

Understand Pain

Handout for Treatment Session 4

Home Education Program

1. Complete 8 lessons (one minute each) on UNDERSTAND PAIN
 - a. <https://www.retrainpain.org>
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

Why do we feel pain?

- Pain functions as an alarm for you to know when your body is in danger.
- Just like a fire alarm, pain is helpful because it motivates you to stay safe.
- However, sometimes there can be false alarms when you experience pain yet there is no actual tissue damage occurring. Figure 1.

Figure 1. Courtesy of Retrainpain.org.



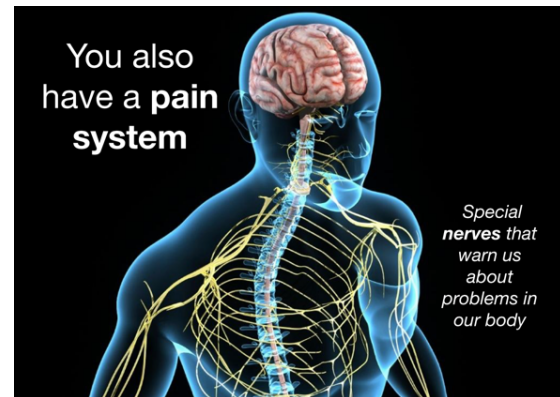
What causes persistent pain?

- The causes of persistent pain are complex and multifactorial. Persistent pain has biological (nerves, spinal cord, and brain) and psychosocial (expectations, emotions, thoughts) components, which are closely connected and constantly communicating.

Nerves

- The **nerves** that compose the nervous system are living cells that **can change**
- If your nervous system is sensitized (Figure 2), then you can perceive pain when:
 - o A non-harmful stimulus is detected
 - Example: Small, non-harmful amount of stretch occurs at your Achilles tendon during walking, yet it can be perceived as painful
 - o No stimulus is detected
 - Example: No stretch on your tendon occurs at rest, yet it can be perceived as painful

Figure 2. Courtesy of Retrainpain.org.



Brain and Spinal Cord

- Sometimes your brain must release chemicals (neurotransmitters, Figure 3) that shut off danger messages from an injured body part to ensure safety of the whole person
- The brain can activate an internal relieving system, known as **descending inhibition**
- When you injure yourself, your body releases chemicals (Figure 3) that make the nerves in that area more sensitive, or “hypersensitive”
- When this process is activated too often, the nerves in your body change and become *more sensitive*. This is called **descending facilitation**.

Figure 3. Courtesy of Retrainpain.org.



Psychosocial

- The brain decides if a message from the nerves (touch, stretch) is **good** (Figure 4) or **bad** (Figure 5) based on the context.

Figure 4. Courtesy of Retrainpain.org.



Figure 5. Courtesy of Retrainpain.org.



Review Questions

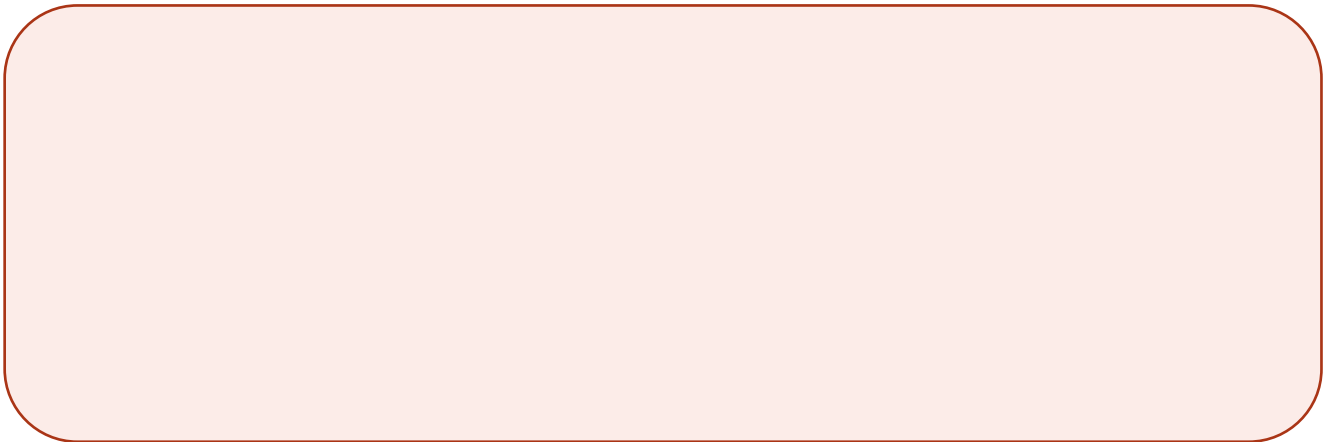
Multiple choice questions:

1. Pain can act as a warning for your body to protect you from what?
 - a. Harm/danger
 - b. Exercise
 - c. Unpleasant activities
 - d. Physical Activity
2. According to RetrainPain.org, your persistent pain occurs when your nerves become _____?
 - a. Less sensitive
 - b. More sensitive
 - c. Shorter
 - d. Decrease in number
3. Our Pain System sometimes does not work correctly and can overproduce pain with _____?
 - a. Gentle touch
 - b. Normal movements
 - c. Spontaneous action or not action
 - d. All of the above
4. A simple comparison to your body's Pain System when it produces too much pain is a _____ that is _____.
 - a. Fire alarm, too sensitive
 - b. Car alarm, less sensitive
 - c. Doorbell, broken
 - d. Car horn, too quiet
5. What is the name of the process when your brain releases chemicals to decrease your sense of pain?
 - a. Descending facilitation
 - b. Descending inhibition
 - c. Hypersensitivity
 - d. Persistent pain
6. Increasing your _____ of pain can change and have a positive effect on your pain.
 - a. Strength
 - b. Duration
 - c. Understanding
 - d. Anger and frustration

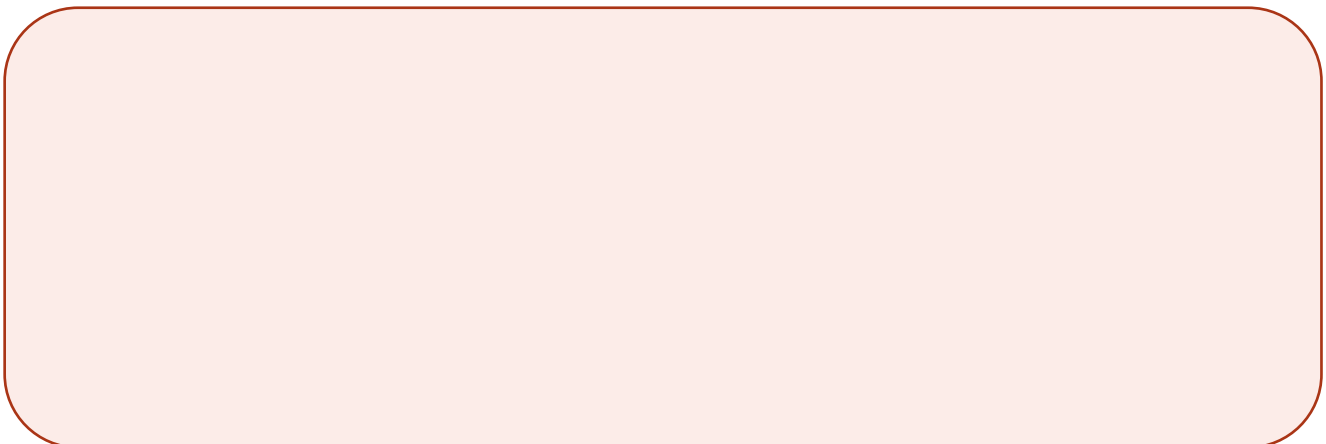
Short response questions:

- Please rate your pain at its WORST since the last visit.
 - What were you doing?
- Please rate your pain at its BEST since the last visit.
 - What were you doing?
- Please rate the pain on AVERAGE during the home exercises.
- Thinking about the 24 hour response to exercise, do you think your pain and tendon stiffness increased, decreased or stayed the same?
- Please rate the pain by circling the one number that best describes your pain on as you are doing the exercises right now.

Make a list from 1 (most influential) to 5 (least influential) of things (treatments, exercises, situations) that **increase** your Achilles tendon pain/stiffness.



Make a list from 1 (most influential) to 5 (least influential) of things (treatments, exercises, situations) that **decrease** 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: _____