

Understanding Your Pain Session – Pain Gates

This information sheet summarises the key information presented during the Understanding Your Pain session at the Ipswich Hospital Pain Management Unit.

Pain gates

Our pain systems are very complex. A combination of physical, psychological and environmental factors can influence the pain signals that are being sent. These factors can either increase or decrease the amount of pain we feel. **Example:**

- in bed at night with no distractions you may notice that your pain feels much more intense than in the day when other things help to distract you from it; and
- there are accounts of sportspeople continuing to play their sport after an injury and not noticing it until after the game has finished; they have been able to 'filter out' pain messages during this time.

These variations happen because our pain system includes a series of nerves along the spinal cord which work like 'gates'.

Whether these gates are in an 'open' or 'closed' position affects the level of pain. Some things will open the gates, letting more pain signals through, which increases the intensity of the pain we feel. Some things will close the gates, partially blocking pain signals, which reduces the intensity of the pain.

Pain gates open = we feel more pain

Pain gates closed = we feel less pain

In the examples above, a lack of distraction in bed at night opens the pain gates, so you feel more pain. The adrenaline release and distraction caused by a sports game closes the pain gates, so the sports person feels less pain as a result.

In chronic pain, the pain signals are always 'on', but the amount of pain you feel varies depending on whether the pain gates are closed or open. Our pain system is constantly monitoring the factors which influence it, and adjusting the position of the pain gates accordingly.

One of the aims of learning more about pain management is to discover which things help to close pain gates, and to start practising these activities and skills regularly.



Factors that can open pain gates

Physical

- Doing too much or too little
- Poor posture
- Muscle tension
- Body de-conditioning from reduction in activity
- Poor diet and lifestyle
- Being unwell
- Being tired
- Stopping/Changing medication rapidly

Thoughts and feelings

- Difficult emotions, such as stress, tension, upset, anger, fear and frustration
- Negative patterns of thinking
- Negative thoughts and beliefs about pain
- Low mood

Social and environmental

- External situations which cause stress, for example, financial or housing problems
- Extremes of temperature/bad weather
- Poor social support

Factors that can close pain gates

Physical

- Pacing activity
- Gentle posture correction
- Gentle stretching
- Gentle increase in activity to strengthen muscles and improve overall fitness
- Good diet and lifestyle
- Good quality sleep
- Being in good health generally
- Taking pain medication

Thoughts and feelings

- Pleasant emotions, such as happiness, calmness and being relaxed
- Positive, hopeful patterns of thinking
- More positive, helpful thoughts and beliefs about the pain
- Good mental wellbeing/positive mood

Social and environmental

- Social/Environmental situations which promote wellbeing, for example, support from friends and family
- Moderate temperatures, good weather
- Good social support

Produced by:

The Ipswich Hospital NHS Trust

Heath Road, Ipswich, Suffolk IP4 5PD

Hospital switchboard: 01473 712233

www.ipswichhospital.nhs.uk

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