



**Wirral University
Teaching Hospital**
NHS Foundation Trust

Spinal Rehabilitation class

Patient Workbook



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Introduction

Why is this the best treatment for your back pain?

Traditional approaches to treat back pain have included 'hands on therapy', such as massage or acupuncture. You may have tried some of these treatments in the past. However, as our knowledge of back pain has improved, we now know that these traditional treatments often do not help in the long term. Since back pain often reoccurs over time, treatments that have a long term benefit are important. Therefore, the Back Skills Training programme focuses on teaching you about your back pain, and providing you with a range of skills and tools that you can use to manage your back pain over time. The Back Skills Training programme has been extensively researched, and has helped a large number of people to reduce their low back pain and improve their quality of life.

What do I have to do?

In order to get the most out of the programme, you should try to:

- Come to all 4 sessions
- Ask anything you want
- Do the home exercise programme
- Give activities at least a two-week trial

Goals

Goals give you motivation and something to work towards. Think of things that you don't do as much as you would like to or things that you have stopped doing completely.

How to set goals - some useful suggestions

1. Chose a meaningful goal that will improve your life
2. Be realistic about what you can do, and set a deadline for doing it.
3. Break down goals into small steps that you can do
4. Write goals down
5. Reward yourself when you succeed
6. If you don't achieve your goal, learn from this; try breaking the goal down into smaller steps and measure your baseline again.

A goal needs to be **SMART**. Here is an example of a **SMART** goal:

Specific — walk half a mile twice a week on flat ground

Measurable — can time yourself to monitor progress

Applicable —this takes you to a shop and back

Rewarding —able to go and buy what you wanted

Timed —to be achieved in 2 months

Once you have worked out your goal using the **SMART** guidelines you will need to plan how you will reach the goal. For example if my goal was to mow the lawn once a week, then how would I break this down into tasks?

- Plan how to put mower away
- Walking a certain distance (example walking a mile)

Some of these steps may need to be broken down further.
Use this sheet to start with your first goal. This should be a goal that will improve your activity.

My Goals

Work out two or three goals that you would like to work towards, these can be related to your fitness, work, or leisure:

1.
.....
2.
.....
3.
.....

Fitness goal

Goal (remember S.M.A.R.T.):

.....
.....

Stages or plan on how to increase:

.....
.....

Baselines

It is important to work out where to start for each exercise or activity. This is called setting a baseline. Once you have worked it out it will help you to start at a level that is comfortable.

How to set a baseline...

- **Day 1:** Think about how much you feel you will be able to do. Try out this amount. Write down how many times you did the exercise or for how long you did it.
- **Day 2:** Think back on how day 1 went. Change the amount if you need to, that is if it was easy try a little more, if it was difficult do a little less. Write down how much you did.
- **Day 3:** Think back on how day 2 went. Change the amount if necessary. See what you can do. Write down how much you did.
- Add together the amount you did on days 1-3 and then divide this by 3.

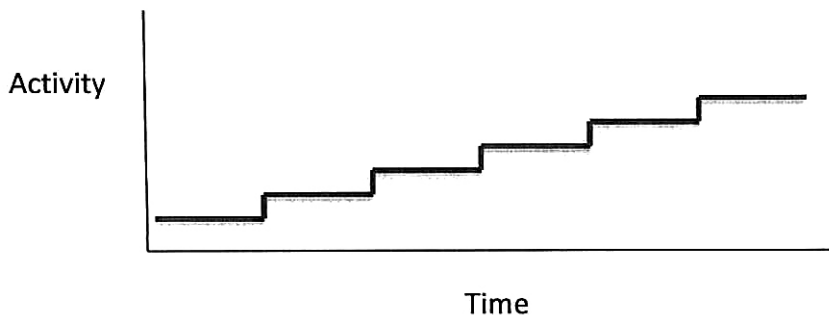
Day 1		Day 2		Day 3		Total
<input type="text"/>	+	<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
Total				Average		
<input type="text"/>	÷	3	=	<input type="text"/>		

Your starting point will be slightly less than your average in case we have overestimated how much you can do. For example if your average was 10 minutes walking, start by doing 7 or 8 minutes.

How to progress on from your baseline

It is important to progress slowly. This will decrease the chance of overdoing it and having a pain flare-up.

- If you manage to carryout your baseline level of activity most days for 1-2 weeks then you can consider increasing by a small amount. For example, you could increase from 8 minutes of walking to 9 minutes.
- The diagram below shows how to build up in small increases to reach your target



- This slow, steady approach to building up allows your body to adapt to the new activity
- If you experience an increase in pain after you have increased your activity level you could consider doing the following things:
 - o Go back to the previous level and stay there for a little while longer before increasing again
 - o Go back a little so that the increase wasn't as much
 - o Stay at the increased level a little while longer to see if your pain settles down (you may choose this option if you think the increase in pain was unrelated to the increase in activity)

Tips on sleeping

Tips on sleeping link:-

www.nhs.uk/every-mind-matters/mental-health-issues/sleep

Tips on Medication

- There are many types of medication that are prescribed to people experiencing back pain. e.g. pain killers, mood modifiers, sleeping tablets, muscle relaxants, and anti-inflammatories
- They can be a useful tool in the management of your back pain in order for you to be able to do more
- In general, people find that taking the full-recommended dose can be more effective. Also, if you wait until the pain is very high before you take anything, it may not work as well as if you take it earlier on. Try experimenting with this to find out what works best for you.
- In general, painkillers do not allow you to hurt yourself without knowing
- Not all medications suit everyone
- Sometimes medications can cause side effects such as: constipation, odd feelings, sleepiness, over alertness
- Consider reducing or stopping medication during good spells in discussion with your doctor
- If the side effects outweigh the benefits in pain relief, or if a medication just isn't working for you then discuss this with your doctor who may advise you on coming off the medication or be able to suggest you try an alternative.

Pain

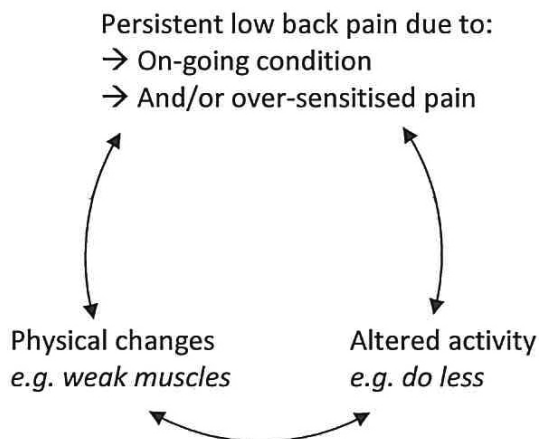
- Pain is a very valuable and necessary thing as it is part of the body's protective system
- Short lasting pain usually acute has a specific source and is limited as to how long it goes on for. It makes us protect the painful part, for example a sprained ankle —which is helpful
- Chronic long lasting pain is an on-going nuisance and is no longer helpful, it lasts for over 3 months and usually has no clear source or cause
- Having pain that stops you doing things that you enjoy is linked to low mood, decreased activity and fitness, and also feelings of frustration
- Research suggests that pain can persist due to changes in nerves which carry messages from our body to our brain about potential problems:
 - Nerves can fire on their own - so people can experience pain when doing nothing
 - Nerves can become over-sensitive so even light touch can be felt as pain
- It is our brain that decides, 100% of the time, whether we feel pain as a result of the messages it is receiving. In on-going pain the brain can become overprotective and we can experience pain with movements or activities that are not harmful, even in a stiff and weak back. This can be likened to an oversensitive smoke detector that goes off all the time
- The changes that occur to the pain system can be improved
- If we understand and manage our pain better, it can reduce over time

Effects of inactivity and benefits of exercise...

Effects of Inactivity	Effects of Activity or Exercise
Weak muscles	Strengthen muscles
Stiff joints and muscles	Improved flexibility
Less fit - feel tired	More energy
Feel tense - muscles knot up	Wind down or relax
Feel fed up	Get a natural high – endorphins, bodies own painkiller
Put on weight	Loose weight

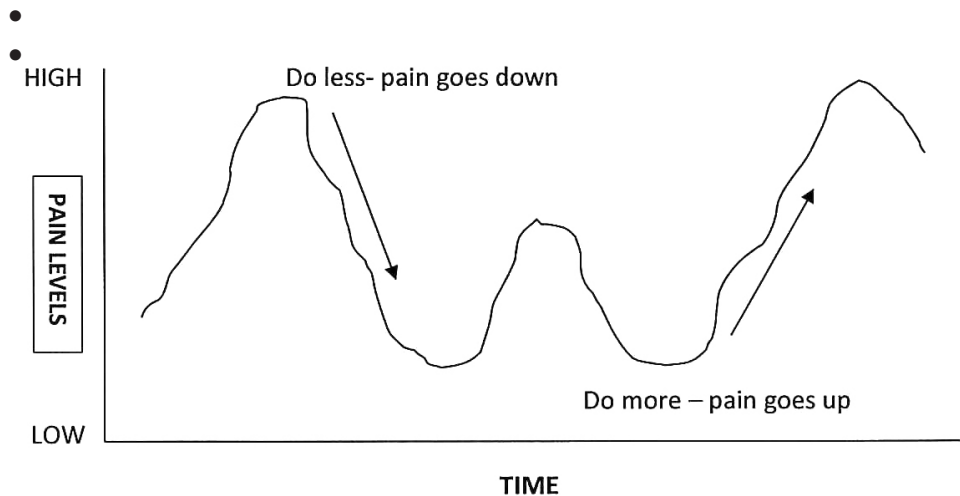
The flow diagram below shows how pain causes changes in our activity levels, usually by decreasing them. This causes physical changes such as stiff joints. When we are stiff and weak our spine's hurt more.

Breaking this cycle is important, you can do this by getting more active and by managing the pain better using the skills this course will teach you.



Pain fluctuations

- Pain often fluctuates up and down known as flare ups
- As pain increases we tend to do less and the pain reduces
- As pain reduces we then do more, causing our pain to go up again, as shown below:



- Often the opposite is true as well - the less we do the more pain we get
- When pain goes up and down it is difficult because it is hard to say what we will be like from one day to the next. This makes planning our lives very difficult
- Getting stuck in over activity / under activity cycles can lead us to doing less over time
- Avoiding these ups and downs is helpful and is called pacing

Pacing

- Pacing means breaking up activity so that the day is divided into periods of relative rest and activity. It will help you manage the day better by keeping to your planned target
- Pacing is harder than it looks because we don't tend to spread our activities and rest out evenly in this way. We would naturally do more when we had the energy and less when tired
- Pacing also means doing the activity whether feeling good or bad, not doing too much and not doing too little. The aim is keep an even level of activity over the day and week
- On a good day; you should not wait for pain to tell you when to stop. You should still stick carefully to your plan and avoid doing too much
- On a bad day try to keep going as planned but you could try to break up the activities more/ or do less.
- There are always times when you may wish to knowingly over-do it. For example, to attend a special event. This is OK. Over-doing it is unlikely to be harmful, even if you have to cope with increased pain for a while afterwards

Guide to pacing

Here are some ideas on how to pace. An example of house cleaning is given.

- **Prioritise:** What are the most important things that need to be done? What has to be done straight away and what can wait until another time
Example: House cleaning, living room first as friends coming over
- **Plan:** Try to plan the activities so those difficult ones are spread out and not done all in one go. What order is the best? Do you need help? Can you do them in a different way? Can you 'chunk' activities into those done in different positions? *Example: try spreading the vacuum cleaning out over several days. Could you sweep the kitchen with a brush, as it's lighter than the vacuum cleaner?*
- **Tolerance level:** Think about your baseline level for each activity of your plan, that is, how much of the activity can be done without overdoing it
Example: try and find the middle ground between what you would do on a good and on a bad day
- **Evaluate:** Try to stick to your plan. After several days carrying out this plan you should look back and decide if any changes need to be made
Example: if you had no problems with only vacuuming one room you could try doing two next time to see if this was ok

- **Have you ever done too much knowing that it's going to cause a flare-up? Or felt so fed up by the on-going pain that you don't feel like trying and so give up on certain activity?**
- Research shows that when we are faced with a task or a situation it is the thoughts that we have about the situation that produces emotions (feelings), which then drive what we do (our actions or behaviour). We don't seem to 'act on impulse' even if it feels like that sometimes
- The way that we think in a situation is different for every one of us and depends on what has happened to us before or what we have learned from others. For example if someone had arranged to meet a friend at a café at a certain time and they didn't turn up, he or she could think 'something's happened'. This would make them feel worried and they might act on this by trying to phone them. Another person in the same situation may think 'they have forgotten' which could make them feel irritated and they would act by not waiting and walking off
- We could say that if our behaviour has been unhelpful, then the thought behind it was an unhelpful thought. In this way, it is worth tackling unhelpful thoughts about our spinal pain, to prevent us managing it in unhelpful ways
- **We need to bear in mind that our thoughts don't always reflect what is really going on – they can *just* be thoughts we are having**

- Unhelpful types of thoughts about spinal pain could include:
 - **Black and white thinking:** I can't do it the way I used to so I might as well not bother
 - **Catastrophising:** I can't cope with the pain any more
 - **Should/Must Statements:** I should be able to vacuum clean the whole house
 - **Jumping to conclusions:** My back always plays up when I sit in a restaurant (only been once). They think I'm making it up
 - **Mental filter:** Arthritis gets worse over time
 - **Critical self:** I've got myself into this mess. Even my thinking is wrong!

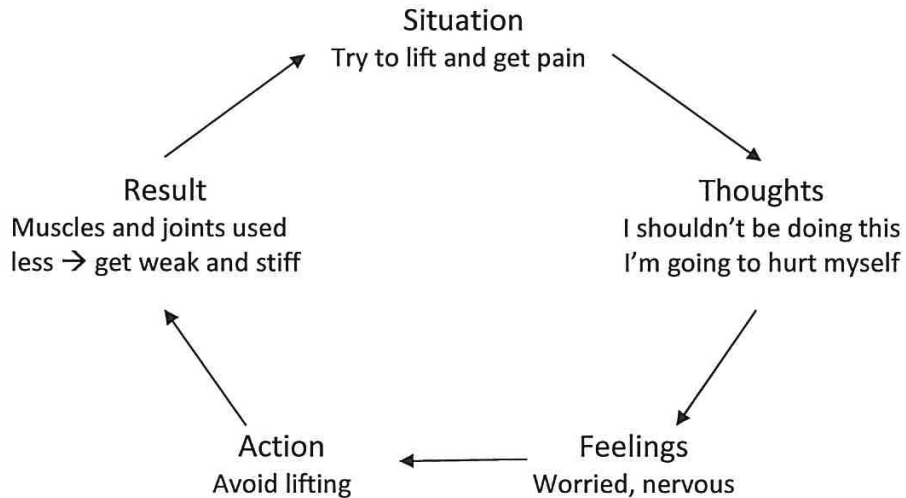
The table below gives some examples.

Situation	Thought	Feeling	Behaviour/ action	Answer Back Thought
Seeing the hovering needs doing	I can't do it I can't risk it	Frustrated Nervous	Avoid hovering Ask someone else to do it	It will be difficult but I can do it if I stick to my plan to spread it out
Wake up with pain	There's no point, I'm no better I might as well give up	Fed up	Spend day in bed Eat chocolate!	My pain is the same but I'm doing more I'll get on top of this like I have other things before
In the garden, the lawn needs doing	I should be able to do this I used to do the whole lawn in one go	Annoyed	Carry on & do the whole lawn (cause flare-up)	I'll do it in my own time It doesn't matter if it doesn't get finished today
G.P says he can't do anything to help	It must be all in my head. I should just push through it.	Low Determined	Don't tell anyone when I'm suffering	I know (and I've been told) this is a real problem that I need to learn how to Manage.

Situation	Thought	Feeling	Behaviour/ action	Answer Back Thought

Avoidance of movement or activity...

When we've hurt our backs there seems to be typical movements or activities that cause pain when we do them. As a result we naturally avoid doing them in the early stages as it hurts too much to ignore it. When we've avoided something for a long time, we can get into this vicious cycle:



The weakness and stiffness that results from generally avoiding a movement can actually increase the amount of pain we feel when we next try to do the movement or activity – a vicious cycle.

Relaxation

What is relaxation?

Relaxation reduces tension. Tension is our bodies' reaction to stress. This can make your pain feel worse. Relaxation can cut into the horrible cycle of pain, tension, more pain, more tension, and can stop pain getting worse.

Do I need special equipment?

The best relaxation skills are those you can use anytime, anywhere and in any position. For example, if you are stuck in traffic and feel your muscles tensing, then you need to be able to start your relaxation skills sitting down. The best way to become good at relaxation skills is to practice them at first when your pain is not too bad so that when the pain is worse you know what to do.

Why do I find relaxing difficult?

Most people find relaxing difficult, as it is not something that we normally do. We often feel that we don't have the time to relax or that spending time relaxing is a waste of time. For this reason 'relaxing' is often linked with being 'lazy'. You need to make time for yourself to practise relaxation, as it is an important tool in managing your pain.

Here are the first two skills for you to try out...

a) Deep Breathing

Deep breathing is one of the easiest relaxation techniques to learn. When we become stressed, one of our body's fight or flight reactions is shallow, rapid breathing. Taking deep, slow breaths is one way we can turn off this fight or flight reaction. Deep breathing is the starting point for many other relaxation exercises.

- Wherever you are, put one hand on your tummy, just below the rib cage
- Slowly breathe in through your nose. You should feel your tummy rising and expanding outwards
- Breathe out slowly through your mouth, emptying your lungs completely and letting your tummy fall. Some people find saying 'relax' either in their head or out loud as they breathe out is helpful
- Make sure your shoulders are relaxed; you can check this by pulling them up to your ears and then dropping them down
- Repeat the tummy breathing several times until you feel relaxed

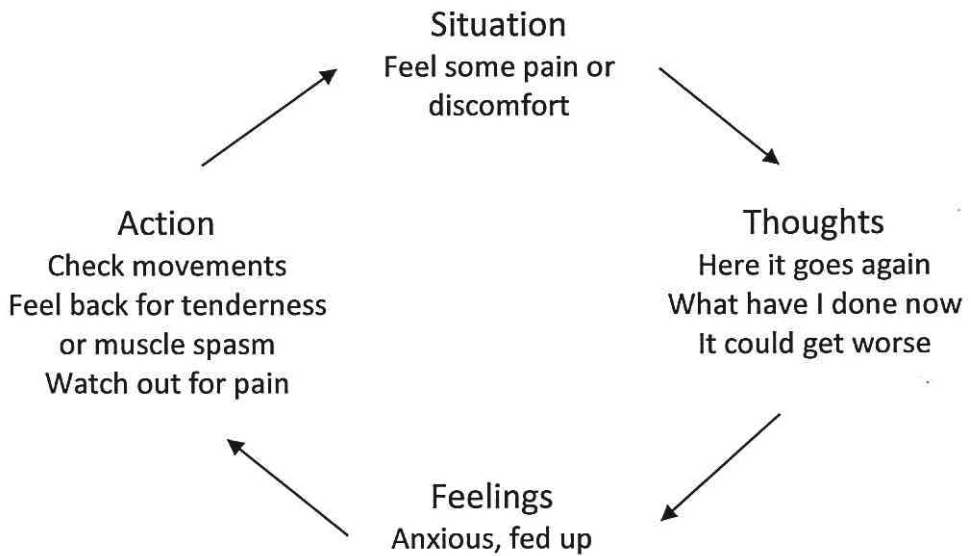
Mindfulness - NHS (www.nhs.uk)

<https://www.headspace.com/>

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

Worry about pain and its effects...

It's very easy to get into vicious cycles when we are in pain. Another cycle can be described by thinking about how loud a clock sounds when we listen to it or when we are worried about the time. Pain is the same and this cycle is shown below:



Distraction...

Try to think of what ways you currently use to distract yourself, for example watching a good film, reading, a hot water bottle. Are there any other tips that you've picked up from the rest of the group?

Try these out and see how they work for you.

Distraction techniques:

1. _____

2. _____

3. _____

Coping with flare-ups...

What would be a good plan for good spells?

- Progress exercises and goals
- Add new goals
- Reduce medications
- Enjoy yourself
- Plan ahead
- Stay active
- Practice relaxation

What would be a good plan during a flare-up?

- Carry on
- Review baseline
- Review medication
- Set goals
- Relaxation
- Allow personal time
- If possible identify triggers, learn from it and plan for next time. However, often there is no cause.

Personal flare-up plan...

Temporary flare-ups to your back problem are bound to happen sooner or later so we encourage you to work out a plan of how you will cope with these flare-ups so you can put it into practice as soon as it is needed.

When I feel I'm having a flare-up I will:

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Knee Rolling



Lying on your bed/floor
With ankles and knees together, take them slowly from
side to side

Knee Hugging



Lying on your bed/floor
Gently hug one knee to your chest
Then both together to your chest if this feels comfortable

Bridge



Lying on your bed or the floor
Feet hip distance apart
Raise your buttocks off the bed
Lift and lower at a controlled pace

Back Strengthening



On all fours
Draw your belly button towards your spine
Lift one arm out straight in front of you
Repeat with the other arm

Back Strengthening



On all fours on the floor
Draw your belly button towards your spine
Raise one leg straight back behind you and squeeze your
buttock muscle

Back Arching



Lie on your tummy, on your bed or the floor
Elbows bent and hands flat
Push up with your hands and forearms so your chest is
lifted off the floor and your back slightly arched
Your hands and forearms stay flat on the bed or floor
Lower yourself down and repeat

Leg Strength



Using a steady chair for support
From a kneeling position, use your hands and arms
to help you
Get up by pushing from one of your legs and raise
up into standing
Repeat and change to the other leg

Sit to Stand



Use firm chair, and at a height you can manage to get up from
Stand up straight from the seat, use your arms if you need to
Then lower back to the seat with control
You can make this more of a challenge by using hand weights/ different speed to the exercise

Trunk Strengthening



In standing with feet hip distance apart
Secure the resistance band



Pull the band and pull it outwards and away as you turn your body

Trunk Strength



Secure the resistance band
In standing, hip distance apart
Draw the band down and back, keeping your body in
strong steady upright posture

Trunk Strength



Secure the resistance band under your foot
In standing, hip distance apart
Draw the band up and to the side as you reach with your
arm, keeping your body in strong steady upright posture

Stair Step Ups



Use stairs to step up and down the bottom step
Use the handrail if needed

Step Up



Use the bottom step to go up and down
As you step up raise one or both arms upwards
You can progress this exercise by adding a hand weight and repeating the same exercise

Biceps Curl



In sitting

Start with elbows almost straight

Bend and straighten arms

Use a hand weight of your choice for resistance

Shoulder Press



In sitting

Arms out at 90 degrees to the side

Palms facing forwards

Reach both arms towards the ceiling and you raise your hand weight

Bike



Wall Squat



Using a gym ball

Stand away from the wall

Ensure the ball has good contact with the lower area of your back

Lower down the wall with your legs, keeping your spine upright and good contact with the gym ball

Squat with Weight



Standing with feet apart
Weight / kettle bell of choice in your hands
Draw your belly button to your spine
Squat down
Directing your body weight through your heels

Weighted Carry



From a seated position
Choose 2 weights to carry



Stand up and walk across
room/gym
Sit when back at the
chair, repeat

Balance



Stand near work top counter

If balance is steady in walking position (feet apart)

Then place feet inline

Use your arm to steady you if needed

Hold 10 seconds, building up to 30 seconds repeat 3 times

Then progress without using your hand for support, when balance is steady

Finally, when able to balance with minimal or no arm support, then heel-toe walk, 10 steps forwards, then turn around and walk back in other direction

Treadmill



Week	1	2	3	4	5	6	7	8
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Sunday								

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Please contact 0151 604 7289 if calling from outside the
Hospital and x2761 if calling from inside the Hospital.



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