



Global Healthy Living Foundation
515 North Midland Avenue
Upper Nyack, New York 10960 USA
+1 845 348 0400
+1 845 340 0210 fax
www.ghlf.org

CreakyJoints Presents

Pain Explained: How the Brain Influences Pain (Part 2)

How pain impacts various area of your life

Pain includes and is amplified by psychological factors. What does that mean? It surely doesn't mean that pain is imagined or that pain is in your head. But while pain may start with tissue damage, with an injury, with an illness, as it goes on and on, it can lead to a host of unpleasant painful sensations, while encouraging negative thoughts.

Many people living with chronic pain can experience a range of issues such as depression, anger, sadness, a loss of friends, loss of employment, finances and more. This can weigh heavily on a person, especially over months, years and even decades.

This means the way your brain responds to pain, or anticipates pain when facing another similar event, changes how you experience pain.

It is important to recognize that pain impacts and is impacted by many areas of a person's life. Therefore, finding ways to cope and manage chronic pain will involve more than just medications. You will need multiple approaches to better manage your pain.

Dr Beverly Thorn, an expert in psychology, and an advisor on this project has said, "your pain is real, and emotions, thoughts, and relationships can impact pain, ability to cope, and ability to live your life."

Pain is clearly not only experienced in a physical way - it is also felt - experienced through our thoughts and emotions. In recent years, researchers have begun to notice that there is a clear and yet complicated relationship between our physical pain and our thoughts, feelings and emotions.

While your brain is processing all these thoughts, feelings, and emotions, it is also processing physical pain. So, how then does our brain process pain?

The role of the brain and the spinal cord in processing pain

Your brain and spinal cord which are what make up the central nervous systems are constantly receiving signals from the rest of your body - even about pain. So, if you poke yourself on the thumb, your immediate reaction is to move your thumb away. Why? Because your brain has

received a signal that there is something causing pain (an unpleasant sensation) and that you need to get away from it.

If your hand touches a hot stove, you pull it away immediately. You don't think about why that happens, we just view it as an automatic reaction or a reflex.

But in that moment, there's a lot happening inside your body, inside the spinal cord and your brain. Your brain receives a message that says, "hey, wait a minute, this is a sensation that is causing me pain and I need to pull my hand away."

The brain monitors and filters these messages through the spinal cord, and it decides how the messages of pain are relayed in your body. For patients living with chronic pain, depending on your thoughts, feelings and experiences, it can actually and can lead to hypersensitivity to pain or amplification of pain over time.

The relationship between pain, thoughts, feelings and emotions

Your brain is constantly receiving messages and telling your body how to respond. So, for example, you prick your thumb with a needle, and a message about pain is sent to your brain. But in order to reach your brain, these messages have to pass through "gates" in your spinal cord.

What 'Gate Theory' tells us is that there are nerve gates or neurological gates that can either block or modify pain signals to the brain or it can pass through as is. We can think of this like a doorman or guard that says, "I'm not going to let this through."

But here's something interesting to consider - what if we could interrupt this message? And *how* can we interrupt this message?

We'll hear a lot more on this topic in the next podcast session with Dr. Beverly Thorn.

But let's talk about some examples. Some people, find staying busy, spending time with children, grandchildren or applying ice or heat to areas of the body where they are experiencing pain can close the gates to pain signals, while another person may find this opens the gates and increases their sensations of pain. There are also treatments in addition to medications your doctor may prescribe, including cognitive behavioral therapy, something we will discuss in another section, which can help retrain how your brain processes and responds to pain.

Now that we have some understanding of what might open and close the neurological gates in your brain and spinal cord, let's briefly talk about why it matters and how you can apply this knowledge to your treatment. Of course, every person is different and so it is important to talk to your doctor to understand what the best and safest option for you is.

One CreakyJoints community member, Jennifer Walker, has transformed her pain into purpose through her art. Jennifer has said, *'As my diseases progressed and multiplied, my art became more integral to expressing my experiences. As I struggled with intense pain episodes, fatigue so numbing I could not communicate, stress over keeping a job while trying to balance taking care of myself, relationship troubles, and more, I went from creating traditional art to creating pieces that expressed my experiences with my diseases.'*

To learn more about Jennifer's passion for art check out the resources page as well as access free materials to help you manage your pain. These approaches, of course, do not replace checking in with your doctor to see if a change of treatment is needed to address the sources of pain and lower the experience of pain. Everyone is unique and therefore you and your care team will have to discover what works for you.

Thank you for listening and we hope you found this information helpful. Remember to take the one question quiz to receive your free resources.