



# Virtual Pain Information Session

For People Living with Persistent Pain

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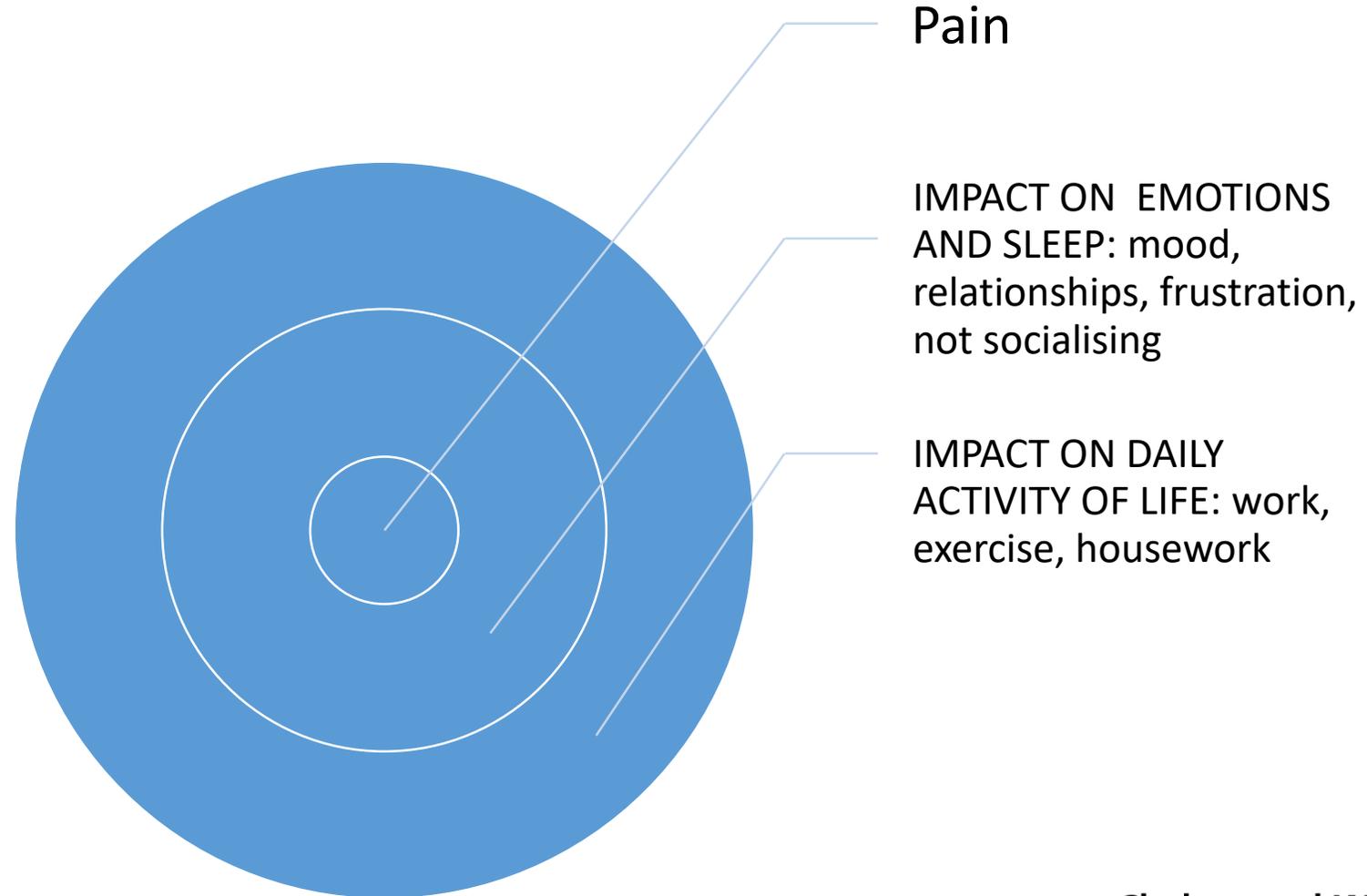
# Aims of the Session

- To gain an understanding of the basic mechanisms of pain
  - The role of the nervous system
  - The difference between acute and persistent pain
- To gain an idea of the therapeutic services we offer here and decide whether you want to explore these further





# How might pain be impacting you?





# Definition

“Pain is an unpleasant **sensory** and **emotional experience** associated, or resembling that associated with, **actual** or **potential** tissue damage”

(International Association or the Study of Pain, 2020)

Pain experience is a **normal** response to something that our brains evaluate as threatening





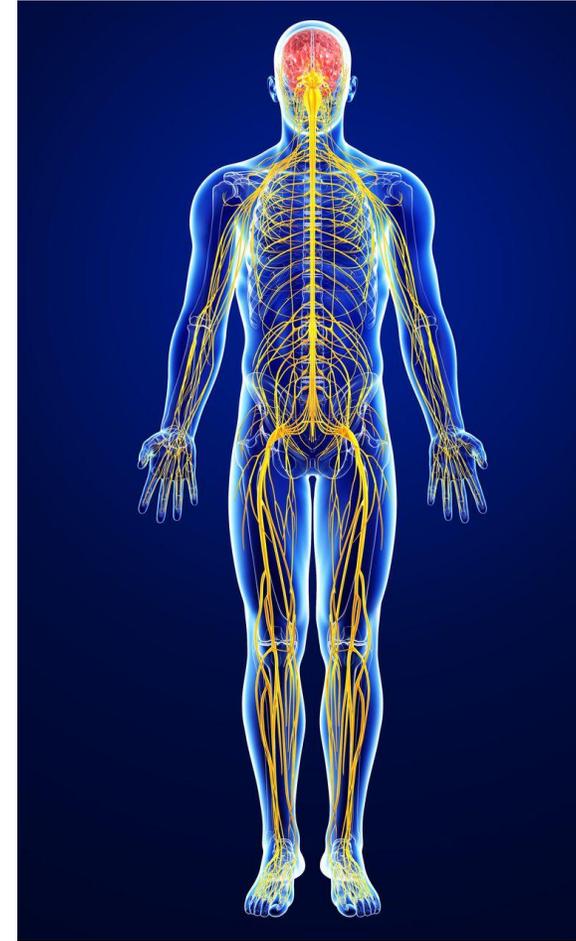
# The Pain System

## Central Nervous System (CNS)

- Brain and spinal cord

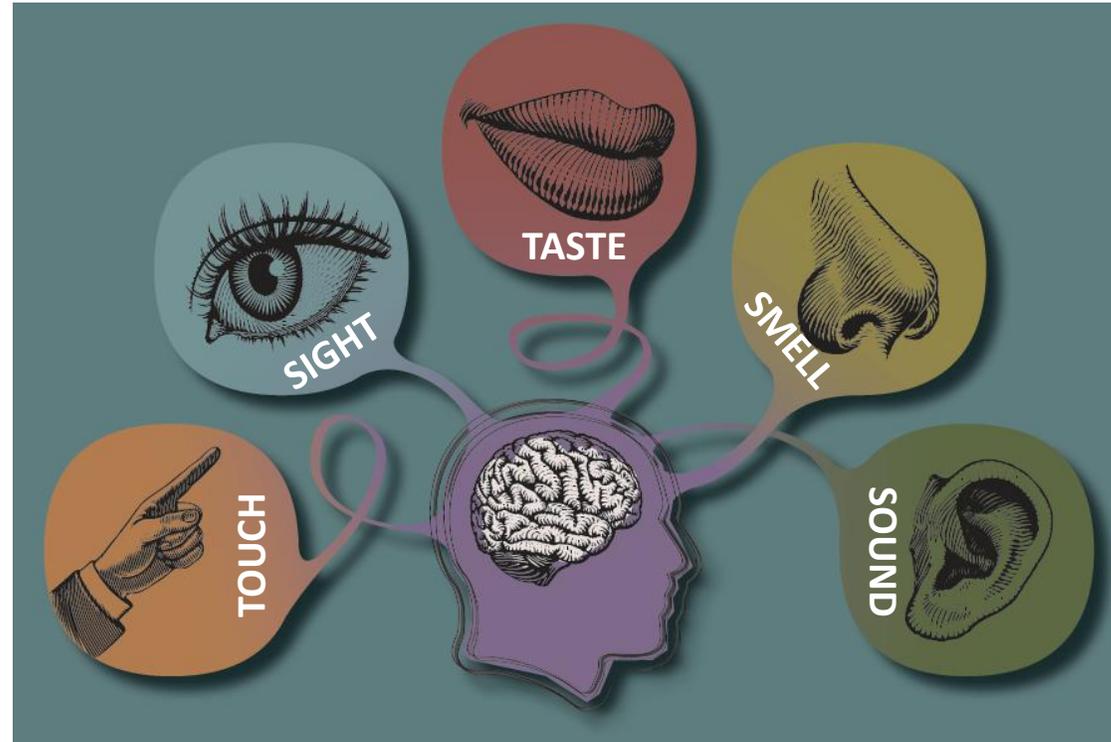
## Peripheral Nervous System (PNS)

- Nerves outside the CNS





# Five Senses: Making Sense of our Environment



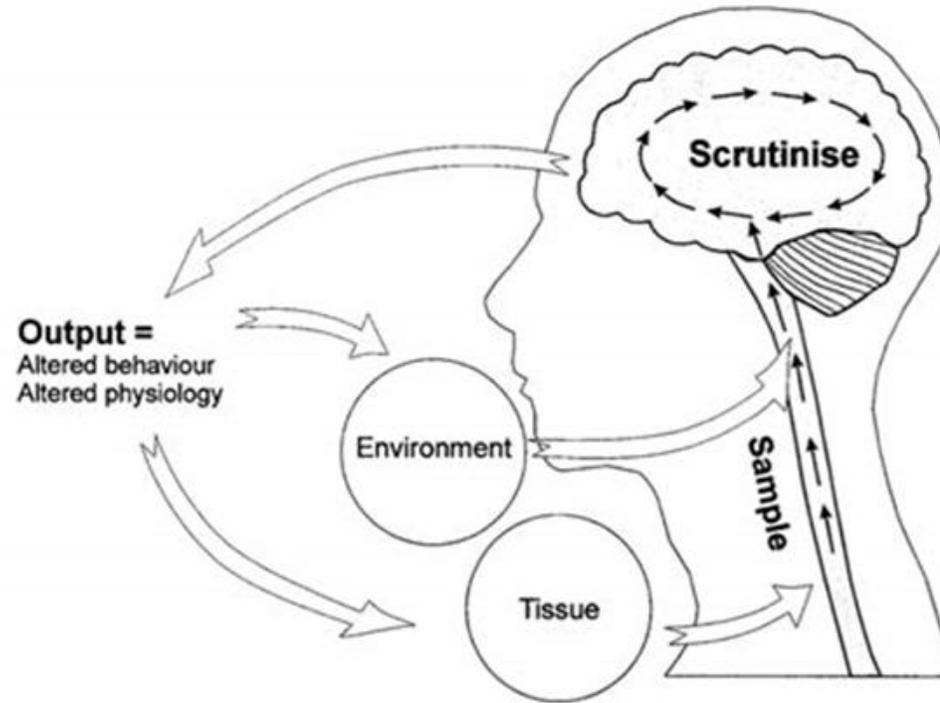
We receive information from our environment constantly....

It is up to our brains to work out what is important and what isn't





# Context/Previous Experience Changes Output



## Scenario:

- A. The doorbell rings at 2pm in the middle of the afternoon
- B. The doorbell rings at 2am in the middle of the night

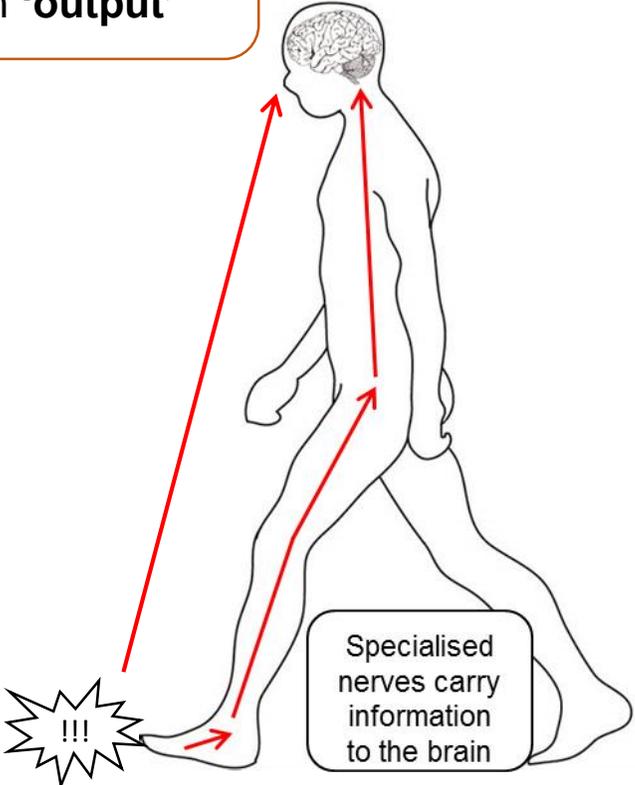




# How Does this Relate to a Pain Experience?

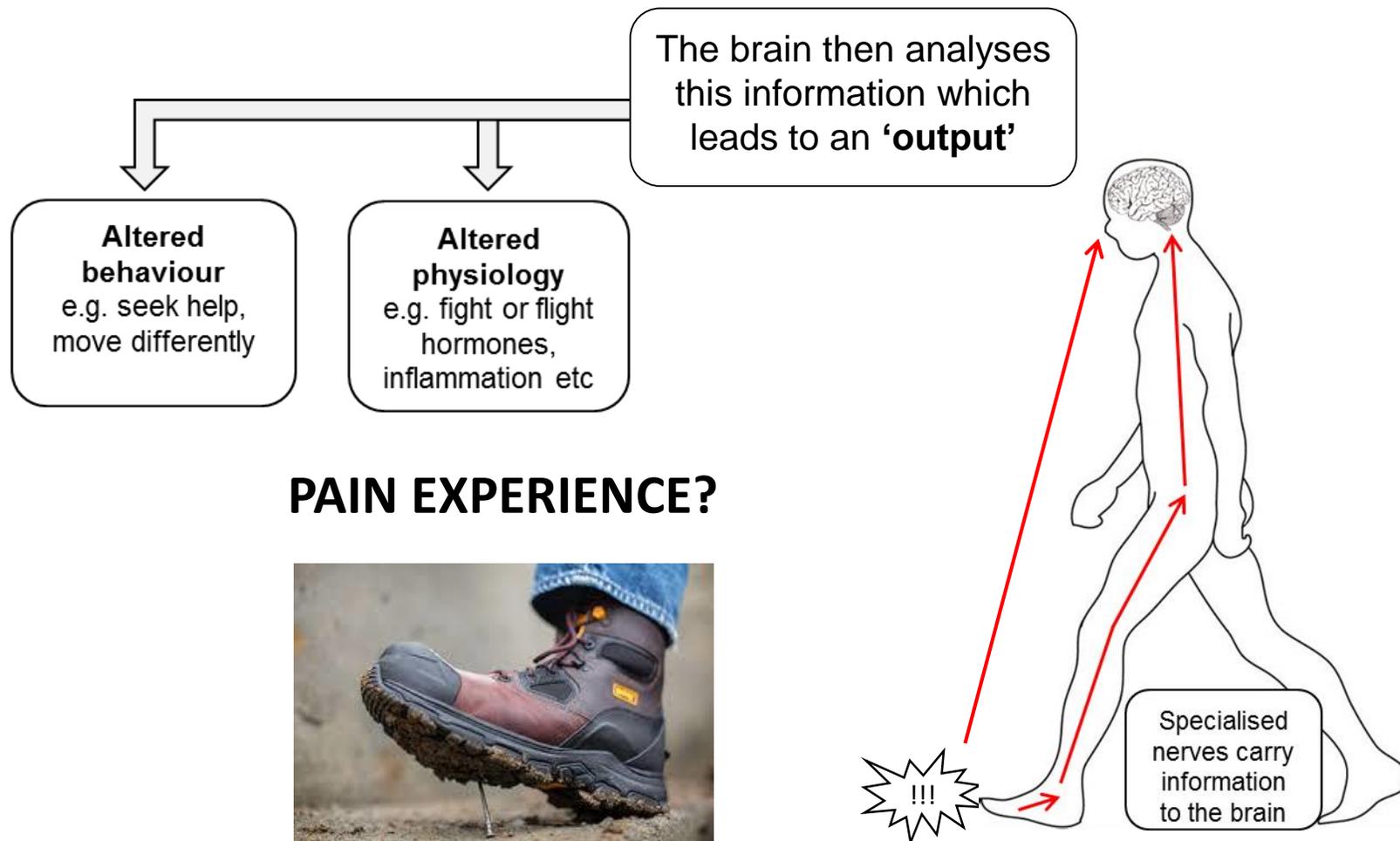
What sensory information will get sent to the brain?  
**(input)**  
Touch? Sight? Smell?  
Sound? Taste?

The brain then **analyses** this information which leads to an **'output'**





# How the Pain System Works





# How the Pain System Works



**High levels of pain, no damage to the body!**

Published in the British Medical Journal





# No Brain – No Pain

Pain is constructed by the brain, just like vision, taste etc.

Its an evaluation of:

- Sensory information from the body
- Pre-existing beliefs/ expectations e.g. “standing on a nail will be painful”

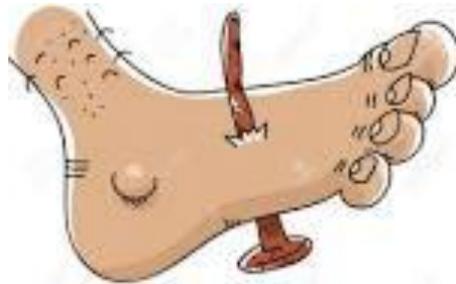
The builder had enough credible information to conclude that a pain response was appropriate (even without any actual damage)





# Acute Pain Experience

What if the nail HAD gone through the foot?



What might we have seen?

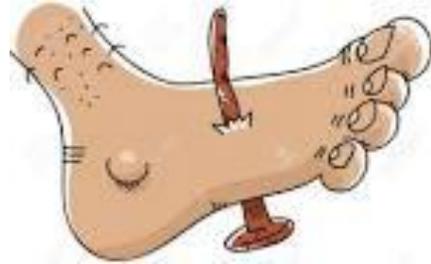




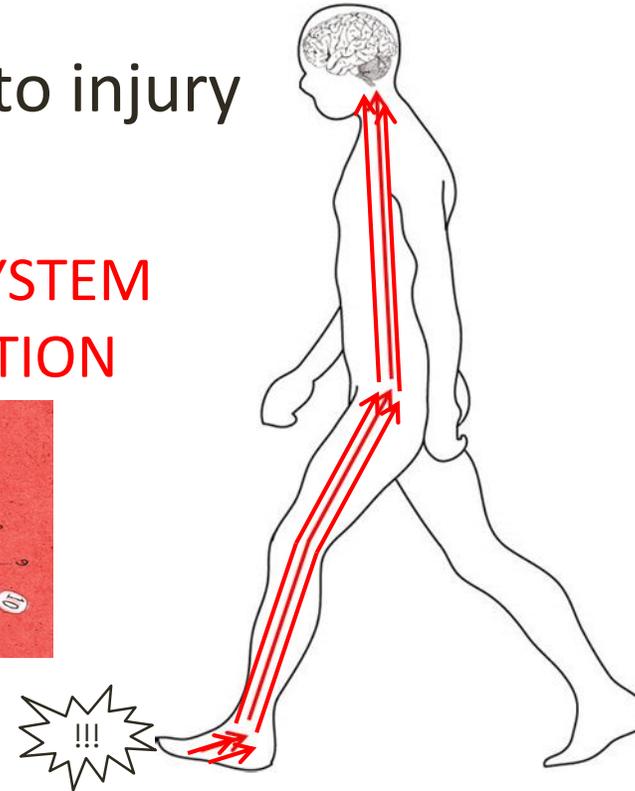
# Acute Pain Experience

**Inflammation** is a normal response to injury

- Hot, red, swollen, bruised



**NERVOUS SYSTEM  
SENSITISATION**

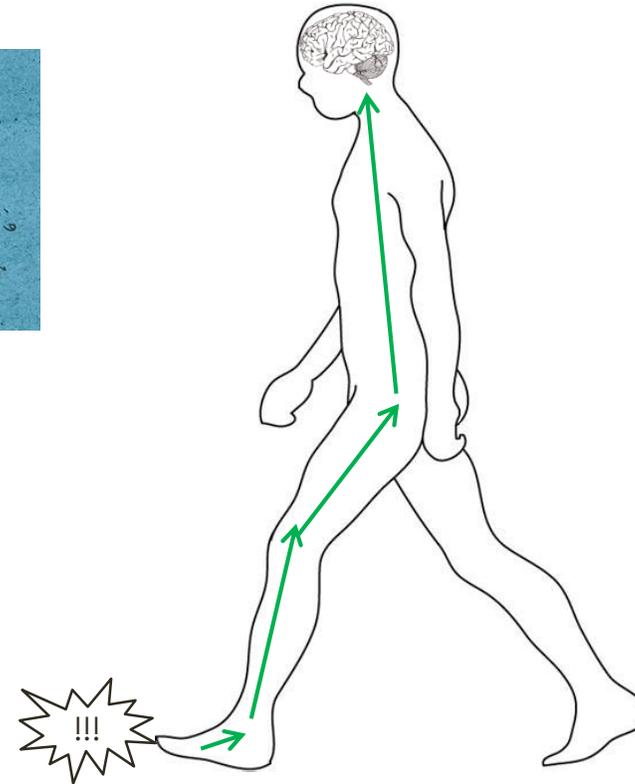
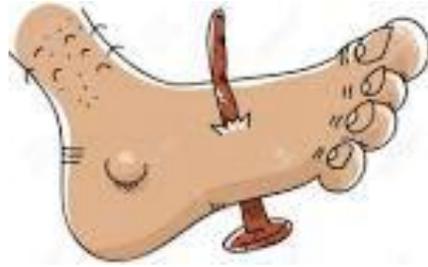


The nervous system gets better at sending 'danger' messages to the brain – nerves fire more easily. The system becomes **SENSITISED**





# Healing Times



## Tissue Healing times:

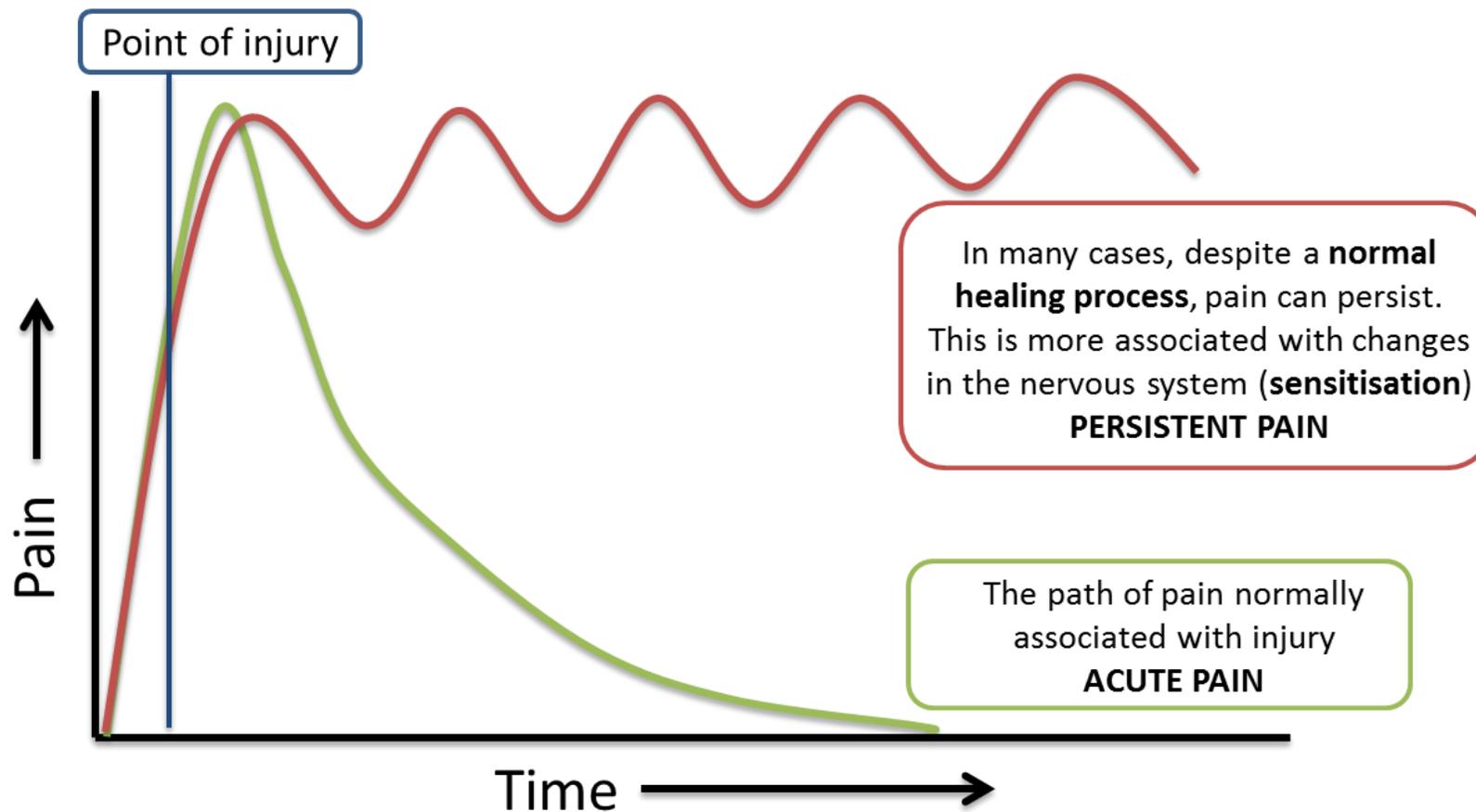
- Skin days – 2 weeks
- Muscles, tendons and ligaments 2 – 12 weeks
- Bones 6 weeks – 6 months
- Discs 6 weeks – 6 months
- Nerves 6 weeks – 6 months

In most instances as tissues heal the nervous system will wind down to a normal level of sensitisation... Pain goes away!





# Unfortunately this is not always the case...



For some people, despite no on-going damage/ structural issue, the nervous system remains **sensitised**





# In other words...

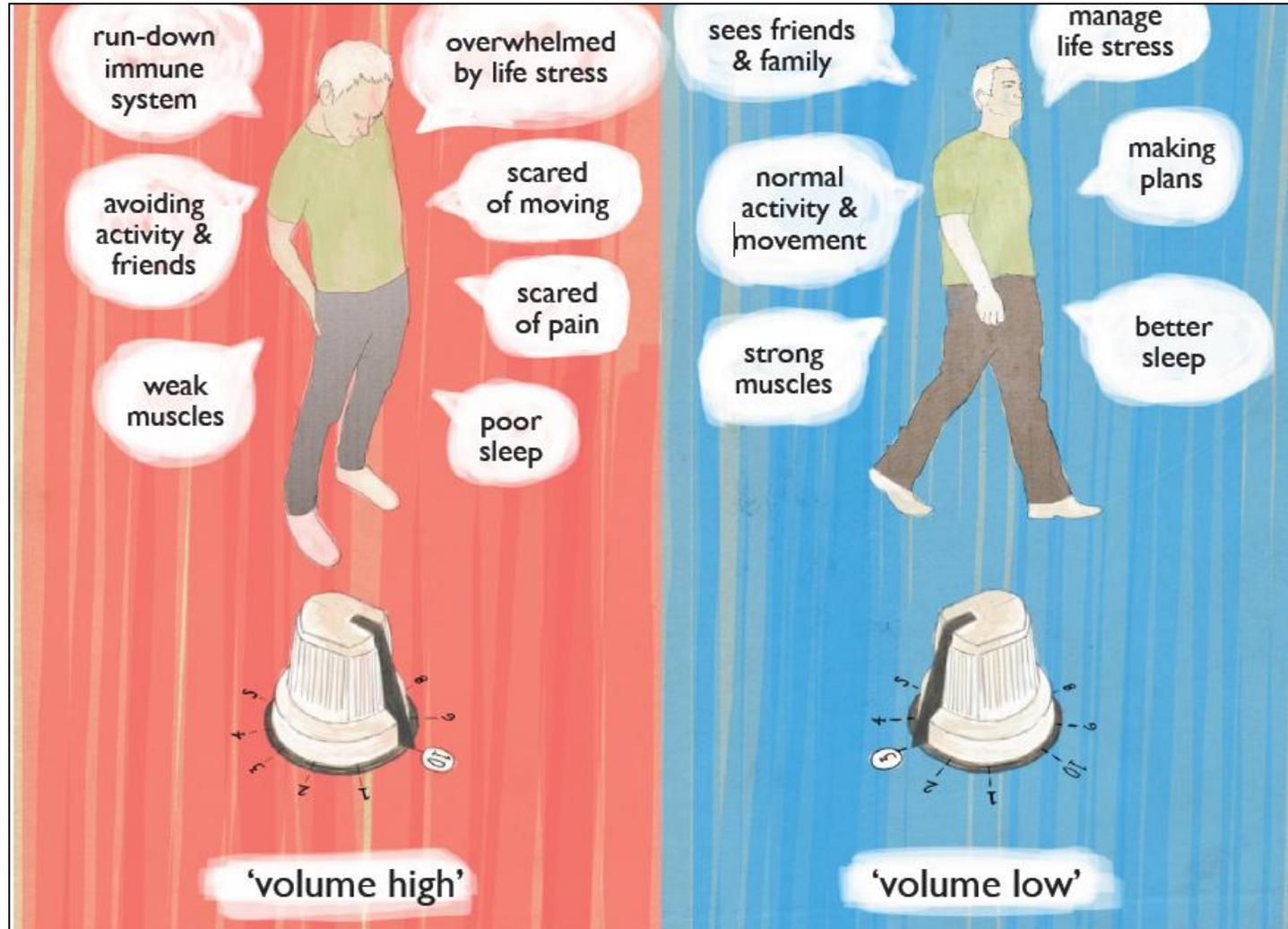


The volume dial on your nervous system is stuck on loud





# What Impacts Nervous System Sensitivity?





# Acute vs. Persistent Pain

## Acute Pain

- Short lasting (less than 6 months)
- Mostly associated with injury in the body tissues and healing

## Persistent Pain

- Lasts or more than 6 months
- Persists beyond the normal healing time for tissues in the body
- Associated with **an increased sensitivity in the nervous system**





# But on the Scan there is Damage...



MRIs see structure **not** pain





# Findings on scans in people with NO pain...

% = percentage of the pain-free population with the finding

## Neck<sup>2</sup>

Disc Bulges = **75%** (Aged 20-30)  
(Study on 1211 individuals)

## Lower back<sup>1</sup>

Disc Degeneration = **37%** (Aged 20-30)  
Disc Degeneration = **80%** (Aged 50-60)  
Disc Bulges = **30%** (Aged 20-30)  
Disc Bulges = **60%** (Aged 50-60)  
(Study on 3110 individuals)

## Shoulder<sup>4</sup>

AC Joint Osteoarthritis = **65%**  
Rotator Cuff Tears = **22%**  
Rotator Cuff Tendinopathy = **25-39%**  
Thickened Bursa = **78%**  
(Study on 54 individuals, aged 40-70)

## Hip<sup>3</sup>

'CAM Deformity' = **37%**  
'Pincer Deformity' = **67%**  
Cartilage defects = **8-18%**  
(Study on 2114 individuals, average age 25)

## Knee<sup>5</sup>

Cartilage defects = **43%** (Aged >40)  
Meniscal tears = **19%** (Aged >40)  
(Study on 4751 individuals)



On scans all we see is structure... what we can't see is pain  
Ask your clinician to explain your imaging findings

### References

- 1 - Brinjiki et al (2015). Am J Neuroradiology
- 2 - Nakashima et al (2015). Spine
- 3 - Frank et al (2015). Arthroscopy

- 4 - Girish et al (2011). Am J Roentology
- 5 - Culvenor et al (2018). British Medical Journal





# An MRI scan is similar to a wedding photo...



In this photo all we see is what people look like.  
**...What we can't see is how they feel.**

In an MRI scan all we can see is structure.  
**...What we CAN'T see is pain!**





# The Truth about Medications and Injections...

The **number of patients** who might be prescribed a treatment in order for **1** person to receive a **50%** reduction in pain lasting more than 6 months (small number is good)

Examples:    Amitriptyline 4  
                  Tramadol 4  
                  Epidural for leg pain 3





# Key Messages

- Pain is an **alarm system**, where information from your body is perceived as a threat
- Pain is **normal** and should be usually helpful
- **Acute pain** and **persistent pain** are not the same
- Persistent pain is more associated with changes in the nervous system (**sensitisation**) than on-going damage or structural issues
- When pain persists it becomes difficult for the brain to filter out non-threatening information
- Everyone is different, not one size fits all





# Further Information

- Chronic Pain – Tame the Beast (Professor Lorimer Moseley – Pain Scientist)
- Professor Lorimer Moseley – The Pain Revolution
- Ted Talk – Why Things Hurt
- Understanding Pain in Less than 5 Minutes and What to Do About it!

You can find all these and more referenced in the handout and by searching for “Chelsea Pain Clinic” on YouTube





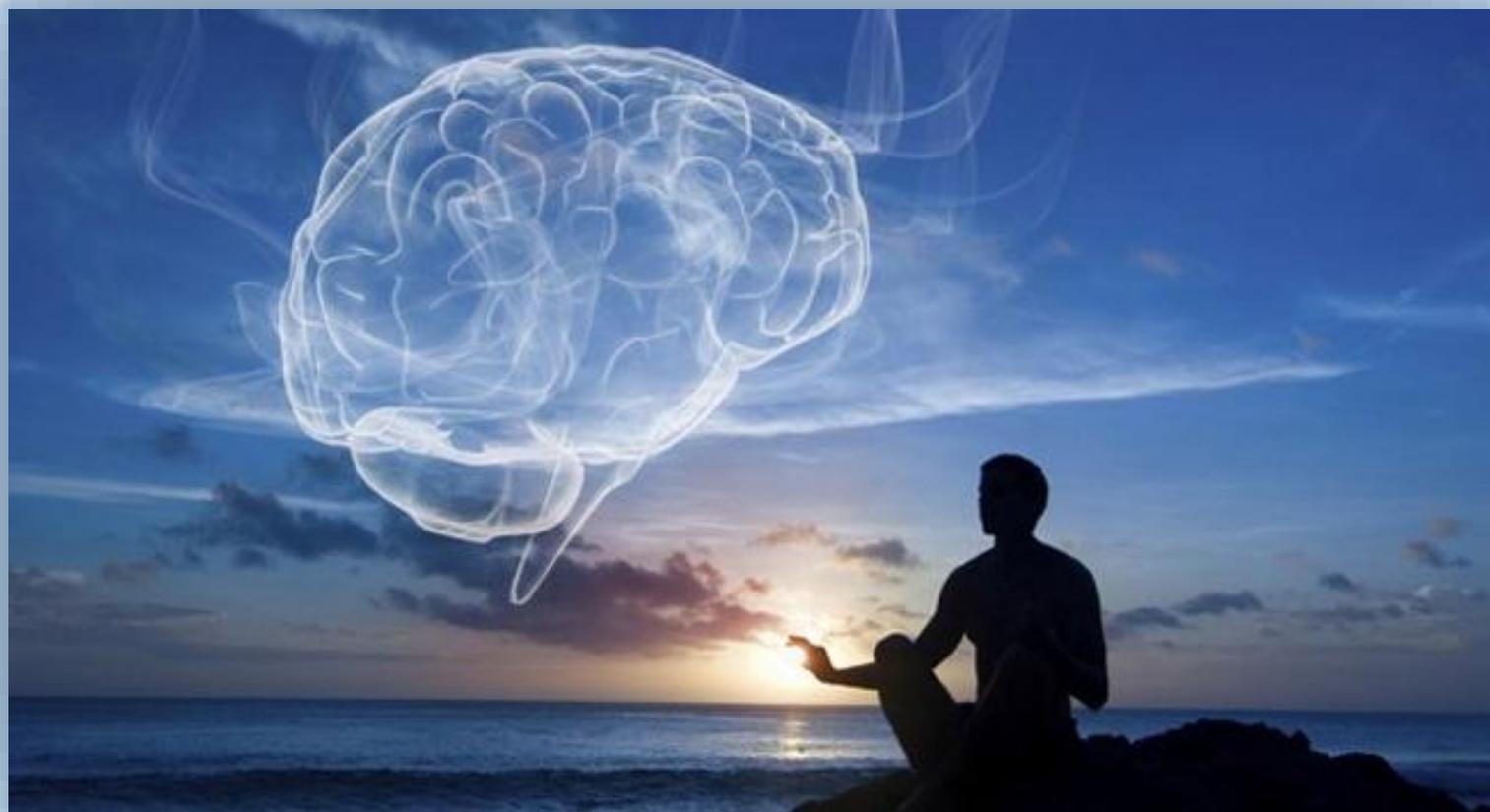
If we can't get rid of your pain  
with injections and medications...

...how can you be supported to change  
your current situation?





# Two Minute Break





If we can't get rid of your pain  
with injections and medications...

...how can you be supported to change  
your current situation?





# How Can You Live Well with Pain?

Working therapeutically in the space between *pain* versus *suffering*





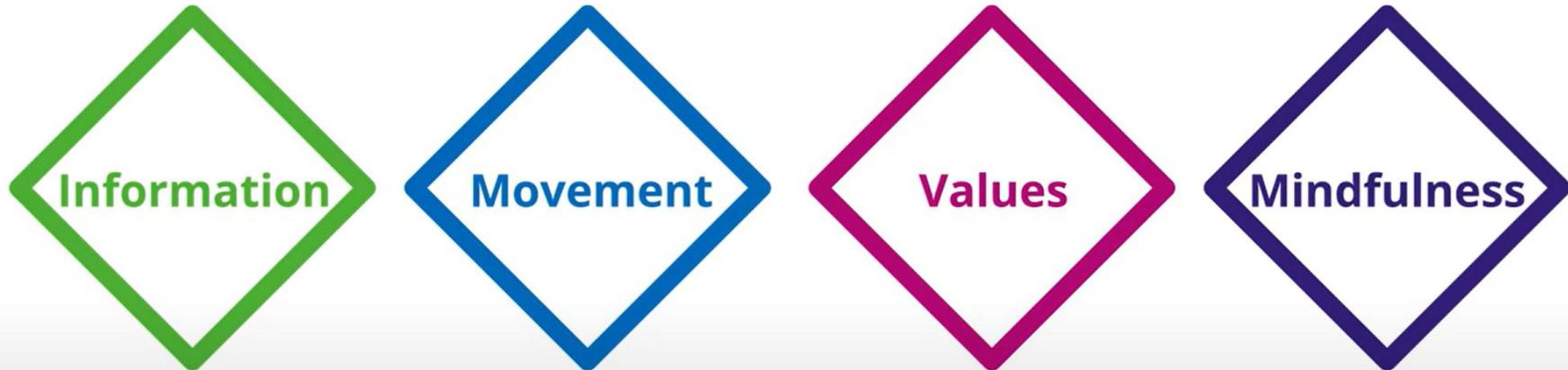
# How Can You Live Well with Pain?

## Experiential Exercise





# How Can You Live Well with Pain?





# Pillars of Pain Management Therapy

- Information

- Changing how we think about pain, reduces threat
- You've learnt new things today! Continue to learn more about it by visiting the following websites:

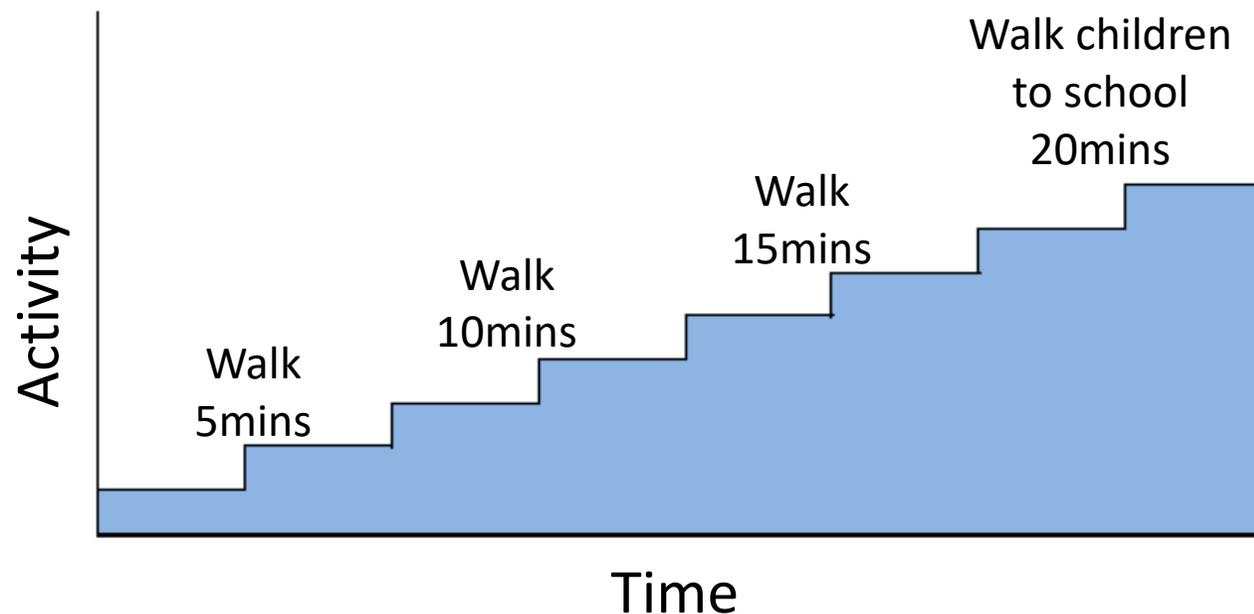
- <https://www.tamethebeast.org/>
- <https://www.youtube.com> searching “Understand Pain in 5 minutes”; “Chelsea Pain Clinic”
- <https://www.instituteforchronicpain.org/>





# Pillars of Pain Management Therapy

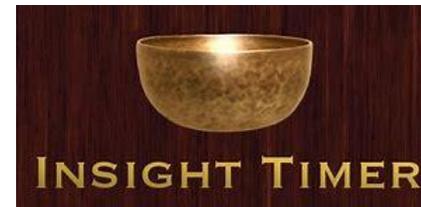
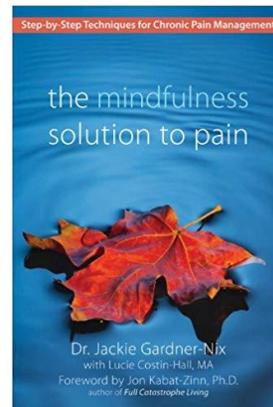
- Movement
  - Directed **towards** an important function/activity (**not** away from pain)
  - Graded and starting at a low level





# Pillars of Pain Management Therapy

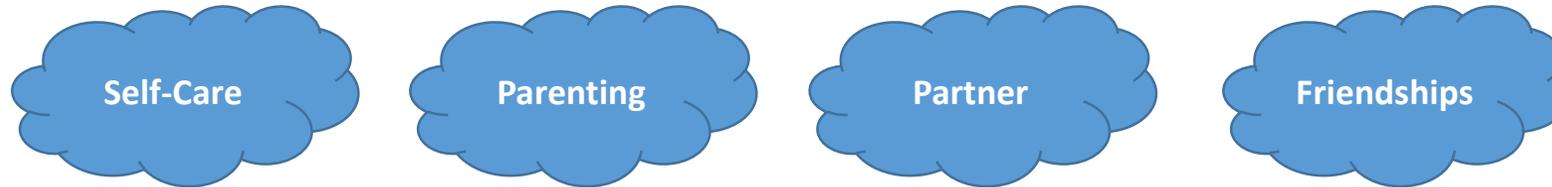
- Mindfulness
  - Paying attention to the present in a particular way: on purpose and without judgment
  - Helps us to slow down and notice unhelpful thoughts and habitual responses to pain
  - Can be soothing





# Pillars of Pain Management Therapy

- Values
  - Thinking hard about what you value and moving closer towards them



- Reflect on how focusing on eliminating pain may have pulled you away from living your life

More control of pain

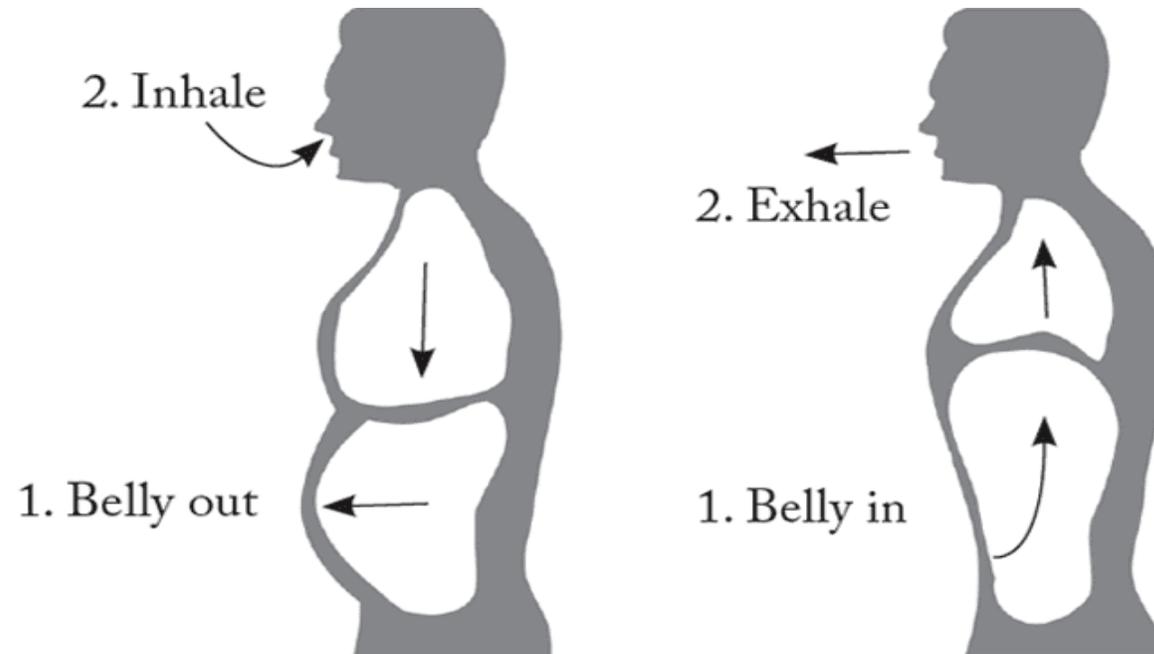
More meaningful life





# Pillars of Pain Management Therapy

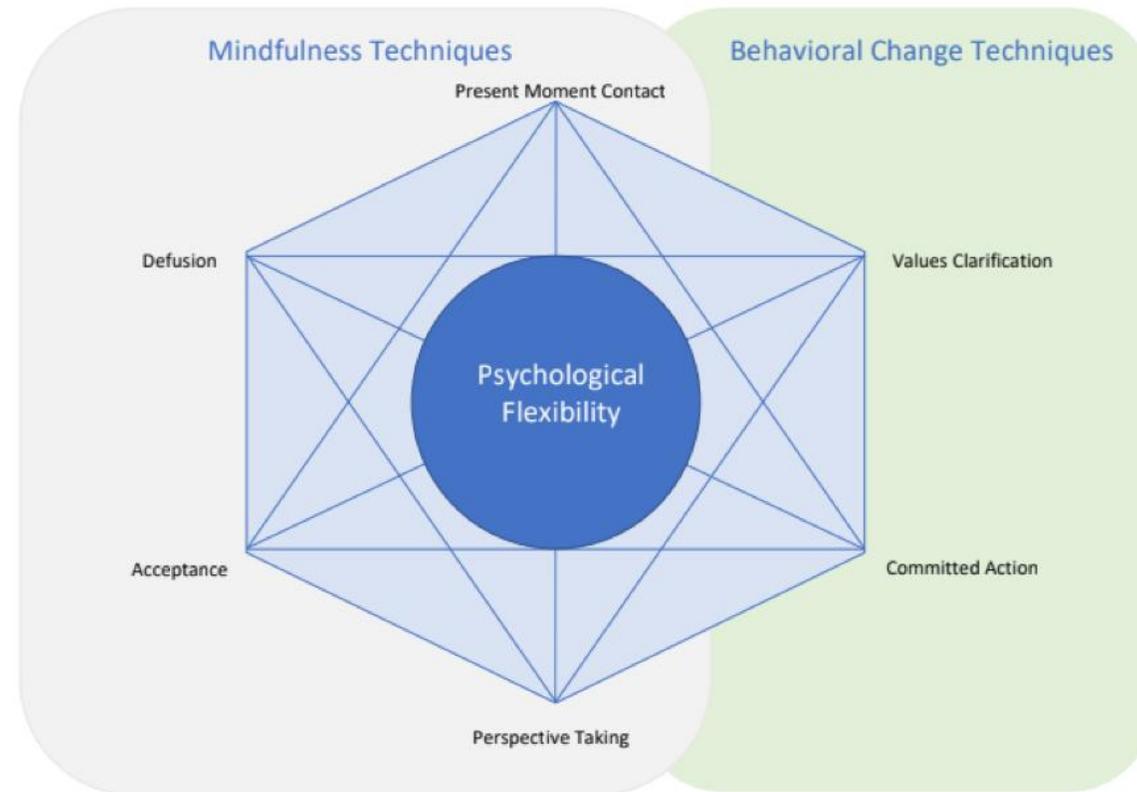
- Values
  - Self-Care as a value
  - Relaxation Exercise – Diaphragmatic Breathing





# Psychological Underpinning

- Acceptance and Commitment Therapy (ACT)





# Stages of Change

## Pre-contemplation

“I have pain and there’s nothing I can do”

## Contemplation

“Pain is complex and there’s room to change”

## Preparation

“I can make a plan and see if it helps”

## Action

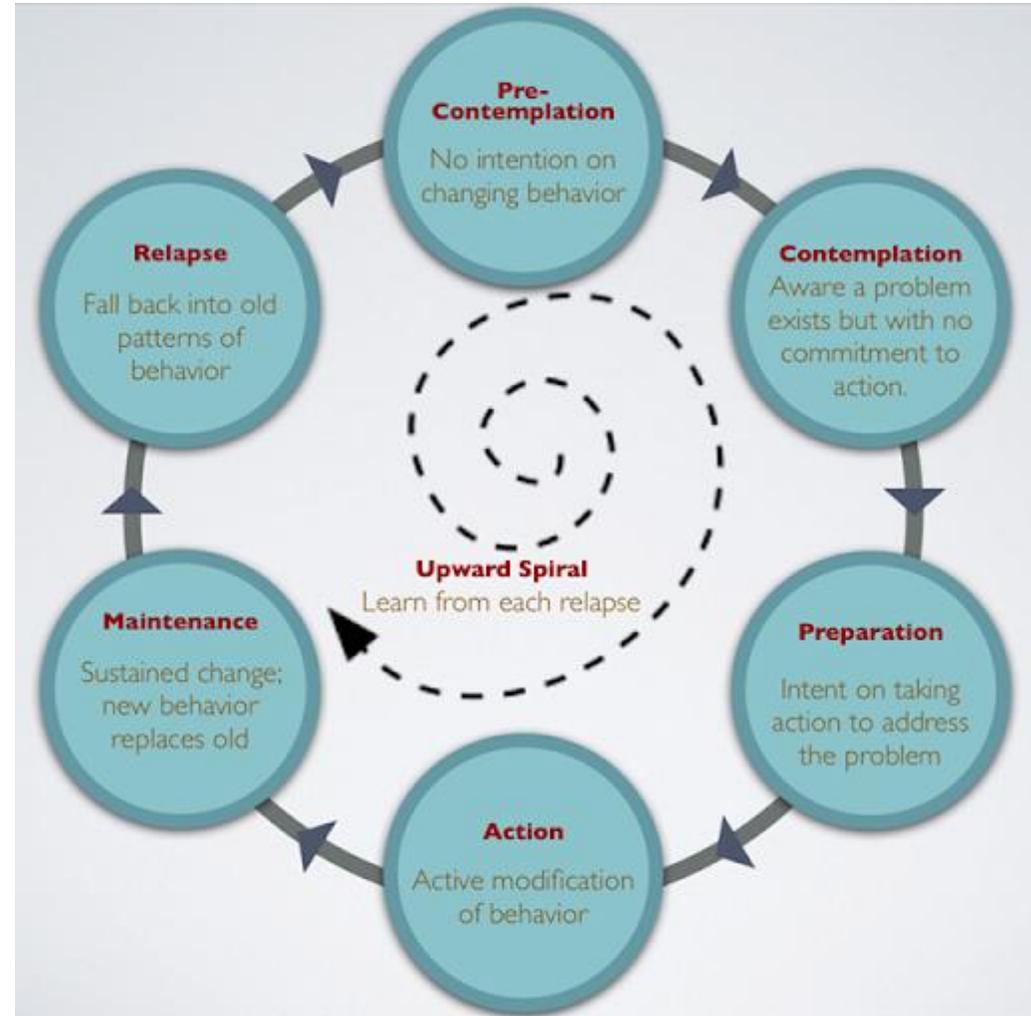
“Here I go, I’m learning and trying”

## Maintenance

“I can carry on with workable strategies”

## Relapse

Flare up – choice to give up or start afresh



Prochaska & DiClemente  
(1986)



# Your Position on the Stages of Change

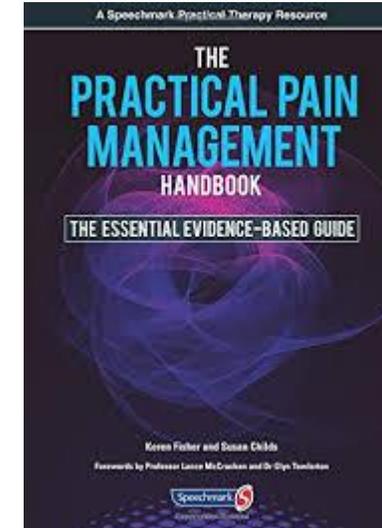
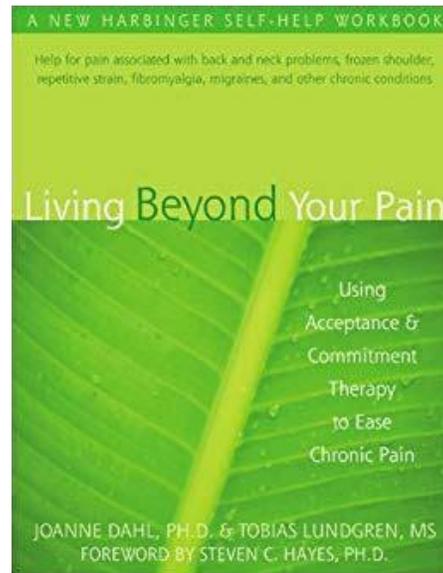
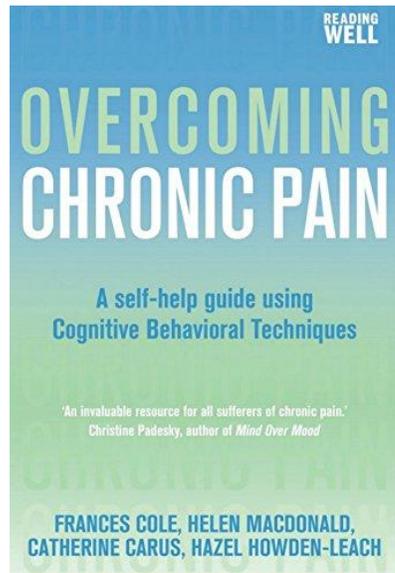
- If you respond positively to some of these statements, a Pain Therapies approach may be for you:
  - The way I cope with my pain could be improved
  - I am open to learning some strategies to help me deal with my pain problem
  - Even if my pain problem doesn't go away, I am ready to start changing how I manage it
  - I have incorporated helpful strategies and would like to learn more
  - I realize it's up to me to manage my pain rather than relying on physicians

Adapted from the Pain Stages of Change Questionnaire (Kearns et al., 1997)





# Guided Self-Help





# Therapies Team at ChelWest

- Traditionally, we run Pain Management Programmes (PMPs) based on our Pillars of Pain Management using ACT
- We run a stratified service
  - Inperson Pain Management Programme (iPMP)
  - Virtual Pain Management Programme (vPMP) via THH
  - Virtual Tai Chi/Pilates
  - Blended Yoga Workshop (virtual and in-person)
  - Blended Dual/Individual Clinics (virtual and in-person)
  - In-person Strength and Relaxation Classes (STAR)
- To access any of our interventions you need to opt into an assessment with a Physiotherapist and a Psychologist, available online





# Testimonies from vPMP

It was really pleasing to see the focus of the Pilates sessions were aimed at people with Permanent Pain; a new experience for me, as former sessions that I have attended were more general in approach

Learning about the current science has helped to understand what is happening in the mind and body. I was happy to see that Western and Eastern approaches were involved in the program

Listening to the stories of other people in the pain cohort and interacting with them was extremely valuable, as well as the interactive sessions

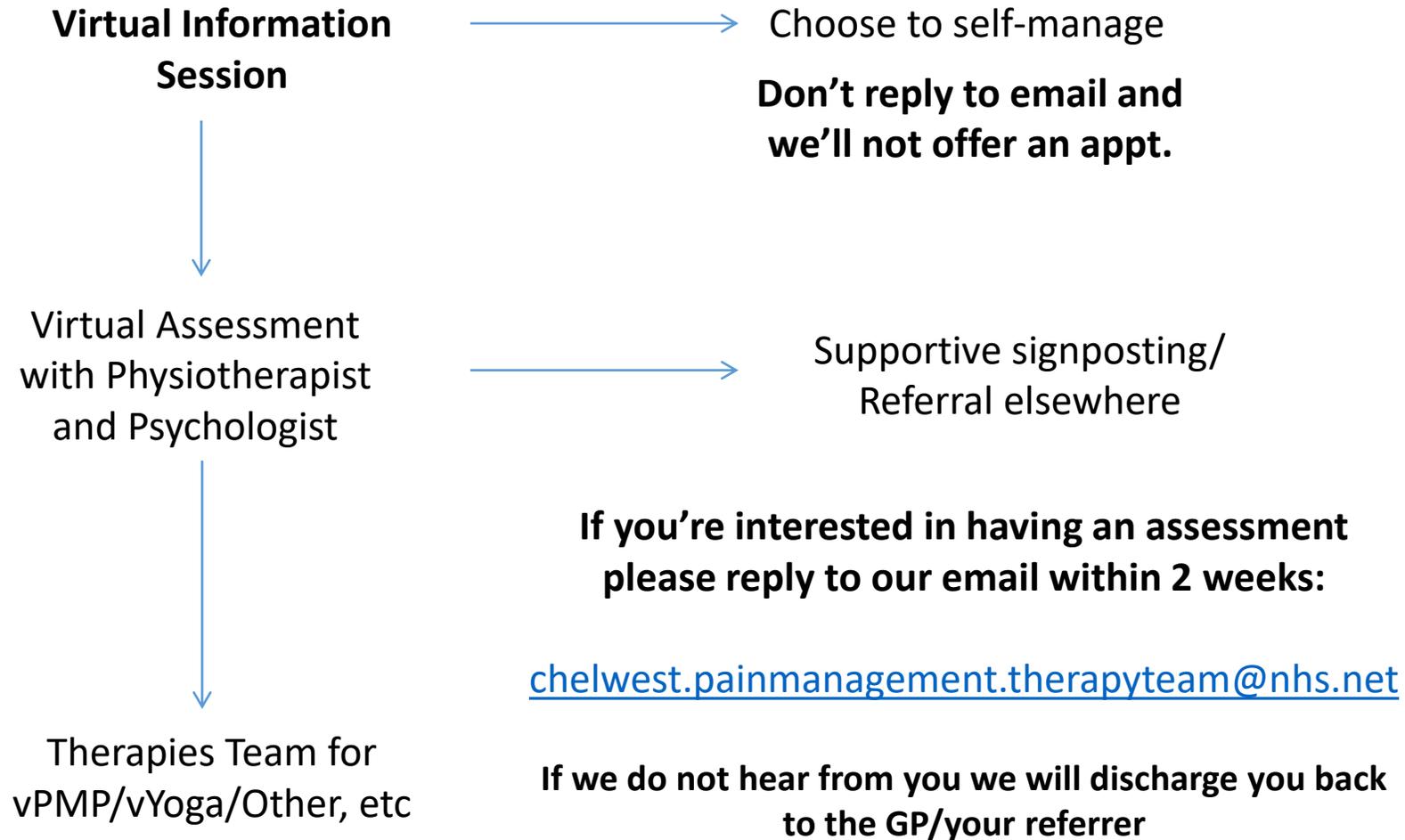
I feel I'm finally in control and have my life and confidence back, actually a better version of my self and more doors have opened that I never thought would.

Thanks so much for this experience, I will treasure it forever. I loved connecting with the others...it is proof that I'm not alone and that there is hope and a bright future ahead without letting pain block our way to living a fulfilling life.





# The Current Pathway





# Thanks and Questions

