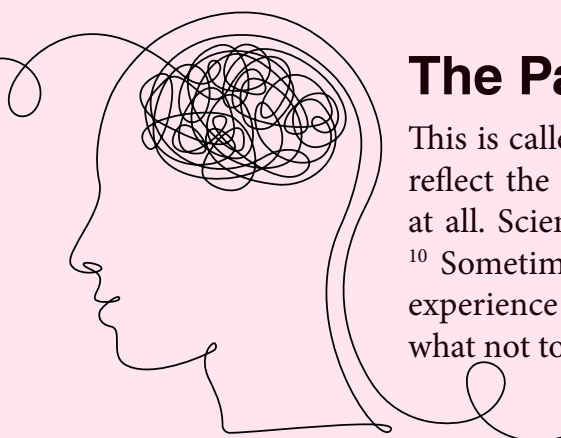


# Pain is Created in the Brain



*Did you know the feeling of pain is something your brain decides you should experience if it believes there is some tissue damage in your body?<sup>1</sup>*

In fact, your brain can decide that you should feel pain even if it only thinks there is a potential threat of tissue damage.<sup>2-5</sup> It may seem strange, but it's up to your brain to decide whether you should feel pain or not.



## **The Pain Paradox**

This is called the “*pain paradox*”. It means that the pain you feel does not always reflect the severity or even the location of your problem - if there is a problem at all. Science has shown beyond a doubt that pain is created in your brain!<sup>2 4 9</sup>  
<sup>10</sup> Sometimes pain can be very helpful and informative.<sup>1</sup> Our brains create the experience of pain to let us know something is not ok.<sup>1</sup> The pain can let us know what not to do while our body heals the problem.<sup>1</sup>



## What does the research show?

For some people, pain can persist even after the initial injury that caused it has healed.<sup>9 11 12</sup> For some people, the pain can spread to other areas that are not injured at all.<sup>6</sup> For these people, the pain has become non-informative and non-helpful.<sup>9 11 12</sup> The pain itself has become a problem. The brain has learnt to be in pain.<sup>9 11 12</sup> The way the brain does this is very similar to the way the brain learns anything. It's called *neural plasticity* - or brain adaptations.<sup>9 11 12</sup>

Brain scientists now know that what you focus on drives the way your brain will change.<sup>13-15</sup> This can be a problem if you are focusing on your pain because it may make it worse. So, even if you're in pain, try to focus on the good things in your life instead of your pain. This alone can help you!<sup>1</sup>

Brain scientists have discovered that adjustments may change brain function<sup>16</sup> in a part of your brain called the pre-frontal cortex.<sup>17</sup> This part of your brain is actually the part of your brain that's very involved in pain becoming chronic.<sup>8 18-21</sup> This might be why getting chiropractic care early on when you have a problem has better long-term outcomes.<sup>22</sup> It might also be that chiropractic care can prevent pain from becoming chronic.<sup>22</sup>

Neuroscientists believe that chiropractic care

most likely helps reduce your feeling of pain by helping your brain 'turn down' or 'switch off' the perception of pain in your brain.<sup>23</sup>

This means chiropractors may or may not adjust your spine exactly where you feel that it hurts. They are looking for parts of your spine and/or body where there is a lack of proper movement and they will adjust you there - so don't worry if it's not where you feel the pain. Remember that the feeling of pain that you experience is created by your brain and does not mean it's where the problem actually is.<sup>24</sup>

Chiropractors are very good at finding the parts of your spine and body that need to be gently adjusted.<sup>25</sup> Research studies have shown that adjusting your spine may help your brain know more accurately what is going on in your body,<sup>26</sup> so it can more appropriately respond to what is going on and control your body better. It improves your brain-body communication.<sup>26 27</sup>

If you want to make sure your brain-body communication is as accurate as possible so you can feel great and function at your optimum potential, check in with your chiropractor and see if they can help.

### Disclaimer and References

This information is provided for educational purposes only. It is not intended to be professional advice of any kind. Haavik Research Ltd encourages you to make your own health care decisions based on your own research and in partnership with a qualified health care professional.

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**GROUND**  
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