Factors Influencing Your Pain

Handout for Treatment Session 3

Home Education Program

1. Watch video: TEDxAdelaide- Lorimer Moseley – Why things Hurt
   a. https://www.youtube.com/watch?v=gwd-wLdIHjs
2. Review this handout and jot down any questions
3. Complete review questions (check email for link OR write below)
4. Complete home exercise log

The Body Sends Messages to the Brain

- **Pain** is experienced by everyone. Regardless of how long you have had pain, or where you feel pain in your body, this sensation **is always produced by the brain. Always. No exceptions. 100%.**

- Throughout the tissues in your body is a network of **sensors, which are constantly relaying messages through nerve cells, to the spinal cord and then on to the brain**.

- These sensors tell the brain about changes in temperature (hot/cold), movement (tension/compression of tendon), or stress (inflammation) at the tissues. Because some specialized sensors are only activated when the tissue is going out of its ideal operating environment, we call those sensors 'danger detectors'.

- "Danger detectors" do not detect pain because pain is always produced by the brain, not by the tissues of the body.

- Because it is the brain that makes pain, it is not only danger messages that influence it. The brain also listens to other incoming messages about safety or danger, social context, surrounding environment. Sometimes the

brain makes pain when there is no danger and does not make pain when there is!

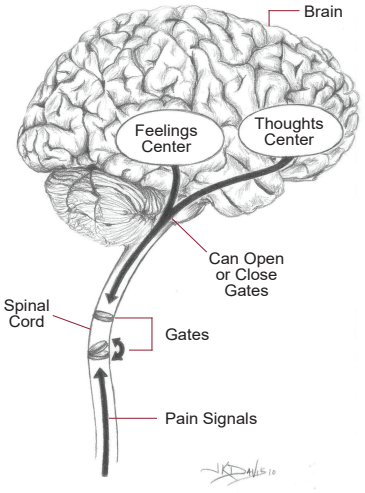
Pain Gate

- The exchange of messages from the body to the brain is a 2-way street where the brain can send messages back to your body. **Figure 1**.

- The signals from the brain can **open** or **close** a gate which helps **decrease** or **increase** your pain.

- Pain can alter with movements and changes in positions. However, factors including your level of stress, how much sleep you are getting, who you are with, or what you are thinking can also impact your pain.

Figure 1. Reproduced from Learning About Managing Pain. Thorn 2017.



Opening and Closing the Gate

- An open gate may mean more danger messages are able to reach your brain. **Figure 2**

- Items that open the gate:
  - No physical activity
  - Negative thoughts and emotions (Depression, anger, fear)
  - Pain medication (Taking too much or for too long)

Figure 2. Reproduced from Learning About Managing Pain. Thorn 2017.

- A closed gate means decreased danger signals to the brain.

- Items which close the gate:
    - Being active
    - Positive thoughts and emotions (Hope, happiness, safety)
    - Pain medication (sometimes)

Figure 3. Reproduced from Learning About Managing Pain. Thorn 2017.

Review Questions

Multiple Choice Questions:

1. Pain is the brain's interpretation of messages sent via nerves of potential _____ to you.
    a. Danger/harm
    b. Hot/cold
    c. Light touch
    d. Pain
2. The _____ in which you experience pain impacts the severity of symptoms.
    a. Duration
    b. Initial severity
    c. Context
    d. Previous injury in the same area
3. Based on the TedTalk, nerves send signals from your body to be interpreted by your _____ to produce the output of pain to help protect you.
    a. Brain
    b. Nerves
    c. Bone
    d. Spinal cord

Short response questions:

Does your context change your pain? Over the next week pay attention to how your pain changes with context. Most pains change with movement and activities, but does yours change with:

Context			
Your level of stress?	*Y*	*N*	*?*
Whether you are doing something you love or hate?			
What you are thinking about at the time?			
Where are you?			
Who you are with?			
The things you hear people saying?			

Make a list from 1 (most influential) to 3 (least influential) of factors that caused your Achilles tendon pain/stiffness.

Exercise Log

Your goals for home exercise until your next visit include:

- Isometrics: _____
- Heel-lifts: _____
- Spring-phase: _____
- Other: _____

Day 1
Type of heel raise exercise performed (circle)

- Sitting bilateral
- Body-weight bilaterally
- Body-weight unilateral
- Machine bilaterally
- Machine unilateral

Number of repetitions and sets: _____

Day 2
Type of heel raise exercise performed (circle)

- Sitting bilateral
- Body-weight bilaterally
- Body-weight unilateral
- Machine bilaterally
- Machine unilateral

Number of repetitions and sets: _____

Day 3
Type of heel raise exercise performed (circle)

- Sitting bilateral
- Body-weight bilaterally
- Body-weight unilateral
- Machine bilaterally
- Machine unilateral

Number of repetitions and sets: _____

Day 4
Type of heel raise exercise performed (circle)

- Sitting bilateral
- Body-weight bilaterally
- Body-weight unilateral
- Machine bilaterally
- Machine unilateral

Number of repetitions and sets: _____

Day 5
Type of heel raise exercise performed (circle)
- Sitting bilateral
- Body-weight bilaterally
- Body-weight unilateral
- Machine bilaterally
- Machine unilateral

Number of repetitions and sets: _____

Day 6
Type of heel raise exercise performed (circle)
- Sitting bilateral
- Body-weight bilaterally
- Body-weight unilateral
- Machine bilaterally
- Machine unilateral

Number of repetitions and sets: _____

Day 7
Type of heel raise exercise performed (circle)
- Sitting bilateral
- Body-weight bilaterally
- Body-weight unilateral
- Machine bilaterally
- Machine unilateral

Number of repetitions and sets: _____