



PAIN MANAGEMENT PROGRAM

(Patient Education- Part 2- Patient Handout)

The Oversensitive Nervous System and Central Sensitization

How do I know when my Nervous System has changed and become Oversensitive?

1. Your diagnosis often doesn't fit, because body tissue heals. (tissue tends to heal in 3 months).
2. Your pain is spreading (your brain is thinking that more of your body is in danger).
3. Your pain is worsening (your brain is trying to protect you).
4. All movement hurts, even small movement.
5. Pain has become unpredictable.
6. Your body is more tender to touch than normal.

- We know that these things start to happen when your pain does not resolve in normal tissue healing time and your pain has become persistent pain.
- These aspects of your pain are NOT because the injured part is more injured, its just because your brain is protecting you "really" well- too well!
- These things don't happen when you have an acute injury (e.g. sprained ankle in the first 6 weeks) The ankle recovers over 6-12 weeks and the pain goes away.
- In some people (for unknown and complex reasons) this acute pain doesn't go away in 6-12 weeks and the body and nerves become oversensitive and over protective- something has changed in your brain.

What can I do about my Oversensitive Nervous System?

- This will be the basis of our Pain Management Program and will not happen overnight, but is a process where education, relaxation and exercise can help to re-set the system.
- Your Physio or EP will explore this with you in your treatment sessions and it has already started with you understanding your body a little better.

Your **Active treatment pathway** will help you understand the steps required and it involves:

1. Activity Management.
2. Pain education and use of Protectometer.
3. Health lifestyle education.
4. Brain or neuroplasticity management.

There are some steps you can think about today.

1. Sleep Hygiene- Rest and digest.
2. Chillout Zone- Breathing and gentle movement with visualised imagery.
3. Knowledge is Analgesia- Reduce the threat.
4. You can be sore and safe.
5. Don't flare up, BUT if you do- Don't freak out.
6. Motion is lotion.
7. Our brain can produce powerful chemicals to help pain.



What does my Fight or Flight response have to do with my persistent pain?

- Your Fight or Flight response is a natural response in your body to protect you from danger.
- This normal fear response will allow you to run away and remove yourself from danger or something that may hurt you.
- This is called a sympathetic nervous system response and when activated releases chemicals in your body like cortisol and adrenalin to increase your stress levels to make you react to the threat- this is normal.
- It is **NOT normal** when the response keeps happening in your brain and body (like when pain persists and you are in fear of pain getting worse, or fear of moving because of pain).
- This also occurs in people under 'constant stress'.
This is when the protective system stays activated and your system can become
- overprotective.
We have a second system in our body called the para sympathetic nervous system which responds to try and calm down the system when it becomes sensitive to fear or
- threat.
This is most active when we rest, relax and sleep and our program uses this system to help you overcome persisting pain by encouraging you to schedule enough rest, sleep, and peace into your life and is part of our healthy lifestyle education.
This re-setting system is also helped with gentle exercise and good diet to help you turn off and relax.

Remember- This Brain change, or Neuroplasticity got you into this persistent pain and can get you out of it- you can get better!

Using the Virtual Body in the Neuroplasticity approach to Pain Management- To help you move again

- The virtual body can be exercised, just like the actual body.
- Virtual body exercises allow your brain to fire off messages and activate parts of your brain that are usually activated in a painful movement BUT without creating pain (because you are not actually moving).
- For example, 'Virtual' Bending Forward, is when you imagine doing this movement and activate the pathways in your brain you use when you bend forward, without moving the actual body.
- Remember context is important in a pain experience, (If you are in a stressed or unpleasant environment, your pain may be worse), but you can change the context by moving the virtual body in a safe environment.
- So, if you experience some pain BUT know it is safe and you are in a safe environment that won't harm you, you may have a reduction in your "**pain protection**" and will experience less pain.
- If pain occurs, breath, relax, then try the movement a couple of times, in a safer position or environment.
- Or go back to the **Chillout Zone** to help turn down your protective system, and try the movement again.