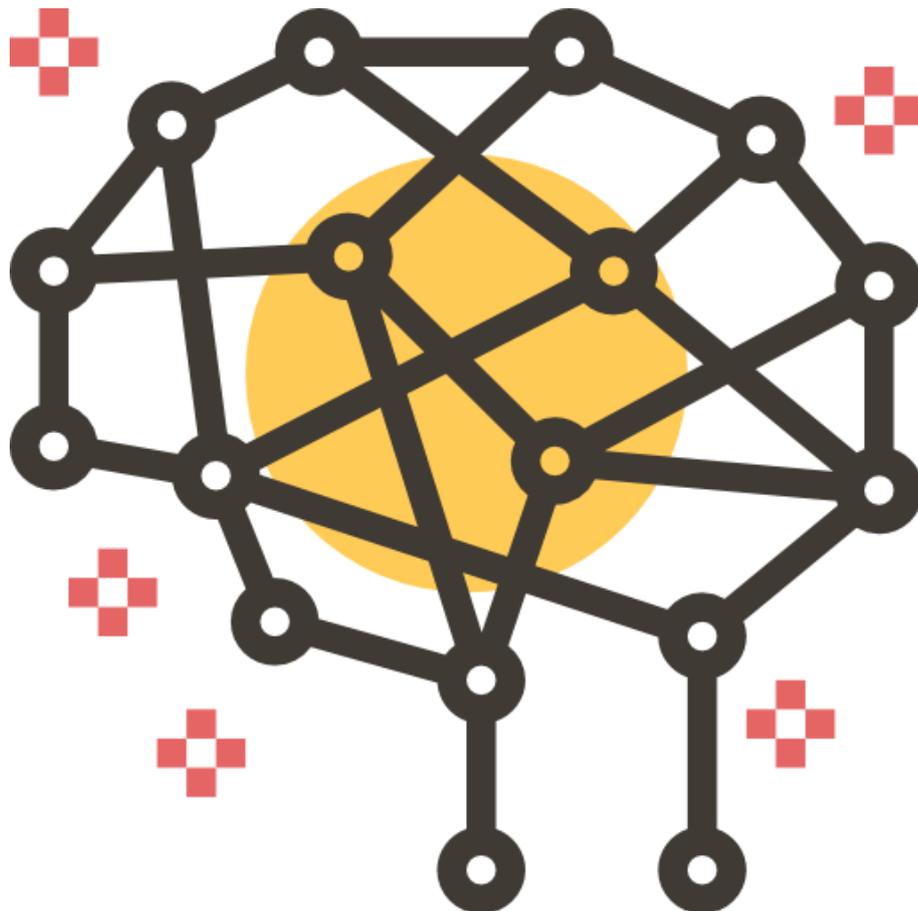


Rethinking Pain

A guide to Understanding and Relieving Pain

LIAN YUN-PERNG



Introduction

Lian Yun-Perng is a Physiotherapist who graduated from Keele University, UK. He has been working as a private practitioner since 2014 in Kuala Lumpur, Malaysia. Throughout his career, he developed a special interest in pain science and pain management. He believes that there is a need to educate his peers and the general public about the evolution of pain science over the last few years.

His special interest in pain science and pain management grew throughout his career as he recognises a gap between pain theories taught at tertiary level and those discussed in current research. He is therefore eager to close this gap and share his knowledge by helping others learn and unlearn certain aspects of pain.

Purpose of this Booklet

The purpose of this booklet is to help people understand why they have pain and what they can do about it. It touches on the definition of pain, the experience of pain, what scientists know about pain and some practical advice for pain management.

This booklet provides simple information to help people understand and relieve pain but does not replace any form of professional medical advice or intervention.

It is free and may be shared without seeking permission from the author. Thank you.

Nociceptor- Our danger sensor



First and foremost, we do not have **pain-receptors** in our body. The receptor that plays a role in pain is called a nociceptor. A nociceptor is a receptor that is sensitive to a noxious stimulus (actual or potential harmful stimulus). Various types of stimuli may alert the nociceptors in the body, including temperature, touch, movement or chemical substances.

Nociception is a neural process of **encoding** and **processing** *harmful or potentially harmful stimuli*. It requires the activation of nociceptors that relay information to the spinal cord and brain. In certain cases, nociception is required before pain can be experienced.

Here are some examples of noxious stimulation:



Burnt hand
(Thermal stimulus)



Walking hurts
(Mechanical stimulus)



Bee sting
(Chemical stimulus)

“Pain is just one part of the protective suite.”
Dr. Lorimer Moseley

What is Pain?

“An **unpleasant sensory** and **emotional experience** associated with **actual or potential tissue damage** or described in terms of such damage.” International Association for the Study of Pain (IASP)

Do you understand what you have read above? Yes and no, right? "What is pain?" may seem like a simple question, but the answer may differ depending on who you ask.

Some say that pain is a warning signal for something that is damaged (but what about pain-free major trauma?)

Some say that it is the body’s way of saying something is wrong (but what about phantom limb pain, where the painful body part is not even there?)

Some say it is a curse for the things they have done; some say it is part of aging.

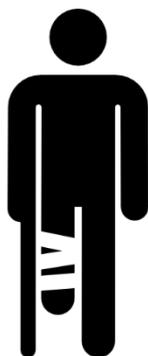
Others say it is a reminder that they are broken/imperfect, that their spine is ‘out’ or that their disc has ‘slipped’ (extra notes: discs *never* slip. Ever).

For the purpose of understanding, **pain is an unpleasant experience**; whatever that may mean to you.

Here are some examples of pain based on the definition by the IASP:



Chest pain
[Warning sign of a heart attack (Potential tissue damage)]



Broken leg
[Bone and tissue damage (Actual tissue damage)]



Broken heart
[Emotional pain (No damage)]

“Pain is inevitable, suffering is optional.”
Buddhist proverb

How is pain experienced?

Pain is described as a **conscious experience** with the **interpretation** of **danger signals** that can be **influenced by memories, emotional, pathological, genetic and cognitive factors**.

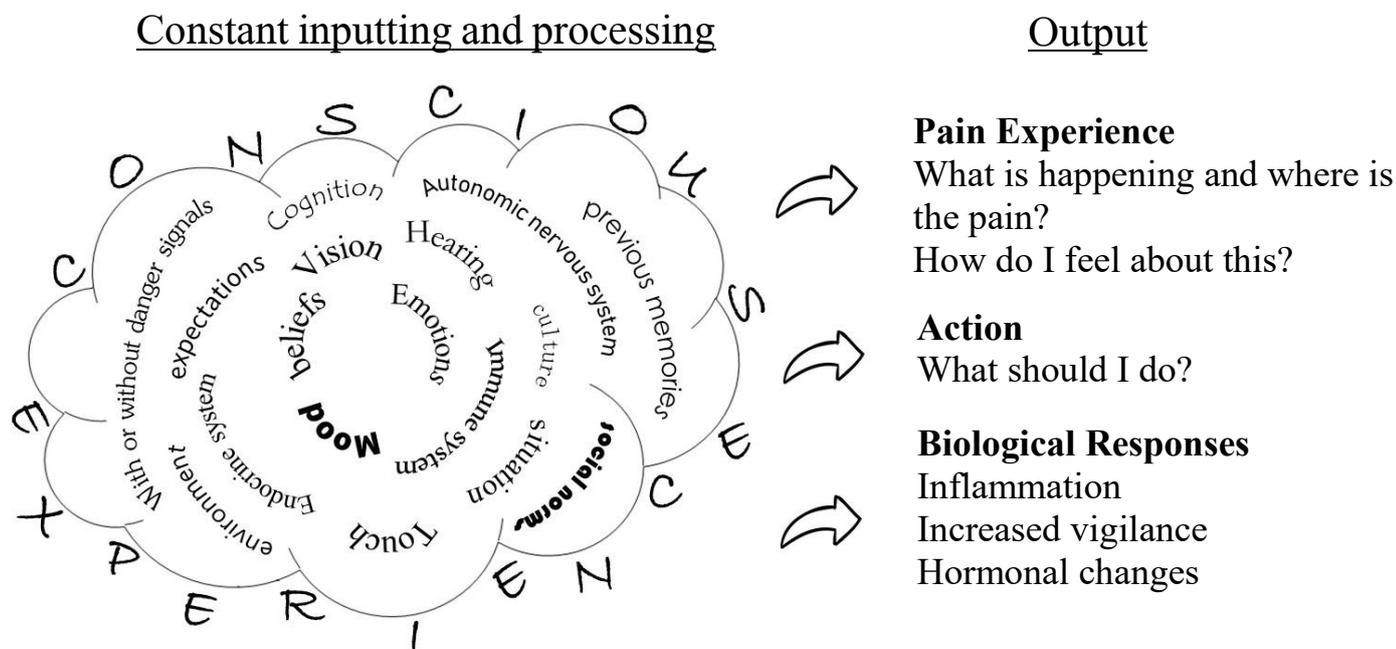


Diagram 1

Consciousness means having awareness. A conscious experience therefore means constantly being aware of the information that the body systems are receiving. For example, surgeons anaesthetise their patients during surgery to prevent them from experiencing pain. Why? Because anaesthesia will cause a loss of consciousness and consciousness is needed to interpret information and experience pain.

So, the experience we call pain is complex and involves multiple factors as shown in diagram 1 above. It is not always possible to pinpoint a single cause of pain and it is important to acknowledge that there are likely many contributing factors to pain.

“Pain is like your mood, you can’t predict it.”
Yun-Perng Lian

What scientists know about pain?



Truth #1

Pain is **complex** and “biopsychosocial”. It involves not only tissue damage and inflammation (bio), but also perceptions, thoughts, emotions, and social stress (psychosocial). It is often dependent on the individual, context, and can be unpredictable.



Truth #2

Pain is like a **danger alarm system**. It is triggered when the protective system feels threatened. The perceived threat signal is relayed from the body to the brain. The brain will interpret the meaning of the information and may lead to pain.



Truth #3

The relationship between pain, posture, and poor movement quality is overemphasised.



Truth #4

We have an **inherent ability** to amplify or reduce pain.



Truth #5

MRI findings have low correlation to pain. However, it is not obsolete; it is often just not as useful as we thought.

“May your choices reflect your hopes, not your fears.”

Nelson Mandela



Truth #6

Pain is **not** a measure of tissue health.



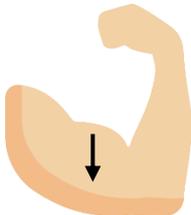
Truth #7

Degeneration and/or aging is **not** the reason for feeling pain.



Truth #8

Pain is **not** the same for everyone. We may share the same diagnosis, but the level of pain is personal.



Truth #9

Pain is **not** caused by weak muscles.



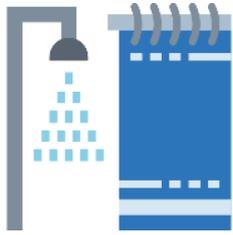
Truth #10

Pain is **not** a thing. It is a perception, or an experience defined only by the individual.

“We either make ourselves miserable or we make ourselves strong. The amount of work is the same.”

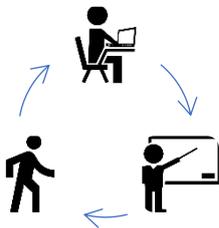
Carlos Castaneda

Practical Advice



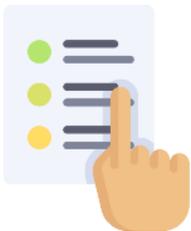
Heat or cold therapy

Apply a heat or cold pack over the painful area or take a hot or cold shower. There is nothing magical about heat or cold therapy. It is relatively cheap and widely available.



Your best posture is your next posture

Keep moving or changing positions. All postures, movements or position are acceptable. What is not acceptable is being sedentary and staying in one posture for too long.



Preference

Each individual has their own preference on what feels good, what brings relief, or what gives relaxation. The key to finding that preference is to be aware of what your body wants.

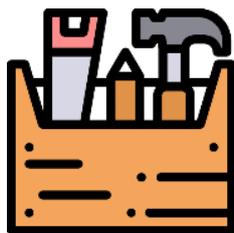


Self-confidence

Believe in yourself. One's belief in their own ability to succeed in accomplishing certain task or activities can have an impact in reducing pain.

“I don't think of all the misery, but of the beauty that still remains.”

Anne Frank



Quick fix

Do not seek for quick fixes. As much as the health industry claims to provide quick fixes, it does not exist. Humans are living organisms; our biology is constantly changing. Unlike machines, humans do not always need to be fixed.



Expectations

Set realistic goals and expectations. The journey is not always smooth and may be bumpier than you expect, but don't let this get you down!



Holism

Find a clinician that practises according to the biopsychosocial model. The clinician should consider and discuss the biological and psychosocial aspects of health before recommending any treatments.



Self-management

Find a clinician that encourages self-management. The clinician should prescribe a home exercise programme, teach self-relieving methods, and encourage independence.

“Pain is temporary. It may last a minute, or an hour, or a day, or a year, but eventually it will subside and something else will take its place. If I quit, however, it lasts forever.”

Lance Armstrong