Fact Sheet:



Pain is an 'unpleasant sensory and emotional experience associated with actual or potential tissue damage'. Acute pain commonly lasts for less than 30 days, whilst chronic pain has a duration of more than three to six months. However a more appropriate definition of chronic pain is 'pain that extends beyond the expected period of healing'. Most commonly pain occurs when your body's 'alarm' system alerts the brain to actual or potential damage. Pain makes you move differently, think differently and behave differently.



Pain experiences are responses to what your brain judges to be a threatening situation. Even if problems do exist in your joints, muscles, and ligaments, it won't hurt if your brain thinks you are not in danger. In exactly the same way, even if no problems whatsoever exist in your body, you will experience pain if your brain thinks you are in danger. Simply put, if there is no pain it means that these changes in tissues are not perceived by your brain as a threat.

Pain is often unpredictable which can make us fear it. Sometimes you can lift an object a thousand times

without a problem, and then all of a sudden one lift causes severe pain. And as a result we begin to fear the movement that caused us pain in the first instance.

Lower back pain and headaches are among the most common pains in humans. In patients with low back pain, research shows that the amount of spinal disc and nerve damage rarely relates to the amount of pain experienced. At least 30% of people who have no back pain, have discs bulging into their spinal canal on MRI,

sometimes quite markedly, but are not experiencing the slightest bit of pain. Just because a MRI shows you have an injury in your lumbar spine does not mean it is the cause of your pain.

Although many varied indicators may relate to the pain experience, it is the brain 100% of the time that decides whether something will cause you pain. All over your body there are millions of sensors that can be thought of as reporters constantly surveying their area for activity. When sensors respond to a stimulus they produce an electrical impulse to the brain resulting in the feeling of pain. The life of a sensor is short – they only live for a few



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days and are replaced by fresh sensors. This means that your sensitivity is continually changing and your current level of sensitivity is not fixed. Your brain decides how sensitive your 'danger' sensors are, based on the chemicals produced in your brain. These chemicals produced in your brain are strongly influenced from your thoughts and emotions. For example: if you have persistent pain for three months, you believe you will never get better and are afraid of returning to work, the sensors your body produces are most likely to be more sensitive than the regular sensor. We can control how sensitive they are by taking control of our emotions, having a positive mindset and becoming active.

This helps to dampen our sensitivity and take control of the pain we are experiencing.

Muscles, ligaments and bones heal. "So why am I still experiencing pain six months later?" What people may be still experiencing is the memory of pain – the muscles, ligaments and nerves all hold the memory of pain strongly.

"So, are you saying that the pain is all in my head?"

Yes – all pain is produced by the brain, so no brain = no pain. However this doesn't mean for a second that it is not real – much to the contrary all pain is real. Remember there is enhanced sensitivity of the 'alarm' system of the body, and this is nearly always the main feature in persistent pain. Remember that the pain is normal, but the processes behind it are altered. The brain is being told that there is more danger at the tissues than there actually is, and is acting as a magnifier of tissue reality.



This increased sensitivity should fade once the damaged structures are under control and you fully understand what is going on at a physiological level. As soon as pain is persistently produced – it starts to dominate every aspect of life, which leads to persistent changes in the neurological system. It continues to perpetuate pain and it is a cycle that needs to be broken. As a result it is important to understand that 'when I am hurting, it doesn't necessarily mean that I am damaging myself'.

Research shows the best way to take control of our pain is by becoming active and strengthening our muscles. Once you understand that exercise won't cause further damage but instead will improve your pain, you will notice improvements. Although you may have bad days, you will certainly have more good days. It is important to focus on the better days and not let the negative days take control of your feelings and body. You will work closely with your physiotherapist to minimise your pain and improve your function by taking an active approach to healing.

Please view the following animation for further information: <u>http://youtu.be/4b8oB757DKc</u>