



PAIN EXPLAINED WORKBOOK



St James's Physiotherapy Department

Explanation of Pain

Definition of Pain:

“An unpleasant sensory and emotional experience associated with actual or potential harm, or described in terms of such damage”

International Study

of Pain 1994

This definition is important as it tells us pain can be affected by factors such as the way we think, feel and by the environment around us. These factors can influence the perception of pain and therefore our response to it. This creates a very personalised experience of pain for each person.

Acute Pain & Healing



What happens when I cut my finger and have pain....

- The damaged cells release chemicals which make the skin inflamed and sent a message to the brain
- The brain receives this message and evaluates the situation
Is this dangerous? This is outside our conscious control

- If the brain decides it is dangerous? PAIN
Or if the brain decides this is not dangerous? NO PAIN
REMEMBER THE BRAIN DECIDES IF WE HAVE PAIN
- If we have pain, the brain can decide that the whole finger is more sensitive to any touch so it is more aware of what is going on. This is to protect your finger from further damage. Now when you press your finger gently, it hurts
- As you heal over the next days and weeks, the brain's perception of what is dangerous to the finger returns to normal and when you press your finger again you don't get pain
- We know a lot about how the body heals. Often pain begins with an initial injury. Most injuries heal in 3-6 months; including bone, muscle, ligaments, tendons and discs.

This pain is HELPFUL/ADAPTIVE

However sometimes pain continues and becomes

UNHELPFUL/MALADAPTIVE...why

What is Chronic or Persistent Pain???

- Pain that continues after 3-6 months
- Healing has finished
- Simply...with persistent pain, the brain's perception of pain doesn't return to normal
- The nerves can remain sensitised in the finger and in the brain
- When you touch your finger (although healing has finished), the signal to the brain from the nerves is perceived as danger
- Therefore the danger messages are still being sent to the brain despite there being no further tissue damage
- The brain receives these danger messages, evaluates the situation "is this dangerous"? and concludes YES=PAIN
- If this pain continues for months and years the danger threshold in our brain become even lower or can even misfire e.g like a keyboard getting stuck AAAAAAAAAA
This is called WIND UP and is one of the reasons why persistent pain does not go away easily
- So now even things like light touch or even thinking about pain can give cause to the brain to give you pain

This pain is UNHELPFUL/MALADAPTIVE

What drives this type of pain is not tissue damage...

It's the pain system- THE BRAIN

In simple terms, the body's warning system becomes more sensitive, producing an increased feeling of pain even though there may be no longer be any continuing damage to the body.



Pain is never “just in the mind” or “just in the body”. It is a complicated mixture of signals from the body and how the brain interprets them.

You know your pain, even though it cannot be seen or measured. The challenge for you is to understand the complicated nature of persistent pain and the best way of managing it.

“WIND UP” AND “WIND DOWN” the Brain

By doing things to “wind up” the brain you are increasing the sensitivity of the pain system

However

By doing things that “wind down” the brain you are calming down the pain system

RETRAINING THE BRAIN

So... by doing things that “wind down” the brain you are calming down the pain system

WIND UP	WIND DOWN
Stress- prolonged stress can cause changes in muscles and nerves and in turn cause pain	<p>Relaxation Techniques</p> <p>Good quality sleep</p> <p>Stress management techniques at work for example- organisation</p>

WIND UP	WIND DOWN
Fear- an injury or pain may cause a person to be afraid of doing certain movements	<p>Goal setting</p> <p>Pacing</p> <p>Progressive exercise/activity</p>

WIND UP	WIND DOWN
Low mood and negative thoughts-low mood can reinforce the negative thoughts of pain and result in less activity or motivation	<p>Goal setting and rewards</p> <p>Positive thoughts</p> <p>Progressive exercise/activity</p>

How can I re-train the Brain???

Do fewer things that “wind up” the brain

Do more things that “wind down” the brain

Management strategies and Treatment

- Pacing- “Little and Often”
- Goal setting
- Exercise
- Flare-up management
- Relaxation techniques
- Sleep and lifestyle
- Challenging thoughts and emotions
- Delving deeper into your “Pain Story”
- Medication



Pacing

- Most people base what they can do and how much they can do on how they feel
- This is particularly true in the cases of chronic pain
- If you experience a “good day” there is a tendency to do as much as you can whilst the pain is minimal



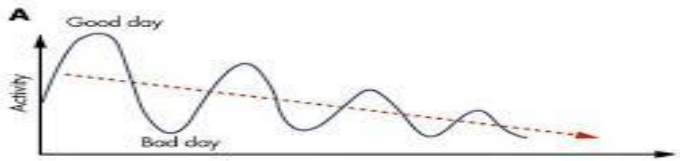
- In the same respect, if you have a “bad day”, your activity levels are much reduced, if not completely non-existent



- What tends to happen, therefore is on a good days you can be tempted to “catch up” on “things to be done” and often end up “overdoing it”
- As a direct consequence of this you find that the next day you suffer with high levels of pain and you are able to achieve very little

Activity Cycling/Boom and Bust

This process is known as activity cycling or the boom-bust cycle



Doing Too Much



- This can result in a build-up of levels of stress and tension as you desperately strive to meet all demands before the pain returns
- Stress and tensions are two factors that can increase pain intensity
- In addition to this, realising that you are not going to be able to do everything may lead to you feeling angry and frustrated that you have not achieved what you set out to do
- “Doing too much” will also leave you feeling exhausted physically and mentally. Resulting in your suffering the next day

Doing Too Little



- Low levels of activity can result in you feeling increasingly anxious and depressed
- The less you do the less likely you will be able to do it
- This is because your levels of fitness slowly diminish until you are physically unable to carry out tasks
- This feeds into the cycle of feeling helpless, anxious and hopeless
- In addition, cutting down levels of activity can slowly erode your confidence and self-esteem
- This tends to start a vicious cycle of developing, as the less you do, the less you feel able to do through lack of confidence and so the more you withdraw from activities and situations

Finding a Balance

- There are many changes in your life when you live with pain
- Most people tend to stop doing the things they enjoy because of worries or concerns over simple activities such as sitting
- Pacing can help break the see-saw of under- and over- activity
- You can use the principle to break an activity down into smaller more manageable portions-like cutting a cake

PACING ENABLES YOU TO MAINTAIN A REGULAR LEVEL OF
ACTIVITY WITHOUT OVERDOING THINGS
PACING WORKS BY PLANNING WHAT YOU DO RATHER THAN
YOUR PAIN TELLING YOU WHAT YOU CAN DO
PACING IS THE NEXT STEP IN “OUT-WITTING “
YOUR PAIN!



Goal Setting

Set yourself a goal

1. Decide **what you want** to do more of –this should be something you struggle with or want to improve on a daily basis
2. Pick 1 or more activity e.g walking, ironing, gardening
3. Set yourself a timescale; when would you like to be able to do this? E.g. 6 weeks

Make it achievable- **you need to succeed!**

Baseline

- The amount you are able to do and know that your pain won't flare up

Find your baseline

How long can I walk before I flare up?

I can walk for 30 minutes but pay for it the next day

Can I walk for 20 minutes without flaring up?

No I will still pay for it

Can I walk for 10 minutes without flaring up?

Probably not, definitely not up hills

5 minutes on a flat surface

Probably

3 minutes on the flat?

Definitely

Plan your Progression....



- Be gentle on yourself
- Start easy, build slowly
- You choose how much to increase on your baseline
- You may experience flare-ups in your symptoms but recognise these and try to manage them and then return to progression when you feel able
- Be realistic so that you can succeed

What Goals do I want to achieve?

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

What is exercise???

Physical exertion of the body

- By making the body do a physical activity, it results in a healthy or healthier level of fitness for both the physical and mental health
- In this way it aims to maintain our physical fitness and general health

Why should we exercise?



- To strengthen our muscles and bones
- To keep our joints supple
- Optimise our cardiovascular system
- Control our body weight
- To socialise
- Training for specific sports
- For fun
- Helps improve mood and reduce anxiety and depression
- Improves self esteem
- Increases metabolism

30 minutes of moderate intensity exercise 5 times a week

OR

75 minutes of vigorous intensity exercise spread across the week

Strengthening exercises at least 2 times a week

Reduce the amount of time spent being sedentary for extended periods

World Health Organisation

Recommendation 2011

Definitions and examples of exercise intensity;



- **Light intensity:**
The ability to talk while exercising
 - Going for a walk
- **Moderate intensity:**
Feel slightly out of breath, warmer and raise heart beat slightly, but still be able to carry on a conversation
 - Brisk walking, cycling or walking uphill
- **Vigorous intensity:**

Breathing harder, getting warmer, raise heart beat rapidly and feel as though your body is pushed nearer its limits making it difficult to carry on a conversation

- Running, swimming, football

- **Strengthening exercises:**

Involves using body weight or working against a resistance

- Exercising with weights, carrying heavy groceries

Exercise is vital to help deal with persistent pain, but getting started is difficult. Remember that we all ache when we have not exercised for a long time. This is a sign that the body is rebuilding muscles and tendons, not a sign of damage.

Common Barriers to Exercise and Possible Solutions

BARRIERS	SOLUTIONS
"I don't have the time"	"Little and often" Walk instead of taking bus or driving Stairs instead of the lift Take regular breaks at work-go for a walk at lunchtime
Boredom/ "don't like exercise"	Variation: change your exercise routine every few weeks. This will help keep you motivated but also give you the most effective results. The body improves faster if you keep changing your program and stops it from adapting. <u>Choose activities you enjoy:</u> to be successful in the long term you need to do things you enjoy

Physical effects: pain, muscle soreness, breathlessness, etc	Remember the health benefits- stronger muscles, improved cardiovascular function It takes several weeks of regular exercise to see an improvement in exercise tolerance and for there to be a training effect
Lack motivation	Remember why you started: weight loss, health, advice by health practitioner, recovering from illness. Keep this in mind and it will help you keep motivated Exercise with a buddy
Stress	Exercise has been shown to reduce stress levels- so although you may feel stressed to begin with you will probably feel a lot better afterwards!
Financial/cultural considerations	You don't have to join a gym-exercise outside in the fresh air or at home Take advantage of local exercise schemes etc..

“Flare Ups”

- Flare-ups of pain are common and part and parcel of having persistent or chronic pain
- Flare-ups are the periodic increases in your usual amount of pain
- They may last a few hours or days
- They are not usually something to worry about, but can be frustrating and make you feel that you have little control over your pain
- There may be some things that you can do to either reduce the number of flare-ups you have or help you to cope better with them

REMEMBER



- Use something to control the pain
- Modify your activities for a time (if necessary)
- Stay as active as you can

What have you found works for you????

.....

.....

Flare-up Q & A

What triggers a flare-up?

Try and identify any triggers and see if you can change the way you do this activity, for example by breaking it down into a more manageable session, i.e pacing. If you are an over-achiever it is easy to forget to pace yourself.

How can I manage the pain?

Think of things that help, for example heat or ice, gentle exercise or stretching, with short periods of rest, regular pain medication.

Is it good to relax?

Your muscles are likely to tense up during a flare-up which may increase your pain. Stress or anxiety may also increase the tension and your pain. Try to relax- there are lots of different ways to do this, so find one way that suits you. With any skill, practice makes perfect so try and fit regular relaxation sessions into your day.

What about activities?

During a flare-up you may need to reduce your activities slightly but try to not stop them altogether, otherwise you may lose some of your fitness. However don't be afraid to ask for help from others, to allow you to reduce your activity for a short period of time, until the flare-up settles, and you gradually return to your normal level of activity.

Sleep



People with pain often have problems sleeping. You may find that pain wakes you up or you may have difficulty getting off to sleep. A lack of sleep can make you feel more tired and stressed throughout the day and therefore can “wind up the brain” and reduce tolerance to your pain.

What keeps me awake?

- It may be what you are drinking in the evenings e.g coffee, tea, fizzy drinks or alcohol
- Are you taking a nap in the day in order to catch up?
- Do you lie awake worrying about not getting enough sleep?

What can I do?

- Gradually increase your daytime exercise
- Try not to nap during the day
- Try not to drink coffee, tea, fizzy drinks or alcohol for at least 4 hours before bedtime
- Smoking is another stimulant to be avoided
- Establish a bedtime routine-some quiet time, maybe a warm bath to help relax the muscles and your mind, or it may be a good time to practice relaxation

- Be comfortable in bed and not too warm. Use pillows for support
- Only go to bed at night when you are sleepy
- Go to bed and get up at the same time each morning, regardless of how much time you slept. Set an alarm clock.
- If you cannot sleep, after 30 minutes get up and do something relaxing e.g read, listen to music until you feel sleepy
- Avoid using computers/TV/ Smartphone use in the bedroom, use them in another room BEFORE bedtime

Relaxation/Deep Breathing

This could be reading, listening to music, walking, dancing, gardening, meeting friends, going to the cinema, or deep breathing, meditation or guided relaxation. You could also try a mindfulness app or relaxation tape.

Don't try too hard to relax, but try for about 10-15 minutes

- Find a comfortable position sitting or lying, somewhere quiet
- Take slow and steady deep breaths
- Focus your mind on something calm and repetitive
- "Let go" when breathing out

Emotions

We have mentioned previously how emotions can have a big impact on your pain and importantly their role in **“winding up the brain”**.

Pain can affect the way you feel and therefore the way you act. You may feel frustrated, anxious or depressed if you cannot do the things that you enjoy, so you may stop or give up doing things. You may become angry about what is happening to you and how it is affecting your life, so you may continue pushing through the pain. You may have negative thoughts about yourself and your situation may appear to be hopeless so you may find yourself doing less and less therefore resting more and causing your mood to become even lower. It is common for people with persistent pain to feel like this.

What can I do?

- Talk to your family and friends about how you feel
- Try not to think about the negative aspects of the situation, but think about the things that you CAN achieve, or that you enjoy doing, rather than those that you cannot do
- Plan to do things that you enjoy. But don't forget to pace it
- Try to practice and improve your relaxation skills, which can help to clear your mind of negative thoughts and see things more positively

SUMMARY



- Pain does not equal damage
- Pain you feel is real!
- All pain is in our heads- the brain decides whether or not we have pain
- Things can “wind up” or “wind down” the pain system
- The body likes to move!
- Little and often, small changes
- Be positive you can “re-train the brain”

THINK....

YOU ARE IN CONTROL NOT THE PAIN

Online Resources

VIDEOS



google these words **completely** and watch the videos

1. **Understanding pain in less than 5 mins (you tube)**
2. **Introduction to pain on vimeo (6 mins)**
3. **23 and a ½ hours- what is the single best thing I can do for my health? Dr. Mike Evans (9mins)**
4. **Tame the beast.org**

WEBSITES

<https://thehonestphysiocom.files.wordpress.com/2020/07/pain-management-guide-book-v1.02.pdf> "Honest physio Pain management"



www.paintoolkit.org

www.arthritisireland.ie

www.chronicpain.ie

www.pain-ed.com

www.alustforlife.com

MY ACTIVITY DIARY

NAME: _____ DATE: _____

GOAL: _____ BASELINE: _____

	WEEK 1	WEEK 2	WEEK 3	WEEK 4
MONDAY				
TUESDAY				
WEDNESDAY				
THURSDAY				
FRIDAY				
SATURDAY				
SUNDAY				