

# Low Back Pain Workbook

A guide to self-managing your lower back pain

**Patient  
Information**



Working in partnership  
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## Background and important information

This information booklet will provide you with guidance on your back pain. It is designed to provide information about back pain and to explore different ways to **self-manage** back pain to assist with longer term improvement and reduction in symptoms. It is intended to supplement the advice and information given to you by your GP, Physiotherapist or at one of the back classes offered within the Wiltshire Musculoskeletal (MSK) Physiotherapy services, and in combination with your exercise programme.

Many patients have a combination of back pain, leg pain, leg numbness and weakness. These symptoms can be distressing but don't necessarily require emergency medical attention.

A rare but serious back condition, Cauda Equina Syndrome, can lead to permanent damage or disability and will need to be seen by an Emergency Specialist Spinal Team.

### Cauda equina syndrome warning signs

- Loss of feeling/pins and needles between your inner thighs, or genitals
- Numbness in or around your back passage or buttocks
- Altered feeling when using toilet paper to wipe yourself
- Increasing difficulty when you try to urinate
- Increasing difficulty when you try to stop or control your flow of urine
- Loss of sensation when you pass urine
- Leaking urine or recent need to use pads
- Not knowing when your bladder is either full or empty
- Inability to stop a bowel movement or leaking
- Loss of sensation when you pass a bowel motion
- Change in ability to achieve an erection or ejaculate
- Loss of sensation in genitals during sexual intercourse



**If you have any combination, seek help immediately by attending your local Emergency Department.**

Cauda equina syndrome is rare, and often these symptoms are caused by less serious issues.

\*Wording in this leaflet is copied with permission from the MACP Cauda Equina Syndrome reference card:  
<https://macpweb.org/home/index.php?p=396&id=276>

## What is back pain?

Pain that is felt in the back. Most people experience pain in their low back, but pain can be felt anywhere along the spine. From the neck to the lower spine, sometimes into the buttocks and hips as well.

## Is back pain a common problem?



Yes! Almost everyone (4 out of 5) people will have back pain at some point in their lives. For 90% of those people, the pain will resolve within 6 weeks, with gentle exercise, activity modification and taking over-the-counter medications such as paracetamol and ibuprofen. However, some people continue to experience persistent pain.

## What causes back pain?

Everyone's back pain is different. Different in the location, intensity of pain or what causes the back pain. Therefore, it makes sense that there are a number of different contributing factors that can cause back pain. Some of the factors that could contribute to pain are repetitive heavy labour work, sedentary work, smoking, mental health, obesity or lack of good quality exercise. The vast majority of patients with back pain have no specific pathological origin to their pain i.e. there is not a single structure in the spine that is the sole cause for the pain.



## Will I need surgery?

Very few patients require surgery. Surgery is mainly for patients with ongoing significant nerve pain in their arms or legs. Often non-surgical treatments such as exercise, education and painkillers are very beneficial and have a sustained benefit.



## Do I need investigations?

Often patients don't require investigations such as X-rays or MRI. We expect to see normal age-related changes on X-rays and scans e.g. 80% of 50 year olds will have degenerative changes in their discs. Often the pain is not due to one single source within in the spine. More commonly, it is due to a combination of factors. Simply put, in a lot of cases, investigations don't change the treatment that is required to manage back pain.

There are patients who are appropriate for onward referral to have investigations or to be considered for Orthopaedic input and your Physiotherapist will organise this onward referral if that is appropriate.

## Anatomy of the spine

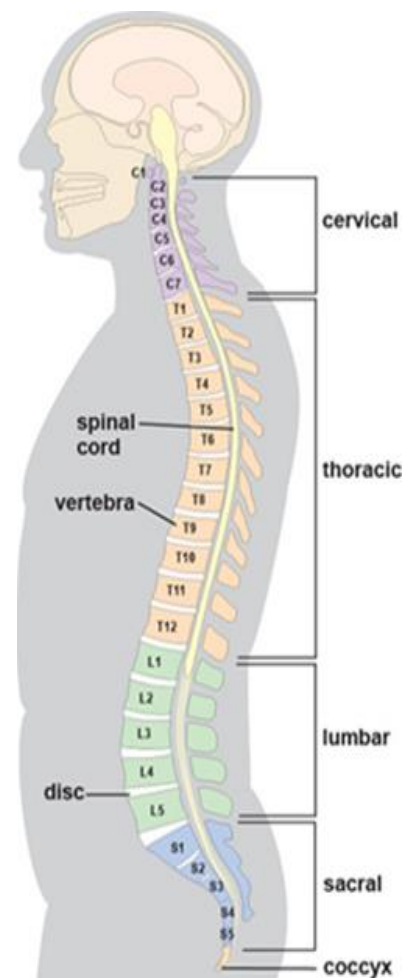
The spine is made up of 5 areas – the cervical spine (neck), thoracic spine (mid back), lumbar spine (lower back), sacrum (attached to the pelvic bones) and the coccyx (tail bone). Each individual bone in the cervical, thoracic and lumbar spine is called a vertebra. In between each of the vertebrae are spinal discs.

The vertebrae and discs are connected and supported by lots of ligaments and muscles. The main functions of the spine are to protect the spinal cord, provide support and stability to the rest of the body and to allow movement.

There are many potential sources of back pain including:

- Ligaments
- Muscles
- Discs
- Bone – arthritis, osteoporosis
- Nerves – Spinal stenosis, nerve root pain

When back pain has been present for a number of months, often the pain can be attributed to a number of sources rather than just one. For example, a muscular back sprain may cause tighter muscles, which in turn will reduce movement of the spine and cause stiffness in the spinal ligaments and spinal joints.



**Summary** – The spine is a complex structure made up of many components. Sometimes it is not possible to attribute pain to one particular component.

## Why do I feel pain?

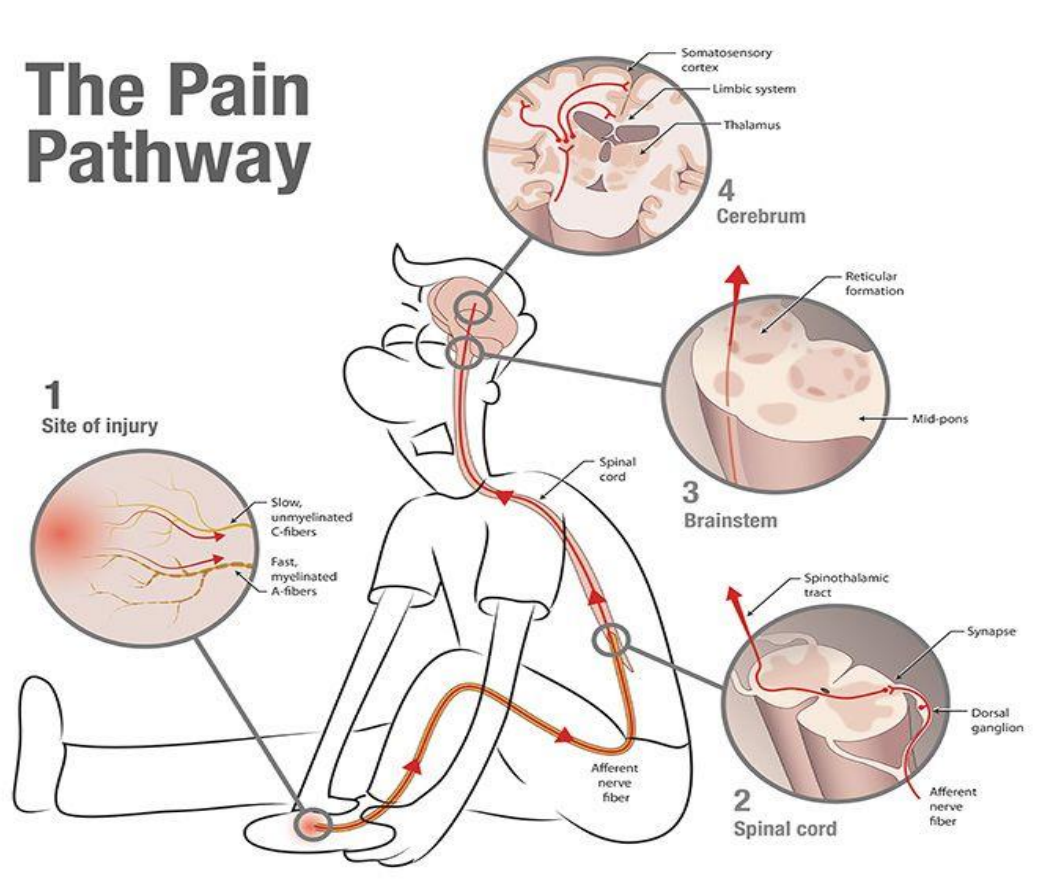
The purpose of pain is to alert the body to potential or actual damage to the body.

## How is pain created? (The science bit!)



When a painful stimulus or tissue damage occurs, specialised nerve cells (nociceptors) are activated which result in a signal being sent to the spinal cord. These signals enter at the dorsal horn of the spinal cord and, if the signal is significant enough, the signal continues up the spinal cord into the brain. The brain then analyses this signal, taking into account many

factors such as the environment, perceived threat, previous experience etc. and decides on the appropriate response. Pain doesn't exist until the brain receives information from the body, where this information is then decoded and perceived as pain. This entire process happens almost instantly.



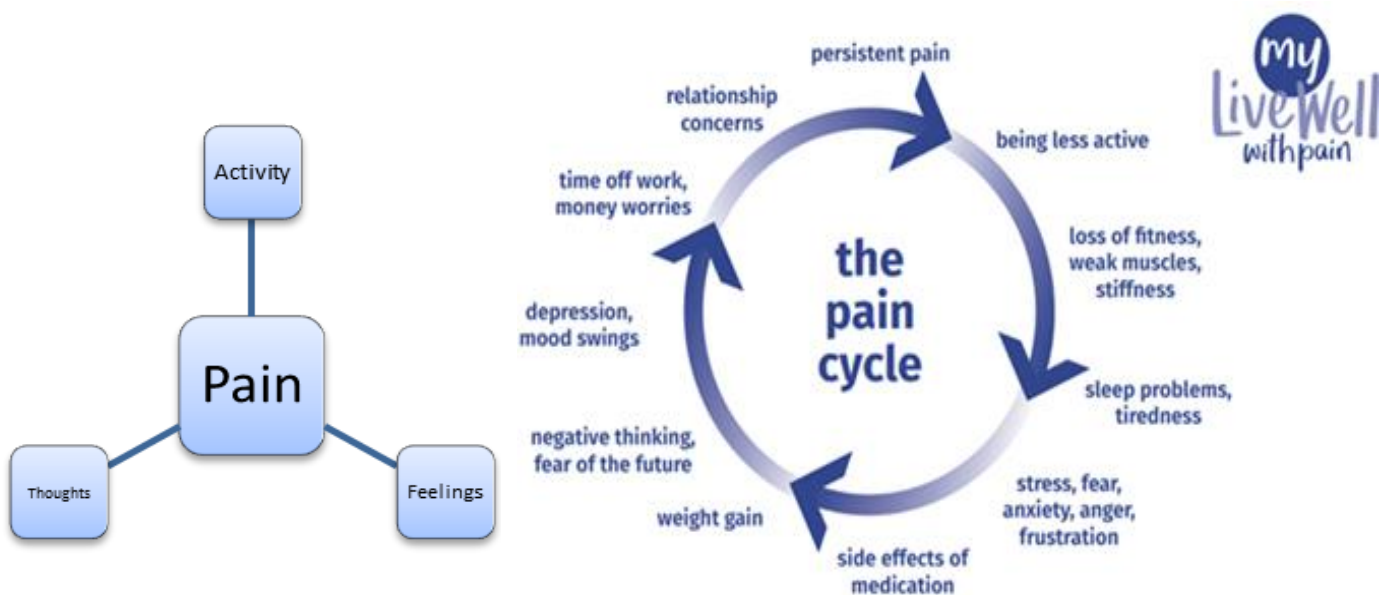


## What is persistent pain?

Pain is a normal sensation that everyone experiences. Initially, pain is produced when we have an injury or to let us know something is wrong. When we have an injury, our bodies produce chemicals which causes nerves to become more sensitive so that we get pain as a “warning sign” before we injure ourselves further. This is called acute pain. Normally, once the injury gets better our nerves go back to normal and the pain stops.

In some people the nerves stay too sensitive, which means that they continue to experience pain even though there is no longer a problem with the body’s tissues. This is called persistent pain. Persistent pain can have a knock-on effect to other aspects of our lives such as poorer sleep quality, worry about damaging tissues further, concern about the source of pain, reduced activity levels due to activity levels and a negative impact on mood and well-being to name a few. This causes the nerves to become even more sensitive, often meaning that the pain gets worse, resulting in the information generated in our pain systems not being accurate. There are several reasons why the pain we experience can become exaggerated and more sensitive than the actual underlying problem.

Persistent pain gets intertwined with all aspects of life. Sometimes this leads to negative changes as illustrated in the pain cycle below.



- Pain involves all the body systems and is influenced by many things.
- Persistent pain does not correlate to tissue damage as closely as acute pain.
- Knowing more about persistent pain helps to reduce pain levels.

**Summary – Persistent pain is REAL pain**

## How can I manage my persistent pain?

There are several ways that persistent pain can be self-managed. Changes can be put in place which can help with pain levels, our activity levels and overall quality of life.

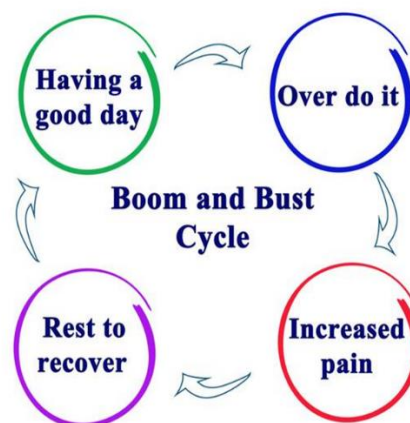


## Let's dive deeper into management strategies



### Pacing

Pacing is an excellent self-management technique which helps to avoid flare ups of pain and allows regulation of exercise, activity and pain levels. Persistent pain can lead to the 'boom and bust cycle' where, on a good pain day, we do too much activity and then suffer the consequences with a pain flare up, resulting in a period of inactivity.



This approach to activity is ineffective and ultimately leads to deconditioning of muscles and a reduction in overall stamina.

### How do I pace?

- Activity diaries can be used to keep track of patterns of activity and identify boom and bust cycles.
- Using the 'traffic light system' to consider daily and weekly activities can help identify what are triggers of pain.



Red activities are activities that always cause pain



Amber activities cause pain on a bad day but are ok on a good day



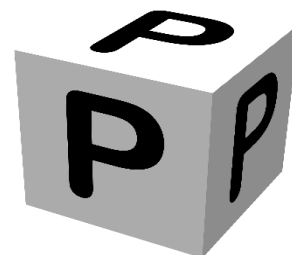
Green activities are manageable and cause little to no problems

'Red' activities can sometimes be broken down into smaller tasks to make them 'amber' or 'green' activities. Consider spreading the activities out during the week to avoid too many red activities in one day.



## The 3 P's principle (Plan, Pace and Prioritise)

Learning to plan, pace and prioritise your daily activities will help manage energy levels and increase overall productivity



**Plan** – Plan ahead. Develop a plan of how to spread out weekly activities.

**Pace** - Pacing helps to complete activities. Consider breaking tasks into smaller, more manageable chunks, take regular breaks and add variety. Gradually aim to increase activities over time.

**Prioritise** - Some daily activities are necessary, but others aren't. Asking questions such as **MUST** you do this activity? **SHOULD** you do this activity? **COULD** you do this activity? These questions will help with prioritising and planning.

## GOAL setting

It can be difficult to know where to start when tackling back pain. It can impact so many areas of our lives. Goal setting can be a useful strategy to help focus our attention on improving one area at a time. Pain can sometimes seem a little overwhelming, and goals give us an incentive to get started and to keep going. Sometimes progress can be quite slow, but by setting and achieving our goals we can see that we have made progress and that there has been some improvement. Goals need to be SMART. Quite simply SMART is way of focusing your goals to make sure they are:



**S**pecific – What exactly do we want to achieve?

**M**easurable – How do we know the goal is achieved? How long/how often?

**A**chievable – Is this goal will be realistic?

**R**elevant – Does this seem worthwhile?

**T**imed – How much time is needed to achieve the goal?

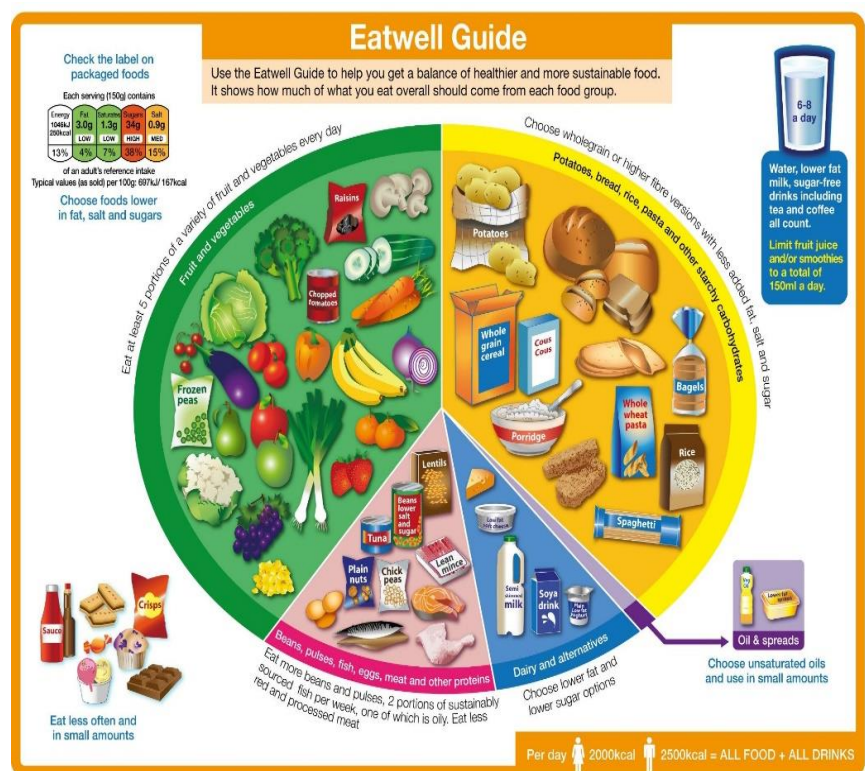
If you apply these SMART rules to your goals, you'll have a much better idea of how to go about achieving them, and you'll be far more likely to get there.

## Healthy living – smoking, diet, weight

Smoking, diet and weight are all factors that can contribute to back pain. Research suggests that smoking may indirectly contribute to the development of degenerative lumbar spine problems. Smokers are more inclined to develop persistent pain compared to non-smokers. This is thought to be due to the impact smoking has on certain parts of the brain which control pain. Reducing or stopping smoking entirely can be very helpful. There are smoking cessation services available to help with this.

Although people of all ages and activity levels experience back pain, recent studies have shown that diet may also play a part in causing back pain.

Eating a varied diet with sufficient vitamins and nutrients can play a role in reducing back pain. Obesity and persistent pain are often linked. This is thought to be due to a number of factors; increased biomechanical stresses, increased inflammatory markers and reduced exercise levels. Losing weight steadily through controlling diet and increasing exercise levels can be beneficial when tackling back pain.



### Useful links:

**Health Improvement Coaches:** <https://www.wiltshire.gov.uk/public-health-improvement-coaches>

**Smokefree Wiltshire:** <https://www.wiltshire.gov.uk/public-health-stop-smoking>

**Healthy Us:** <https://www.wiltshire.gov.uk/public-health-weight-adults>

## Graded Exercise

Often there is a concern that exercise will cause more pain. Unfit and under used muscles can ache more than developed muscles when we start to exercise, but this will improve with practise. It is therefore very important to start slowly, and build up exercise levels gradually, to minimise any discomfort. Research shows regular exercising can actually decrease pain and discomfort. It prepares the body for other activities by strengthening weak muscles, improving exercise tolerance and improving mood and well-being. Exercising results in the release of hormones such as endorphins and serotonin from the brain. Endorphins and serotonin trigger a positive feeling in the body and endorphins act as analgesics, like a natural painkiller.



### Top tips:

- ❖ Make it fun
- ❖ Meet with others if lacking motivation.
- ❖ Do something that you enjoy
- ❖ Do something that is affordable.
- ❖ Pace exercises – don't start with too many repetitions
- ❖ Build up the exercises

## **Stress management**

Stress is typically defined as a state of affair involving a demand on the physical or mental energy of an individual. Stress can present in many forms such as worrying about pain, work commitments, family pressures, financial pressures etc.

When an individual is stressed, low in mood or anxious the reaction in the body is physical as well as mental. Stress increases the production of adrenaline and cortisol in the body's system. Adrenaline heightens the body's awareness to stimulus, both good and bad. It effectively puts the body on 'high alert' and this can amplify the pain response. Cortisol is often referred to as the stress hormone. Higher levels of cortisol in the bloodstream causes raised blood pressure, difficulty sleeping, fatigue and reduces the body's ability to cope.

It is therefore important to recognise and deal with any stressors that might be contributing to overall pain levels. This can be done in a variety of ways such as enjoying hobbies, meeting friends, reducing workload, practising relaxation and incorporating 'me' time into a day.

Some resources that might be helpful for managing stress are listed below:

**Pain management** <http://www.pain toolkit.org/>

**Cognitive Behavioural Therapy self-help**

<http://www.getselfhelp.co.uk/selfhelp.htm>

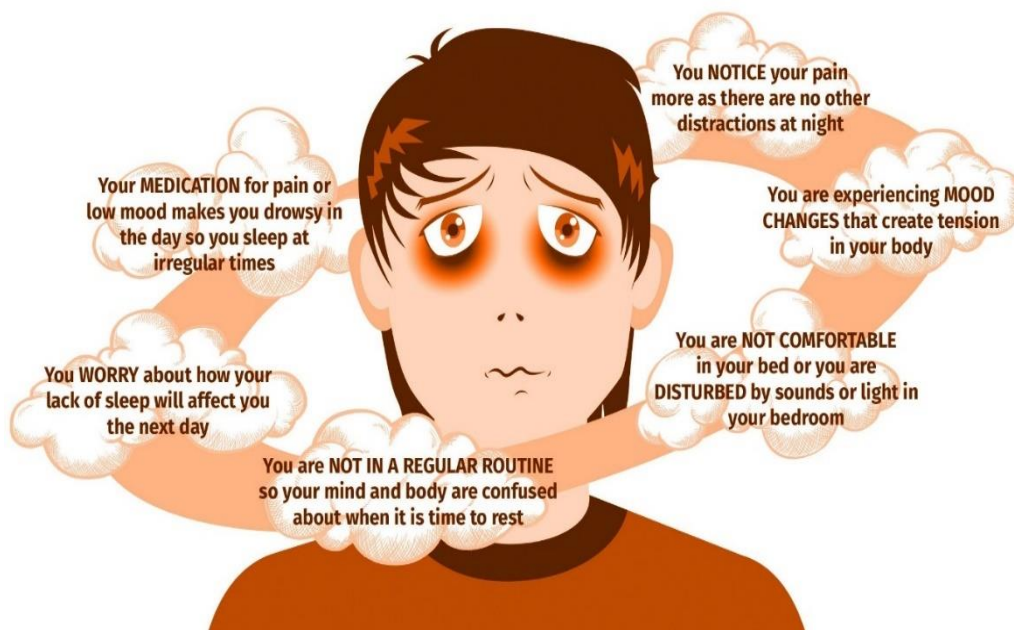
**Mood juice** <http://www.moodjuice.scot.nhs.uk/>

**Wiltshire IAPT** (Improving Access to Psychological Therapies)

<https://iapt.awp.nhs.uk/wiltshire-iapt>

## Good sleep hygiene

Good sleep patterns are medically referred to as good sleep hygiene. Often people with persistent pain have difficulty getting to sleep or staying asleep. There are many factors that can contribute to broken sleep such as irregular daytime and evening routines, pain, worrying and medication. This can lead to a bit of a cycle, as poor sleep can contribute to daytime fatigue, poor memory and concentration, lower mood, and lower motivation levels. All of these can negatively affect pain levels.



**There are things that can improve sleep. Here are 5 changes to improving sleep hygiene:**

1. Improve daily routines – try to stick to a similar routine during the week and at weekends. Try to avoid napping during the day. If a nap is essential, try to keep it to 15 mins maximum to encourage the need to sleep at night.
2. Increase activity levels – try to gradually increase activity levels in the day. Choose activities you enjoy and try to get outside.
3. Monitor food and drink – avoid caffeine, alcohol or main meals late in the evening. Try having main meals earlier in the evening.
4. Night-time routine – develop a wind down routine and do it consistently every night. Only get into bed when it is time to sleep. Make sure the bedroom is dark and the temperature is comfortable.
5. Encourage the mind and body to rest. Try varying pillow positioning to make lying more comfortable. Practise relaxation. Try not to worry if you wake during the night and continue practising relaxation techniques.



## **Relaxation**

Learning relaxation techniques can be a very useful skill to help cope with and manage pain. Anxiety, tension and stress can make the pain worse. Also, the pain itself can lead to anxiety, tension and stress, so it's a vicious circle. We can try and break this cycle using relaxation.

It sounds easy, but quite often, learning to properly relax takes time. It requires regular practice, ideally every day, and gradually it should become easier.

## **Avoid static or repetitive dynamic postures**

A lot has been said about posture and work positioning over the last 50 years. However, there is little evidence to show that these are causative of low back pain. Several large studies have indicated that there is no one ideal posture to be aiming for. It is more important to find a position which suits you, change position regularly and to keep generally active. For example, it might be helpful to set a timer to remind you to have a short walk or change position regularly.

Lifting and loading the spine has also traditionally been thought to contribute to causing low back pain. However, resistance activities like lifting can improve strength, balance, cardiovascular health and good bone health. The key here is to consider your physical ability in relation to the task at hand. For example, a person who works in a manual job might need a high level of general strength to avoid injury. Injuries are more likely to occur when we suddenly change our activity levels. Our bodies often respond well and adapt to graded increases in activity. As an example, if you have not done any gardening all winter and did not substitute this with another activity to keep you strong, it is generally not a good idea to do a whole day of digging on the first day of spring! We would recommend a gradual return to activities which your body is not used to.

## **Medication**

There are a variety of medications which work on different parts of the pain pathway. In some cases, pain medications can be an effective part of the treatment for persistent pain to help regulate or normalise the pain pathway. This, in turn, can enable more comfortable movement, higher activity levels and assist with exercising with less pain.



## Managing set-backs

Occasionally 'flare-ups' or 'set-backs' with back pain can occur. These can be frustrating and disappointing, but it is important to try not to be too disheartened. A flare-up should be temporary and will settle down. If you have a flare-up, firstly try not to panic! If the pain is severe take pain medication as it's been prescribed and keep any bed rest to a minimum – no more than 48-72 hours. Consider implementing strategies such as relaxation, pacing activities and changing position regularly. Remember that flare-ups are not just physical. A flare-up of pain can be triggered by external circumstances such as stress or lack of sleep. During a flare-up, unhelpful thoughts such as "this is awful", "I can't cope", "I am back at the beginning" may develop. It is important to try and manage these thought patterns. Flare-ups are normal and are managed well if there is already a plan in place of management strategies during a set-back.



## Where do I go from here?

Consider making small changes and try to stick with them.

- ❖ Continue to improve fitness
- ❖ Move regularly
- ❖ Try different techniques for relaxation
- ❖ Look at different pacing strategies
- ❖ Set goals to work towards
- ❖ Learn more about pain and management strategies
- ❖ Reduce stress levels

These are what research has shown to be most effective for long term improvements in back pain. Please speak to a Physiotherapist if you would like any assistance or advice with implementing these strategies

## Further resources

**Prof Lorimer Moseley “Why Things Hurt”:**

<https://www.youtube.com/watch?v=gwd-wLdIHjs>

**Explain pain in less than 5 minutes:**

[https://www.youtube.com/watch?v=C\\_3phB93rvI](https://www.youtube.com/watch?v=C_3phB93rvI)

**Tame the Beast:** <https://www.tamethebeast.org/>

**Government guidelines for physical activity:**

<https://www.gov.uk/government/collections/physical-activity-guidelines>

**Live well with pain:** <https://my.livewellwithpain.co.uk/>

**Smoking cessation:** <https://www.wiltshire.gov.uk/public-health-stop-smoking>

**Eatwell:** <https://www.nhs.uk/live-well/eat-well/food-guidelines-and-food-labels/the-eatwell-guide/>

**Relaxation:** <https://www.nhs.uk/mental-health/self-help/guides-tools-and-activities/breathing-exercises-for-stress/>

**Mindfulness:** <https://www.nhs.uk/mental-health/self-help/tips-and-support/mindfulness/>

## Further Information

If you would like to seek the advice of a physiotherapist, there are a number of options within Wiltshire. Please speak to your GP practice about the ways you can be referred or visit <https://wiltshirehealthandcare.nhs.uk/physiotherapy/>

Other useful websites:

<https://www.activewiltshire.org.uk/>

Here you will find information on improving your activity level and details of what is available in your local area.

<http://www.wiltshire.gov.uk/public-health-weight>

Here you will find information about weight management options in your local area.

<https://www.wiltshire.gov.uk/public-health-improvement-coaches>

Health Improvement Coaches work on a one to one basis to support behaviour change and improve health. They concentrate on behaviours associated with ill health including unhealthy eating often linked to obesity, stopping or reducing smoking, sensible drinking, increasing physical activity, building confidence and motivation to change and boosting self-esteem. They also signpost and support clients to access other services and activities where appropriate.

### **Safeguarding**

Wiltshire Health and Care (WHC) are committed to safeguarding and promoting the welfare of children, young people and adults at risk of abuse, including victims and survivors of domestic abuse. We expect all WHC staff to share this commitment and promote safeguarding by implementing WHC policies and procedures, act promptly on concerns and share information appropriately.

If you or your carer have any concerns regarding a child or adult's safety, please phone Wiltshire Safeguarding Team on 0300 456 0111 (Adult) or 0300 456 0108 (Child) (9am – 5pm Monday - Friday) or please call 999 if you feel they are in immediate danger.

### **Patient Advice and Liaison Service (PALS)**

If you have any questions, or concerns, suggestions or compliments about our service, please speak to a member of staff.

This information sheet is available in other languages and formats. If you would like a copy, please contact us on 0300 123 7797 and [whc.pals@nhs.net](mailto:whc.pals@nhs.net)

### **Patient and Public Involvement**

We value your opinions which will help us to further develop our services.

If you wish to provide feedback or get involved in our patient participation groups, please email the Patient and Public Involvement Officer at [ask.wiltshirehealthandcare@nhs.net](mailto:ask.wiltshirehealthandcare@nhs.net) or telephone 01249 454386.