

Patient  
Information

# Persistent back pain - a guide to recovery



## What is persistent back pain? The facts

Pain is a protective feeling that prevents damage and keeps you safe. If you've had an injury, pain limits movement until the body part has healed. Thankfully, most tissues heal within 3 months.

Persistent back pain is back pain that has lasted for more than 3 months. Persistent back pain is unlikely to be related to ongoing tissue damage and more likely to be the result of a sensitive and over-protective nervous system. This means that previously painless activities such as sitting, bending and walking may become painful and muscle guarding and protective postures can make the local back tissues very sore.

The good news is that persistent back pain is rarely dangerous and is not due to getting older or wearing out and is unlikely to be associated with poor posture or a weak core.

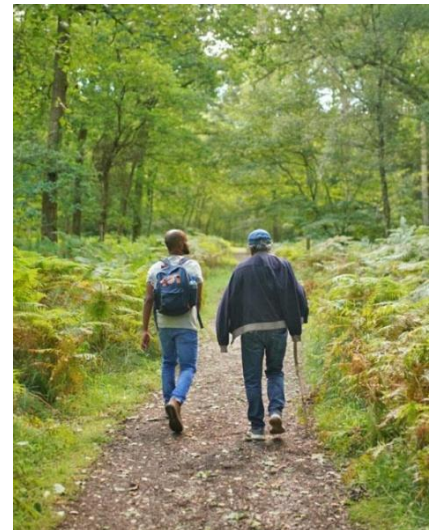
Backs do not wear out with lifting and bending. In fact, retraining your back to do these movements again may be important for your recovery. Scans are often unhelpful and surgery, injections and strong drugs are usually not terribly effective.

Not all back pain is the result of an injury, many things can contribute to back pain such as poor sleep, low mood, worry, reduced activity or activity you're not used to doing.

With persistent back pain it's important to gradually start doing movements and activities into some pain with the reassurance that pain during movement does not mean damage.

Understanding this can reduce fear and protective muscle guarding, allowing the recovery of normal movements and relaxed postures.

You can choose any activities to reduce sensitivity and muscle guarding; make it enjoyable and relevant to you.



### So what can be done?

There's good evidence to show that making sense of your pain along with coached exercise and activity can be life changing. This will involve working into some pain with the knowledge that pain is a protective feeling rather than a sign of tissue damage. This is the case whether you've had pain for 3 months or 3 years.

The information in this booklet may challenge your thoughts and beliefs about your back pain. Research and medical recommendations have been used to give you the most up to date understanding about persistent back pain and how to work with it towards better management.

## So why do we feel pain?

Pain is just one of your body's protection systems that keeps you healthy and safe.

Others include your immune system which fights infection and part of your nervous system which makes you run, fight or freeze in dangerous situations.

Consider pushing your finger against the sharp prickle of a cactus. The purpose of pain is to make you stop, to prevent tissue damage. If tissue injury does occur, pain helps to protect the body part until it has healed. **Pain changes your behaviour, keeping you safe.**



Your brain is constantly weighing up information coming from your body, thoughts and surroundings and making decisions whether it's in your best interest to produce pain to protect you. This is a complicated system and relies on what your brain considers dangerous. For example, stubbing your toe crossing the road will probably hurt a lot less than stubbing your toe in your living room. This is because your brain produces less pain when you're crossing the road keeping the rest of your body safe.

Your surroundings can have a huge effect on the pain experience. This is a true story and there are many other stories like it:

A workman jumped from a stepladder landing on a nail which came out through the top of his boot. He experienced severe and excruciating pain. The boot was removed only to find that the nail had passed in between his toes, no tissue damage at all!

In this case there was sufficient danger information coming from his eyes and the horrified people around him to make him feel like he had major tissue damage and his brain produced pain – this was 100% real.

What we feel and our emotional response is the result of everything we know and have experienced and is very affected by our surroundings.

## But how do I know there's not something seriously wrong?

### Medical examination and safety

Your doctor or physiotherapist will have asked you questions and in some cases examined you to make sure there is nothing serious causing your pain. This should reassure you that you do not need any further investigations, injections or surgery.

In most cases injections and surgery are usually not very effective for persistent back pain, as well as being potentially risky.



There are low risk ways of getting back in control and enabling recovery using exercises, relaxation, psychological support and self-management techniques.

## But why is my pain not going?

You may feel certain that there is something seriously wrong with your back because it hurts so much and stops you from doing so many things.

Sometimes a very minor injury, or even no injury at all, can lead to persistent pain, a spread of pain and severe restriction in activities, and it may not make sense why this has happened.

In some cases, pain can still be present in a body area that's been removed, such as in phantom limb pain. This is caused by increased sensitivity in the nervous system and areas of the brain which controlled the missing limb still remaining active. This provides an interesting example of where a body part does not need to be present for pain to be felt.



Information coming from your body, beliefs about what may have happened to your back, previous experience of back pain and your surroundings will create a feeling of threat and an equivalent level of pain e.g. low threat = low level or no pain.

Take this example:

You're at work. You're always careful because you've been told you've got a 'weak back'.  
You bend over and 'pull your back'.  
You've done this before, last time resulting in 6 months off work and not much support.

This would be a very threatening situation and could lead to severe and ongoing pain.

With the right understanding, support and advice to remain relaxed, keep moving and not panic, the threat level and pain could be reduced, and a feeling of control recovered.

Ongoing threat can result in increased sensitivity in the nervous system and tissues and ongoing pain. This is a complex and not fully understood process and is likely to be affected by many things.

Below are some of the possible reasons for ongoing pain:

- Chronic stress, poor sleep and excess weight can lead to the release of inflammatory chemicals around the body causing pain, particularly in areas where there's been pain before e.g. recurrent back pain.
- Avoidant behaviours such as avoiding bending because of concerns about causing 'further damage' can have significant effects on the local back tissues such as stiffness and weakness.
- Muscle guarding and protected movements can increase stress on local back tissues causing further discomfort, particularly where there are underlying changes such as osteoarthritis. In this situation it's important to start doing relaxed movements and activities to improve tissue health and is likely to involve working into some discomfort.

Getting better is all about reducing the threat level. If you know the pain is not related to something bad happening, you will be less likely to protect the area and avoid painful movements and positions.

## So, if my pain system is sensitive and over-protective, how can I understand it better to help my recovery?

The below illustration may help to explain over-protection in persistent back pain.

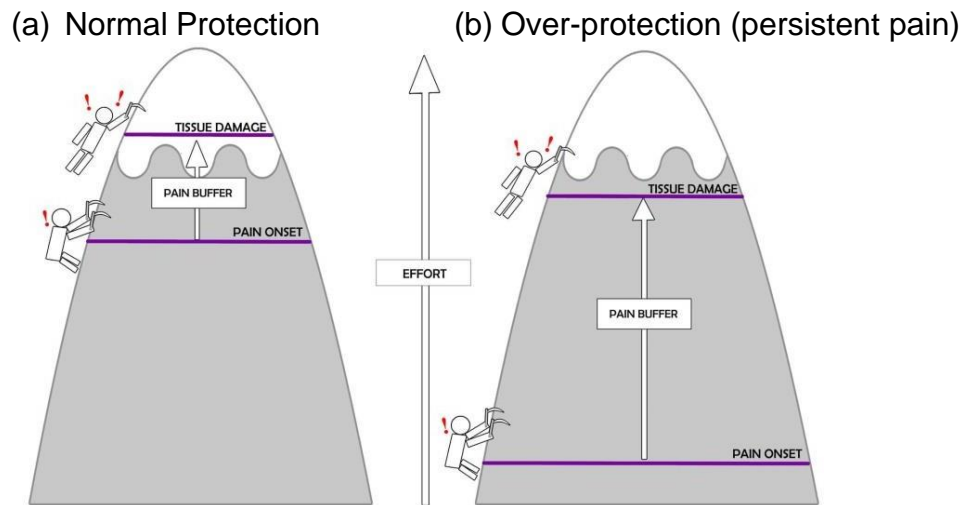


Illustration adapted from Twin Peaks Model, Butler, D.S. and Moseley, G.L., 2013. Explain Pain 2nd Edn. Noigroup publications

**Image (a)** shows 'normal protection' - where pain provides a warning of when you might damage yourself.

**Image (b)** shows the 'over-protection' seen in **persistent back pain** - where pain no longer provides a useful warning of when you're likely to damage yourself.

With persistent pain you're very protected from injury - the pain will stop you well before you damage yourself (there is a huge protective pain buffer). Understanding this can reassure you that it's **'safe to move'** into some pain. This is important for your recovery.

Your thoughts, beliefs and surroundings strongly affect whether you feel pain or not. Faulty thoughts and beliefs regarding weakness or damage can cause muscle guarding of the affected area such as:

“If I bend it will hurt and cause more damage so I must keep my back safe by avoiding painful movements and maintaining a good posture.”

However, keeping your back still and protected can make it very sore. Your back needs movement to nourish the tissues and keep them healthy, mobile and strong. Start slowly moving into positions and doing activities which are good for you such as relaxing in sitting, bending, walking and lifting.



## But what if my pain gets worse? Should I be worried and how should I manage it?

**Pain flare-ups** are worsening of your 'usual pain' and are not normally related to tissue damage. Common reasons for flare-ups include poor sleep, stress and tension, low mood, a sudden increase in activity or unusual activity.

If you push yourself a little too far and too fast, your sensitised over-protective system may react by producing more pain. It's necessary to work with this, pacing your activities and exercises to challenge yourself and avoid flare-ups where possible. Try not to panic if you do flare-up, the pain will settle. Keep calm, relaxed and continue moving. Understanding this can be reassuring, giving you back control.

The challenge is to do just enough activity to start retraining your pain system and tissues to become less sensitive and protective. It's important to relax and work into some pain doing what might be considered threatening movements or activities.

Choose activities that you love such as walking with friends, dance, swinging a golf club etc. Other active approaches might include relaxation, mindfulness and breathing control. These can help sleep and we know a good night's sleep reduces inflammation and pain.

## Will having a scan help? Will it show anything?

Sometimes scans will pick up something that may need further treatment. But in most people, this is not the case.

If you've had a scan the diagnosis you've been given such as degenerative discs (the soft tissue structures between the bones of your spine), or a disc bulge may cause fear and affect the way you do activities.



Did you know that **discs do not slip; they are strongly attached to the bone above and below**. The spine is a tough and capable structure.

Many of the findings seen on scans are just normal age-related changes and are unlikely to be the cause of your pain.

Here's an example:

In people **without back pain** who are 50 years of age, 8 out of 10 have disc degeneration and 6 out of 10 have disc bulges.

These types of changes begin from an early age and are common and may be nothing to be concerned about. However, if you're worried by what you've been told, start moving differently and protecting what you consider to be a weak and damaged area, you may become guarded, sore and then more fearful.

Ask your doctor or therapist to talk to you about what you would expect to see on the scan of somebody of your age who has no pain. Understanding this can be essential in reducing the level of threat and help with the recovery of normal activities.

## Would massage and manipulation help me?

Massage and manipulation are passive therapies and although they may make you feel more comfortable for a short while, there is no evidence to recommend these treatments for persistent back pain. National guidelines<sup>1</sup> suggest the use of exercise programmes and physical activity for conditions such as persistent back pain. However, if you do use massage and manipulation try and use them alongside an active approach that gives you understanding and control over your situation.

Try and be aware of why your back muscles might be tight and your joints stiff. Finding the cause may be more effective than treating the symptoms with passive treatments such as massage. Muscle guarding, often the result of the belief that the back needs protecting may be the reason for sore and tight tissues. Guarding can be reduced by starting to relax into positions and activities such as sitting, standing and bending.

Your body needs movement and changes in position to feel better. Trust your body; it's stronger and more capable than you think.

The benefits of activity include better joint mobility, stronger muscles, improved nerve and circulatory function, weight control, reduced stress and improved sleep.



Often well-meaning but negative messages may stop you from doing the very things you need to do to recover. Be confident to challenge these as well as your own thoughts and beliefs about your back pain.

## Will taking painkillers help?

Certain medicines such as codeine and tramadol (known as opioids) can make your pain worse.



There are billions of nerve and immune cell connections in the body. After a few weeks of taking these medicines, the immune cells become more active, leading to increased sensitivity and more pain.

It is now widely accepted that the long term use of these medicines is not effective for persistent back pain.

If you would like to start reducing your use of these tablets it should be done slowly to avoid side effects and you may need some help from your GP or pharmacist. This can be a frightening prospect, so ensure it's the right time for you and try to have other strategies in place to help manage your pain.

National guidelines<sup>2</sup> suggest that there's little or no evidence that medicines such as paracetamol or anti-inflammatories such as ibuprofen make any difference to people's 'quality of life, pain or psychological distress' and can cause harm. However, short term use may be appropriate during for example a flare-up.

Having the right people around you to support you with reducing your use of these drugs is very important. Evidence<sup>3</sup> suggests the use of 'supervised group exercise programmes' and remaining 'physically active for longer-term general health benefits' is likely to be more helpful.

## Can poor sleep, anxiety, depression or being overweight cause my pain?

Yes, they can all contribute to the onset and persistence of pain.

Sleep and the immune response, which is important for overall body health, are closely linked. Poor sleep produces low level inflammation increasing sensitivity and pain. Using techniques to promote better sleep can be helpful such as consistent sleep times, managing worries and taking some form of regular exercise.

Chronic stress and depression are linked to a low-grade inflammatory response. If you suffer from anxiety and/or depression, try relaxation and breathing exercises, talk with family and friends and explain how they can help, consider psychological support and take some form of regular exercise.

Being overweight is also linked to low-grade inflammation. The current evidence<sup>4</sup> shows that cutting calories helps more with weight loss than increasing exercise. However, regular exercise can help with keeping weight off and general health. If you need support, consider a self-referral to Livewell or joining a weight loss support group.

Taking time to **explore how to improve your sleep, manage your mental wellbeing and lose weight** may be very important in reducing your pain. For further information see page 11.

## Will improving my core and posture help?

Despite the popularity of core muscle training (tensing your tummy and back muscles) for back pain, there is evidence<sup>5</sup> to suggest that persistent lower back pain is not caused by a weak core.

In fact, people with back pain often tighten and tense their core. Tightening and contracting your core muscles can limit normal relaxed movement of the spine, squashing the local tissues and making your pain worse. Consider clenching your fist for a long time and imagine how sore and uncomfortable your wrist and fingers would feel!



How you stand, sit and bend does not cause back pain, although these activities may be painful. A range of postures are good for your back and it's safe for you to relax during sitting, standing and bending. There is recent evidence<sup>6</sup> to show that lifting with a rounded back is actually more efficient, this may surprise you.

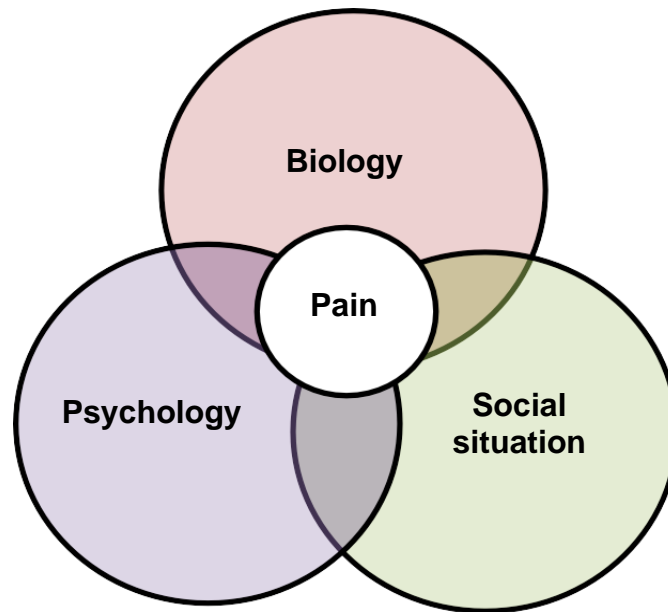
However, being fit and strong for the tasks and activities that you would like and need to do is important. Try and achieve this by gradually building up your ability to do things. Muscles should be active, strong and capable when needed for activity and relaxed when not.



## What contributes to my pain?

Health and wellbeing are related to everything going on in our body, mind and environment. In the same way, whether you feel pain or not will be related to your:

- **Biology** - physical health and fitness, inflammation, genetics etc.
- **Psychology** - thoughts, beliefs, feelings, knowledge etc.
- **Social situation** - family, friends, access to care, work, culture etc.



Think about what you would like to do that your pain is currently stopping you from doing. Take time to understand the contributors to your pain and how you might affect these:

- When do you feel at your worst?
- Does poor sleep and stress affect your pain?
- Do certain people and what they say affect how you feel?
- Do specific thoughts affect what you do and how you do it?

### When it comes to pain everything matters!

Your brain and nervous system have the potential to release powerful natural painkillers (endogenous opiates) which your body doesn't fight against. Being more active, socialising and doing things that make you happy will all help to release these very effective painkillers.

## What are the main things I need to remember about pain and recovery?

- Pain is all about threat and protection. With persistent pain there's likely to be an increased sensitivity and an over-protective pain response. The good news is that this is reversible.
- There's a poor relationship between tissue damage and the amount of pain felt. You're safe to move into pain, find your level, and gradually progress to get more active. If you flare-up try not to get too worried, there's probably a reason. Try and understand this, work with it, relax and keep moving.

- Pain is the result of everything going on in your body, brain and environment. Your thoughts and beliefs can also affect your pain. When you know about these things it's possible to influence them. Pain can be made worse by behaviours like avoiding activities, muscle guarding, protected movement, and worrying about the future.
- Making sense of your pain can reduce fear and encourage you to work into positions and movements that you may have been avoiding because of concerns about tissue damage and the future of your back.



## Is there a course I can attend to help me?

Ask your doctor or therapist about attending our 'Escape Pain for Backs' programme for persistent back pain. This is a 12-session course running twice weekly for 6 weeks.

The course will help you make sense of your pain, and work towards your personal goals and recovery with expert coaching and support. Each session includes 20 minutes education followed by 40 minutes graded exercises, as well as relaxation, Tai Chi, gym ball and multi-gym-based activity.

If you're uncomfortable about joining a group your therapist can see you individually to help you understand your situation and work towards increasing your confidence, activity levels and quality of life.

## What else can I do to help my recovery?

At times when you feel worse, try to look at what may be contributing to your pain. This may help you discover things that turn down the pain:

- Which movements are you avoiding?  
Often fear-avoidance is linked to muscle guarding, abnormally rigid over-protective postures and restricted activities. Try to start relaxing into and doing these movements again.
- What do you enjoy doing but don't do anymore?  
Often pain can stop you doing the very things you need to do to help recovery. Start challenging yourself by gradually introducing these activities again e.g., walking further, cycling and swimming.
- Have you stopped socialising?  
Often persistent pain can lead to social isolation. Take every opportunity to start socialising again. Use positive support from people around you to get you back and keep you on track.
- Do you feel like you're damaged or falling apart?  
Often negative thoughts can make pain worse. So, after reassurance from your therapist, try to think more positive thoughts such as: 'I'm structurally strong' and 'I'm working on getting fitter and more active'.
- How do the people around you behave?  
Often well-meaning family and friends try to look after you which may discourage you from doing things you need to do for your recovery. Teach them to support you in the right way.

**Recovery is possible.**

## What can be learnt from current research studies into pain?

Here's some of the up-to-date evidence to support this approach to your recovery:

1. An Australian pain study<sup>7</sup> looked at the effect of 'what we see' on pain felt. The researchers matched a red or blue light with an uncomfortable sensation (cold rod pressed against the back of a person's hand). The results showed without exception that the red light resulted in more pain being reported.

**What we see and what we think it means, really matters when it comes to pain.**

2. A Canadian study<sup>8</sup> analysed the brain scans of 39 people who developed back pain over a 12-month period. During the acute phase of their back pain, areas of the brain scan lit up that are linked to physical pain. In those where pain became more long lasting there was a clear shift to areas of the brain linked to negative emotions such as fear, sadness and memory.

**Thoughts, beliefs and mood are extremely important when it comes to persistent pain.**

3. Recent research<sup>9</sup> has shown that pain education along with exercise can have positive effects on reducing pain, pain-related fear and disability, increasing function and improving movement in the short to long term.

**Learning about pain may reduce threat, fear-avoidance and promote positive behavioural change.**

## What pain resources can I access?

'Tame the Beast' is an excellent video animation:

[www.youtube.com/channel/UCXTg1eVjEp06jyz3mNKRtIA](http://www.youtube.com/channel/UCXTg1eVjEp06jyz3mNKRtIA)



'Flippin' Pain is a public health campaign with a clear goal: to change the way people think about, talk about and treat persistent pain':

[www.flippinpain.co.uk](http://www.flippinpain.co.uk)



'Empowered beyond pain' podcasts – check out episodes 4 & 11 – plenty of expert advice and patient recovery stories:

<https://podtail.com/podcast/empowered-beyond-pain/>



Recovery Strategies - an excellent workbook with lots of easy-to-read top quality information and illustrations about pain:

[www.greglehman.ca/pain-science-workbooks](http://www.greglehman.ca/pain-science-workbooks)



Guidance for reducing opioid medications:

<https://my.livewellwithpain.co.uk/resources/painkillers-and-me/reducing-opioid-medication/>



Guided relaxation, mindfulness and to help sleep:

<https://soundcloud.com/breathworks-mindfulness>



For help and support with losing weight contact:  
[www.livewellderby.co.uk/lose-weight-0](http://www.livewellderby.co.uk/lose-weight-0)



If you are struggling with your mental health contact Trent PTS self-referral:  
[www.trentpts.co.uk/](http://www.trentpts.co.uk/)



For urgent mental health support use this link:  
[www.nhs.uk/service-search/mental-health/find-an-urgent-mental-health-helpline](http://www.nhs.uk/service-search/mental-health/find-an-urgent-mental-health-helpline)



**If you would like more information please let us know.**

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**We would be grateful for any feedback on this booklet.**

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[www.lifehack.org/363322/6-reasons-why-diet-more-important-than-exercising-for-weight-loss](http://www.lifehack.org/363322/6-reasons-why-diet-more-important-than-exercising-for-weight-loss)
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