

Wording to Use When Billing for PNE

PNE intro (Pain knowledge)

Education: Patient introduced to the topic of pain neuroscience education and that improving knowledge of how pain works promotes improved recovery and rehabilitation. Current knowledge and understanding of patient on pain related topics was explored to create baseline.

Homework: Patient received the pain knowledge quiz by Moseley, GL as a means to begin addressing misconceptualizations of pain.

Sensitive nerves

Education: Patient educated on the concept of the nervous system as the bodies alarm system, and the role of nociception to warn the body of danger. Peripheral nerve sensitization, hyperalgesia and allodynia were explained using metaphors to promote deep learning.

Homework: Patient encouraged to identify personal yellow flags, and explore/identify activity limitations as a result of nervous system hypersensitivity.

Nerve sensors

Education: Patient educated on the concept of neuroplasticity, and how factors such as temperature, stress, movement, immunity and blood flow affect pain via ion channel expression. Instruction provided regarding homeostasis/ion channel balance disruption may occur based on what your brain thinks is needed for survival.

Homework: Patient encouraged to review/diagram nerve sensitivity topics discussed today to promote deep learning.

Spreading pain (Nosy neighbors)

Education: Patient educated regarding spreading pain symptoms, and that feeling pain in adjacent areas of the body does not indicate definite tissue injury. Hyperalgesia, immune responses and central sensitization topics were introduced using metaphors to promote deep learning.

Homework: Patient encouraged to discuss with a trusted support person the concept of spreading pain, using nosy neighbor metaphor, to reinforce learning.

Calming sensitive nerves

Education: Patient was educated regarding endogenous mechanisms and strategies to increase the brain's production of chemicals which decrease pain, such as aerobic exercise and improved pain knowledge. The concepts of pacing, graded exposure, 'sore but safe', and 'hurt does not equal harm' were discussed. Sleep hygiene and diaphragmatic breathing topics introduced to help calm the nervous system and reduce stress.

Homework: Patient provided with tools to start exercise log and sleep hygiene log.

Pain comes from the brain

Education: Patient was educated on the concept of pain as an output of the brain, including nociception versus pain, inhibition and facilitation, and threat value using metaphors to promote deep learning.

Homework: Patient encouraged to recall/record instances where they have had tissue injury but no pain, such as bruise or cut.

The Neuromatrix (Brain's pain map)

Education: Patient educated on the pain neuromatrix or pain map via fMRI examples, and how various areas of the brain are involved in pain experience. These areas have alternative primary focus which is disturbed when brain is producing pain (memory, focus, concentration, emotion, fine motor control, temperature), causing potential patient issues/struggles.

Homework: Patient encouraged to journal body issues experienced as a result of pain, and problem solve strategies discussed at today's session which can improve "pain maps"/neuromatrix.

Central sensitization (Body, Inc.'s CEO)

Education: Patient was educated about nerve sensitivity caused by central sensitization, driven by both biological and psychosocial factors. The brain as CEO of the body metaphor was incorporated.

Homework: Patient encouraged to identify personal stressors which contribute to pain and discuss these with PT for guidance and plan to move ahead.



Stress responses to pain (Lions and stress)

Education: Patient was educated regarding sympathetic nervous system topics as they pertain to pain, including stress biology, fight or flight response, the role of adrenaline and cortisol in pain, the body's immune response and multiple output mechanisms. Metaphors were used to promote deep learning, and the role of self-care techniques useful in calming the sympathetic nervous system were addressed.

Homework: Patient encouraged to identify and record stress issues they are dealing with on a daily basis since experiencing pain. Patient also encouraged to think about their persona response to a hypothetical large threat, and how the body's response to pain is mimicking that response.

Tissues (Tissue issues)

Education: Patient educated about the relationship between tissue injury and pain, and that pain is an output by the brain. Included was the principle that tissue injury does not have to hurt, and that you can have pain without having tissue injury, particularly with a hypersensitive nervous system.

Homework: Tissues heal. Patient encouraged to recall occasions where they had tissue damage and felt no pain (bruise or cut), and journal things they could do before pain. Since we understand that tissues heal, reflect on how this inability to tolerate previous level of activity is due to extra sensitive nervous system rather than injury.

Neurogenic inflammation

Education: Patient educated regarding neurogenic inflammation concepts including retrograde firing (orthodromic and antidromic nerve impulses) persistent swelling, and immune response. Thoughts are also nerve impulses, thus emotional stress and worry/fear can keep tissues inflamed.

Homework: Patient encouraged to review strategies to calm nervous system covered in PT, including movement and exercise to increase blood flow and oxygen to nerves, ice, pain education and relaxation techniques.

Body Maps/Homunculus (The brain's body maps)

Education: Patient educated regarding the role of the primary somatosensory cortex in pain and body maps (which depend on movement and use of body parts) and that for people with persistent pain, decreased use of the body and other biological processes change the body maps. Laterality proficiency was discussed and assessed.

Homework: Patient prescribed laterality improvement activities and strategies, as well as initial graded motor imagery exercises with goal of reducing pain via neuroplasticity.

Immune system and pain

Education: Reviewed with patient the role immune system plays in prolonged pain states, and the phenomenon of spreading pain and flare-up of old injuries, scars or pains. Explored further earlier concepts to improve immune health, in contrast to the "fix it" approach to pain management.

Homework: Review/progressed patient's home stress management/coping plan, specifically areas of relaxation, diaphragmatic breathing, personal goal setting, exercise logs, and sleep hygiene.

Emotions and pain

Education: Patient educated on the relationship between emotions and pain, and the role that fear, catastrophization, nociception and threat play in persistent pain, by activating the bodies alarm system, resulting in hypersensitive nerves. Metaphors incorporated to foster deep learning and paradigm shift for patient.

Homework: Patient encouraged to journal all the various stressors and life situations they have had to deal with since pain, and to conceptualize these as "filling their cup".