

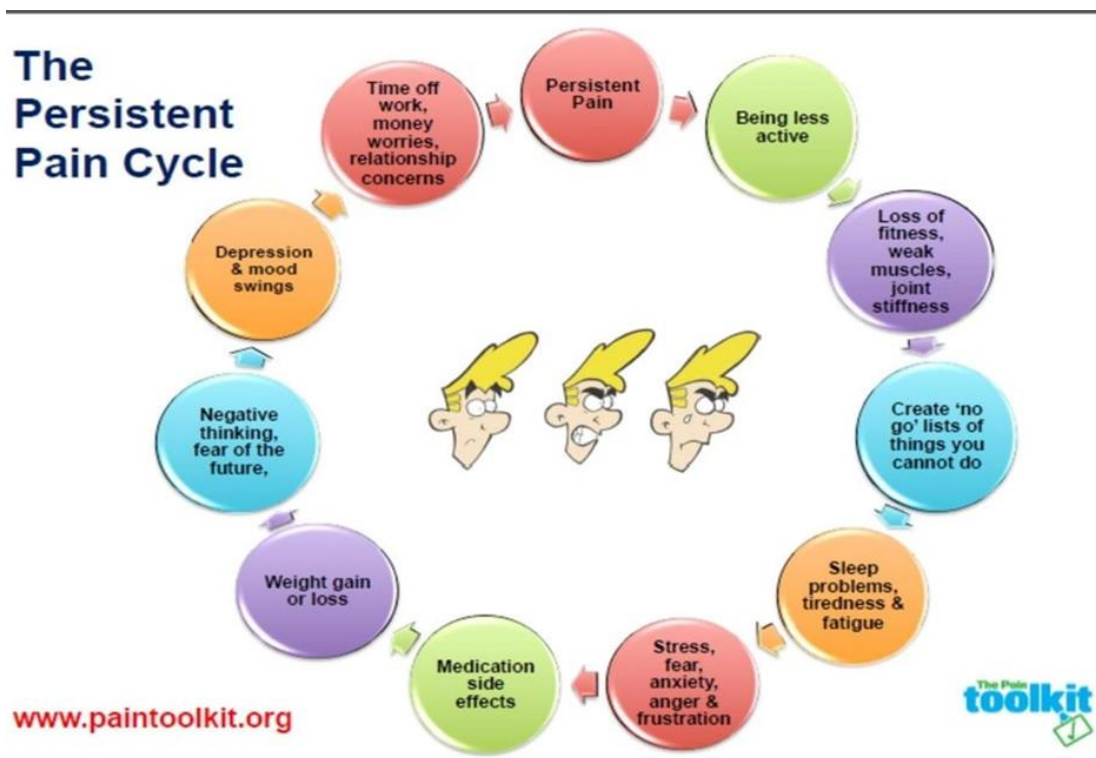
Patient information

Exercise and posture

Movement matters

It is very common for people that have been in pain for a long time to have seen lots of different therapists and have had lots of different opinions regarding why they have pain and what is wrong. Conflicting information can be confusing and frustrating.

A common message people receive is that something is wrong, out of place, weak, or poor. Therapy is often geared at fixing the problem and maybe even stopping doing things until this has been achieved. For a lot of people, especially those with long term pain conditions this is generally not very effective at all, and is often counter-productive. This persistent pain cycle image shows why this can happen. Becoming inactive due to pain or fear of movement is understandable but is unhelpful and can result in other problems.



The aim of exercise is to regain function and participation in some of those activities you once enjoyed and have stopped due to pain, to regain control of your health and overcome the fear of movement causing pain, or someone telling you to stop as it could be a cause of your pain.

It is key to remember that your alarm / protection system is very good, too good, and is triggered too soon and too easily.

It is important to say that you should not “crack on regardless”, as you may find your symptoms will flare up because it could be too much too soon, but understand that you can adapt, modify and try things slowly, building up gradually to head towards your goal.

You are strong and can adapt

A lot of people in pain will have been told they are weak, tight or unstable and for the vast majority of people, this is untrue or partly true and doesn't correlate well with pain.

Humans are adaptable: we adapt to our environment, experiences and the activities we do. For example, frequent tennis players have more muscle mass on their dominant side which is through using it more and adaptation. We also adapt to pain. We can adapt to pain negatively, however, we can also adapt to pain positively. All humans can adapt no matter what their circumstances are. Physical activity and things that make you stronger can be helpful for pain. However, they are not only helpful in that they improve strength, they also improve your self-efficacy, resilience and belief in yourself.



When you are in pain, your tolerance for physical activity may change. Your nervous system becomes more sensitive and protective, so activities that once were fine to do become harder and more painful and the temptation is to then avoid things. Over time this can lead to gradual deconditioning, lack of fitness which in turn increases your sensitivity of the nervous system and reduces the resilience of your body.

To increase your tolerance to aggravating activities, the body requires it to be stressed physically however this needs to be a slow and gradual increase to improve your physical condition and reduce or at least maintain your levels of sensitivity. You may find that over time you will be able to do more despite your pain.

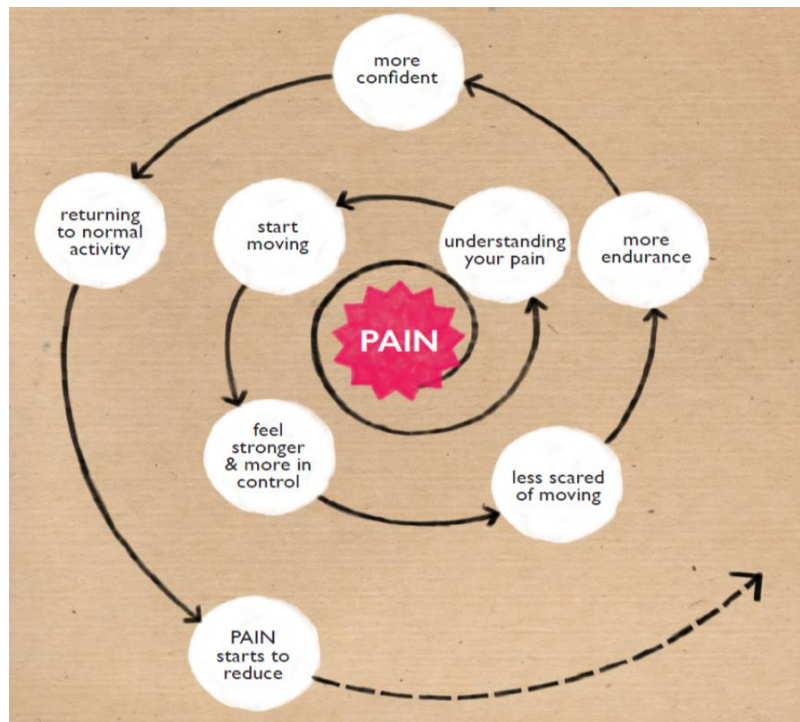


Diagram from Understanding Persistent Pain, how to turn down the volume on persistent pain, Department of Health and Human Services, Tasmanian Government. (2014)

The fear of movement

Under a few circumstances not moving is good because there is an acute injury where some rest will help you heal, for example a broken limb. But after a time, the injury heals and movement is actually good, it promotes healing. But for some they can still fear movement. After a while that lack of movement or the fear of pain or movement can increase your sensitivity and turn up your level of protection. Then you can get stuck in a sensitised system where pain has gone past its useful and protective stage.

Avoiding meaningful activities, like hobbies or time with friends, can increase your sensitivity by increasing social withdrawal, a depressed mood or sense of hypervigilance. Which could mean that you just don't trust your body anymore to be strong and robust and you feel it needs protecting.



Catastrophising

When we catastrophise we tend to see the worst possible outcome and then we tend to focus on pain to a larger degree. Being worried about things is a normal and helpful response to protect ourselves. However, with catastrophising we worry too much and in turn this catastrophising can sensitise us and can amplify our pain experience.

Persistence coping

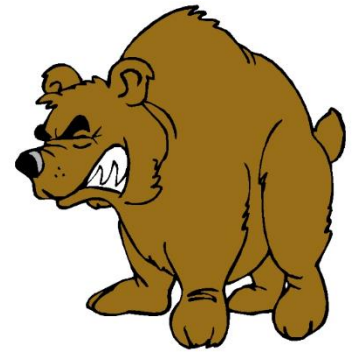
“no pain, no gain”

“grin and bear it”

These are examples of thoughts that involve persisting or pushing through in the face of pain. This can be helpful initially for some. It's normal to have pain and sometimes we want to keep pushing through pain to do the things that are important to us. However, because we become very efficient at sensitising to pain, there is a role for stepping back sometimes by modifying your activity and letting things settle down.

Poke the bear, don't punch it!

Persistence copers tend to take a good thing like being active but just do it too much. Like with many things, we want to find the appropriate balance between avoidance and persistence.



Graded exposure to activities or movements that aggravate

You might be avoiding the movements that you find painful, fearful or uncomfortable. Avoiding them can even make you more worried and further sensitise you. To address your worries, you need to try and slowly expose yourself to those movements, and hopefully turn down the level of protection and reduce your buffer zone. You can adapt and change your response to movement.



First you need to identify a movement you find sensitive, or something that you want to do, then consider what is stopping you from doing this activity. Then we want to slowly start doing this activity. Try exploring with the following (adapted from Recovery Strategies):

- Slowly start doing the movement to the edge of discomfort
- Back off and evaluate how you feel
- Go back to the edges of discomfort and wait, consider what you are feeling
- Breathe, relax your muscles when you are at the edge of discomfort, can the discomfort decrease?
- Repeat for as long as you feel able to tolerate, start small and build up, do it little and often in the day
- Keep doing this if you have no large flare ups

- Poke into discomfort for longer periods

Another option to try could be modifying the painful activity:

- Change the movement that hurts in some way, for example, if standing and bending hurts then start to do this lying down on your back or stomach, or perform it sitting
- Relax, add in an image that you are fluid and loose to try and ease tension
- Modify any way you want and see if it changes the pain
- If the pain changes, try to do the movement without the modification
- Start slow and slowly build up
- Combine with the previous technique



You can try to move with less pain (after a modification) or you can move with pain but it just feels less threatening to you. A success here can be moving with pain but not having a large flare up the next day.

What exercise is best?

There is no one type of exercise that is best for any given pain condition. The best exercise is the one that you feel you are gaining benefit from and enjoy. If you enjoy it you will have greater feel-good response from the chemicals and hormones that



make us feel good. Because of the feel-good effects, you are more likely to continue with it in the longer term and thereby gain greater health benefits. Exercise is individual, what works for one person may not work for another. It is also worth considering activities that are not traditionally thought of as exercise:

- | | |
|---------------|---|
| • Dancing | • Hula hoop |
| • Games | • Gardening |
| • Kite flying | • Playing with kids / grandkids outside |

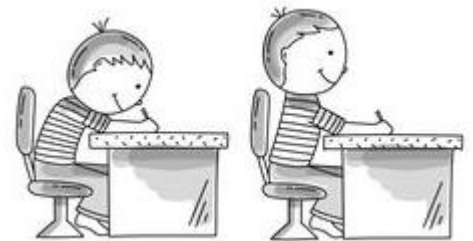
Plus many more

Exercise can be anything that gets your body moving, and ideally makes you a little short of breath.

Posture and body mechanics

A common therapeutic approach has been, and still remains for some, to teach everyone with complaints of low back pain to tighten their abdominals especially when lifting or carrying anything. Many people do experience decreased pain, which is a good thing however pain often leads to excessive protective tension. So, for some people, tightening abdominals with activity may promote even more tension which may increase stress and discomfort to a greater degree. Increased tension can affect the fluidity of movement, so movement generally becomes stiffer and harder and less free.

Most of us at some point have been told to sit up straight, or you will hurt your back. While sitting up straight isn't bad, posture is less about how we look and more about how we feel. Everyone's body is different, and what feels comfortable for one person will not feel right for another.



The most important factor when sitting is to remain comfortable. Adopt positions that feel good however if you sit for too long in any position you will likely start to feel uncomfortable. So, in fact the most important message is movement, get up, stretch, take a walk, don't sit for extended periods of time.

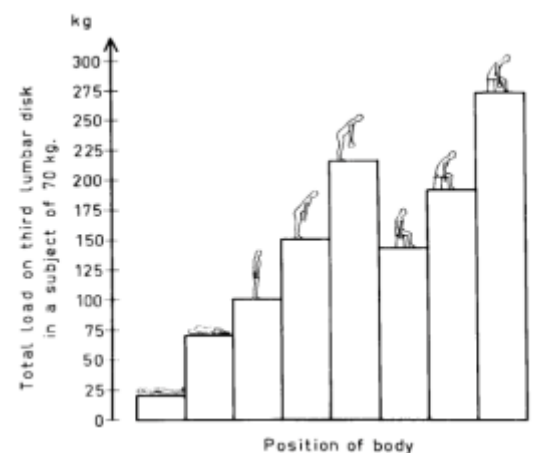
Motion is lotion!

The best posture is your next posture!

Bending

There is a common misconception that bending is bad for your back and you will slip a disc or injure yourself if you bend. This can result in fear or anxiety about bending and to try to avoid it, and as mentioned previously contribute to sensitising of pain. Your back is a very strong structure, it is surrounded by very strong ligaments, muscles and fascia, which can withstand significant levels of force.

In the 1960's Alf Nachemson, was one of the first to publish data on the strength of the human spine by showing how much load is produced in various positions on the third lumbar disc. This is an image of the conclusions of his study. What it highlights is that pressure at the L3 disc increased to 150kg when bending forward and to nearly 225kg when bending forward while holding a 44lb weight. This actually shows how adaptable and strong our spine is however the study was interpreted very differently. It put fear into people's minds that these positions increase pressure and therefore this is a



bad thing and for some these beliefs continue today. Bending may increase pressure but this has not been directly linked with pain.

Manual handling

Manual handling means the handling of things, this can involve lifting, pushing, pulling, supporting, and carrying. There is lots of manual handling advice out there, with the main message being, keep your back straight, don't bend and lift, lift with your knees. With the words "mind your back" being a key message. This all stemmed from research over the years, like mentioned previously, that increased load on the disc was dangerous and reducing load would reduce risk of back pain. Now that's not to say that reducing the load or making the task more efficient is not a good idea. It's the association with lifting with your back bent and causing pain which is not factually correct. Pain is a lot more complex and there are more factors at play other than just your posture or position. Some research has actually suggested that lifting with some bend in the back is actually more efficient than lifting with a neutral or curved / lordotic back.

When considering a manual handling task, it is always a good idea to perform a risk assessment. For smaller activities like picking up a pencil from the floor you probably find you do this subconsciously and automatically. For the bigger tasks like carrying something heavy or awkward, a little more planning may be necessary. This is where TILE can be helpful.

T **Task.** What is it that you are trying to do? Where are you going? Does it need to be done? Is there any help available? Is there any equipment that could help?

I **Individual.** How are you feeling today? Have you got a cold? Are you suffering a flare in symptoms? Are you strong enough to do it? Have you had training (if appropriate)?

L **Load.** How heavy is the load? How big is the load? What is the weight distribution? How does the load move?

E **Environment.** Is it wet, cold, slippery, windy, hot? Are there steps, slopes or uneven surfaces?

Once all these questions have been answered a plan can be made to carry out the task. If you conclude that it is not safe and the risks are too great then the choice not to do it should be considered.

Some basic exercises you could try to begin with...

See how they feel, modify your position, how far you push it, the time you hold it, play around with the exercise to get the best result for you.



Knees to chest

Lie on your back, knees bent. Bring one knee up and pull it gently into your chest for 5 seconds. Repeat up to 5 times on each side.



Pelvic tilt

Lie down with your knees bent. Tighten your stomach muscles flattening your back against the floor. Hold for 5 seconds. Repeat 5 times.



NB: Upper knee should be directly above lower knee.



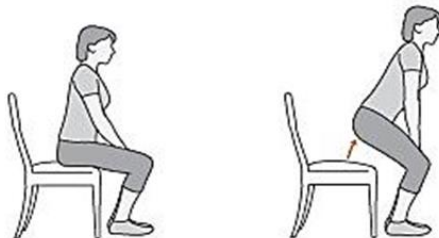
Back stretch

Lie on your back, hands above your head. Bend your knees and roll them slowly to one side, keeping your feet on the floor. Hold for 10 seconds. Repeat 3 times on each side.

Back arching

Take a deep breath in and round your back towards the ceiling. Let your head drop down a little. Then relax the back letting your tailbone rise in the air. Repeat 5 to 10 times, working within your comfort range.





Sit/stands

Sit on a chair. Without using your hands for support, stand up and then sit back down. Make sure each movement is slow and controlled. Repeat for 1 minute. As you improve, try to increase the number of sit/stands you can do in 1 minute and try the exercise from lower chairs or the bottom two steps of a staircase.

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