

About Pain....

The majority of patients we see come to us with a chief complaint of **pain**. As an individual if you understand more about your experience of pain it will help you (and your therapist) manage and treat your problem.

Many advances have been made in the field of pain study in recent times, particularly now that science is able to image people's brains (eg functional MRIs) while they are experiencing pain.

In this article, we would like to share with you some of the interesting things you might not know about pain that may help you.

Pain is 100% of the time an output from your brain.



Our brains receive information from the rest of our bodies (via our nervous system). If we experience a muscle or ligament strain, pain is present at the time of injury and will help us to not move in directions that are painful. This will help the tissue heal and the pain usually goes away once the healing process has occurred. **Pain is a defence mechanism for our bodies, to protect it from critical damage.**

However, if your brain weighs up that there is a continuing threat, the pain process can become chronic and more difficult to manage. It can provoke ongoing changes in the way your nervous system and brain work. This can also affect several other body systems that the brain controls.

The degree of injury does not always equal the degree of pain,

Research has told us that very major injuries may not hurt at all and very minor injuries may hurt a lot. The degree of pain you experience is more related to other aspects including past experiences and how your brain "weighs up" the threat. For example, if you have previously sprained an ankle and then you sprain it again, it is possible that your brain has learned to protect the ankle and defend it more. So the second sprain may hurt more even if the tissue damage isn't as severe.

Despite what MRIs, X-Rays and CT scans show , this may not be the cause of your pain.

While diagnostic imaging may give us excellent views of your internal anatomy, it gives us little information about pain. A study performed on individuals 60 years or older, who had no symptoms of back pain, found that 36% had a herniated disc, 21% had spinal stenosis and over 90% had a degenerated or bulging disc. What shows up on an image may or may not be related to your symptoms. In the future it may be more beneficial to scan your brain to find out about your pain!!

Psychological variables, such as depression, fear and anxiety, can make your pain worse.

A recent study in the *Journal of Pain* showed that psychological variables prior to having a total knee replacement was highly related to long term pain following the total knee replacement. The treatment of these variables may actually be as effective, or even more effective than the surgery. It makes sense- these psychological components are part of your brain processes- which can “fire” to produce or magnify pain.

Your social environments can influence a painful experience.

Many of our patients will state that their pain will increase when they are at work or when they are in a stressful situation. Pain can be sent from your brain due to an environment that it suspects is unsafe- a threat. This is our brains way of protecting us.

Education about pain can be more effective than core stabilisation in the prevention of low back pain.

A study published in BMC Medicine recently showed that education to reduce the fear and threat of low back pain was much more effective in preventing the onset of low back pain than a program to strengthen your core. We believe why not do both?