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PAIN MANAGEMENT 01803 654309

UNDERSTANDING PAIN

Chronic pain can be a puzzling and confusing condition to live with. After all, most of us grow up understanding that pain will go away. So how can we make sense of pain that *doesn't* go away – pain that becomes persistent?

There are important differences between acute and chronic/persistent pain:

Acute pain: Is an indication that ***damage*** has happened as a result of injury (e.g. hitting your thumb with a hammer). It is a helpful alarm signal that enables us to get out of harm's way and to protect our bodies while we heal.

Persistent pain: Persistent pain has no useful purpose and is ***not an indication of new or further damage.***

Reasons for acute pain

- New injury usually results in bleeding. When blood cells and plasma leak out of blood vessels, they irritate the surrounding tissue and nerve endings.
- Inflammation is the first phase of the healing process and in itself can be a painful process: the body is saying: 'be careful, you are not yet fully healed and you might cause further damage'.
- Swelling in the area around nerves or damage to nerve endings will cause pain.

Reasons for persistent pain

There are 3 main reasons as to why people suffer from persistent pain:

1) The structural source of the pain.
2) Changes in how you move.
3) Changes in how pain messages work.

The reasons for your pain are likely to be **a combination of these .**

1. THE STRUCTURAL SOURCE OF THE PAIN

When you have a new injury (acute pain) it is easy to guess which bit of you is causing the pain: the bruise, the broken bone, or inflammation around the splinter. With persistent pain, it is much more difficult.

It is likely that you have not had an explanation of your pain that makes sense to you. Often, no obvious structural cause can be found. This can be frustrating and confusing – after all, *you* know you have pain. You might think that some of the advanced scans that are available now would help to pinpoint the structural problem. Unfortunately, this is often not so. Even the best scans only give a 'snapshot' of your body. The part of you that is hurting does not change colour on the scan – or look any different from the part that is not hurting.

Even when doctors can pinpoint structural changes on the scans or X-rays (for example, 'arthritis' or 'a disc problem'), it is still very difficult to say whether these are the source of your pain or not. For example, if a doctor was looking at a scan or X-ray that showed arthritis, they still would not know whether the patient had pain or not.

Clearly, pain is very complex.

2. CHANGES IN HOW YOU MOVE

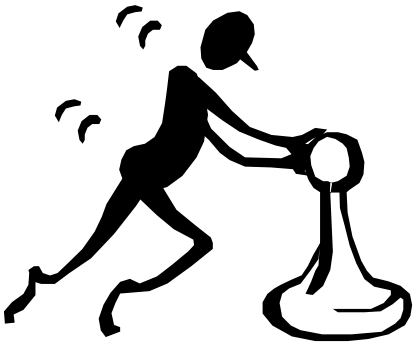
Many people with chronic pain respond either by reducing their activity or by trying to 'push through' their pain:

i) Reducing activity or limiting certain movements, eg bending and twisting:

This is a common response to pain. Many people try their best to rest or avoid activities that make the pain worse. But, what effect does this have over a long period of time?

- You may well become low or frustrated at not being able to 'live a normal life' or 'be the person you used to be'.
- You sit, stand or walk differently which can affect other joints and muscles.
- Muscles can become 'deconditioned'.
- You may put on weight and become less 'fit'.
- When joints don't get moved regularly through their 'full' range of movement they become stiff as structures tighten up. This in itself can contribute to movement being painful.
- The parts of our brain that control movements have to learn new movement strategies. This can create its own problems which can feed into a pain problem. For example, we may chose to move more slowly: this can be more demanding on the muscles, require more co-ordination skill and instead of reducing pain, can wind up a situation that is already painful.
- In a similar way, the brain 'recognises' that we are not moving 'normally'. It will then 'assume' that there is a problem. This can feedback into the pain problem.

ii) **Pushing through pain:**



There are times when people 'push through' their pain. This may be because of frustration or a sense that they 'must' or 'should' get things done. What effect does this have?

- Pushing through the pain is a bit like prodding a bruise. Gently prodding it will not cause any further damage – but will feed into the pain system that is already 'on high alert' and make it more likely to become more sensitive and more irritable.

- The repeated 'prodding' serves to strengthen the pain 'memory' we will discuss this more in the next section.

- There can be a great sense of achievement: "I did it – even though it hurt!" But it can also add to your sense of frustration and concern – to be hurting so badly again – and this will certainly **not** help you manage your pain in the long run.

These issues are discussed more in the handout on Activity Management.

3. CHANGES IN THE NERVOUS SYSTEM

Pain can be very puzzling. To think about this, let's consider a few different situations:

Puzzle 1:

Some athletes injured in sports events, or soldiers injured in battle, do not notice or feel pain at the time they are first injured: they only become aware of it later. In some ways, this is similar to a carpenter who only notices a painful splinter when washing their hands at the end of the day.

In these examples there is clearly tissue damage, so how come they don't experience pain?

Puzzle 2:

People who have had a limb amputated can still experience pain in the limb that is no longer there.
This is called 'phantom limb pain'.

How can this be the case when there is no limb to hurt?

Clearly pain is complex! Nerve messages can be altered as they are processed in the brain and spinal cord. This can mean that messages may be:

- Made bigger (we call this 'wind up')
- Smaller
- Altered (messages that start out as touch can be experienced as pain)
- Or even generated within the nervous system.

Its **NOT** that pain is ‘all in the mind’ or ‘imagined’ or ‘put on’. The experience of persistent pain is very real indeed. The way that these changes happen will be explained more in the handout *Understanding Pain 2.*

SUMMARY OF PERSISTENT PAIN

There are 3 main reasons as to why people suffer from persistent pain:

1. The physical source for the pain
2. Changes in the way you move and live your life
3. Changes in the how the pain messages work

Just because we are not able to give you a specific ‘diagnosis’ or tell you exactly which structure is causing the pain, it **does not mean that your pain is not real**. It simply means that your symptoms have reassured us that there is ‘nothing nasty’ going on but unfortunately, we do not have a cure for your pain.

However, the good news is, that as we now understand so much more about how the changes in the nervous system happen, we are able to help you to understand your condition and improve your ‘fitness’ and activity levels – in ways that are helpful for you.