

Acute vs Persistent Pain

Acute Pain	Persistent Pain
Short-term (less than 3 months)	Longer-term (more than 3 months)
'sharp', 'shooting', 'stabbing', 'excruciating', 'unbearable'	'dull', 'ache', 'depressing'
Warning signal that tells us something is wrong with our body, such as an injury.	Not a warning signal that something is wrong with our body.
Relieved by healing processes.	Not relieved by healing processes.

Why do people get persistent / chronic pain?

Changes to the brain

Research has shown that the structure of the brain changes slightly in some people who have had pain for a long time (e.g. 'phantom limb pain'). These structural changes mean that these people are more likely to experience persistent pain. Some recent research has shown that increasing your activity level slightly, despite having pain, might help reverse some of the structural changes that occur in the brain.

Changes to the nerves

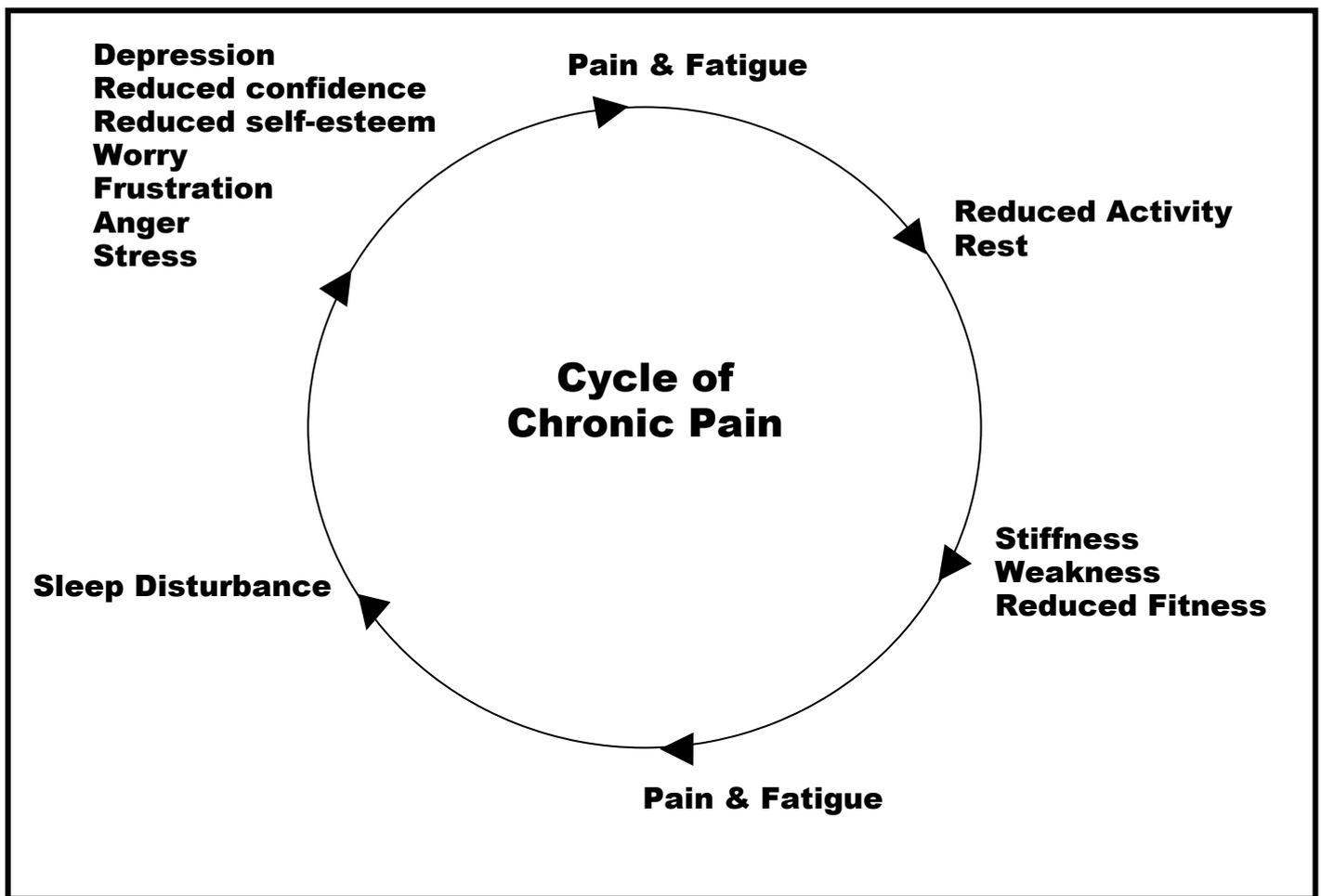
It has been shown that the nerves can become more sensitive in people who have longstanding pain. This means that pain can occur following fairly simple movements that would not normally result in pain. It is a bit like an 'overly' sensitive car alarm that can be set off by the wind rocking the car slightly.

Deconditioning

When people experience pain they often reduce their activity level. Sometimes this happens because of the pain itself and sometimes it can happen because a person is frightened that normal activity might lead to them damaging their body. When a person reduces their activity, their muscles get stiff and weak, and their overall level of fitness goes down. All of these things actually increase the pain that a person gets in the longer-term and makes it harder to do normal activities. This often leads to feelings such as depression, frustration, anger, worry, loss of confidence and guilt. These feelings in turn can make pain worse and lead to a further reduction in activity. When all of this happens a **cycle of chronic pain** (see diagram on next page) can occur and it is very important to try and break this cycle.

The best way to break the cycle of chronic pain is to gradually increase your activity level. This helps reduce stiffness, increase strength, and improve general levels of fitness. It is important to remember that a little bit of soreness and stiffness is normal when you first try to break the cycle of chronic pain. This is because you will be using your muscles in a way that they are not used to. A little bit of soreness is actually a good sign and means that your muscles are being made to work a little bit harder. When muscles are made to work harder they get **STRONGER!!**

Remember, just because something hurts it doesn't mean that it is causing damage!



Getting your 'gates' to close

The spinal cord contains 'gates' which can help block pain messages from reaching the brain. When the gates are open more pain messages reach the brain. When the gates are closed less pain messages reach the brain. Although you cannot completely close the gates, you can close the gates slightly, which can help reduce your pain. Getting your body to release **endorphins** is an excellent way of getting your gates to close slightly. Exercising and doing things you enjoy is also an excellent way of getting your body to release endorphins. The diagram page 5 shows what the gates might look like on a bad day (high pain) and a good day (low pain).

done. For instance, you may need to take more rest periods or you may need to split jobs up over a couple of days rather than doing them in one go (see session on pacing).

If you are having problems with over-supportive or under-supportive people it is important that you speak with these people and let them know how their behaviour is affecting you and how it makes you feel. This can be difficult at first but will help you in the longer-term.

Physical changes due to inactivity

When people have pain it can be very tempting to avoid activity which can have a marked effect on your body. Prolonged periods of inactivity can increase the risk of developing a heart condition, cause obesity, weakness of bones and muscles, depression and premature ageing. Here are some of the effects that too much rest can have on your body:

Cardiovascular

This refers to the heart, blood vessels and lungs. The heart is a muscle, and if it is not exercised it becomes smaller and works less efficiently. This means less oxygen can be carried around the body and you are likely to feel more tired.

A low cardio respiratory level of fitness is the leading attributable factor in ALL causes of death.

Inactivity kills more people than smoking, diabetes and obesity combined due to its link with increasing the likelihood of heart problems, diabetes and some forms of cancer.

Muscles

A week of bed-rest can result in a 15-20% loss of muscle strength. Muscles also lose their elastic feel which causes them to become more painful when stretched.

Joints

The joints become tight and may restrict movement. The joints will become more painful due to reduced support from the weakened muscles around them.

Bone

After six months of complete bed rest, 40 percent of the body's calcium is lost. The bones rely on calcium for their strength. Loss of calcium causes the bones to become weaker and increases the risk of them breaking (osteoporosis).

Brain

Blood flow to the brain decreases, causing reduced oxygen, with the following effects:

- tiredness and reduced alertness
- disturbed sleep
- increased inability to cope with stressors
- increased susceptibility to depression

Sensory

Bed rest has been noted to result in reduced sharpness of sight, hearing and taste. Balance mechanisms can also be affected.

No person with pain will develop all these problems, but the list is a reminder of what can happen to all of us if we become too inactive. The list should also remind you that not all your physical and emotional symptoms are due to whatever caused your pain but may be the result of the way in which pain has changed your normal lifestyle. **The good news is that these effects are reversible - you just need to become more active again!**

