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Pain Management Guidebook

Empowering people with persistent pain to achieve self-management, through improved knowledge and understanding of pain with the adoption of healthy and sustainable coping strategies

Purpose



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At Guardian Exercise Rehabilitation, we passionately believe in achieving sustainable and long-lasting health outcomes for our clients. In order for this to come to fruition, we work towards self-management in a graded and supportive manner. It is important that this process is underpinned by an improved understanding of pain and key health concepts.

In this guidebook, we explore the topic of persistent pain. We will provide explanations of basic pain principles, through storytelling and metaphor, to help you make sense of your own individual pain experience.

While initially setting the foundations by helping you understand the sometimes complex and multidimensional nature of pain, our purpose is for this book to provide you with **solutions** and a **plan** to achieve your goals! In doing so, we will explore how to adopt sound and sustainable coping strategies and discuss simple tips and tricks that you can implement immediately!

At Guardian Exercise Rehabilitation, we see our Physiotherapists and Exercise Physiologists as Tour Guides, and you, the client, as a Tourist. It is our job as a Tour Guide to put you on the right path and show you the sights – and what we ask of you, the Tourist, is to be open to exploring new directions and new experiences.

How to use this guidebook:

While you can use this guidebook on your own, it will be best to use collaboratively with your Physiotherapist or Exercise Physiologist. The reason for this is that sometimes the messages within this guidebook may not make complete sense or you may not totally understand how it could relate to you – and your Physiotherapist or Exercise Physiologist will discuss these messages in a way that relates to you and your own unique pain experience!

Acknowledgements



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MATT DEL BROCCO

Pain Management Guidebook accessible from
<https://thehonestphysio.com/resources-to-download/>

BEN CORMACK

Live Well with Pain eBook accessible from
<https://livewellwithpain.co.uk/>

GREG LEHMAN

Recovery Strategies Pain Guidebook accessible from
<http://www.greglehman.ca/pain-scienceworkbooks>

Resources

<https://www.retrainpain.org/>

<https://www.paintoolkit.org/>

<http://www.pain-ed.com/>

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

Recommended Apps

Curable

- ◆ Pain education
- ◆ Individualised to site of pain
- ◆ Short podcasts and articles that can be accessed at your own pace

Pathways

- ◆ Pain education
- ◆ Articles that can be accessed at your own pace and structured into order of article release

Head Gear

- ◆ Tools and activities to recharge and build resilience
- ◆ Mood journal and tracking
- ◆ 30 day challenges

Headspace

- ◆ Guided meditations that can be personalised for different targets (e.g. stress, sleep, happiness etc.)

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An Introduction to Pain

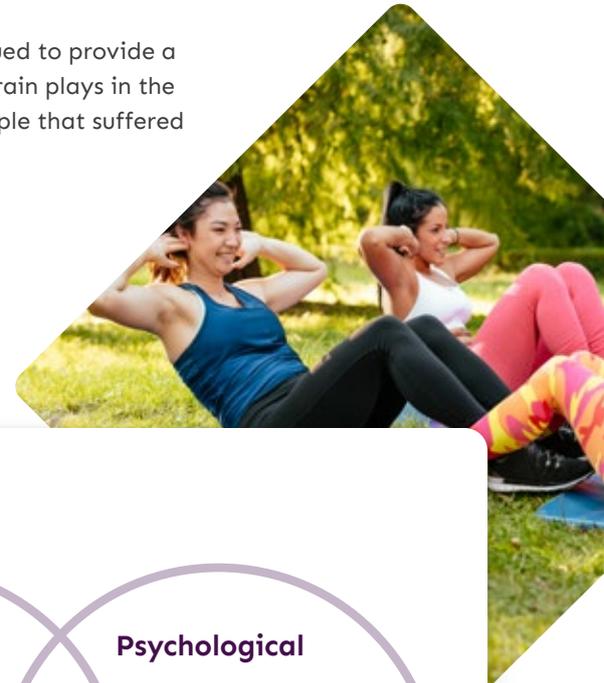


The history of our understanding of pain

The early theories of pain can be traced back to the Ancient Greek era, when Aristotle and Hippocrates, as well as many others, had competing theories around the root cause of pain. However, in 1664, René Descartes theorised that tissue damage was directly proportional to pain. He also expressed a concept of Dualism; an idea of a material body that interacts with an immaterial mind. These concepts have stood the test of time. Many health professionals still use the underpinnings of his theories within their beliefs around what pain actually is. It's a very mechanical concept, whereby pain is always related to damage; and then if we can't find any damage, pain must be in the mind.

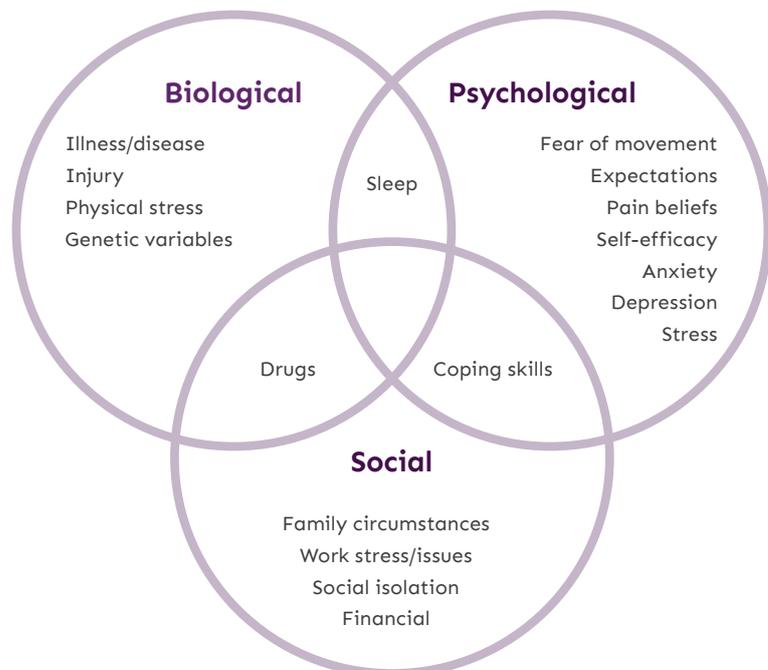
Jumping forward to the 20th century...

There have been many other proposed theories of pain. Most of these continued to provide a mechanical rationale, but slowly start to acknowledge the key role that the brain plays in the pain experience. Beforehand, if no obvious or clear "damage" was found, people that suffered with persistent pain would simply be labelled as psychologically disturbed.



The biopsychosocial model

In 1977, the American Psychiatrist George Engel proposed the biopsychosocial model. It started to look at the biological, psychological and social aspects of health. Importantly, this model acknowledges the complex relationship between all three components. We must avoid separating them and attempt to understand the dynamic relationship between them. Pain cannot simply be either biological, psychological or social – it's an individualised experience based on a complex affiliation between all three components.





Understanding pain

Pain is defined as:

"An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage"

Diving a little bit deeper, but without going into the scientific jargon, pain is essentially an alarm system that is built to protect us.

Imagine putting your hand on a hot stove and not feeling pain...your flesh would burn. Imagine breaking your leg and not feeling pain and then trying to carry on walking...you would risk further damage.

Pain is essential for survival. But, sometimes this alarm system over-does its protective job. This is often the case for those suffering with persistent pain.

Exercise benefits for persistent pain

Evidence tells us that understanding contemporary pain biology can be extremely beneficial for those suffering with persistent pain and is a necessity for comprehensive biopsychosocial treatment.

You're probably thinking "well, all of this is great, but what can I do to help my pain?"

Research shows that there's one thing that builds physical resiliency, self-efficacy, the feeling of control over your pain and a healthier lifestyle... EXERCISE! But it's complex and multifactorial, which is why it's essential to be individually assessed by a Physiotherapist or an Exercise Physiologist.

What type of exercise is best?

Good news! No single type of exercise is more beneficial than another. But to be effective, exercise programs need to be tailored to the individual and based on the multifactorial nature of their pain and the goals of the person.

References:

Booth, J et al. (2017). Exercise for chronic musculoskeletal pain: A biopsychosocial approach. *Musculoskeletal Care*.

Stilwell, P., & Harman, K. (2019). An enactive approach to pain: beyond the biopsychosocial model. *Phenomenology and the Cognitive Sciences*.

What is Persistent Pain?



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You may have heard the terms “acute pain” and “persistent pain”, but what do these terms really mean?

Acute pain

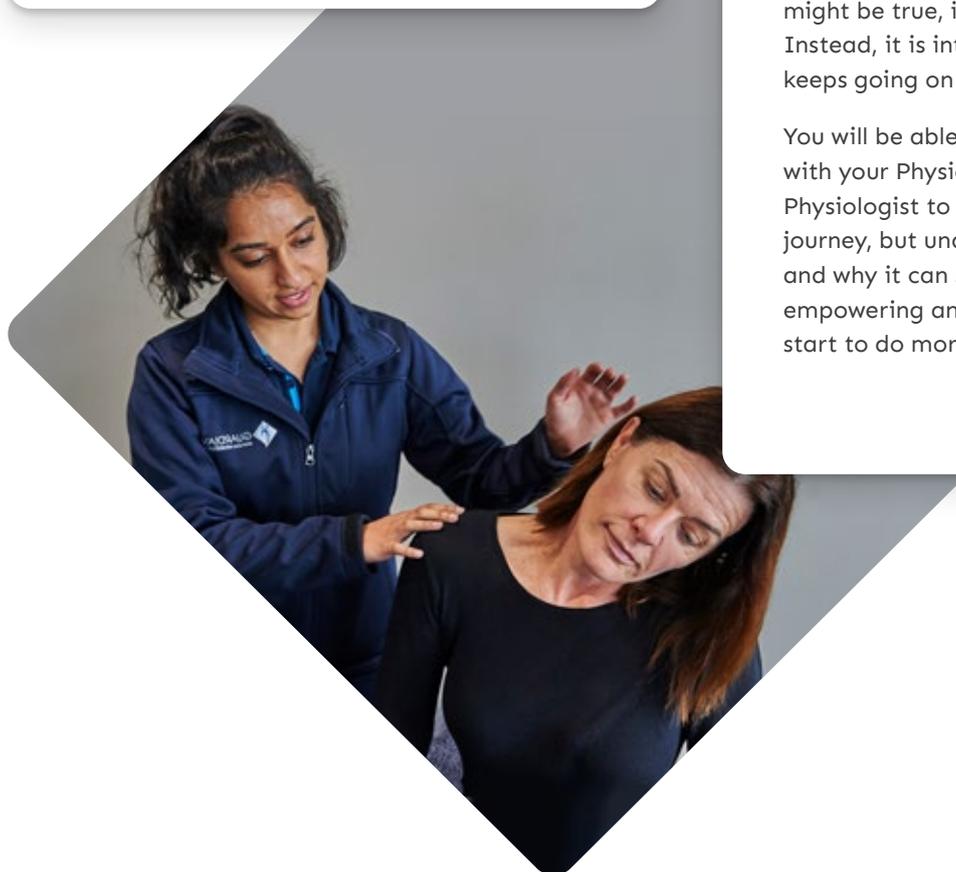
Acute pain is short-term and is generally associated with tissue damage or possible tissue damage. For example, the pain in your ankle that you may feel for a few days or weeks after you roll your ankle would be an example of acute pain. This is clearly a helpful protective response as the pain, swelling and bruising will stop you from running or doing anything else that could cause further damage to your ankle. This pain will then usually settle down over the next few weeks and you'll be able to run and jump once again without a problem. Can you think of a similar experience you may have had in the past?

Persistent pain

But sometimes, the pain will persist past expected healing time, and this is what we call “persistent pain”. This now no longer becomes as much about tissue damage, but more about the sensitivity. Like we explored earlier when discussing what pain is, sometimes the alarm system (pain) doesn't turn off and you experience pain long after any tissue damage has healed. This doesn't mean the pain isn't real, simply that your alarm system has become too good at its job.

Other terms for “persistent pain” also include “chronic pain”. It can be natural to assume that when using the word “chronic”, it means the severity of the pain is worse. And while this might be true, it is not intended to mean this. Instead, it is intended to mean that the pain keeps going on for longer than we expected.

You will be able to work on practical strategies with your Physiotherapist or Exercise Physiologist to help you on your rehabilitation journey, but understanding the nature of pain and why it can sometimes persist can be an empowering and reassuring message as you start to do more physical activity.



The truth behind how pain can persist



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We should view pain as an alarm. Alarms are meant to motivate you to do something to protect yourself. How loud the alarm is, or how many alarms are going off, are not good indicators of how much protection is needed.

Pain is helpful after an injury initially, as it serves a necessary purpose in helping you to avoid loading the injured area too much. However, this protective response can then 'overdo' its job and persist past expected healing time. In these instances, pain is not as helpful. This does not mean that the pain is not real - **all pain is real!** It simply means that your perception has changed, and your body has become used to being in pain. It's almost like a smoke alarm still going off long after the firefighters have put out the fire and gone home.

Think of a sniper in the Vietnam War who has spent years isolated in the jungle, shooting at the enemy - but he's lost his radio. Nobody is able to reach him and tell him that the war is over, so he is still hiding in the jungle. There is no actual danger anymore but he doesn't know that, so his perception is that there is still danger.

There are many potential contributors to why pain is experienced and why pain can persist - such as mental health, poor sleep, fear of movement, and previous experiences.



So, how can previous experiences shape pain?

Imagine you are walking through the bush, and a snake bites you on the leg. You experience agonising pain, but you still make a good recovery and there are no lingering physical effects. Later that month, you are walking along the same bush trail, but this time you are a little more hyper-vigilant and fearful given your previous experience. You stand on a stick, which kicks up and brushes your leg - how do you think you would react to this? The stick is not actually dangerous, but given your previous experience the context has changed, and there is now a perception of danger!

What can I do?

When living with persistent pain, it can be normal to feel down, have a sense of hopelessness, and feel like your body is weak. You can work on flipping this mindset around by understanding that pain is an alarm and that your body is **strong, robust and adaptable**. There are many actions you can take - one being exercise - to expose yourself to stress and allow your body to positively adapt. We have lots of ways to help change the current pain trajectory and calm down the over-protective 'alarm system'. Speak to your Exercise Physiologist to develop a collaborative plan to restructure the nature of your ongoing pain and disability.

References:

- Lehman, G. (2017). Recovery strategies: pain guidebook. Retrieved from <http://www.greglehman.ca/recovery-strategies-pain-guidebook>
- Moseley, L, & Butler, D. (2015). The Explain Pain Handbook: Protectometer. Adelaide, South Australia: NOI Group Publications.

The multidimensional nature of pain



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Given the complex nature of pain, there are many unique factors that can influence a pain experience. While pain management can seem complicated, overwhelming, and perhaps a little frustrating - there can be good news too! If there are numerous contributing factors, there are also numerous ways an Exercise Physiologist can help to manage your pain.

Contributing factors

- ◆ **Tissue** - Have you been told that you have muscle tears or a bulging disc? These factors may be important, but they are rarely the sole contributor to your pain if you've had it for a long time.
- ◆ **Physical Habits** - Sometimes you might 'brace' your core before you bend or lift, because it is commonly taught that this protects your back. There is no strong research to support this. Instead, you might be making your muscles sore and sensitising your nervous system. If you clenched your hand all day, your hand would start to ache, right? And it would feel better to relax, right?
- ◆ **Physical Impairments** - When you do try to move differently, you might be unable to do this because of a lack of strength, balance or flexibility.
- ◆ **Meaningful Activity** - When you are in pain, you stop doing the things you love. Ask yourself, if I didn't have the pain tomorrow, what would I do? Nothing is off limits; you just need to find the right starting point and develop a graded plan.
- ◆ **Lifestyle/Health/Social Factors** - In what areas of your life can you be healthier? Sleep? Stress? Work-life balance? Weight management?
- ◆ **Coping Strategies** - Do you avoid painful movements or push through painful movements? Stopping actions that are important to you can lead to increased sensitivity. Push through actions that aggravate you and you will never get a chance to settle down. You need to find the right balance.
- ◆ **Emotional & Psychological Factors** - Fear, depression, anxiety, financial stress and anger can all contribute to your sensitivity and pain. Reach out for help if needed!
- ◆ **Beliefs** - If you believe that move-ment and load is bad for the body and will cause injury, then you are likely to avoid it - even though we know that movement is good for us. Your beliefs might lead to bad decisions for your pain.



The cup analogy

Consider all of these factors 'stressors', and then consider the amount of water inside a cup as an example of stressors. Sometimes, some or all of the stressors may increase enough for the level of water in the cup to rise until the water overflows; this represents a pain experience. You can then either attempt to bring down the level of water in the cup (reduce the level of stress) or build a bigger cup (increase your ability to tolerate stress).

Can we reduce what is in your cup and/or can we build a bigger cup?

The answer is different for each individual, which is why it is so important to discuss your multidimensional pain experience with your Exercise Physiologist.

References:

- Booth, J et al. (2017). Exercise for chronic musculoskeletal pain: A biopsychosocial approach. *Musculoskeletal Care*.
- Lehman, G. (2017). Recovery strategies: pain guidebook. Retrieved from <http://www.greglehman.ca/recovery-strategies-pain-guidebook>

Self-Reflection – What is in your cup?



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After reading the previous page, which explores different pain contributors within the context of the “cup analogy”, now is the time to take a moment to reflect on how this specifically relates to you. Write down some of the things that are in your cup and might be contributing to your pain.

As you keep reading through this book, you may want to come back and add more to your cup.

After focusing on the things that may be a problem and contributing to your pain, now is the time to shift the focus to the positive things that could make your cup bigger. Also, what do you think you could do to make your cup bigger?

You should keep writing these things down, maybe even sticking them on your fridge as a constant reminder of the things that make you strong.

Discuss your self-reflection with your Physiotherapist or Exercise Physiologist to discuss potential management strategies.

The myth about pain and physical damage



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It is a common belief within society that there is a direct correlation to pain and something being damaged within the body. However, research shows that pain is much more complex than that and is actually influenced by a variety of factors. The latest studies show that pain does not always equal damage.



What is the evidence?

The stats below are 'abnormalities' that are found on scans in people without pain.

- ◆ 87% of people between the age of 20-70 years have a disc bulge in their neck
- ◆ 22% of middle-aged men have partial rotator cuff tears in their shoulders
- ◆ 78% of middle-aged men have bursitis in their shoulders
- ◆ 37% of 20-year olds and 96% of 80-year olds have disc degeneration in their lower back
- ◆ 43% of people >40 years have knee osteoarthritis
- ◆ 19% of people >40 years will have a meniscus tear in their knee

If these 'abnormalities' are found consistently in people without pain, then we cannot say with any confidence that pain correlates well with damage. This doesn't mean that abnormalities found on scans are not contributing to your pain, as that may well be the case - but the fact remains that pain is complex and multidimensional, and while these findings may have some impact, it is also likely that there are other factors also contributing to your pain. **Any approach to rehabilitation must address the multifactorial nature of each person's pain, as each person's pain is unique to them.**

A lot of these changes are often a normal part of ageing, or can occur years before we become aware of them. For example, you can tear a rotator cuff muscle in your shoulder without even knowing and continue to live a pain-free, normal life. You may then develop pain later for any number of reasons - a particular task that your body was not prepared for, poor sleep, or maybe you are feeling more stressed than usual. You might then be sent for a scan, revealing the tear that was there all along, but it is the tear that gets the blame! Let's consider...

- ◆ Does having wrinkles on your face give you face pain?
- ◆ Does going bald on your head give you head pain?
- ◆ Have you ever noticed bruising and have no recollection of how it occurred?

Why is this a positive message?

Of course, it can sometimes be quite confronting to receive a message like this, and it can be normal to think:

- ◆ "So, you are telling me that my pain doesn't exist and that I'm making it up?"
- ◆ "I know my back is damaged and that is what is wrong!"

Please, do not think this message is about saying your pain is not real... **ALL PAIN IS REAL!**

The point being made here is hopefully a reassuring one that we can take confidence in - **we do not necessarily need to fix these changes found on your scan to help with your pain.** There are other things we can do to help you, and these things will be very individualised, which is why it is critical that you are assessed by - and chat with - your Exercise Physiologist for a tailored intervention.

Let's take some reassurance from the evidence, and understand that as humans we are inherently strong, robust and adaptable - and that we don't need fixing before we start doing!

References:

- Brinjikji, W et al. (2015). Systematic literature review of imaging features of spinal degeneration in asymptomatic populations. *American Journal of Neuroradiology*.
- Culvenor, A. G et al. (2019). Prevalence of knee osteoarthritis features on magnetic resonance imaging in asymptomatic uninjured adults: a systematic review and meta-analysis. *British Journal of Sports Medicine*.
- Girish, G et al. (2011). Ultrasound of the shoulder: asymptomatic findings in men. *American Journal of Roentgenology*.
- Nakashima, H et al. (2015). Abnormal findings on magnetic resonance images of the cervical spines in 1211 asymptomatic subjects. *Spine Journal*.

Story Time



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A well-known pain story in the rehab world is the “nail in the foot” story that was published in the British Medical Journal in 1995.

So, the story goes...

A 29 year-old builder attended the emergency department at his local hospital after working on a building site and accidentally jumping down onto a large 15cm nail. This man was in agonising pain and the Doctors at the emergency department had to give the man very strong painkilling drugs. However, every time they tried to move the nail he was screaming in pain and wouldn't let them anywhere near him. Eventually, he was sedated and the Doctors were then able to remove the nail effectively. They pulled out the nail and removed his boot so that they could then access the wound and take appropriate care – but – the nail had landed between his toes and there was no injury! No blood! No puncture wound!



Why is this story important?

This story highlights one of the previous messages that pain does not correlate with tissue damage and that we can experience pain in the absence of damage! Instead, expectations and context play a huge role in a pain experience. This man had the expectation that a huge nail going through his boot would have caused damage and that he needed protection – his alarm system went off and he experienced pain! This does not mean the pain was not real. **Pain is always real.** No matter what.

Fear of Movement



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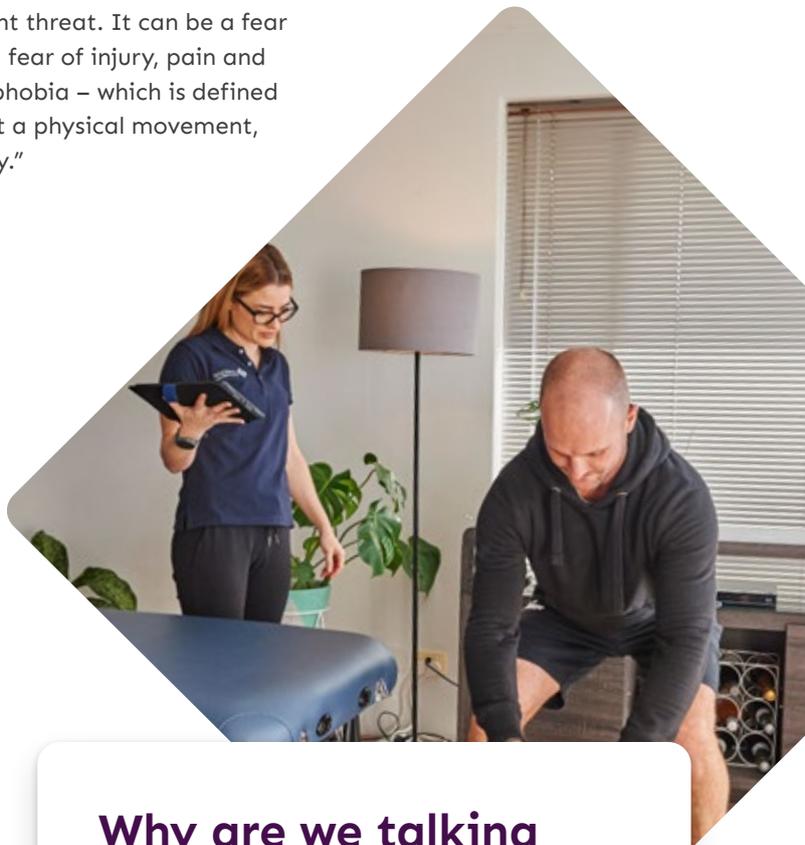
Fundamentally, fear is an emotional response to an imminent threat. It can be a fear of heights, a fear of small spaces, a fear of snakes, or even a fear of injury, pain and movement. Another term for a fear of movement is kinesiophobia – which is defined as “an excessive, irrational and debilitating fear to carry out a physical movement, due to a feeling of vulnerability to a painful injury or reinjury.”

Quite often, fear can be helpful as it is a protective response that stops us doing something silly or putting ourselves in danger. But, fear can also lead to avoidance.

We have discussed that pain works as an alarm, and how that alarm system can become sensitive and go off when it doesn't need to. We also know that avoidance and fear can cause this alarm system to become even more sensitive. When you have fear of a movement, which might be based on an expectation that it will hurt due to a previous experience you have had, your alarm system becomes hyper-vigilant and is looking for a potential threat, which can increase your pain or continue to drive avoidance of the movement.

Kinesiophobia, or fear of movement, can happen through two forms:

1. A direct experience such as pain or trauma – e.g. you hurt your back when bending forward, so you then avoid bending forward because of this previous experience
2. Social learning – e.g. you have been told by a friend or another health care professional that you should avoid bending because it is bad for your back – therefore, you learn to avoid bending.



Why are we talking about kinesiophobia?

A recent systematic review published in the British Journal of Sports Medicine found that a greater degree of kinesiophobia predicts greater levels of pain, and is associated with higher disability and reduced quality of life.

How can you and your Physiotherapist or Exercise Physiologist work together to help?

1. Be receptive to accepting that these factors exist
2. We have tools to see if Kinesiophobia is present and is a factor
3. Consider why you believe what you believe – have you been taught something that has caused you to become avoidant of movement?
4. Work with your Physiotherapist or Exercise Physiologist to start to explore movements that you are concerned about. In a slow, graded and safe manner, you can reduce fear and increase mobility

References:

Luque-Suarez et al. (2018). Role of kinesiophobia on pain, disability and quality of life in people suffering from chronic musculoskeletal pain: a systematic review. *British Journal of Sports Medicine*

Resuming Meaningful Activities



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When you have experienced pain for a while, it is normal to cease doing the things that you love. For each person, this is going to be different. For somebody, it might be lawn bowls, or playing darts with friends, or running. A common reason for stopping these meaningful activities might be that you feel you need to be 'fixed' and 'pain-free' before you recommence them. You may have been told that you have one leg shorter than the other, or your muscles are not 'firing properly', or you have a weak core, or you have poor posture - the list is potentially endless! A common and unfortunate pitfall of this treatment approach (apart from it not being evidence-based), is that it focuses on "fixing" - we need to "fix" this, we need to "fix" that.

When we have a contemporary understanding of persistent pain, we understand that it usually means our internal alarm system is too good at its job of protecting us. It goes off too quickly, too soon, and too easily. It has nothing to do with needing to be mechanically fixed.

Pain does not equal damage, and we can adapt positively to physical load - it is just a case of finding the right place to start. But fundamentally, for the most part, nothing is off limits.

While reengaging in activities you love to participate in clearly provides physical benefits and hardening, it will also have amazing psychological and social effects too, right? Let's answer a few questions:



What makes you, you?

What would you do tomorrow if you had no pain?

What did you enjoy before you had your pain?

Once you have established the activity:

What needs to happen for you to start those things?

What do you think would happen if you did those things tomorrow?

If you enjoy running, it is not as simple as just going out and running a marathon; that would of course be too much, too soon! But we can discuss ways to modify movement and build physical strength, as well as finding the right place to start - with the goal of gradually progressing towards running that marathon.

It is empowering and enriching to start participating in activities that you previously didn't think you could do, as we can start to flip the script; not focusing on what you can't do, but **focusing on what you can do**. And you don't need fixing before you start doing!

Speak to your Exercise Physiologist and figure out a collaborative plan to help you recommence the things you love.

References: Lehman, G. (2017). Recovery strategies: pain guidebook. Retrieved from <http://www.greglehman.ca/recovery-strategies-pain-guidebook>

The Health Benefits of Good Work



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For most people, working improves general health and wellbeing as well as reducing psychological distress. There have been numerous studies that have shown that people who return to work in a timely manner often end up with a shorter recovery time – and vice versa. The longer you have off work, then the longer it can take to return to work.

More specifically, an Australian Position Statement on the health benefits of good work outlined that if a worker is away from work for a work related injury for:

20 days then the likelihood of return to work is 70%

45 days then the likelihood of return to work is 50%

70 days then the likelihood of return to work is 35%

How can good work benefit you?

- ◆ Ensuring that some meaningful physical activity is undertaken during the time you are working
- ◆ Facilitating social inclusion and a sense of belonging with your colleagues and/or customers
- ◆ Positive feelings of contribution to your family and society
- ◆ Feeding a healthy and positive routine
- ◆ Decreasing the likelihood that an individual will engage in risky behaviours

You don't have to wait until you are fully fit and pain-free before you return to work. You can work with your Workplace Rehabilitation Provider or Employer to develop a return to work plan whereby you can gradually return to meaningful work over a period of time with steady increases to your work hours and duties as you recover and start to feel better. This should be run together with your exercise program, as both will assist in your recovery and increase your physical work conditioning to allow you to return to your normal duties quicker.



The evidence shows us that:

- ◆ Work should be an important part of your rehabilitation
- ◆ The longer you are off work, the less chance you have of returning
- ◆ Waiting for full recovery will actually delay the recovery and decrease your chances of returning to work
- ◆ Staying away from work may lead to psychological and emotional distress with feelings of depression, anxiety, stress and isolation

References:

The Royal Australasian College of Physicians. (2015). Realising the health benefits of work – An evidence update. The Australasian Faculty of Occupational & Environmental Medicine.

Pacing to manage persistent pain



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Persistent pain symptoms usually lead to changes in activity levels. Some individuals tend to avoid engaging in normal activities as a means of avoiding pain flare ups. Other individuals push through their pain symptoms to get tasks completed, only to experience increased pain and subsequent inability to complete further activity until the pain decreases. Both of these approaches can have a detrimental effect on quality of life, feelings of control over pain symptoms and long-term engagement in meaningful daily activities.

Adequate rest from physical activities is important to assist with moderating pain levels and allowing for tissue recovery, however too much rest can be harmful to our long-term health and wellbeing. The effects of too much rest include:

- ◆ Increased risk of heart disease
- ◆ Obesity
- ◆ Weakness of bones and muscle wastage
- ◆ Pre-mature ageing
- ◆ Mood changes, such as depression

The above points highlight the importance of maximising engagement in meaningful physical activities such as a structured exercise programme, household tasks, and socialising with friends and at work to assist with maintaining our overall health and wellbeing to counteract the above. But how do we do this, when activity leads to pain?

Pacing is a way in which we can take a 'time focused' rather than 'pain focused' approach to activity, which means engaging in an activity for a certain amount of time and then ceasing it before our pain increases. Pacing allows us to undertake a little bit of activity often, to ensure our activity levels are constant across a day or week; rather than a 'boom-busting' approach (doing a lot and then needing prolonged rest).

Benefits of pacing

- ◆ It allows us to engage in more meaningful activities that are important to us
- ◆ Helps to reduce the frequency and severity of pain flare ups
- ◆ It gives us control of our lives regardless of persistent pain

How to pace

1. Think about what tasks are important to you. What can you comfortably do now and what would you like to be able to do? Your Exercise Physiologist can assist with setting achievable 'stepped' goals to assist you to re-engage with meaningful activities.
2. Discuss this with your Exercise Physiologist, who can assist you with determining your baseline activity tolerances and provide you with a graded plan to increase your activity alongside your exercise programme. This could be gradually increasing the time or distance achieved within an activity, or alternating heavy/ stressful activities with lighter/ easier activities.
3. Keep a record, such as an activity journal, to monitor your progress and keep track of what is being changed. To ensure good pacing, it is important to only change one to two components at a time.
4. Make sure that on 'good' days, you do no more than your pacing schedule allows and on 'bad' days, you still try do something, even if it's at a lesser amount.
5. Having a flare up is okay! It just means we need to go back a step when we start our activity again. Go back to what is achievable for you and gradually pace your activity level up again.

References:

Australian Pain Management Association (2018) Pacing Activity Retrieved 3rd April 2020 from <https://www.painmanagement.org.au/2014-09-11-13-35-53/2014-09-11-13-36-47/166-pacing.html>
Nicholas M, Malloy A, Tonkin L, Beeston L (2012). Using Pacing to Overcome the Effects of Chronic Pain on Activities in Manage your pain: Practical and Positive Ways of Adapting to Chronic Pain.
Nielson W, Jensen M, Kardorp P, Vlaeyen J (2013) Activity Pacing in Chronic Pain Concepts, Evidence, and Future Directions. Clinical Journal of Pain

Activity Planner



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Take a moment to plan out your physical activity over the next 4 weeks, using the tips and tricks you learnt from the previous page by using pacing strategies.

Week 1						
Mon	Tues	Wed	Thurs	Fri	Sat	Sun

Week 2						
Mon	Tues	Wed	Thurs	Fri	Sat	Sun

Week 3						
Mon	Tues	Wed	Thurs	Fri	Sat	Sun

Week 4						
Mon	Tues	Wed	Thurs	Fri	Sat	Sun



You are Strong and Adaptable

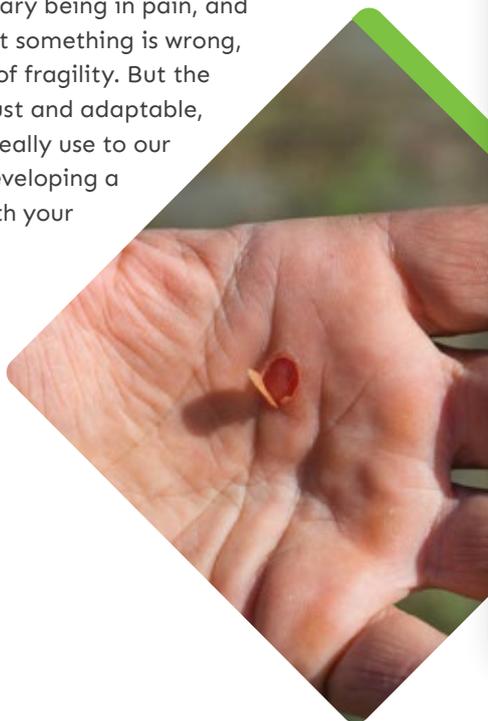
You may have been told before that you are weak, have muscles that don't work properly, you are fragile and unstable. As human beings, we are all different, we are all variable. Look around you, we all are different sizes, shapes, colours - we all are built differently. We are all meant to move differently.

Let's look at the spine, as this is often viewed as weak and unstable. However, this belief has been socially constructed and initially proposed by some very flawed research.

Studies previously showed that if we take a pig or sheep spine, place it into a mechanical jig in a laboratory and then repetitively bend it, after approximately >80,000 bending motions, the disc can herniate. This is an animal spine - not a human spine! This is a dead spine - not a spine within a living, breathing human being that has the ability to adapt!

But we ran with this, and we found ourselves living in this world where lots of people feel the need to protect their backs, fearing that bending and lifting with a rounded back is harmful - this is not the case! The average spine can withhold 2,000lbs of pressure. The average spine is inherently stable and capable of handling huge amounts of bending and stress.

This doesn't mean your back might not hurt when moving it. But, having pain doesn't mean something in your back is damaged. It is scary being in pain, and normal to think that something is wrong, and have a feeling of fragility. But the human body is robust and adaptable, something we can really use to our advantage when developing a plan to help you with your pain and disability.



You are adaptable!

We can all adapt. However, we should provide a caveat - adaptability is finite, there is a line, and this emphasises the importance of an individualised exercise program.

When you are in pain, of course, your ability to tolerate movement and physical activity will likely drop. Things you could previously do with ease now become painful. Most people in pain avoid doing painful things; however, when you have pain for long time, this isn't necessarily the answer - what we will be doing is decreasing our ability to tolerate stress and physical activity.

To increase your ability to tolerate stress, we need to start stressing you again - it's just a case of finding the right starting point. But a reassuring thing to remember here is that we can respond positively to stress, because as humans, we are awesome, and we can adapt well to that stress.

Think of calluses on your hands. If we worked in an office and then were to perform a 12-hour shift of bricklaying tomorrow, our hands would get cut and they would be sore. However, if we started to gradually perform some bricklaying, an hour here, an hour there, gradually building up the time - our hands would start to develop calluses and they would respond positively to stress to allow us to do more of thing that we want to be able to do. However, if we go too hard too soon, we get blisters on our hands - so we need to make sure we find the right starting point and progress sensibly.

Our bodies also have the amazing ability to heal itself over time. The rate of spontaneous regression for a lumbar disc extrusion is 70% and 41% for a disc protrusion. This is just another example of our adaptability, and that our body is strong and can be trusted!



You went through adaptation to get into pain... You can go through adaptation to get out of pain

We add different types of stress - physical, emotional, work - and we slowly adapt to them over time. Our alarm system (pain) will slowly start to calm down because it doesn't see the same stress as much of a threat.

We call the concept of adapting to the same stimulus over time...Habituation. A simple way to understand this is to think of a Kick Boxer. They learn to kick heavy bags, conditioning their body to the task. When they first start kicking the bag, it will hurt, but as they continually do this and expose themselves to that same input, they then adapt and it no longer hurts anymore.

There are lots of studies that highlight our ability to adapt. Such as subacromial bursal thickening occurring in the shoulder with increased training load of open ocean swimmers, but showing no correlation to pain - instead demonstrated an positive adaptation to load. Or another study that showed that forward bending (>30 degrees) was associated with lower low back pain intensity in blue collar workers - again, showing an ability to adapt to the movements and tasks we do and are used to.

We could go on and on and provide endless examples of how amazing we are at adapting. This can be a powerful message to grasp as it can be reassuring and help us understand the importance of exercise and physical activity in helping you learn to tolerate the movements and tasks that you currently have difficulty with. We can find the right starting point, set out a graded plan, and allow the human body to do its wonderful thing!

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Covanis, G., Breidahl, W., & Burnham, S. (2015). The relationship between subacromial bursa thickness on ultrasound and shoulder pain in open water endurance swimmers over time. *Journal of Science and Medicine in Sport*.

Villumsen, M et al. (2014). Are forward bending of the trunk and low back pain associated among Danish blue-collar workers? A cross-sectional field study based on objective measures. *Ergonomics*.



The Perfect Posture Doesn't Exist



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You may have heard that you must sit up tall and keep your back straight when you sit. We often see companies invest heavily in ergonomic set-ups for their employees which promote keeping the spine in a “neutral” position in order to reduce the prevalence of back pain, or attempt to help those already suffering with back pain. There is no strong evidence to support this notion of a “good posture”. The truth is – we don’t know what good posture looks like.

Research does not show a relationship between posture and pain, so we shouldn’t be blaming posture for your pain. There are likely many other contributing factors that are unique to you and should be discussed with your Exercise Physiologist.

The Role of Habits and Expectations

A posture can become a protective mechanism and reflect your beliefs about your back – if you feel vulnerable and as though your back needs to be protected, you may be more inclined to “sit up straight”. Understanding why you feel the need to do so can be important.

We also know that expectations have a huge influence on various bodily functions, but particularly with pain. If your beliefs have been shaped to think that sitting with a bent back is going to cause pain, this can actually cause an increase in pain.

Your best posture is your next posture.

References:

Laird, R et al. (2014). Comparing lumbo-pelvic kinematics in people with and without back pain: a systematic review and meta-analysis. BMC Musculoskeletal Disorders.

Slater, D et al (2019). Sit up straight: Time to re-evaluate. Journal of Sport Physical Therapy.

What Should You Do?

The idea of “sitting up straight” has become a common belief across society, and while doing this can feel better for a period of time, you do not need to sit like this to protect your back. In fact, if you sit like this for too long it may make you feel sore, as sitting up straight requires increased muscle activity of the back muscles and may cause higher levels of discomfort and fatigue.

Sitting can be uncomfortable and painful if you have low back pain. **Sitting for long periods of time should still be avoided.** But, think about why sitting is painful. It is much more likely due to a lack of movement, rather than the position of your spine.

What feels good for you will likely be different to what feels good for your colleague. There are natural variations in spinal curvatures, and no correlation between these variations and pain. Sit in a way that feels comfortable for you, and when that feels uncomfortable, change it – **just keep moving!**



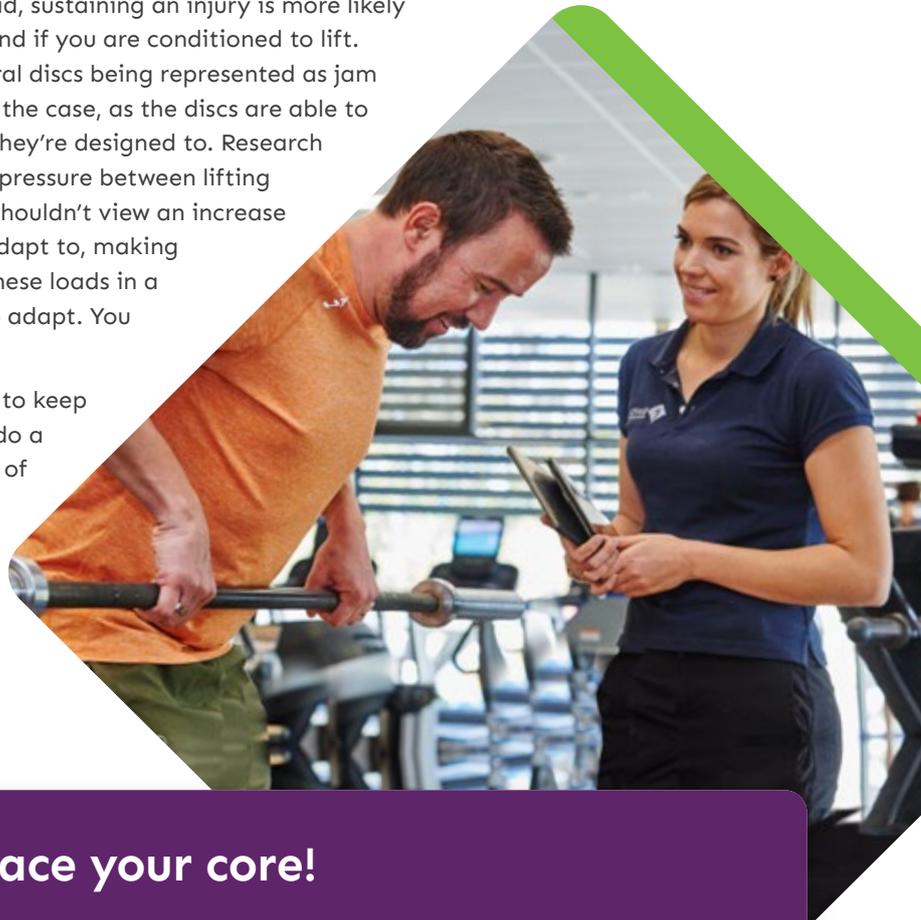
Occupational Lifting Advice



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Despite popular belief, research shows us there is no strong evidence that lifting with your back straight actually prevents injury. Instead, sustaining an injury is more likely related to how often you lift, how much you lift, and if you are conditioned to lift. Traditional manual handling courses show vertebral discs being represented as jam doughnuts that explode when loaded. That is not the case, as the discs are able to tolerate bending, twisting and loading – in fact, they're designed to. Research also shows us there is only a 4% difference in disc pressure between lifting with a bent back versus a straight back. We also shouldn't view an increase in load as a bad thing – it is something you can adapt to, making you stronger! However, you must be exposed to these loads in a progressive way, over time, allowing your body to adapt. You simply cannot do too much, too soon.

There is also evidence to show that even if we try to keep a straight back when we squat, we actually can't do a very good job of it, as there is minimal difference of movement through the lower back.



You do not need to brace your core!

Another common myth is that you need to 'activate your core' before you lift. The **spine is inherently strong and incredibly robust**, and you do not need to activate certain muscles at certain times to make the spine more stable. In fact, people in pain generally 'brace their core' more than people without pain, yet they are still in pain when they bend and lift. Your spine, muscles and body as a whole need to be strong and tolerate loads, but you do not need to brace your core to lift safely.

We cannot say that you need to bend your back when you lift, or that you need to straighten your

back when lifting. Simply put, you do not need to lift a certain way to reduce your injury risk. **You should be moving fearlessly and thoughtlessly.**

Start to gently expose yourself to lifting lighter loads with a bent back, allow your body to adapt, and progress sensibly over time. Give yourself different options to move and lift with less 'constraints' and 'rules' – it's liberating and safe! Have a discussion with your Exercise Physiologist about a personalised plan for you to help increase your capacity to lift in different ways, while having confidence in your back!

References:

Saraceni, N et al. (2019). To Flex or Not to Flex? Is There a Relationship Between Lumbar Spine Flexion During Lifting and Low Back Pain? A Systematic Review With Meta-Analysis. *Journal of Orthopaedic & Sports Physical Therapy*.

Villumsen, M et al. (2015). Are forward bending of the trunk and low back pain associated among Danish blue-collar workers? A cross-sectional field study based on objective measures. *Journal of Ergonomics*.



Embracing Movement Variability

A key theme of traditional treatment for pain-related conditions has been that there is an idealistic way of moving – and if we can achieve that, it will help with alleviation of your pain. Some common statements that you may have been told include:

- ◆ You have a weak core
- ◆ Your pelvis is out of alignment
- ◆ Your 'glutes' aren't firing properly
- ◆ Your knee drops in when you squat
- ◆ Your shoulder blade doesn't move properly

All of these have no strong evidence to support them. Surprisingly, these 'biomechanical' explanations for pain actually have a very poor relationship to pain.

We have evidence that shows as human beings we are highly variable, existing on a spectrum of movement variability, and we cannot say with any confidence that we know the right way to move.

- ◆ Frequency and degree of bending has not been shown to correlate with low back pain
- ◆ Variation in core muscle timing has been shown to be a normal movement variation
- ◆ Delayed glute timing has been shown to exist strongly in people with and without pain
- ◆ Knee alignment is highly variable in people without pain
- ◆ The shoulder blade moves in lots of different ways in people with and without pain

References:

Hochreiter, B. (2019). Health knees have a highly variable patellofemoral alignment: a systematic review. *Knee Surgery, Sports Traumatology, Arthroscopy*.

Plummer, H. (2017). Observational scapula dyskinesia: Known-groups validity in patients with and without shoulder pain. *Journal of Orthopaedic & Sports Physical Therapy*.

We are Variable and we are Adaptable.

These assumed 'dysfunctions' can exist in people without pain. We are designed to move differently and with variation; and the reason that is okay, is because we have the ability to adapt to variable movements.

It can be very empowering to accept that we are variable, and sometimes, there is little we can do to address some of these factors anyway. Instead, we can collaboratively come up with a holistic, well-rounded recovery plan that embraces your own unique way of moving.

Priscah Jeptoo is a Kenyan long-distance runner who has won marathons all over the world. As you can see in the photo, her knee dramatically falls inwards. This movement variation is often demonised, and many Therapists will attempt to correct it. She has no pain and can run a marathon. Why? Because this is a normal movement variation and a unique way of moving that she has adapted to over time.



Everyone needs to embrace their uniqueness.

Smith, B et al. (2014). An update of stabilisation exercises for low back pain: a systematic review with meta-analysis. *BMC Musculoskeletal Disorders*.

Sakamoto, A et al. (2007). Muscular activation patterns during active prone hip extension exercises. *Journal of Electromyography and Kinesiology*.

The Importance of Stress and Sleep



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Stress matters

In a similar way to how we view pain as normal, we should view stress as normal. They are protective responses of the body. They are both unpleasant to experience. But they are both things we can learn to adapt to.

Stress is not inherently bad. What we mean by this is that it is not the stress itself that is bad, it is our response to the stress that may be bad. We can often explain pain as when our stress increases beyond our ability to tolerate the stress (when we talk about stress, we mean physical, emotional and psychological). Sometimes, the stress in our lives cannot be changed. Lots of us may experience work stress, that may be considered a normal part of life. So, the stress itself is not the modifiable factor, it is the way we cope with the stress that becomes important.

Also, our response to an input can become more magnified than it used to be when we are stressed...

Let's use Nigel as an example. Nigel has 3 children who always bicker, argue and shout (as most siblings do). He has learnt to tolerate this behaviour over time and has simply accepted it (as most parents do). One morning, he wakes up tired, as he slept poorly the night before, and proceeds to have an argument with his partner. He then leaves for work, is disciplined by his boss for missing a deadline and is then told he has until tomorrow morning to rectify this issue, which means he will have to work through the night. He is driving home extremely stressed, frustrated and a little annoyed. He walks into his house with his 3 children bickering, arguing and shouting, as normal. This time, he responds in a totally out-of-character manner – he raises his voice, screams at his children and tells them to go their rooms.

The input had not changed – his children always behave this way. The surrounding contextual factors had changed (increased stress, frustration, anger) – which facilitated a change in his reaction to this same input.

Let's come back to the concept that stress is not inherently bad, and that there will be lots of stress in our lives that is simply unavoidable and unmodifiable. **But we can learn to tolerate the stress better.**

Sleep matters

Let's discuss sleep. Sleep is protective. Sleep is one of those things that can help us learn to tolerate stress better. A lack of sleep, of less than 7 hours for some, as well as interrupted sleep or poor sleep quality, can sensitise our nervous system – decreasing our ability to tolerate stress and potentially amplifying our pain experience.

Whilst this isn't a rule for everybody at all, a simple way to think of this is if we had 2/10 pain every day, and then we started to miss out on quality sleep, that pain then may become 5/10.

Lower levels of sleep have been linked with many pain conditions such as fibromyalgia, and persistent low back pain.

Exercise has been shown to help with sleep.

So, if you are experiencing pain and have been sleeping poorly, it is likely that there are some pragmatic things that you and your Physiotherapist or Exercise Physiologist can talk about to help you!

References:

Lehman, G. (2017). Recovery strategies: pain guidebook. Retrieved from <http://www.greglehman.ca/recovery-strategies-pain-guidebook>

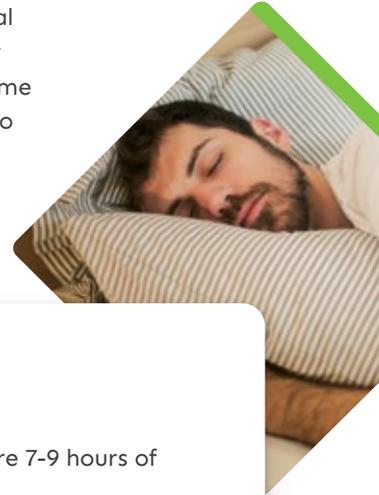
Finan, P et al (2013). The Association of Sleep and Pain: An Update and a Path Forward. *The Journal of Pain*.

Sleep hygiene tips and tricks



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Sleep hygiene is a term used to describe good sleeping habits, which are a vital part of our general health and wellbeing. Good quality sleep has a significant impact on our recovery, both physically and mentally, and is essential in preparing us for the day ahead. In this factsheet, you will find some tips on how to improve your sleep quality, as well as some educational and interactive resources to help along the way. Seek assistance from your GP if you continue to experience insomnia.



Top tips for good sleep

- 1. Exercise!** There is so much research demonstrating the positive effects of regular exercise on sleep quality. Keep higher intensity exercise towards the start of the day and lower intensity exercise such as walking and yoga towards the end of the day; to enable the body to wind down at bedtime.
- 2. Avoid the following substances** for at least 4-6 hours before bed: Alcohol, Caffeine, Nicotine.
- 3. Routine:**
 - ◇ Train the body to go to sleep and wake at similar times each day.
 - ◇ Have a sleep ritual that trains your brain to sleep at a particular time e.g. after a 5-minute stretch routine or listening to relaxing music.
 - ◇ Keep your daily routine the same and don't avoid activities because of tiredness as this reinforces negative patterns.
- 4. Good Nutrition.** A healthy, balanced diet has a big impact on sleep quality. Avoid eating too much processed food and foods with high sugar content, as well as heavy meals before bed.
- 5. Minimise Screen Time before Bed**
 - ◇ Switch off electronic devices at least 30 minutes before bed
 - ◇ The blue light from screens can stop your brain from producing melatonin which assists with sleep.
- 6. Sleeping Environment**
 - ◇ Sleep at a comfortable temperature
 - ◇ Block out any light sources by using blinds or an eye mask
 - ◇ Keep the area you sleep in clean and use for sleeping and intimacy only, not for working or other tasks
 - ◇ Control noise by using earplugs if necessary
- 7. Avoid Napping**
 - ◇ This can inhibit your ability to fall asleep at night
 - ◇ If necessary, keep naps to 20-30 minutes long and before 3pm

Sleep facts:

- ◆ Most healthy adults require 7-9 hours of sleep per night
- ◆ 33-45% of Australians have poor sleep patterns that lead to fatigue and irritability
- ◆ For every hour of sleep missed at night, there is a 14% increase in the risk of unpleasant emotions or feelings that affect day to day function
- ◆ Those that regularly sleep for less than 5 hours each night are more likely to experience long-term mental health issues

Recommended Apps

1. Headspace
2. Slumber
3. Pzizz
4. Sleep cycle
5. Calm
6. Noisli

References:

Hirshkowitz, M et al. (2015). National Sleep Foundation's sleep time duration recommendations: methodology and results summary. Sleep Health Journal.

Emotional Factors



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When we talk about emotional factors in relation to pain, it can be natural to think “why do they keep asking me about how I am feeling?” or “do they think this is all in my head?”. It is important to emphasise a message that has already been referenced multiple times – the pain is absolutely not in your head, all pain is real! Simply, we understand that psychological and emotional factors can influence pain, so it is important that we have conversations about this to understand what we can do to help!

Suffering with persistent pain can impact on lots of areas of your life, such as your ability to perform activities that are meaningful to you, as well as impacting on personal relationships, your sleep, your work – just to name a few. This can then cause psychological and emotional anguish, which can then cause the nervous system to become even more hyper-vigilant and stressed, causing even more pain, which in turn can then further cause negative emotions. It becomes a vicious cycle. We can't separate these things, we must acknowledge the relationship and understand the importance of addressing mental health factors to assist with pain management – linking back into the biopsychosocial model which we discussed earlier.

Physical factors and emotional factors can be working together to cause your persistent pain. You can have a muscle strain without feeling stressed, and you can feel stressed without having a muscle strain – but if you combine the two together, it can increase your chances of having persistent pain. Just like Coca Cola and Mentos – individually, they are safe, but you add them together and it causes an eruption.

When you work with your Physiotherapist or Exercise Physiologist, it is important they get the full-picture and understand all the factors that can be “in your cup”, which may include how you are feeling and your emotions. You can then work together to look at some simple strategies to help manage these. It is important you understand why these questions may be asked and why an emphasis may be placed on psychological factors. It is not about diminishing the importance of the physical factors of your condition – it is about understanding all of the factors that are an important piece of the puzzle when developing a plan to help you!



References:

Lehman, G. (2017). Recovery strategies: pain guidebook. Retrieved from <http://www.greglehman.ca/recovery-strategies-pain-guidebook>

What is Self-Efficacy and Why is it Important?



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Self-efficacy is, according to psychologist Albert Bandura who originally proposed the concept, a personal judgment of "how well one can execute courses of action required to deal with prospective situations"

What this really means is your ability to think "I can do this".

And this is important in managing your pain journey and maximising your recovery. One of the first areas of self-efficacy to explore is pain self-efficacy, and this is essentially your ability to function and carry on despite your pain. Of course, it isn't as simple as flicking on a switch and being ok to carry on, because there can be lots of important factors that are shaping this belief. You may be thinking "well, my pain is too severe, so I can't do that", or "if I do that it will make my injury worse". For example, if we believe that pain equals more damage and we should slow down, then this will directly influence our ability to carry on doing that activity.

A low level of self-efficacy can often occur when you have a feeling that you need to be fixed by someone – for example, "I need someone to crack my back into place" or "I need surgery to fix my broken knee". Whilst your Physiotherapist or Exercise Physiologist is there to help, now is the time to take control and acknowledge that you are the most important piece of your recovery journey. Think of your Physiotherapist or Exercise Physiologist as your Tour Guide and you as the Tourist. They will show you the way and make recommendations on what may be enjoyable, but you are the one that will still take control of your own holiday and venture out and experience new things and take your own meaning from them.

What we also need to acknowledge and accept is that there will be ups and downs and peaks and troughs throughout the recovery journey – and while it's important that we continue to be positive, robust and resilient, it can sometimes be hard to do! This idea of simply becoming positive in an instant can be confronting, and that's ok, but this is a journey and gradual process; a journey that your Physiotherapist or Exercise Physiologist is on with you, and over time we can start to see just how strong and resilient your mind and body can become with the appropriate reassurance and support.

How can your Physiotherapist or Exercise Physiologist help to assist in enhancing your self-efficacy?

Find out how much self efficacy you have - Measure it with questionnaires

Highlight previous success & strengths

Provide optimism and support

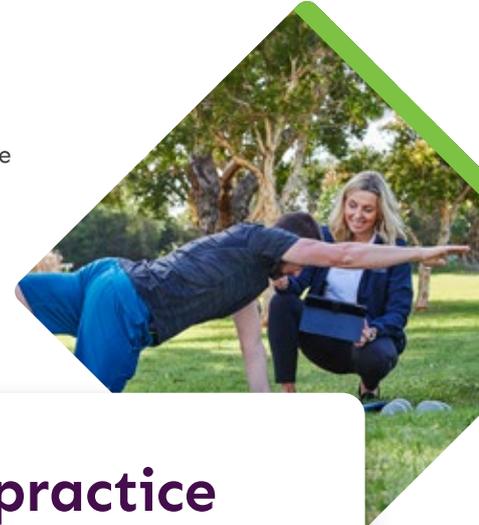
Set personalised and meaningful goals

Help plan out exactly what to do

References:

Black, O et al. (2017). The Effect of Self-Efficacy on Return-to-Work Outcomes for Workers with Psychological or Upper-Body Musculoskeletal Injuries: A Review of the Literature. *Journal of Occupational Rehabilitation*.

We can often experience moments where we 'lose track of time' and our lives become mundane and almost automatic. However, the method of mindfulness – which has been adapted from old traditional Buddhist meditation - is when one is actively focused on the present moment. Mindfulness is described as a conscious state or form of self-awareness that is now commonly used in cognitive-therapy treatment for psychological conditions. There is strong evidence to suggest that mindfulness has a significant impact on human functioning including physical and mental health, self-regulation and our behaviour.



What are the benefits?

As busy humans we can experience feelings of stress, anxiety and depression in our day to day lives; some more frequently than others. Mindfulness has been shown to have a positive impact on these common emotions and is associated with reduction in depression, providing assistance with maintaining other associated symptoms. The benefits of mindfulness have a significant impact on various aspects of life, including our overall mood, energy and quality of sleep, as well as job satisfaction within our work role. We know mindfulness-based cognitive therapy is now frequently used in the treatment of many mental health conditions – including bipolar disorders - to assist with emotional regulation and self-compassion for a positive outcome long-term.

Suggested apps and courses

- ◆ Insight Timer
- ◆ Headspace
- ◆ Calm
- ◆ Mindfulness in Australia - mindfulnessinaustralia.com
- ◆ Mindfulness Exercises - mindfulnessexercises.com/free-online-mindfulness-courses

How to practice mindfulness

Anyone can practice mindfulness - we have countless opportunities in our day to experience and exercise a mindful state, as an important part of the practice is to be non-judgmental and aim to engage wholeheartedly. There are many characteristics of mindfulness; most notably our receptive awareness, processing of information and a present consciousness which allows us to focus on and accept our feelings, thoughts and body sensations. One of the key techniques in becoming mindful is meditation, which can be practiced through guided podcasts, online courses and meditation classes. Mindfulness meditation focuses on becoming more aware of moment-to-moment changes within our mind and body, and then being able to change how we view these changes in a positive and non-judgemental light. We can also practice mindfulness through many other techniques, including but not limited to the following;

- ◆ Connected Breathing;
- ◆ Physical activity or Yoga;
- ◆ Mindful eating.

References:

Hofmann, S. G., Asmundson, G. J., & Beck, A. T. (2013). The Science of Cognitive Therapy. Behavior Therapy.

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Healthy eating



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A healthy diet supports a healthy body and mind. It is filled with a wide range of foods from the five food groups, including:

1. **Vegetables and legumes**
2. **Fruit**
3. **Grains and cereals**
4. **Lean meat and poultry, fish, eggs, tofu, nuts and seeds**
5. **Dairy products and alternatives**

Further to consuming foods within these five groups, we may also choose to eat foods for enjoyment or social reasons on occasion too. A healthy diet will look different for everyone, but the basic structure will be similar.



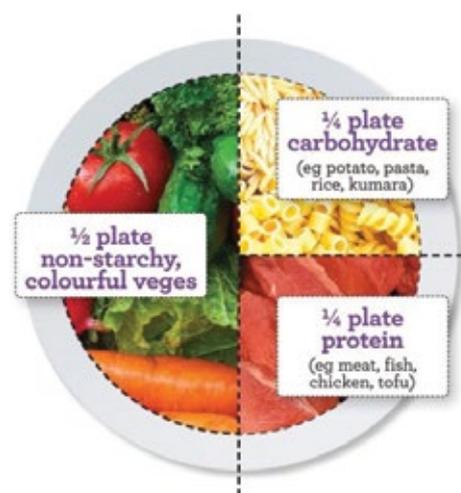
Written by Casuarina Forsyth,
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The healthy plate model

A practical way to help you achieve this is by adopting the healthy plate model. In this model, half of the plate is made up of vegetables, which can be raw, cooked, fresh or frozen; one quarter of the plate is made up of protein-rich foods, which can be animal based (fish, chicken, beef, pork, lamb, eggs etc.) or plant based foods (lentils, chickpeas, beans, tofu, tempeh); the last quarter of the plate is made up of carbohydrate-rich foods (rice, pasta, bread, potato etc.), and then a small amount of healthy fats (extra virgin olive oil, avocado, nuts or seeds). This model can be applied to the meals we cook at home - for example, a beef stir-fry with lots of veggies and rice, or adding a salad or veggies if we order takeaway such as pizza or a pasta dish.

Our body requires a range of nutrients to function optimally. Through the consumption of a wide range of foods from the food groups, we can increase the chance that our body is getting all the vitamins and minerals it needs to support good health and optimal wellness, as well as prevent against future lifestyle related diseases. Having variety in the foods we eat not only ensures that we are able to meet our body's needs for different nutrients, but also means that our meals are more interesting and we don't get bored of the food we are eating.



Tips for sustainable behaviour change



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By ditching the 'all or nothing' thinking – Don't try to change everything at once; instead, pick one thing that you would like to change (e.g. having fruit as an after-dinner snack) and focus on that for a week or two, then, move onto the next thing you are hoping to change when this has become part of your routine. This method is a lot more achievable and sustainable than trying to change everything at once, as that can be overwhelming and is often too restrictive.

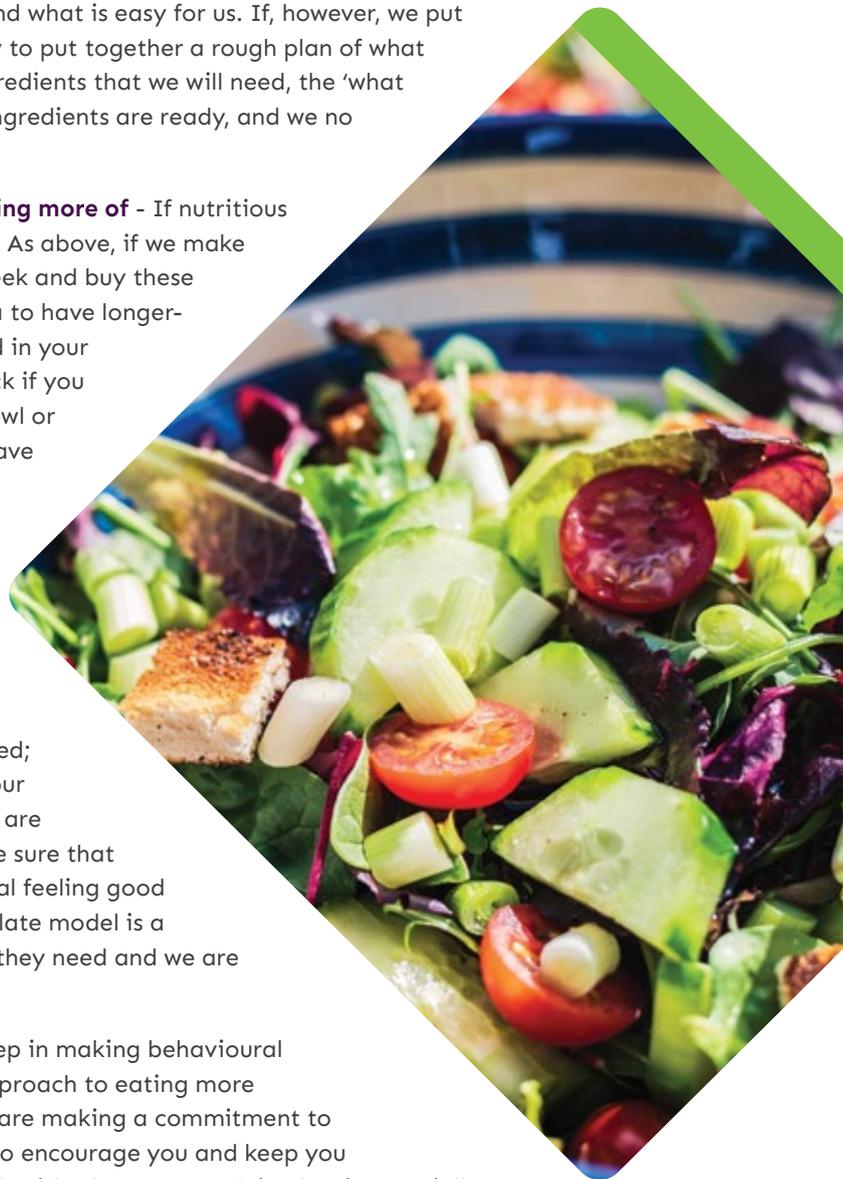
By focusing on the positive – We will be a lot more successful with our behaviour change if we focus on positive things we would like to add to our diet, instead of the things we would like to give up or reduce. The beauty of focusing on the positives to increase in our diet (e.g. aiming to have three different veggies with lunch and dinner) is that we will be filling up on the nutritious stuff and 'crowding out' the less healthy foods anyway.

By having a plan and being prepared - We only have so much decision-making power each day, and our lives are filled with making decisions. If we leave what to eat for dinner until after work, it will be all too much and we will fall back on what we know and what is easy for us. If, however, we put aside some time when we are relaxed and have capacity to put together a rough plan of what our dinners will look like for the week and buy all the ingredients that we will need, the 'what to eat for dinner' decision has already been made, the ingredients are ready, and we no longer need to make decisions after a long day.

By stocking your kitchen with food you want to be eating more of - If nutritious ingredients or foods aren't available, we won't eat them. As above, if we make a plan for what we want our meals to look like for the week and buy these ingredients, this is what we will prepare. It's a great idea to have longer-life staples (i.e. tins of legumes, tomato and fish) stocked in your pantry and fridge so you can make an easy meal or snack if you haven't been prepared with shopping. Keeping a fruit bowl or jar of nuts on the kitchen bench is a great reminder to have some fruit or nuts as a snack when we are hungry.

By making sure your meals are balanced and you are eating enough – Undereating doesn't lead anywhere positive. Our bodies need food, and when our bodies are well nourished, we can get on with the important things and stop thinking about food all the time. Our hunger plays an important role in making sure our bodies get the food that they need; often we fear hunger, but hunger is actually a sign that our bodies are working efficiently and using the fuel that we are providing it with. Eating regularly is a good way to make sure that we eat appropriately for our appetite, and leave the meal feeling good and energised. Having balanced meals via the healthy plate model is a good way to ensure our bodies are getting the fuel that they need and we are satisfied from our meals.

By getting support - Getting support can be a crucial step in making behavioural changes and working out a balanced and sustainable approach to eating more healthfully. Setting up a support system means that you are making a commitment to the changes you want to implement, and support helps to encourage you and keep you accountable. This is a great tool to help you stay on track with what you are doing, but is especially important when things aren't going the way you necessarily want them to.



Flare Up Plan



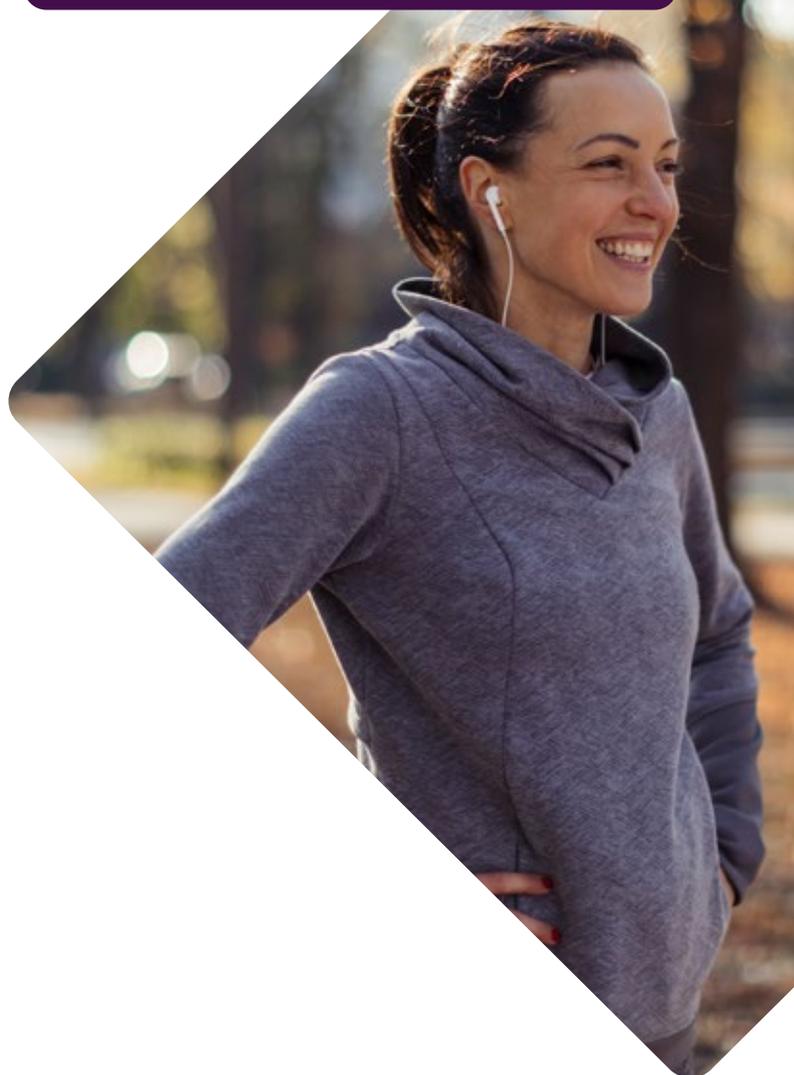
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A flare up is essentially an unexpected increase in your pain. Sometimes, you may not even know what causes it. Sometimes, it can be due to doing too much physical activity too soon. There can be lots of little factors that all combine together to cause it. It may suddenly happen, or you may feel it building over a few days or weeks. Either way, it is an important part of your overall pain management plan to have a flare up plan when you feel this occurs. This plan will be personalised and tailored to you.

While it is important to discuss this with your Physiotherapist or Exercise Physiologist, the “rules” for this plan may be similar:

- ◆ You may need to rest for a short period of time – maybe a day or two
- ◆ Keep exercising, but change your exercise routine to reduce the amount of time or intensity of the exercise
- ◆ Increase relaxation exercises such as yoga
- ◆ Utilise mindfulness strategies
- ◆ Focus on adopting good sleep hygiene to get good sleep quality
- ◆ Do exercise that you enjoy and is meaningful
- ◆ Take time to perform a hobby or a task that you enjoy doing – it might not even be active, it could be knitting or reading a book
- ◆ Use your medication sensibly and as guided by your Doctors
- ◆ Start getting active again, but understand you may have to take a step back to then take a step forward once more
- ◆ Reintroduce exercises in a gradual manner
- ◆ Understand that you are not back to square one, you have just hit a speed bump in the road
- ◆ Talk to others for support and reassurance
- ◆ Congratulate yourself for having worked through the flare up
- ◆ Focus on your plan, and focus on the things you can do to control it – this way, you feel much more confident to manage any other flare ups you have in the future

“Before anything else, preparation is the key to success”
– Alexander Bell



Developing a Flare Up Plan



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What are some potential factors that could cause you to suffer a flare up?

E.g. Stressors (what is in your cup?), illness, physical activity

What are my early warning signs?

E.g. low mood, poor sleep, change in pain, increase in pain, fatigue/tired

What do I need to do to manage my flare ups?

E.g. See GP about medication, adopt pacing strategies for general activities, readjust exercise routine which includes meaningful exercise, meditation, recreational hobbies

Takeaway Messages



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1. All pain is real
2. Stay active and exercise
3. Start doing meaningful activities – Nothing is off limits
4. Start gently exposing yourself to feared movements or activities – you will adapt and become stronger
5. Maintain social life and engagement
6. Scans don't tell the full story
7. If you feel pain, it doesn't mean damage
8. Pain is an alarm that is meant to protect - sometimes, this alarm can become too sensitive and too good at its job to protect us
9. Many factors can influence how sensitive the alarm is
10. Your body is inherently strong and adaptable
11. Don't panic if you have a setback

