



## Understanding Pain

### What happens

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#### **Time Scales:**

##### **Injury:**

It takes about 6-8 weeks for soft tissue or bone to heal enough to work normally again and for the pain to go away. e.g a broken leg , a sprained ankle. This can vary and a more severe injury can take longer but generally it is understood that pain going beyond 3 months is not due to tissue damage anymore. The reasons for this are many and will be discussed below.

Alternatively pain can appear to come on for no reason at all and it can also spread or move around, it is difficult for the sufferer to understand this as they are unable to attribute the pain to anything they have 'done'.

#### **Two Angles:**

You may want to first consider pain from these two angles;

- a) Tissue damage causing pain (remember only giving short term pain), or
- b) Neural pathway-produced pain which is created in the brain, where all pain is processed and experienced. This might or might not have once been due to tissue damage (e.g - from an injury), but with persistent pain the brain and its nerve connections are causing this. So it is almost like the brain forgets to switch the pain off and what is causing your pain is not due to injury any more, but is a faulty memory of the pain. You can liken it to a car alarm when it is going off all the time even though there is nothing wrong with the car!

#### **A third and very important angle - Emotions and Stress:**

c) There is a lot of evidence now on the role our unexpressed emotions and stress levels have in bringing about pain; challenging the theory of the traditional tissue damage and at times linking in with neural pathway thinking. This is a very important angle to consider and will be discussed further later on in this document.

#### **The structural viewpoint:**

When someone has had an injury that may initially have been to a soft tissue (e.g - muscle injury), but it continues beyond two or three months, the traditional way of treating this, through stretches, exercises and mobilization, will not cure this. We therefore need to consider different approaches.

## Mind and Body:

So what do we do then? Health professionals need to understand the body and how it works, but if the focus is just on the body, the mind is neglected. Yet the mind controls everything, from our breathing to our emotions as well as our regulation, and therefore experience, of pain. When we work with pain we need to consider both the mind and body for the best results.

**This is not saying that your pain is not real or that you are creating it consciously, your pain is very real, it is just not being caused by the area where you actually feel the pain!** Also, once you look more deeply into the pain and actual underlying cause, you will begin to understand that there might well be different reasons for it than you had initially thought.

## Oversensitivity:

What can happen with persistent/chronic pain is that the brain and nervous system becomes oversensitive and the nerve pathways become 'learned'. It unhelpfully 'remembers' the pain that once was due to tissue damage and the pain cycle persists - just like a memory it cannot forget. So the recipient of the pain, who lacks the understanding of the science behind persistent pain, feels that there must be something wrong in the tissues.

This oversensitivity can also cause symptoms in other parts of the body, or the painful area to spread, which can again seem to confirm to the individual that something is really wrong with their body and also worsening. This is not the case and only due to the oversensitivity of the nervous system and an over-protective nervous system.

## Pain the protector:

Consider this statement by Lorimer Mosely, a Professor of Clinical Neuroscience and a very well regarded expert in pain. *'Pain is not providing a measure of the condition of your tissues but it is providing a measure of your brain's evaluation of your need to protect your tissues'*. There is a story about a man who was taken to hospital after he accidentally stuck a garden fork through his foot. He was screaming in agony yet when they removed the boot in hospital they found the fork had actually missed his foot entirely - absolutely no tissue damage had occurred. So what caused the pain? It was his brain's perception of damage; so the brain wrongly evaluated that this man's foot was in danger and produced pain as a protective mechanism! Pain can be produced as a protection from anything our brain perceives as dangerous. Not just physical actions though, but also emotions/fears related to exams or getting in the car for the first time following an accident.

## A false positive:

The even more confusing part of this is when your GP sends you for an X-Ray or scan and something shows up, for example wear and tear such as a bulging or 'slipped' disc, or a joint that shows arthritic changes. Unfortunately you may also be told that this is the cause of the pain.

The downfall to this is that this is a flawed model because there are many studies that show even people who have **no pain** have had scans that show disc, joint and arthritic problems. On the other hand you can see very normal looking spines on an X-Ray and the person can be in excruciating pain!

Once anything serious is ruled out though it is important to look into addressing the underlying causes of the pain and begin retraining the mind and body.

## A few key starting points for recovery:

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**So how do we treat this ongoing pain? We retrain the brain and nervous system and create the right conditions internally to allow the pain to resolve.**

- 1) Educate yourself or be open to alternative explanations for your pain:
  - Read the book '**Chronic Pain: your key to recovery**' by Founder of SIRPA, Georgie Oldfield MCSP, which may be found on Amazon or ordered at a good book shop.
  - This video on youtube entitled 'Understanding Pain'  
<http://www.youtube.com/watch?v=4b8oB757DKc>
  - Watch this entertaining Ted-X talk by Lorimer Mosely. 'Why things hurt?'  
<https://www.youtube.com/watch?v=gwd-wLdIHjs>
- 2) Change your beliefs about your pain. Change your belief that the pain is due to tissue damage because this does not apply to chronic/persistent pain.
- 3) Recognise that the pain is caused by an over-sensitive nervous system which is causing the pain to persist.
- 4) Remember that pain is linked heavily to our emotions and perceived dangers (notably repressed/unresolved emotions such as anger) and high or chronically high stress levels, which will require some attention.
- 5) It can help to look at all the things that affect the nervous system and work on how to calm these down or change the pathways.
- 6) You need a plan so you can approach the pain from more than one angle. This is called a multifactorial assessment, and is proven to be the most effective way for dealing with ongoing pain. This can be done with help from a health professional who has had training in persistent pain, such as your SIRPA Practitioner.

Hopefully you now have a better understanding about your pain and have gained some deeper insights into why the pain has persisted or even why it started in the first place. This in itself might be all you need to change your thinking and enable you to move progress and your pain to begin settling down.

The next section will look more at the treatment approaches and areas to work on in your recovery from pain.

## What we need to work on to gain a handle on our pain:

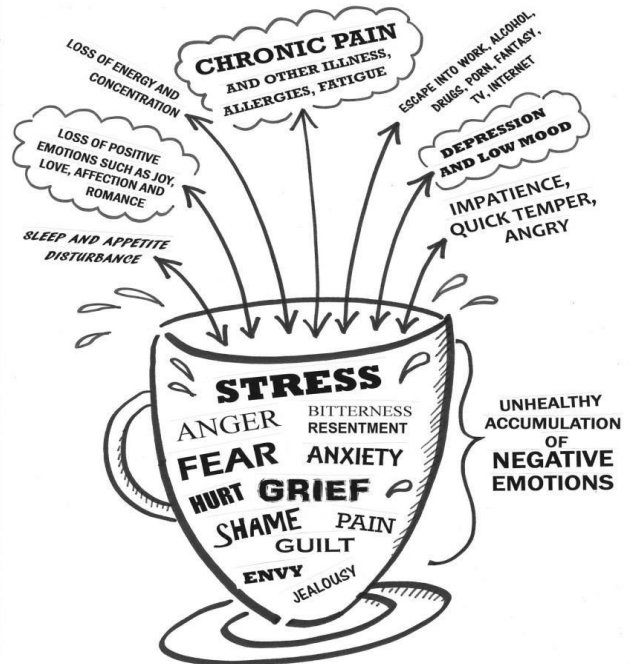
### Emotions:

A major factor to consider is the role our thoughts and emotions play in producing pain. There are now more and more studies about this and specialists propose that a lot of our pain is due to repressed emotions, such as anger, fear or frustration.

This is a huge topic, yet just addressing the underlying, unresolved emotions alone can be the key to resolving your pain.

The SIRPA website is an excellent resource for chronic/persistent pain and the role emotions and many other factors play in this:  
[www.sirpauk.com](http://www.sirpauk.com)

This diagram entitled 'Symptoms of a Full Emotional Cup', created by SIRPA Practitioner, Liz Hancock, demonstrates this excellently.



### Thoughts

In terms of our thoughts, you may believe that a thought cannot be harmful to us physically, but this is incorrect. If you think of your pain as a fire and our thoughts as fuel, every time we worry or have fearful thoughts about our pain or in fact anything else, this 'fuel feeds the fire of the pain'.

Thoughts commonly lead to an emotional response or feeling, and research has shown that emotions such as fear, stimulates the emotional brain and exacerbates pain. It is sometimes very difficult to even identify our thoughts though because our minds are constantly full of them, yet they can have a very powerful effect on our bodies. For example if these thoughts are ongoing and based on anger, worries and anxieties, these emotions can sensitize the nervous system, which as we know can cause pain and other symptoms.

Building up an awareness of our thoughts is crucial, not just for pain, but to regulate our mood. This is where a technique called mindfulness can be very helpful. A great starting place for this is the 'Headspace' app ([www.headspace.com](http://www.headspace.com)), which can be accessed on smart phones, tablets and computers. The initial basic course is free and not only does it explain what mindfulness and mindfulness meditation are, but the daily sessions talk you through how to develop a daily practice of mindfulness.

If you don't have access to the internet though, here is a very simple example of a mindfulness practice.

- Sit down and ensure you are comfortable in an upright position.
- Become aware of your surroundings, feeling the support beneath you.
- Close your eyes and become aware of your breathing
- Begin to notice your thoughts
- When you notice a thought, just let it pass by and gently bring yourself back to the present moment and your breathing.

You will notice how busy your mind is and the nature of your thoughts and you may notice that you think about your pain a lot, or resist your pain. If we use fuel and fire metaphor you may well be able to begin to build up the awareness of what affects your pain. When we identify our thoughts and accept them for what they are, just thoughts, then we can begin to realize we don't have to be them.

## Awareness and Resistance

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Awareness and resistance. Here's a useful equation about pain and suffering:

**Pain x Resistance = Suffering**

**Pain x Zero Resistance = Zero Suffering.**

As we become more familiar with our own mind/emotions and realize that pain is not due to a structural problem and therefore not to be feared, we can more easily accept it, without resisting/fighting it. As we become more allowing of it, we remove some of the 'fuel' for the pain and in time the pain can resolve fully.

## Stress

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Stress is not something we can eliminate from modern life, but by making some subtle changes to the way we deal with it, we can learn to handle it more effectively.

The stress response is normal in our body because it helps us 'raise our game' to handle challenges in life. In fact we wouldn't be here as a species if our stress/'fight and flight' response hadn't helped us deal with predators and other threats to our lives in times gone by.

The problem in this day and age is that most of our perceived stress/danger is psychological and with persistent pain the stress response works overtime and does not switch off. Our bodies become caught in a fight or flight response resulting in the sensitization of the nervous system, which in turn causes pain. It can also cause chronic fatigue, sleep problems, chronic skin conditions such as eczema, digestive problems, depression, anxiety and many more symptoms.

### Different causes of stress can identified by considering the Acronym CCOPS:

**C**hildhood stress - many studies are now demonstrating that adverse childhood experiences in childhood are highly linked to chronic pain and other health problems in later life.

**C**urrent stress - for example; work, financial, relationship pressures and many more.

**O**verstimulation - We live in a world that can be very overstimulating for the senses, such as living with the TV and radio on a lot of the time, multi-tasking and the use of stimulants such as caffeine/sugars in our diet. All of these can cause sensitization of the nervous system, which as can be seen can result in pain.

**P**ersonality type - are you an over-achiever, a care-giver, a people-pleaser and/or a perfectionist for example?

**S**elf-induced pressures - do you push yourself, always expect high standards, are over-analytical or are you over-critical of yourself and others? All these create internal pressures which increase the load on our system and can cause ongoing pain.

Anything that changes your brain's evaluation of danger/stress response will change your pain. Therefore, recognizing stress and learning how to deal with it is key to reducing the pain response in your body because it down-regulates (calms) the nervous system, which reduces the pain.

## Significant life events and pain

Sometimes we can develop pain during, or often after, a stressful or traumatic time in our lives. Just consider teachers and how many of them become ill in the summer holidays after the build up to final exams, reports etc. It is sometimes in the aftermath of events that our body can't keep going anymore and when we are finally able to relax, pain or other symptoms are triggered. This is not a negative response, merely a message from your body that some self-care is required and as you weren't listening to the minor signs, such as fatigue, headaches etc, often the symptom that develops will make sure you have to stop and look after yourself!

## Where to start - a few ideas:

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Below is an action plan of suggestions to help you begin to handle your pain better and then start the journey to becoming pain free. It might seem impossible at the moment, but there are so many people out there who have had persistent pain for years and now live a life unaffected by it:

**Change underlying belief:** The pain is not being caused by tissue damage; it is your body's way of protecting you from danger. Accept that it has become over-protective and too sensitive, which is causing the pain to persist. Movement will not cause damage.

### 1) Begin to calm the nervous system:

- Write down the stressors in your life and take active steps to see how you might be able to deal with them.
- Acknowledge through journaling (offloading onto paper) about how you feel/felt about any ongoing stress or past events/relationships that were stressful. (N.B. Ask your SIRPA Practitioner for our pdf with some tips on journaling)
- Maybe offload to a close friend about how you really feel/felt.
- Practice relaxed, slow, deep belly breathing - counting slowly to 6 as you breathe in and 6 as you breathe out.
- Develop a practice of mindfulness, maybe just starting with 5mins a day.
- Begin to notice your thoughts around the pain (fuel to the fire) as well as any other stress-inducing thoughts. Writing these down and then rationalizing them on paper has been shown to help. e.g. what you might say to a friend who had told you this is what they are worrying about.

- Consider how you might be able to calm your nervous system by reducing things like; the amount of time you spend with technology/TV/radio, caffeine, sugar, ruminating, multi-tasking etc.

## 2) Take an active approach:

- Begin to move more and try to overcome the fear that movement will cause damage - remember that tissue damage is no longer the issue. Areas may be tight and also weak from not moving for a while, but that's normal and movement and strength will return in time as the causes of the symptoms like pain, tightness and weakness etc are addressed and they resolve.
- Set a goal around physical activity. e.g. 'I will walk for 5mins every day and persist with this', increasing as and when you feel ready.

## 3) Get to know yourself better:

Do you put a lot of pressure on yourself or do you always put others first? Beginning to recognize your personality and behaviours that are not healthy or cause you pressure is also very important for a positive shift in health. Be kind to yourself; treat yourself like you treat others.

Reading this leaflet is a great start to understanding that recovery from chronic pain is possible and to learn a few tips to help you begin. The recovery process is about learning through education, taking responsibility for yourself and your pain, learning self-empowering strategies to help you resolve your pain and become more stress-resilient.

The video and book mentioned above are valuable steps to help you start your recovery journey. Where necessary there is also an in-depth online SIRPA Recovery programme available to work through, plus you might benefit from some one-to-one support and guidance from a SIRPA Practitioner.

You can find a list of health professionals who are approved SIRPA Practitioners (or working towards approved) on the Find a Practitioner page of the SIRPA website. Some people require support and guidance as they progress along their recovery journey and SIRPA Practitioners will be able to provide this either face to face or via online support.

*This leaflet was created for SIRPA™ by Chris Shorter BSc Hons Physiotherapy (2003) MCSP who*



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