bedtime.

### **GET A MOVE ON**

People’s instinctive reaction to pain can also set off a vicious cycle of worsening disability, says Beth Darnall, Ph.D.,

clinical professor of anesthesiology, perioperative and pain medicine at Stanford University in California. “They may move less for fear of increasing their pain, which allows muscles to atrophy and negatively impacts mood and sleep.” The way to keep from being dragged into that cycle—or to get out of it—is to incorporate appropriate types of movement into your daily routine.

Physical activity can reduce pain and improve people’s ability to move through their day, according to a Cochrane review of 264 studies involving nearly 20,000 adults with chronic pain. A physical therapist can offer strength and stretching exercises tailored to a person’s needs and abilities. And regular walking, aquatic exercise, and posture improvement programs, such as the Alexander Technique and the Feldenkrais Method, can help reduce pain and make movement easier.

Also consider forms of exercise that incorporate mindfulness, such as tai chi and yoga. In a 2017 Consumer Reports nationally representative survey of 3,562 back pain sufferers, 89 percent of respondents who went to a yoga or tai chi instructor for help said the advice or treatment was beneficial.

### **TRY HANDS-ON HEALING**

Last year, a comprehensive research review published by the Agency for Healthcare Research and Quality found good evidence that acupuncture helped with chronic back and neck pain and fibromyalgia, that massage helped with

chronic back pain and fibromyalgia, and that spinal manipulation helped with chronic back pain and tension headaches. And a 2017 review by the American College of Physicians found that heat can help ease back pain.

Hands-on therapies help in two ways, Schneiderhan says. A therapist with a solid understanding of anatomy and physiology can help address a physical problem that is triggering pain. For example, massage can break up scar tissue, improve circulation, and help relax tight muscles that may be putting pressure on nearby nerves.

These therapies also can help “bring people back into their bodies,” she says. People struggling with long-term pain tend to disconnect and no longer register cues about what doesn’t feel good. Hands-on treatments increase awareness of the many small factors that contribute to pain, such as slouching at a desk for hours.

### **HARNESS BRAIN POWER**

The gold standard for psychological treatment of chronic pain is cognitive behavioral therapy. Through a limited, goal-oriented set of CBT sessions—typically seven to 12—the therapist can teach a patient to identify thoughts and behaviors that worsen pain, and replace them with new thought patterns designed to calm the nervous system and relieve pain.

Ask your doctor for a referral or look for a therapist who has training and experience in treating chronic pain, Darnall says. You can search for providers through the Association for Behavioral and Cognitive Therapies ([findcbt.org/fat](http://findcbt.org/fat)) and the American Psychological Association ([locator.apa.org](http://locator.apa.org)). CBT for pain is generally covered by insurance, and sessions can take place in person, online, or by phone.

Other psychological approaches, such as progressive relaxation exercises, mindfulness, and meditation—alone or with CBT—also have been shown to reduce pain.

## 3.

## Fish Oil, Anti-Inflammatories, Muscle Relaxants & More

**THE GOAL OF** pills, patches, and creams is to take the pain down a couple of notches to allow for exercise, work, and socializing—activities vital to recovery. But set realistic expectations, says Clauw, the University of Michigan pain doctor, and always start with the safest option in the lowest dose that’s helpful. The risks of more potent drugs, such as opioids, often outweigh the benefits. “In the best-case scenario, one-third of people taking any single drug will reduce their pain level by half,” Clauw says. Most get far less relief.

### SUPPLEMENTS

There’s no solid data supporting most pain-relief supplements, including glucosamine and chondroitin. Marijuana may relieve certain types of pain. And while little research has been done in humans, preliminary findings suggest that cannabidiol (CBD), a cannabis compound found in marijuana, can reduce inflammation, which could alleviate pain. (See “CBD Goes Mainstream,” in the May 2019 issue of CR, or go to [CR.org/cbd](http://CR.org/cbd).) Fish oil reduces inflammation and helps some with rheumatoid arthritis pain. Research has linked vitamin B and D deficiencies to certain types of pain.

### OVER-THE-COUNTER DRUGS

Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen (Advil, Motrin, and generic) and naproxen (Aleve and generic), work primarily by reducing painful swelling. Acetaminophen (Tylenol and generic) reduces your brain’s perception of

pain. NSAIDs are typically better for muscle and joint pain, Tauben says; neither is very effective against nerve pain, such as that from shingles.

NSAIDs can be powerful. A 2017 JAMA study showed that patients who received ibuprofen plus acetaminophen for severe pain reported the same amount of pain reduction as those who received an opioid plus acetaminophen. Always check with your doctor before combining any drugs, taking more than the recommended dose, or continuing an OTC drug for longer than 10 days.

Side effects for ibuprofen can include heart attack or stroke, stomach bleeding and kidney disease; for acetaminophen: liver disease.

### TOPICAL PAIN RELIEVERS

Pain relievers in cream or patch form—OTC or prescription—may cause fewer side effects than pills because less of the drug is absorbed into the bloodstream. Their ingredients can help in one of three ways: by reducing pain and inflammation (NSAIDs or aspirinlike compounds called salicylates), by producing a feeling of heat or cold to keep nerves busy transmitting those sensations instead of pain (chili-pepper-derived capsaicin or cooling menthol), or by numbing the area (lidocaine).

“They can provide some relief from mild to moderate pain but not enough for severe symptoms,” Tauben says.

### PRESCRIPTION DRUGS

**Antidepressants.** The only antidepressant approved for treating

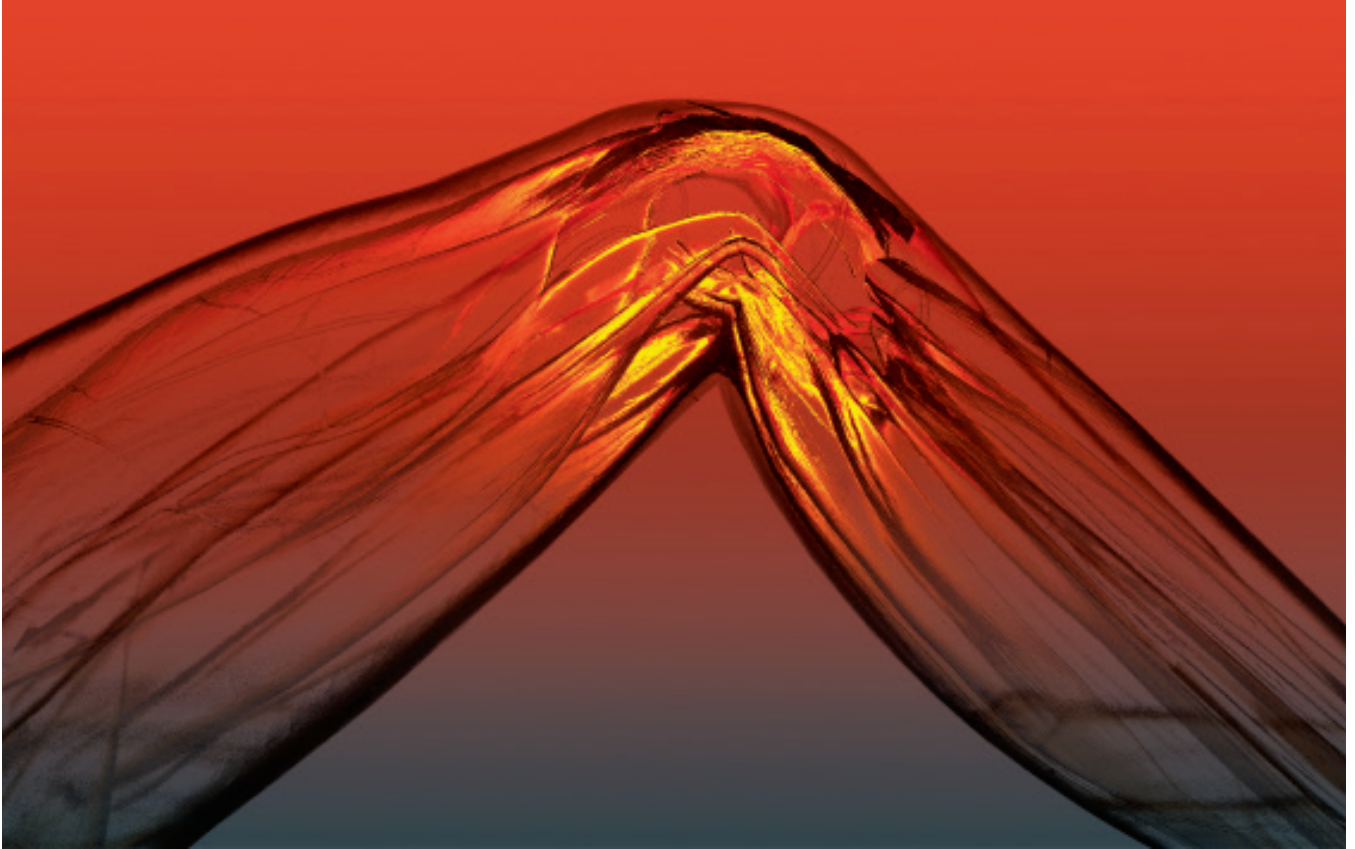
certain types of pain is duloxetine (Cymbalta and generic). But for years, doctors have prescribed other antidepressants off-label. Small doses can help with fibromyalgia, headache prevention, and pain due to nerve damage. The drugs affect brain chemicals that regulate pain and mood, so they can help even in people who aren’t depressed. But they can come with side effects, such as weight gain, constipation, and suicidal thoughts.

**Anti-convulsants.** Three drugs used to prevent seizures are also FDA-approved—and increasingly prescribed—for certain types of nerve pain: gabapentin (Neurontin and generic), pregabalin (Lyrica), and carbamazepine (Eptol and generic), which can cause deadly allergic reactions. Studies suggest they help with nerve pain but not common ills such as back pain. Side effects can include suicidal thoughts.

**Muscle relaxants.** Drugs such as cyclobenzaprine (Amrix and generic) can be useful against a pain flare-up. But there’s no evidence that taking them longer than three weeks is helpful, and feeling groggy can hinder recovery, Clauw says. Avoid carisoprodol (Soma) because it carries a high risk of abuse and addiction. And never take these alongside opioids.

**Opioids.** These drugs—which include codeine, oxycodone (OxyContin), and hydrocodone, and are sometimes combined with acetaminophen (Vicodin, Percocet)—should be considered only if no other treatments work and only if there are more benefits than risks for an individual patient, according to the American College of Physicians. They work well in the short term for severe pain from an injury or from surgery but not against chronic pain because they often lose effectiveness over time, can increase sensitivity to pain, and carry risks of addiction and overdose. Possible side effects include constipation, breathing problems, confusion, irritability, and sedation.





# 4.

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## Steroids & Surgeries

**FIVE YEARS AGO**, Austin Kessler of Driftwood, Texas, was lifting a rock in his yard when he heard a loud pop. It was his back, and he fell to the ground in excruciating pain. The 66-year-old suffered a herniated, or slipped, disc. His primary care doctor referred him to an orthopedist, who recommended surgery. When Kessler’s wife asked whether there were alternatives, the surgeon said no:

“You can try, but I guarantee it won’t work and you will be back,” Kessler remembers the doctor saying.

After a second opinion, Kessler decided against surgery, and his pain abated over time with physical therapy and exercise. This is not uncommon.

Orthopedic surgery has more people seeking second opinions than any other specialty, according to one study

of thousands of patients. More than a third of these second opinions lead to a change in treatment plan.

Surgeries and injections do help in certain cases. But they carry more risk than most other treatments, so you should generally seek a second opinion if a doctor is pushing surgery, says David Hanscom, M.D., an orthopedic spine surgeon at Swedish Medical Center in Seattle. Hanscom starts with “prehab,” working with patients on sleep, stress, and exercise. Most improve enough that they don’t need surgery, he says.

### **STERIOD INJECTIONS**

For decades, doctors have commonly treated painful joints by injecting a corticosteroid to reduce inflammation and decrease pain. The shots don’t speed healing, but they can provide modest short-term relief. These “can be

an excellent stopgap measure” if a pain flare-up is keeping you from moving, says Lisa Mandl, M.D., assistant research professor of medicine at Weill Cornell Medical College in New York City. But more than two or three shots a year may damage joint cartilage.

Steroid shots are also sometimes used in the epidural space outside the sac of fluid around the spinal cord, but a misplaced needle can cause rare but serious complications, including stroke, paralysis, and even death. These are safer in the buttocks or legs, Hanscom says, and can temporarily ease the pain of a slipped disk or sciatica.

### SURGERIES

Before proceeding with surgery, ask:

■ **Am I a good candidate?** Surgery is most likely to help when an underlying structural problem is the cause of the pain, Hanscom says. If the pain is widespread or severe despite only minor damage visible on an X-ray, a sensitized nervous system is more likely to be the problem, he says. “In that case, surgery won’t help.”

■ **Are there other options?** Surgery does not necessarily lead to better results than safer treatments. Arthroscopic knee procedures to repair cartilage are among the most common surgeries in the U.S., yet studies have shown that they don’t improve symptoms any better than physical therapy. Exercise and physical therapy work as well as, or better than, surgery for minor rotator cuff injuries and low back pain, according to research reviews. Surgery may speed recovery from a slipped disk or spinal stenosis, but those using noninvasive therapies for at least two years fare just as well.

■ **What results can I expect?** More than 90 percent of people who have a hip replacement are pain-free 10 to 15 years later. Knee replacements improve mobility, but about 20 percent of recipients have ongoing pain, Mandl says. “People who fully commit to rehab tend to have the best outcomes.”

## 5.

# ‘It’s All in Your Head’

Studies show that many doctors dismiss pain symptoms based on patients’ race, gender, and age. Here’s how to make sure you get the care you deserve.

by **Maya Dusenbery**

**I**T’S ALREADY DIFFICULT to find appropriate treatment for chronic pain. But a growing body of research shows that some groups are more likely than others to face diagnostic delays and undertreatment.

Physicians tend to “dismiss women’s pain a lot more than they do men’s,” says Penney Cowan, founder and CEO of the American Chronic Pain Association. According to a 2014 online survey of more than 2,400 U.S. women with a variety of chronic pain conditions, 91 percent felt that the healthcare system discriminates against female patients. Nearly half were told the pain was all in their head. It’s also common, particularly for women with pelvic and menstrual pain caused by conditions such as endometriosis and fibroids, to be told their pain is just a normal part of being a woman, says Amy M. Miller, president and CEO of the Society for Women’s Health Research.

Evidence shows that women’s pain is also often less thoroughly investigated, especially initially, when the cause of pain is unknown. A 2008 study

of nearly 1,000 patients in an urban emergency room found that women waited an average of 16 minutes longer than men to get medication when reporting abdominal pain and were less likely to receive it. Other research has shown that clinicians are more likely to suggest psychosocial causes, such as stress or family problems, to female patients in pain—when they would order lab tests more frequently for a male patient with similar symptoms.

Studies also have shown that racial bias can affect how doctors assess and treat pain. In 2012, an analysis of 20 years of published research in the U.S. found that African American patients reporting pain were 22 percent less likely than white patients to get pain medication from their doctors. The gap was largest when the cause of the pain, such as back pain, was not immediately apparent.

Another study found that African American patients reported less-effective pain management than white patients. One factor in this, experts say, is that some healthcare providers believe, falsely, that patients of color

often report that they are told, "What do you expect? You're getting older."

Pain is also frequently ignored in children, particularly among those too young to communicate effectively. A 2003 study in a pediatric emergency department found that more than half of the children younger than 2 with obviously painful injuries, such as broken bones and burns, were not given any pain medication at all.

### A Cautionary Tale

Diane Talbert, an African American woman from a small town in Virginia, spent decades in pain despite repeatedly explaining her symptoms to roughly 10 doctors.

She has suffered from a severe case of psoriasis, a persistent skin condition, since she was a child. But when she experienced recurring shoulder pain and then hand swelling in her mid-20s, doctors didn't take her seriously, she says. "They said it was all in my head."

Over time, her pain worsened, and eventually she was unable to lift her arms over her head to get dressed in the morning. One doctor said she must be overreacting. As she got older, her symptoms were dismissed as signs of early menopause.

Finally, a rheumatologist took Talbert at her word and quickly diagnosed psoriatic arthritis, a painful autoimmune disease that affects about 15 percent of people with psoriasis.

Today Talbert, now 61, treats her psoriatic arthritis with the immunosuppressive drug Stelara, and she manages the residual pain with other medications.

Some disparities in pain treatment are due to implicit or unconscious biases, which may be amplified in the medical system, Meghani says. Overloaded healthcare providers with little time to spend with patients may resort to taking shortcuts by falling back on stereotypes when making

are more likely to abuse prescription painkillers.

Other research suggests that doctors—nationwide, about 72 percent are white—often underestimate the pain level of minority patients. "A lot of work in the social sciences has shown that you're more empathetic to people in your in-group than your out-group," says Salimah H. Meghani, Ph.D., R.N., who was a lead author of the 2012 analysis and is an associate professor at the University of Pennsylvania School of Nursing. "That's a very well-studied phenomenon."

Half of the hundreds of white medical students and residents surveyed for a 2016 study subscribed to at least one myth about supposed racial differences related to pain—such as believing that the nerve endings of black people were less sensitive than those of white people. The research found that those who believed in more myths were more likely to rate a black patient as having less pain and to undertreat accordingly.

Experts say the age of the patient also plays a role. Some physicians see pain as an inevitable part of the aging process; older patients

clinical decisions, she says.

Mark Rosenberg, D.O., a spokesperson for the American College of Emergency Physicians, says ad hoc pain care is partially to blame. "Until recently, it was very subjective," he says. "Standardizing pain management will go a long way in decreasing variability in treatment."

Much of the research on these disparities comes from studies of acute pain. But the risk that stereotypes and biases will affect treatment decisions may be even greater when it comes to chronic pain. Research has shown that healthcare providers are more likely to believe patients' self-reported pain levels when there is objective evidence of the pain's cause. But in many chronic pain conditions, lab tests or imaging might not identify the cause of pain, or there's no objective evidence of the pain at all. "Since pain is subjective and relies on patients' own testimony," Meghani says, "disproportionately trusting the self-reports of some groups over others can result in discriminatory care."

While there is greater awareness today that these disparities in pain treatment exist, there is little indication that they have begun to improve, Meghani says. Awareness alone will not solve the problem, she says, and neither will one-off empathy training sessions. "A lot of things need to change simultaneously for this deeply ingrained culture to change."

Cowan says people with pain should not be deterred and should keep pushing to find providers who listen and offer treatment plans that work. "Pain tends to take away our sense of self-esteem," she says. "So many people blame themselves and take responsibility for the fact that they're not getting better. When it comes to living with pain, we can't be passive patients—we need to be active participants."

# 91%

Percentage of U.S. women with a range of chronic pain conditions who believe the healthcare system discriminates against female patients.

Source: National Pain Report survey.

# 47%

Percentage of black patients who said doctors underestimated their pain, compared with 33 percent of nonblack patients.

Source: Journal of the National Medical Association.