

EXPLAIN PAIN

EXPLAIN PAIN JMW

No one wants pain.
Pain is unpleasant
Pain protects you by alerting you
of danger.

Occasionally the pain system
acts oddly.

Some times the pain system fails
to alert you eg. Cancer.

Pain experiences are normal
and are an important,
although unpleasant,
response to what your brain
judges to be a threatening
situation.

Pain occurs when your body's alarm system alerts the brain to actual or potential tissue damage.

Pain makes you take notice because it is your body's way of getting you to do something about the situation.

The amount of pain you experience does not necessarily relate to the amount of tissue damage you have sustained.

In low back pain, research has shown that the amount of disc and nerve damage rarely relates to the amount of pain experienced.

It is also very likely that an x-ray of an older person's spine will reveal changes which could be described as arthritic or degenerative-but they can still function very well.

Simply, if there is no pain it means that these changes in tissues are not perceived by your brain to be a threat.

The context of the pain experience is critical. Exactly the same minor finger injury will cause more pain in a professional violinist than in a professional dancer because finger damage poses a greater threat to the violinist.

Phantom limb pain is the experience of pain in a body part that does not exist. Pain after amputation is usually more severe if there was pain before amputation. This is a type of pain memory.

Within our brains is the virtual
body which is a sensory map of
our body.

Imaging studies show that marked changes occur in the brain with any chronic pain.

These alterations result in changes in the virtual body. For example in chronic back pain, the sensory map area that corresponds to the back is greatly enlarged because we are attending to it regularly.

The alarm system in our nervous system has developed over thousands of years. It is a highly sophisticated system that is designed to warn the brain when we are in danger.

The command centre for the alarm system is in the brain. It receives information from the millions of sensors throughout our body. These sensors respond to different inputs.

The life of a sensor is short. They
are replaced by fresh sensors.
Consequently, your sensitivity is
always changing.

When your alarm system is activated, there is an increase in the production of sensors, to provide your brain with very accurate and up-to-date information.

When the level of excitement in the sensory receptors reaches a certain level, they start firing messages to your brain. Somehow your brain then interprets these messages, including ones that are interpreted as pain.

When the sensory messages reach your spine, it causes chemicals to be poured into the gap between nerves. If enough chemical is present and if they unlock the gates into other nerves, messages are then sent along your spinal cord to your brain.

The relay station at your spinal cord operates like a post office. The inputs and outputs of a post office are constantly changing. It receives very strong messages from your brain that control the amount of messages reaching your consciousness.

Once the brain receives the messages from your spinal cord, it has to construct a sensible story that explains the pain based on all the information arriving.

The areas of the brain involved
in pain is widespread.

However the exact areas vary
between people because
everyone's pain experience is
different.

Healing in body tissues is dependent upon blood supply and the type of tissue damaged.

Pain should diminish as healing occurs.

Pain that persists longer than the expected healing time is likely to be coming from another source.

When pain persists, the nerves may start to “backfire”. This is a normal process in acute pain. It helps inflammation. But in persistent pain, the nerve also spews out chemicals into the tissues.

This means that you don't need to have damage in your tissues to feel pain! By reducing the sensitivity in your nerves, you also reduce the chemicals spewed out into the tissues.

So what does nerve pain feel
like?

Pins and needles

Burning

Pain at night

Positions and movement

Stress

Sudden zings of pain

Your brain has the final say about what is painful. You do not feel pain in your tissues. You feel pain in your brain.

“Are you saying that the pain is all in my head?”

Yep, no brain, no pain!
But, your pain is very real.
As your time living with pain
increases, the involvement of the
tissues reduces and the
involvement of the nervous
system increases.

As the amount of chemical in the spinal cord increases, the nerve pathways to your brain also become more sensitized.

That is, your brain is being told that there is more danger at the tissues than there actually is.

The messages are faulty
because they have been
amplified.

It is important to also know
that thoughts and beliefs are
nerve impulses too.

Thoughts can be viruses for pain.

That is, they can delay the reduction in pain simply by sensitizing further your nervous system.

Once your pain is chronic, the sensitive nervous system can do all sorts of weird things. Not only can pain persist, but it can spread, worsen, and small movements can make it feel worse.

Pain can then also become unpredictable which can be very frustrating.

Threats to your body make the pain worse.

The sympathetic and parasympathetic nervous systems are part of an elaborate response system. It is intimately related to adrenalin and the cortisol system.

Chronic pain and stress are usually associated with persistently increased levels of adrenaline. This can magnify the effects in your nervous system to either “fight or flight”.

The cortisol system is also involved in heightened situations of stress. It is a protector response that helps to regulate energy systems in the body. When it is chronically stimulated, it may lead to changes that are less than desirable.

Long term stress and pain usually lead to an alteration in activity which results in more circulating inflammatory molecules (cytokines). Immune system responses can be learnt.

What boosts the immune system:
to have control in your life
family and medical support
strong belief systems
have a sense of humour
exercise appropriately

The brain also primes your muscles to help you support your body. In the long term, activation of these muscles is not smart because they are not designed to be under constant readiness.

Muscle aching may develop associated with a sense of tightness. Research has demonstrated that even if spinal pain settles, back muscles remain weaker than before the injury.

Long term muscle changes make you behave differently and move differently. Once this pattern becomes established it is very hard to reverse.

There are many health practitioners out there who would like to help you with your pain. However, beware, you need to be careful and in control.

Different explanations of your pain can be confusing and make you feel worse.

The following guidelines may help:

Make sure that all ongoing pain receives a medical examination.

Any prescribed help must be understood.

Have all your questions answered satisfactorily.

Avoid dependence on any practitioner-you must take control.

Fear is a powerful motivator. It can lead you into a cycle of pain and disability from which it is hard to break free. To face these fears, you need to be informed and understand as much as possible about your pain.

Coping is the ability to identify, manage, and overcome the issues which stress us all.

Coping aims to reduce the threat value of the stimulus and the associated emotions.

People who use active coping
strategies:

Learn about the problem

Explore ways to move

Stay positive

Make plans

Nudge the boundaries of your
pain.

Passive coping strategies include:

Avoiding activities

Doing nothing

Waiting for something to happen

Believing that someone else has
the answer.

So which road should we travel
to start controlling our pain.

No pain, no gain ?

Let pain be your guide ?

Understand pain so you don't
fear it?-this is the road less
traveled but ultimately, the road
to recovery.

Smart thinking:

“When I am hurting, it doesn’t necessarily mean that I am damaging myself”

But it doesn’t mean that you go out and immediately take up heavy yoga stretching.

Your nervous system will not let you do anything more than gradually increase your activity or exercise level.

Pacing is the word that often comes up when deciding to increase activity levels.

Decide what you want to do
more of.

Find a baseline to start with-that
is, an amount that is well under
creating a flare-up.

Then, over time slowly increase
your amount of activity.

Flare-ups during a return to activity is inevitable, but careful planning of what strategies to use can help reduce the stress associated with this.

Imagined movements-activate the brain without moving the actual body.

Here, you are trying to activate the movement pathways in your brain without also stimulating the associated pain pathways.

For example, imagine yourself bending.

Alter gravities forces.
Perform helpful movements in
positions which are more helpful
than others.

For example, performing
exercises on your back or in
water, may be less annoying than
doing them sitting or standing.

Challenge your balance.
Activities like using a Fit-Ball
may be helpful as it stimulates
postural muscles to be activated
rather than the heavy splinting
muscles associated with pain
states.

Alter the environment in which you do your activities. Initially, commence with activities in your own home then progress to doing them in public places like a park or swimming pool. This will help break the feeling of isolation.

Do movement exercises in different emotional states. That is, you must continue to do your paced activities even when you are feeling low. This will propel you out of the Boom and Bust cycle.

Add distractions to limit the attention on your pain. Music is one example. Another is meditation or visualisation

Finally, realise that your pain changes all the time and that your body has an enormous ability to heal. By taking control of your pain, you can ultimately determine which path to recovery you will take.