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Origins of Pain

Chronic pain is biochemical, but it's also psychological. Treatment needs to address how we think and feel about it

By Haider Warraich

Every person who has ever hurt has their pain origin story; I certainly have mine. While lifting weights one day when I was a medical student, I heard a loud click and felt my whole body go limp. As pain gripped me, I was rushed to the emergency room, where I was assured the agony would eventually disappear. It didn't. What I've learned about pain since then—both as a patient and as a physician—has me questioning how we diagnose and treat it.

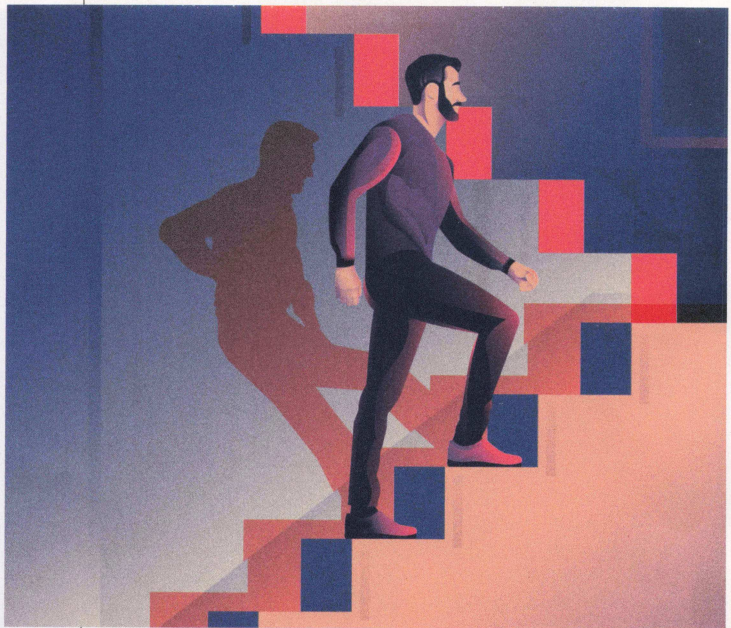
In researching a book on pain, I learned about studies showing that our perception of this response to injury—and our fear of it—can play a huge role in our clinical outcomes. Such findings are opening the door to treatments that might finally help the millions of people living with chronic pain.

The traditional approach has been to find mechanical and anatomical explanations for chronic pain. Magnetic resonance imaging showed multiple damaged discs in my spine. It was the only evidence for what turned my acute injury into never-ending torment. Chronic pain is usually defined as pain that affects someone frequently for three months or more, and mine exceeded that by many years. My pain has improved, mostly because of physical therapy, but my origin story—the injury and the resulting MRI abnormalities—had little to do with the pain I felt years afterward. A. Vania Apkarian of Northwestern University, one of the world's leading pain researchers, told me the classic idea is that pain continues as long as the injury does, but the injury and pain it produces end up being separate. "The injury itself has no value," he says.

Although MRIs are reliable indicators of injury, they are not reliable indicators of pain. A review of 33 studies found that among a group of 20-year-olds without any back pain, 37 percent had disc degeneration and 30 percent had disc bulges on MRI. And in people whose backs hurt, MRI results have absolutely no correlation with their pain. In other words, an MRI doesn't help us figure out what hurts and what doesn't. These data upended my understanding of the link between pain and injury.

This is a really big deal: millions of people in the U.S. alone get MRIs and computed tomography scans for back pain, which is the most common cause of disability worldwide. Yet a recent study showed that only 5 percent of MRIs for back pain were medically justified, and of those who received MRIs, 65 percent received potentially harmful advice—including calls for generally risky back surgery that probably would not have resolved their pain.

Spinal surgeries are some of the most commonly performed procedures around the world, and in a study of people who had



lumbar fusion, only 26 percent returned to work after two years, compared with 67 percent with chronic pain who didn't have surgery. I could have been one of those people who had unnecessary surgery, but when I took my MRI films to a renowned surgeon, he told me an operation might leave my back worse off. Instead I committed myself to physical therapy to lessen the pain.

If anatomy doesn't explain why pain turns chronic, what does? One major factor in whether pain becomes immortal in our bodies is our mindset. People who fear being in pain or are anxious about it are up to twice as likely to develop chronic pain after an operation. Traumatic events such as being robbed or sexually assaulted are some of the strongest predictors of chronic back pain.

A recent clinical trial revealed the power of therapies that target how we think about discomfort. Patients with chronic low back pain were split into three groups: one received usual care (painkillers and exercise); another was told it was getting a placebo (which can be quite effective for back pain). The last group received usual care plus pain-reprocessing therapy, which teaches people that the brain can construct chronic pain in the absence of an active injury and that simply reframing the threat pain represents might reduce or eliminate it. Such therapy strips chronic pain of its sharpest weapon—fear. The results were remarkable: of those who received pain-reprocessing therapy for a month, 52 percent were pain-free at one year, compared with 27 percent of those receiving placebo and 16 percent of those receiving just usual care.

A holistic examination of pain and its origins should spur efforts to make sure everyone in agony receives kindness and respect, as well as access to more than pills and surgical procedures. Embracing the complexity of pain can open the door to new and innovative ways to ensure that even if we hurt, we don't have to suffer. ■

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