

# Your Body's Protectometer Part Two

## - and the Magic of Bioplasticity

In the Winter issue of this magazine, we discussed how your body's Protectometer works and how to identify your DIMs (dangers in me) and SIMs (safeties in me). If you need a bit of revision, please have a quick look at that article again. In this issue, we discuss how to make this knowledge work for you.

### The dark side of bioplasticity: Increased sensitivity of your danger transmission systems.

The longer your nervous system has been protecting you, the better it gets at doing it. The nerves that convey danger messages to your brain become more sensitive and the brain cells that make your pain become more sensitive too. All sorts of things that didn't hurt before now hurt. The effect of increased sensitivity is that the Protectometer becomes more sensitive to DIMs and becomes more alert.

### Bioplasticity and why you should be hopeful that your pain will get better:

Neuroplasticity is the ability of your brain to change over time. Not just your brain can change, but all of your systems, which is why we call it bioplasticity. This means that anyone can learn how to lower their Protectometer to a normal state.

### Make bioplasticity work for you:

- Identify your DIMs and SIMs.
- Modify and remove DIMs.
- Strengthen and gather SIMs.

Here is an example of bioplasticity at work by removing DIMs and adding SIMs to turn down the protective systems, including pain:

Sarah worked out that bending forward was a strong DIM that sent her Protectometer up to 8 on the pain scale. She modified this DIM by seeing her doctor and learning that her back was not about to crumble and nothing was out of joint. She then began firstly just to imagine herself bending forward, which allowed her to sneak under the radar of her protective systems. By gradually and progressively

performing parts of this movement pain-free, she eventually accomplished the whole movement comfortably. Learning that hurt doesn't always equal harm and that bending forward was just one DIM among many, further modified her power over the bending-forward DIM and eventually removed it. Sarah could have also added some SIMs by changing context during this process, for example imagining or performing the movement in her happy place, with her best friend, having a good laugh and with her favourite music.

### 1. Plan your strategy

Active coping strategies are better than passive ones:

#### Passive coping: DIMs

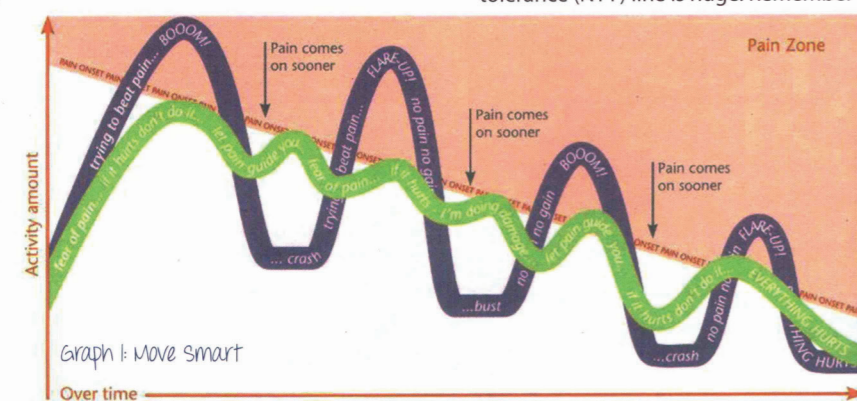
- Waiting for someone to 'fix your pain'
- Letting someone else take control
- Doing nothing to help yourself
- Avoiding activity
- Believing activity will make you worse
- Only taking pills
- Hoping your pain will just disappear

#### Active coping: SIMs

- Finding out more about the problem
- Making plans
- Exploring different ways to move
- Improving your fitness
- Working with a supportive clinician
- Eating better
- Learning to face unchangeable DIMs

### 2. Move smart:

Two activity behaviours that are driven by DIMs, are fear of pain and 'no pain no gain'. Both switch on and turn up protective systems, leading to a situation where



everything hurts. The common feature of both of these behaviours is that the brain learns to make pain with less and less activity.

### 3. Pacing and graded exposure:

#### • TT: Initial Tissue Tolerance line.

Before your pain started, your tissues were fit and healthy. There was a certain amount of activity or specific movement that you could do before your tissues would react in some way. Most tissues are damaged by reaching the tissue tolerance line too quickly (e.g. from falling or lifting a heavy weight). Sometimes, this line is reached slowly while you are distracted (e.g. working or training).

#### • PBPP: Initial Protect-By-Pain line.

Danger sensors are activated before damage occurs and your brain is alerted. Pain motivates you to stop or change the activity to get your tissues out of danger.

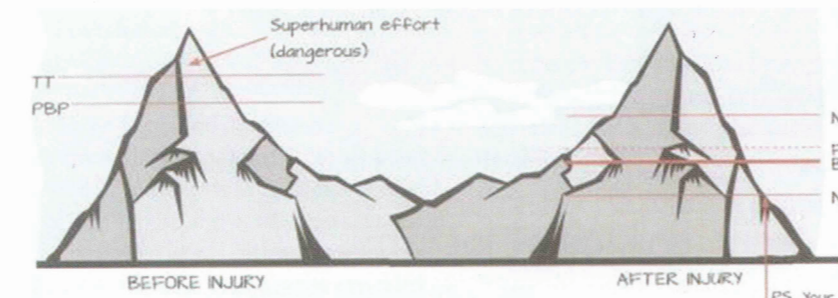
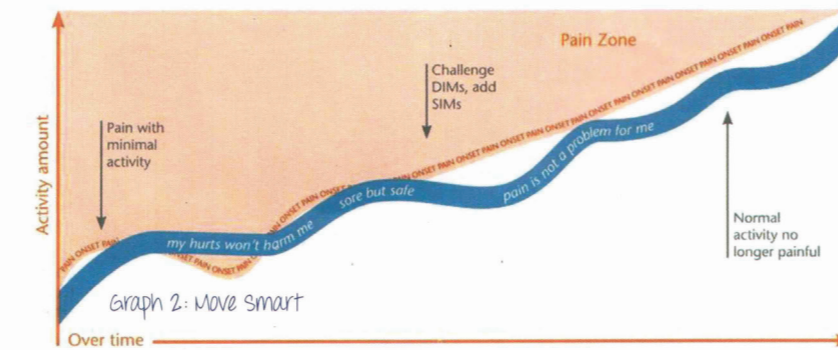
#### • NTT: New Tissue Tolerance line.

Look at the mountain on the top right. If you have had pain for some time, the tissue tolerance line shifts. Your tissues are not like they were – especially if they have sustained an injury. Although the tissues might have healed, they may not perform in quite the same way. You have not used the tissues as much or in the same way since your pain started. They are unfit, weaker and more easily fatigued.

#### • NPBP: New Protect By Pain line.

Your alarm system is sensitized. You have pain at very low levels of activity, or maybe even simply imagining movement brings on pain. Now the protective buffer between the onset of pain (NPBP) and the new tissue tolerance (NTT) line is huge. Remember

# Your Body's Protectometer



This graphic illustrates a before and after reaction to pain as experienced in your tissues



This graphic illustrates pacing and graded exposure to pain

that you won't re-injure the tissues if you take the steps below slowly – it will hurt too much to get anywhere close to that line.

**Step 1:** Reflect on how you used to be (TT and PBPP), where your initial or old tissue tolerance and protect-by-pain line was, with walking as your example.

**Step 2:** Sort out your new tissue tolerance line (NTT). It will now be slightly lower than it was back then – you are not quite as fit, healthy and strong as before.

**Step 3:** Sort out your new protect-by-pain line (NPBP). How far 'up the mountain' is the onset of your pain now when walking?

**Step 4:** Compare back then to now. Compare the buffer between tissue tolerance (TT) and protect-by-pain lines (PBPP) on both mountains. Can you see how pain is protecting you a bit too well now?

**Step 5:** Understand flare-ups. As an extra protective measure, your body has a flare-up line (FUL). This is the amount of activity that wipes you out, makes you nauseous, has you reaching for the hard

drugs, feeling desperate and occasionally doing some pretty drastic things. A flare-up is a sign that your Protectometer has moved well into the pain zone – but remember that it is rarely a sign that you have re-injured yourself. If you try to push through your flare-up line, your brain might make some drastic attempts to protect you even more – you might feel dizzy, vomit or even faint.

**Step 6:** Set up your base line (BL). Your base line is where you are safe from flare-ups and a long way from injuring yourself. There are three questions to answer:

1. How much do I want to do? Goal - one hour walking would be great.
2. How much walking would it take to really flare me up? FUL - around 30 minutes.
3. How much walking does it take to make me hurt now? NPBP - about five minutes.

Now your BL can be set up anywhere that you feel you can cope between these points. In the example above, this will be between five and 30 minutes. Remember

that anywhere below your NTT line, you won't hurt your tissues. You might be sore, but you will be safe.

**Step 7:** Select further activities to pace. You can set up a BL for anything in life – activities you need or want to do e.g. fishing, dancing, working at your desk or cleaning the house.

**Step 8:** Check your back pack. You will need to organise and pack plenty of SIMs (Positive attitude, detailed plans, hope, inspiration, fitness and mobility, warm clothes, wholesome food, patience, useful knowledge about pain and supportive friends). Throw out any old weighty DIMs (Negative attitude, fear of movement, high sugar food, bad sleep, no plans, no hope, lack of fitness and low expectations).

**Step 9:** Enjoy the view. To progress, do a little more of the activity each day – not much more, just a little more so as to sneak under the pain radars. You can progress up your mountain by confronting certain DIMs, while maintaining the same amount (time/number/quantity) of activity. Taking your activity out of a safe place (home or clinic) and into the workplace for example, could confront and conquer a DIM. If your systems are edgy and super protective, sneak under the radar by just imagining yourself making the movement. Make small increases every few days or even weekly. Gone a little too far? You can back off a little or keep going with the same amount of activity, but with some extra SIMs in your back pack.

The FUL line will slowly shift along with your training level. This is because you are training your brain and reducing the perceived threat. The NPBP and NTT line will slowly lift as the sensitivity of the system reduces.

### 4. Your own drug cabinet.

Your brain produces its own powerful drugs such as serotonin, endorphins and other substances that are similar to morphine. These happy hormones work throughout your body to stop danger messages from reaching your brain – they block DIMs. They can keep your Protectometer in the no-pain zone even if you have a severe injury.

The keys to your cabinet: SIMs such as knowledge / getting a big warm hug from a friend, are keys that will switch your brain's

*continued on page 21 /...*

# Your Body's Protectometer

*continued from page 19 /...*



drug cabinet on. DIMs such as fear / driving by the place where you had your accident, will switch it off.

### 5. Clean up your language:

Some words and phrases sound dangerous, like 'degeneration' or 'wear and tear'. But words can also be SIMs and sound safe, like 'soothe' and 'ease'. If you keep using and repeating words such as 'degenerating' they can become more deeply embedded as DIMs that switch off your drug cabinet in the brain and push your Protectometer up.

**Understand your scans:** We 'grow like trees' – none of us are symmetrical, and the 'kisses of time' are not limited to wrinkles. Scans and x-rays nearly always show something, although that something may cause you no suffering. Don't let the words on an x-ray report be unnecessary DIMs. Seek a real understanding of scans and x-rays – a good question to ask your doctor is, 'how common are these findings in the average population that is without pain?' The results may surprise you.

**Understand your diagnosis:** Diagnoses, including words like arthritis, fibromyalgia, collapsed arches, whiplash, spinal instability or anything with the word syndrome in it, sound dangerous and can be DIMs. This language can become so powerful that it takes over your life and defines what you do, think, the places you go, the people in your life, even your biological state. Don't let it become a 'super DIM' that will constantly push your Protectometer up. Understanding your symptoms in terms of DIMs and SIMs and protective systems rather than just the diagnosis, will give you the freedom to make the best treatment choices.

**Bin the DIMs:** Fill this rubbish bin with all the words and sayings that will no longer be DIMs for you, e.g. arthritic, degeneration, bulged, compressed, bone on bone, ruptured, it's just old age, crumbling and falling apart.

**Sing the SIMs:** Cleaning up your language by finding and focusing on healthy words can lower your Protectometer. This will switch on the drug cabinet in your brain, releasing happy hormones and letting you do what you want to do, e.g. I am sore but safe, bioplasticity works for me, pace it don't race it, motion is lotion, and I have my friends on my side.

**Where to from here?** You now know more about pain and how to treat it than most people. Return to your Protectometer on a regular basis – as you find new SIMs, add them to your Protectonotes and as you demolish DIMs in your life, remove them from your Protectometer.

Your Protectometer is the key. It provides a way of thinking about your pain, and many people have told us they have found themselves feeling less anxious, less fatigued, or less stressed, by understanding their DIMs and SIMs.

This journey often requires patience, persistence and courage, but it can also be fun and inspiring. Do not be afraid to seek assistance from current thinking professionals. Ask them to clarify things you don't understand and look out for books like 'Explain Pain' by G.L. Moseley & D.S Butler or 'Why do I hurt?' by A. Louw to further improve your knowledge about pain.

### Lee Scott, Paardevlei Pain Program

1. 'The Explain Pain Handbook: PROTECTOMETER' by G.L. Moseley & D.S. Butler

2. 'Explain Pain' by D.S. Butler & G.L. Moseley



**PAARDEVLEI PAIN PROGRAM**  
Unmask pain and embrace life

# The Pain Scale

*continued from page 16 /...*

0 – Pain free.

Mild Pain – Nagging, annoying, but doesn't really interfere with daily activities.

1 – Pain is very mild, barely noticeable. Most of the time you don't think about it.

2 – Minor pain. Annoying and may have occasional stronger twinges.

3 – Pain is noticeable and distracting, however, you can get used to it and adapt.

Moderate Pain – Interferes significantly with daily living activities.

4 – Moderate pain. If you are deeply involved in an activity, it can be ignored for a period of time, but is still distracting.

5 – Moderately strong pain. It can't be ignored for more than a few minutes, but with effort you still can manage to work or participate in some social activities.

6 – Moderately strong pain that interferes with normal daily activities. Difficulty concentrating.

Severe Pain – Disabling; unable to perform daily living activities.

7 – Severe pain that dominates your senses and significantly limits your ability to perform daily activities or maintain social relationships. Interferes with sleep.

8 – Intense pain. Physical activity is severely limited. Conversing requires great effort.

9 – Excruciating pain. Unable to converse. Crying out uncontrollably.

10 – Unspeakable pain. Bedridden and possibly delirious. Very few people will ever experience this level of pain.

### Avoiding the Pitfalls

The most common mistake people make is overstating their pain level.

While you may simply be trying to convey the severity of your pain, what your doctor hears is an exaggeration and he will not take you seriously. If you want your pain to be taken seriously, it's important that you take the pain scale seriously.