Script: Explaining Neuroplastic Pain

Pain is a danger signal. If you put your hand on a hot stove, the pain lets you know to move your hand so that you don't injure yourself further. But sometimes, these danger signals can get activated even in the absence of structural damage.

There's been a lot of recent research showing that learned neural pathways in the brain cause many forms of chronic pain and NOT structural problems in the body.

IF THERE WAS AN INITIAL INJURY: When you develop an injury, there is acute tissue damage. During this time, the brain creates pain pathways. But the brain doesn't simply forget these pathways once the injury has healed. So, the body can heal, but the pain pathways in the brain are still there and can still cause pain.

You see, right now, you're sitting here, and you're feeling something in your back. But I'm feeling something in my back as well.

We're sitting, we're using back muscles, so of course, we're going to feel something in our backs.

We have nerve fibers in our back that are sending messages to our brains. These messages are safe. They're neutral. They're saying, 'Just a sensation."

But your brain is interpreting these messages as if they're dangerous.

It's like if I were to toss you a baseball, but your brain thought it was a hand grenade. You'd respond as if it was dangerous even though it's safe.

There are nerve fibers in my back that are sending messages to my brain as well. But my brain is interpreting these messages accurately: "A light amount of pressure, just a sensation, no cause for alarm."

Your brain is getting the same messages but is interpreting these messages as dangerous. So, as a result, it's *amplifying* the sensation.

So, here's the best analogy I can think of: Imagine you were wearing a hearing aid. Right now, I'm talking at maybe a 2 out of 10 volume. But imagine if you cranked that hearing aid all the way up, you'd be hearing me at like a 7 out of 10 volume.

I'm still talking at a 2 out of 10 volume, but your brain interprets it as louder than it is.

It's the same thing with neural pathway pain. There's a volume knob in our brains. And if this volume knob gets turned up, we can interpret sensations as louder than they are.

And the thing that determines whether the volume knob gets turned up or down, is how much danger your brain thinks there is.

All chronic pain patients have the same fear: “There has to be *something* going on in my body that’s causing this.”

And when the brain believes that the body is damaged, it responds with pain.

So, treatment involves teaching the brain that the signals it’s receiving from the body are actually safe.