"The Psychology of Pain" Preventing Pain from Injury becoming Severe Chronic Pain

Recent years of scientific research has taught us a lot about how pain works in nerve cells; that is, how pain signals go from body tissue to brain. We have also learned a lot about what makes pain worse (and better) over time. Some of these factors are physical and some are psychological. We now know that how much (a) pain, (b) disability and (c) emotional distress a person has six months after an injury is influenced by psychological factors just as much as the physical injury itself.

So, for everyone with an injury, there are psychological factors that will affect your medical outcomes and overall wellbeing. This tip sheet summarises that knowledge for you. Psychological factors refer to (i) our thinking about the pain and injury, (ii) our attitude towards treatment, (iii) our choices and behaviours and (iv) our mood, including feeling down or angry about the injury.

One of the first things to learn about is the idea of "The Pain Experience". There are psychological parts to the way we feel pain for anyone and everyone. The circular diagram on the right shows how there are always layers to the way we experience pain. It starts with a nerve signal carrying pain from the damaged site to your brain. But that is not all. We always have thoughts about our pain and the injury and it affects out mood. Our behavioural response to pain is quite natural and inevitable too.

BEHAVIOURS
(protection,
treatment ...)

EMOTIONS
(worry anger,
depressed)

THOUGHTS
about injury
and pain

Pain Signal

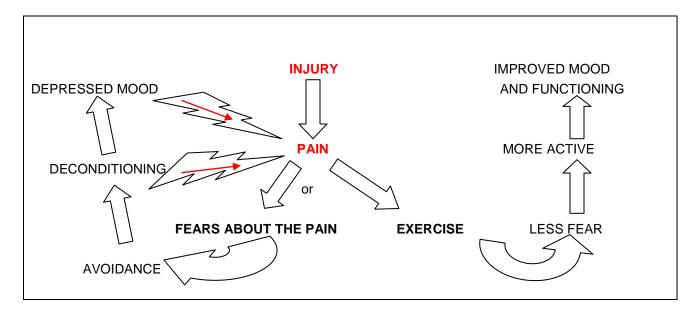
There are a few main reasons why some pain actually gets worse over time and lasts longer. The main factors that we know of are (a) fear and avoidance and (b) emotional distress.

How does **fear and avoidance** work against us? Well, actually, it is completely natural and understandable to fear pain or re-injury. We need to learn to be guided by medical advice more than our instincts at times. Pain is made worse by **anxiety** because if we **avoid** pain then we never get to realise that it is not as horrendous as we first think. Even worse, we may get deconditioning, when our bodies get weaker due to not moving enough and this causes more pain. Finally, worry about our pain makes us focus on it more, so we feel it more.

Imagine a woman who has been told that her bad back pain is due to a 'bulging disk'. She does not realise that this is stable and can be managed by physiotherapy exercises over the next six months. She starts worrying that it might bulge out further and she will never be able to pick up her kids, be active or get back to work. So she tries to protect her back by doing very little. The less he does, then two things follow. Firstly, her muscles and joints get weaker because of low use ('deconditioning'). This is likely to make her pain worse in the long run and may even cause secondary medical problems. Secondly, the less she does, the more she misses out on things and she becomes more depressed about her life. She has less things to distract her from her pain and she worries more.

This brings us to the second of the two major maintaining factors – distress and depression. What we know through good studies is that depressed mood tends to make our pain experience worse. It happens in a few

ways. The more **depressed** we feel, the more efficiently the nerve pathways carry the pain messages, so the same injury in your leg or back seems to feel worse by the time we feel the pain (when those nerve messages have reached the brain). Secondly, the more depressed we get, the less motivation and energy we have to do our rehabilitation or everyday activities. The less we do, the weaker we get and our injury does not recover properly. Finally, if we get depressed and do less, then we have fewer distractions, and our life seems to revolve around our pain. Others get sick of it and we seem to notice it more.



The figure here shows how professionally recommended and supervised exercise can help recovery. On the other hand, avoiding any pain because of fear leads to extra layers of problems, some of which can make the painfulness of the injury last longer than necessary.

In summary, there are psychological aspects of all pain experiences and there are psychological factors that affect everyone after an injury. How you manage these factors can have a big impact on how much pain you have and how active (or how disabled) you are in 6 or 12 months after the initial injury.

The treatment implications are:

- 1. Get some good medical advice about the nature of your injury and how *worried* you really need to be about how the pain feels.
- 2. Get some advice about the optimal level of exercise; some pain is safe and helpful in recovery.
- 3. If you are feeling depressed (about the injury or anything else) get some help with this, as *depression* seems to compound the painfulness of an injury
- 4. Getting back on with major life activities and roles (family, household, recreation and work) after an injury is very important it prevents a short-term injury becoming a longer-term disability.
- 5. Spot the obstacles to you getting back on with these activities and get some help overcoming them.