How Can We Better Manage Chronic Pain? Insights from an Expert

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Neha Pathak, MD, FACP, DipABLM: **[00:00:09]** Welcome to the WebMD Health Discovered podcast. I'm Dr. Neha Pathak, WebMD's chief physician editor for health and lifestyle medicine. If you've ever wondered why some aches seem to fade with time while others linger, intensify, or pop up in new spots, this is the conversation you've been waiting for.

In today's episode, we're exploring the increasingly complex world of pain management, how to tell the difference between acute and chronic pain, why our brains sometimes become amplifiers instead of shutting pain signals down, and how conditions like fibromyalgia provide a window into understanding pain that can't always be traced back to a single injured body part.

We'll tackle the tough questions that so many of us grapple with. When is pain medication appropriate and where do opioids fit in, or not fit, into a long-term pain plan? Why do older non-opioid drugs still have a role in modern pain management, and how do therapies that seem far removed from a pill bottle, like mindfulness and cognitive behavioral therapy, make a real difference for people living with persistent pain?

If you or someone you love has struggled to find lasting relief, get ready to learn more about the changing science of pain and the importance of turning down an overactive pain system.

First, let me introduce my guest, Dr. Daniel Klauw. Dr. Klauw is a Professor of Anesthesiology, Medicine, and Psychiatry at the University of Michigan. He serves as Director of the Chronic Pain and Fatigue Research Center.

Welcome to the WebMD Health Discovered podcast, Dr. Klauw.

Daniel Clauw, MD: [00:01:52] Hi, how are you?

Pathak: **[00:01:54]** So, before we jump into our discussion around chronic pain, I'd love to ask about your own personal aha moment or health discovery when you work, when you research, when it comes to chronic pain.

Clauw: **[00:02:07]** Well, very early in my career, I am clinically trained as a rheumatologist and there were individuals that were being referred to me with, at that time the condition was fibrositis. And no one really knew anything about the condition, people even wondered whether these people even had anything wrong with them or whether they were sort of making this up. But, I always believed that there really was something wrong with these individuals, so it's been very gratifying over the last thirty or forty years as a researcher.

As tools like brain imaging and other tools became available, we were able to show that conditions like fibromyalgia are in fact very real, but the pain is really coming more so from the brain than it is due to some damage or inflammation in some different areas of the body. And so that requires people sort of rethinking both how they diagnose pain as well as how they treat it.

Pathak: **[00:03:00]** I'd love to dig into some of that some more but first let's start by just defining some of the basics. Can you help us define pain when we are talking about acute pain versus chronic pain?

Clauw: **[00:03:12]** So, acute pain is almost always adaptive. You know, you bang your thumb with a hammer, you have surgery, something that's supposed to hurt, and it's time limited. Chronic pain is typically defined by the length of time that you'd have pain in that region of the body. For most regions of the body, three months or longer of having pain, half the time in that region of the body is so-called chronic pain in that area of the body. We do know that the mechanisms that underlie chronic pain are quite different from the mechanisms that underlie acute pain, and that's one of the reasons that those distinctions are made.

Pathak: **[00:03:52]** Can you help us break this down even more when we're thinking about pain and the different aspects of pain? I think a lot of us recognize that some pain is nerve pain or some might be muscular, or some might be in our joints. Can you help us think about why the root cause or where that pain is coming from might predispose us to chronic pain or why one might be more likely to create these changes in our brain than others? Or is that the case?

Clauw: **[00:04:22]** Yeah. So, there are thought to be three overarching mechanisms of pain. The first is called nociceptive pain, and that's the kind of pain that most people think of when they think of pain. Nociceptive pain, there's some sort of damage or inflammation in the region of the body, and that activates nerves in that area of the body, that signal from the nerves goes up to your brain to be felt as pain.

The second kind of pain is neuropathic pain or nerve pain, where the nerves that bring the information from the periphery up to the brain are either damaged or compressed, and that caused a neuropathic pain where the pain is typically in the distribution of that peripheral nerve.

And then the third kind of pain, which has become more legitimized in the last decade or so, is the kind of pain that people with conditions like fibromyalgia or headache or irritable bowel. The term now that's being used unfortunately is nociplastic pain. The older term, which I liked a lot better, was central sensitization because that really got people to think it's really more of a centrally driven problem. And it's also the case that on brain imaging and other kinds of studies, it does seem as though the brain and the central nervous system do become sensitized. One of the analogies that I use quite frequently is that the amount of pain that someone experiences is like the loudness of an electric guitar, and you can make an electric guitar louder either by strumming the strings harder or by turning up the amplifier.

And this latter kind of pain, the fibromyalgia pain, is really more of an amplifier pain. These individuals with this kind of pain in their central nervous system, are more sensitive to pain. They're also more sensitive to the brightness of lights, the loudness of noises. This seems to be more of a multi-sensory problem in conditions like fibromyalgia and nociplastic pain conditions. But be that as it may, it seemed as though brain regions are then more sensitive to pain, more sensitive to light, more sensitive to noises, more sensitive to any type of sensory stimuli.

And although we can talk about these three kinds of pain as if they typically occur in isolation in a given individual, often they have more than one mechanism of pain. They might have something wrong in their knee joint, plus they superimposed have this amplifier, this high amplifier setting, and that's causing the pain in their knee to be much more pronounced than it would otherwise be if they just had nociceptive pain in their knee.

Pathak: **[00:06:51]** Great description and it helps us sort of think about why when we're thinking about managing pain, we have to think about it in this multifaceted way as well, because the inciting reason for that pain experience could be coming from many different points. How is it that we should be thinking about asking ourselves about that pain so that we can then best manage it?

Clauw: **[00:07:15]** The first thing to do is either give the person a formal body map or just draw a mannequin on a piece of paper and ask the person to make check marks in all the regions of the body they're experiencing pain. This is incredibly helpful because the more different locations of pain that individual has, the more likely that one of the mechanisms is this latter mechanism of central sensitization or nociplastic pain because the more pain you see in more locations, the more it's probable that it's an amplifier problem that's causing pain in multiple areas of the body rather than that there's five different independent problems in those five different regions of the body where someone has pain.

So, we've learned, especially in the last 10 years, that a body map is just really helpful and really important, it's really easy to use. It is a good start because you can… Sometimes when someone comes in with their chief complaint of, for example, low back pain they don't tell you they're hurting in all these different locations and if you don't ask them, you don't start off in the right place. Really approaching multi-site widespread pain differently than pain in one or two locations where it is more likely to be a problem just in that area of the body.

Pathak: **[00:08:29]** What's next in your thought process in terms of helping someone manage that pain?

Clauw: **[00:08:34]** So, the person with more focal pain you would use more peripherally directed treatments. You would use medications like non-steroidal anti-inflammatory drugs or acetaminophen. You would use injection, surgical procedures if those happen to be options for pain in that region of the body. You could use ointments or things like that. Physical therapy

would work better for that kind of pain because it's confined to a region of the body and you really have to try to fix the bones, the muscles, the joints, the nerves in that area of the body so you're really focusing your treatments on the periphery.

In contrast, if someone's pain is much more widespread, if they have had other chronic pain conditions over the course of their lifetime, if these centrally driven pain syndromes are often accompanied by other central symptoms like sleep problems, memory problems, fatigue, sense odors, noises, and you see that more that kind of pain your treatments are going to have to be more centrally driven. You're going to be getting people sleeping better. You're going to be getting them exercising or at least getting them more active. You're going to be using different types of cognitive behavioral treatments, different types of integrative treatments, things that we used to call complementary and alternative treatments that we now refer to as integrative treatments. But those are the preferred treatments and you're keeping opioids away from that latter group of people because they don't work for this kind of pain. They might make this kind of pain worse, but when you use medications, you're using non-opioid centrally acting analgesics drugs like serotonin, norepinephrine, reuptake inhibitors, tricyclic drugs, gabapentinoids, those drugs that are working more so in the central nervous system.

Pathak: **[00:10:19]** Can you talk a little bit about where opioid medications have a role and where do they not have a role?

Clauw: **[00:10:27]** Opioids work really well for acute pain. They don't work very well at all for chronic pain and they seem to especially not work very well at all for chronic pain like fibromyalgia, this kind of pain that's coming from the central nervous system. My concern is that they often make that kind of pain worse. There are a lot of studies that suggest that. I don't have any problem with using an opioid for acute pain, but the problem is sometimes we don't know when acute pain is just going to be acute pain and when it's going to transition to chronic. I don't think that the average person that prescribes opioids understands how little data there are that show that they work. There are not really good studies that show those drugs work and there's studies that are concerning that show that they do make pain worse in a subset of people.

Pathak: **[00:11:14]** So, I want to kind of take some of these options piece by piece. So, going back to the integrative therapies, are we then talking about things like yoga? Are we thinking about things like acupuncture? Can you talk a little bit more about those types of therapies and the evidence behind their benefit?

Clauw: **[00:11:33]** Yes, we are talking about all of those things, many of which we used to be sort of dismissive of, especially in the United States. And in fact, even the reason that I try to encourage people not to use, continue to use labels like complimentary and alternative is those both imply that those are like second choice, whereas they work as well as any of our drugs for these kinds of chronic pain conditions are a lot safer. So why would we consider them to be

alternative or why are they complimentary? Why aren't they first line therapies, which is again, where they really should be from a standpoint of evidence.

A lot of those therapies weren't really well tested in randomized controlled trials until starting about 15 or 20 years ago. I don't know exactly when it was, but about 25 or so years ago, there was a new NIH Institute that was complementing alternative medicine. Now it's integrative medicine, but that Institute ended up overtime funding a lot of good quality studies on things like yoga and acupuncture and Tai Chi and things like that. And more often than that, those work in chronic pain conditions. And so some of the latest meta-analyses that have looked at all of these non-drug therapies, the sort of integrative non-drug therapies, the evidence base just keeps going up and up and up for those therapies in part because there've been more studies of those therapies that have sort of accumulated and shown that they don't work in everyone and they don't like any one of those therapies doesn't like work incredibly well.

When you're taking care of people with chronic pain, you have to try different things. And it's often like a combination of two or three different things. Maybe one, that acupuncture works really well in them and yoga works really well in them. And one of the drugs works really well in them, whereas they tried PT and it didn't help them. They tried this and it didn't help them. One or more of the drugs didn't help them. Unfortunately, it's a lot of trial and error. And a lot of the research studies that are now being funded by the NIH that our group and others are involved in are basically saying, "Okay, we have someone with low back pain, but low back pain could either be a problem in the back, a problem in the nerve, or a problem in the brain. Which treatment for low back pain should we use for what patient with low back pain?"

We're trying to get better at phenotyping people using things like body maps or other ways of trying to get at what is the underlying mechanism or mechanisms of your pain. And because we know more about what caused your pain, then we should pick a treatment that's more likely to be of benefit.

Pathak: **[00:14:06]** I'd love to sort of transition us to some of the other options that you mentioned when you are thinking about this amplifier effect. So, the tricyclic medications or the serotonin norepinephrine uptake inhibitors, can you talk a little bit about the mechanism of action of those?

Clauw: **[00:14:23]** Yeah, both the tricyclics and the serotonin norepinephrine reuptake inhibitors are thought to be working by increasing activity down the descending analgesic pathways, the pathways that come from the brain down to the spinal cord. And the more active those are, especially with norepinephrine and less serotonin, the less pain comes upward. GABA-petanoids work differently, but those are sort of the other big class of centrally acting analgesic. Those actually reduce glutamatergic activity. Even though the term GABA is in their name, they're not working on GABA, they're reducing glutamatergic activity.

Pathak: **[00:14:58]** And then I'd love to ask you about just a recent announcement from the FDA that just signed off on the first new type of pain reliever to be approved in over two decades. And it has a different mechanism of action. It seems like it works more by preventing the pain signaling nerves around the body from firing in the first place is sort of a layman's way of saying that. Can you talk a little bit about this new therapeutic option?

Clauw: **[00:15:26]** You described it quite nicely. It is a drug that works on a channel in the nerve, and in helping block that channel. It blocks conduction of pain. As you said, it's very peripherally focused, peripherally acting. And that's why the two conditions that it was shown to be effective in, and it's approved for are acute pain conditions. They did studies in sciatica that didn't look for it to be effective compared to placebo. It didn't work any better than placebo. So, so far, it looks like it might work quite well in acute pain. And again, because it's working peripherally like that, that would make sense.

Pathak: **[00:16:00]** Really, really helpful discussion. I just love to sort of talk to you about your toolkit or what someone might think about in their multimodal pain management kit. How would you want folks that are listening today that are dealing with chronic pain to think about their toolkit for managing this pain?

Clauw: **[00:16:23]** Try new things that you haven't tried, new non-drug therapies that you haven't tried. There's at least 15 or 20 non-drug therapy, acupuncture, acupressure, mindfulness, all sorts of different types of meditation, targeted behavioral therapy for insomnia, emotional awareness therapy. I could just keep naming, but there's so many non-drug therapies that have been shown to be effective.

The problem is when people have chronic pain, they get tired of trying new things. They've tried a lot of things that don't work, and they're sort of sick and tired of trying things. And I get why people like sort of almost give up. But what I say to people is that all of these non-drug therapies that I'm listing, and many more that I forgot to mention, work in about one out of three people. So, if you're a chronic pain patient and you try three of those therapies over the next year, odds are one of them is going to help you enough that you keep doing it. And that's a win that you can incorporate that into your routine and then move on.

The other thing is as a patient, discard the therapies that don't work. People have a tendency to accumulate drugs and even non-drug things. Someone said, "Do this, do this." Try one thing at a time and give it a trial. And if it works, keep doing it. If it doesn't work, discard it. But don't keep taking drugs and keep doing non-drug therapies that haven't really been effective for you. You have to become your own pain researcher and try different things, see if they work, retain the ones that do work and move on, and then try something new.

Pathak: **[00:17:50]** In your research, do you also think about expectation management? Because I imagine that that also has some role in whether or not you perceive a treatment as being

effective. If you are sort of expecting that a treatment is going to be considered effective, if you can get to a pain level as close to zero as possible when everything that we said in our discussion, you might need several different strategies together to get yourself to a pain level that's manageable. How do you approach this idea of expectation management when it comes to chronic pain?

Clauw: [00:18:26] That's embedded in several types of cognitive behavioral therapy. In fact, one type called acceptance and commitment therapy essentially says you are going to continue to have chronic pain in all likelihood, even if we find treatments that are working. And so, let's focus on function, improving function, but not focus as much on the pain intensity or the pain level as much as what are some things that you would like to be able to do that you can't do? Let's figure out ways you can do those things. But use patient-set functional goals as a way of motivating individuals to try new things.

Again, as physicians, we shouldn't think that our patients are going to be motivated to get their visual analog pain score from a seven down to a five. If they can get their pain better so that they can play nine holes of golf or they can pick up their grandchild, that's highly motivating to them. And we should use those types of motivation in partnership with our patients, use that type of functional motivation, not pain scores and things.

Pathak: **[00:19:32]** Any final thoughts, final strategies for someone who's listening today that you'd like them to start thinking about incorporating as they're listening to this or right after they stop listening to us talking? What would you like them to do next?

Clauw: **[00:19:47]** I think the biggest revelation is that the brain and the central nervous system are playing a much more prominent role in most pain conditions than we thought or understood. And so, you know, embrace the use of some of these treatments that are really more centrally focused than peripherally focused and embrace the use and even changing the semantic terms of some of these integrative therapies that again, maybe we were dismissive of because they started 3000 years ago, but things like yoga, acupuncture, Tai Chi, things like that, as well as more mainstream things can be extremely helpful.

Pathak: **[00:20:20]** Well, I want to thank you so much for your time. This has been a really helpful discussion and I hope anyone listening who is struggling themselves or helping a loved one manage can take some of these tips home and start using them right away.

Clauw: **[00:20:33]** Thanks for having me.

Pathak: **[00:20:34]** Thank you so much for joining us as we explored the topic of pain management. Dr. Clauw covered some really important topics from the different ways pain can arise in our bodies to how our brains can actually turn up the volume on discomfort. We learned that the more widespread or long lasting pain is, the more it may be driven by processes within

the central nervous system. And that means our treatment has to go beyond fixing what's happening in the muscles, joints or nerves.

From mapping out all the painful areas on a simple diagram to exploring nontraditional therapies like acupuncture or yoga, we have a wealth of tools at our disposal that can help dial back that internal amplifier. We also heard how crucial it is to take a personalized approach to pain management. What works for someone with a clear injury in one area might not be the answer for someone with multi-site pain that's persisted for years. Rather than a one-size-fits-all solution, it's about layering strategies, physical therapy, medication if needed, integrative therapies and even mind-body techniques.

The ultimate goal? Not always to eliminate every twinge of pain but to restore function and quality of life. If this episode inspired you to try something new, remember it often takes trial and error to find the combination that works best for you or a loved one. Keep exploring, stay proactive and don't be afraid to enlist all the resources available to you. To find out more information about Dr. Clauw, make sure to check out our show notes.

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