

THE MODERN BODYMIND

MICAH HOWARD MD, ABOIM

“

HE SENT HIS WORD AND HEALED
THEM, AND DELIVERED *THEM*
FROM THEIR DESTRUCTIONS.

— *Psalms 107:20*

”



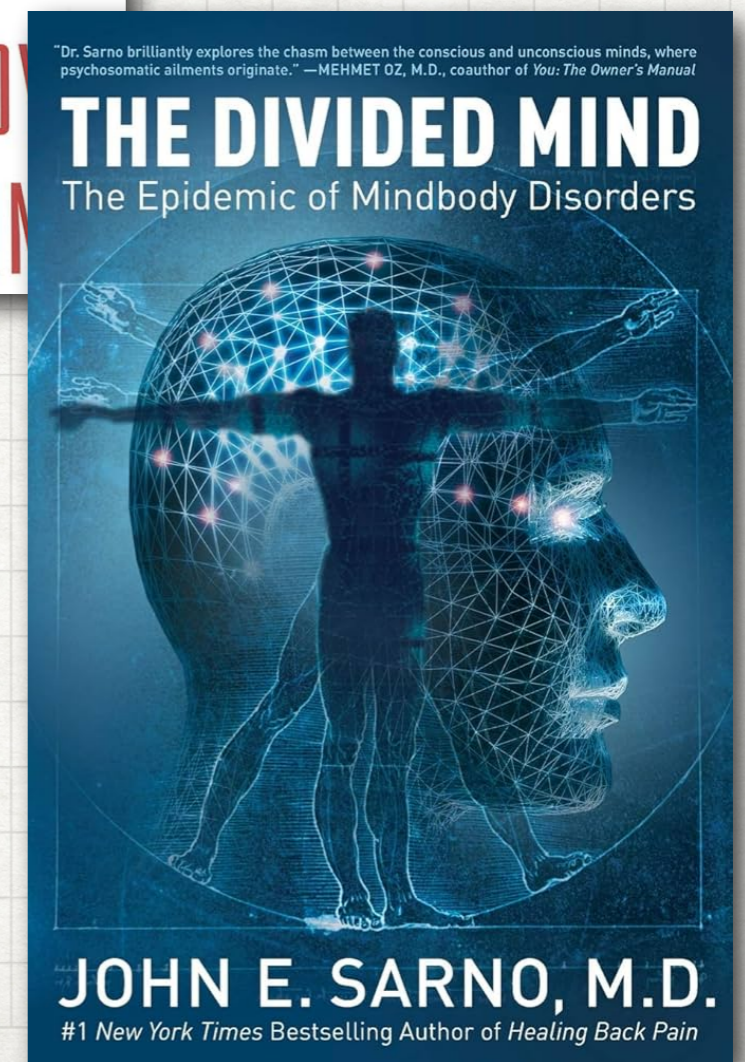
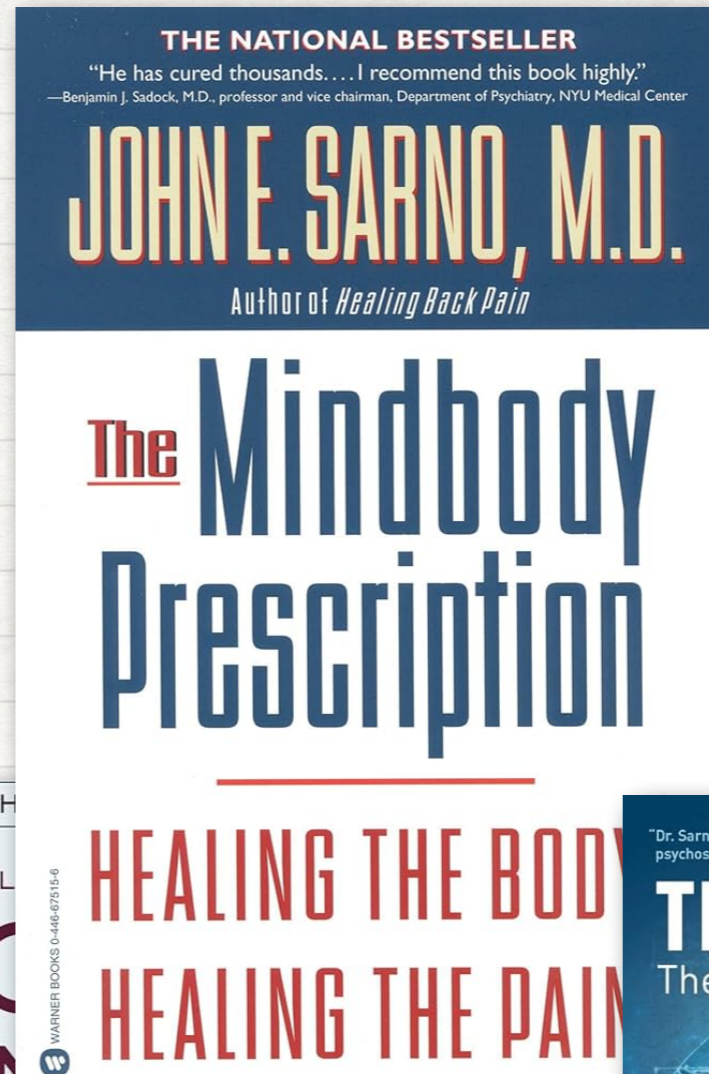
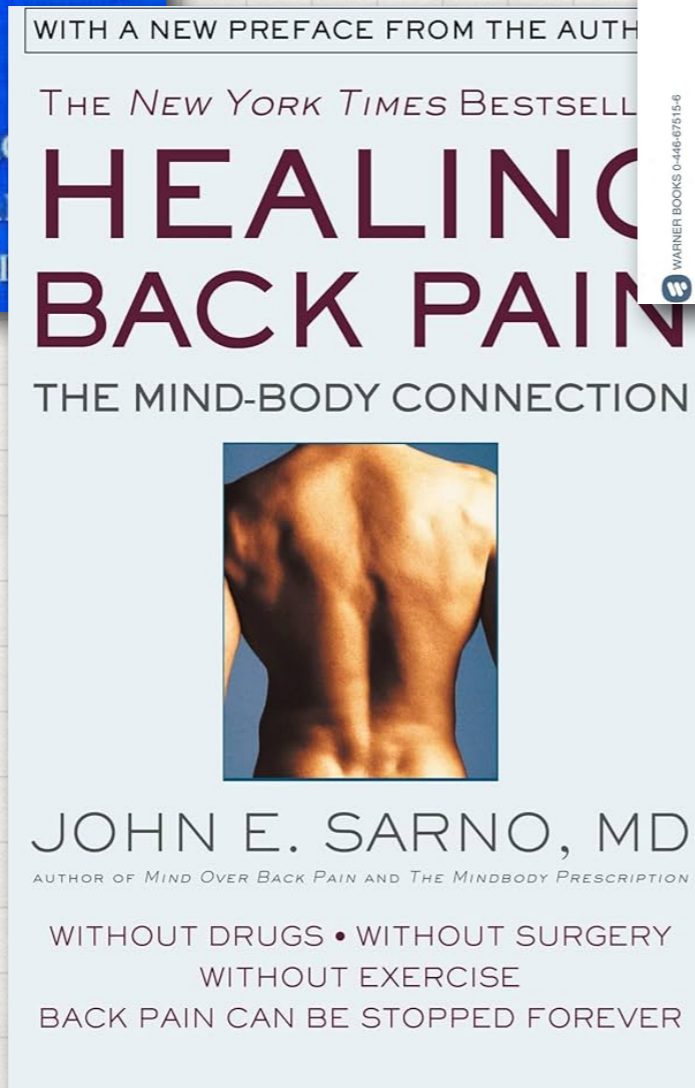
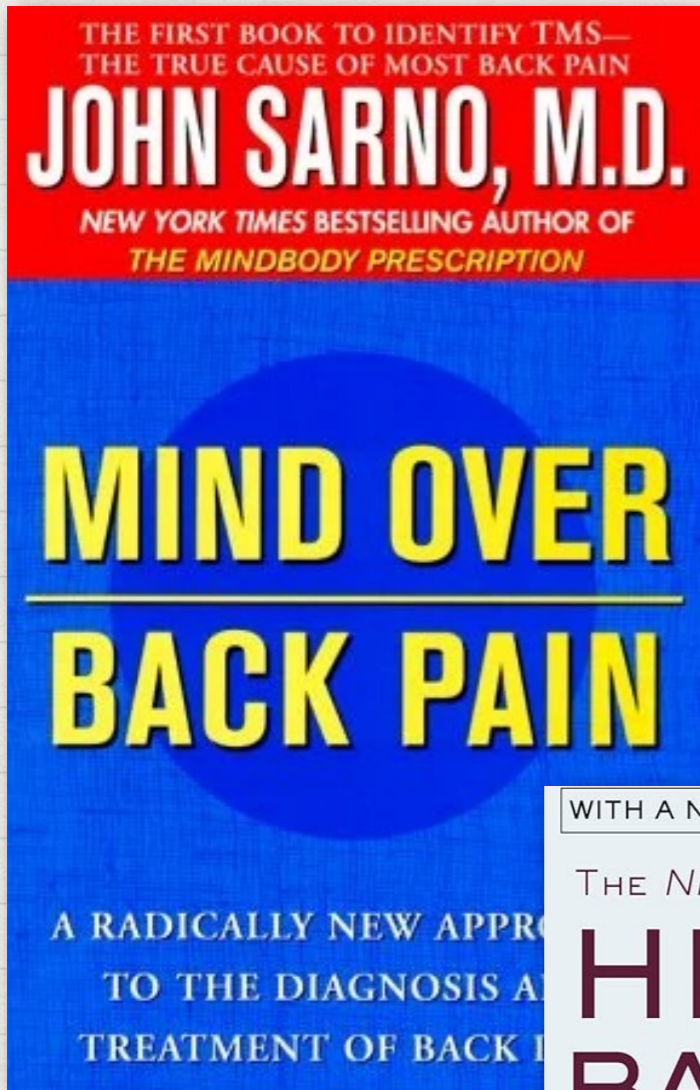
DR JOHN E SARNO

DOCTOR AUTHOR COMPASSIONATE PIONEER

Dr. John E. Sarno was an orthopedist and surgeon at the Rusk Institute of Rehabilitation Medicine in New York City. For many years he treated patients suffering from back pain with medications, physical therapy and surgery, until it dawned on him: He hadn't succeeded at alleviating his patients' pain. That led him on an odyssey to explore deeply the emotional roots of pain. He went on to successfully treat thousands of patients by teaching them to heal their underlying emotional pain. He authored four best-selling books on healing from pain through the mind-body connection.

Dr. Sarno passed away on June 22, 2017, a day short of 94 years old.





“

WE KNOW ANXIETY, DEPRESSION AND ANGER CAN EXACERBATE CHRONIC PAIN CONDITIONS. WHAT IF THEY ARE THE CAUSE OF THEM?

- *Dr. John E. Sarno*

”

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SPECIAL ARTICLE **ETHICS AND CLINICAL RESEARCH***

HENRY K. BEECHER, M.D.†

BOSTON



Henry Beecher of Harvard reported that in a group of severely wounded soldiers in World War II, it was found that despite the severity of their injuries they often required little or no analgesic medication because their pain was substantially lessened by their becoming aware that they were still alive, being cared for and removed from the dangers of deprivation, hardship, and sudden death.

THE HOW OF PAIN

THE BIOLOGIC CONVERSATION

Transduction of a Pain Stimuli

Nociceptors are transducers - they convert one form of energy to another with the ability to sense a wide range of changes in our tissue. Painful stimuli causes a direct (mechanical or thermal) activation of our nociceptors and that injury causes tissue damage and release of chemicals (sub P, prostaglandins) that can also activate other nociceptors.

Conversion of the Signal to Electricity

Based on the type of pain stimuli and the chemicals released, specific nociceptors convert the chemical signal to an electrical one

- Myelinated A-delta fibers travel fast (~ 20 m/sec) that will cause a sharp ,localized pain to be felt. Slower, unmyelinated C fibers (2m/sec) cause a dull, aching pain that is typically longer lasting and more difficult to localize. **Which fiber would you guess is more likely to be associated with chronic pain?**

Transmission (First Order)

Once the electrical signal is generated, the message is transmitted by the afferent nerve fiber to the dorsal horn of the spinal cord before the journey to the brain.

Transmission (Second Order)

Once received by the dorsal horn of the spinal cord, second-order neurons are activated and transmit the signal to the thalamus. An activated C fiber will take a different tract (*lateral spinothalamic*) which will have more stops and connections than an A-delta activated fiber which will use the anterospinothalamic tract.

Transmission (Third Order)

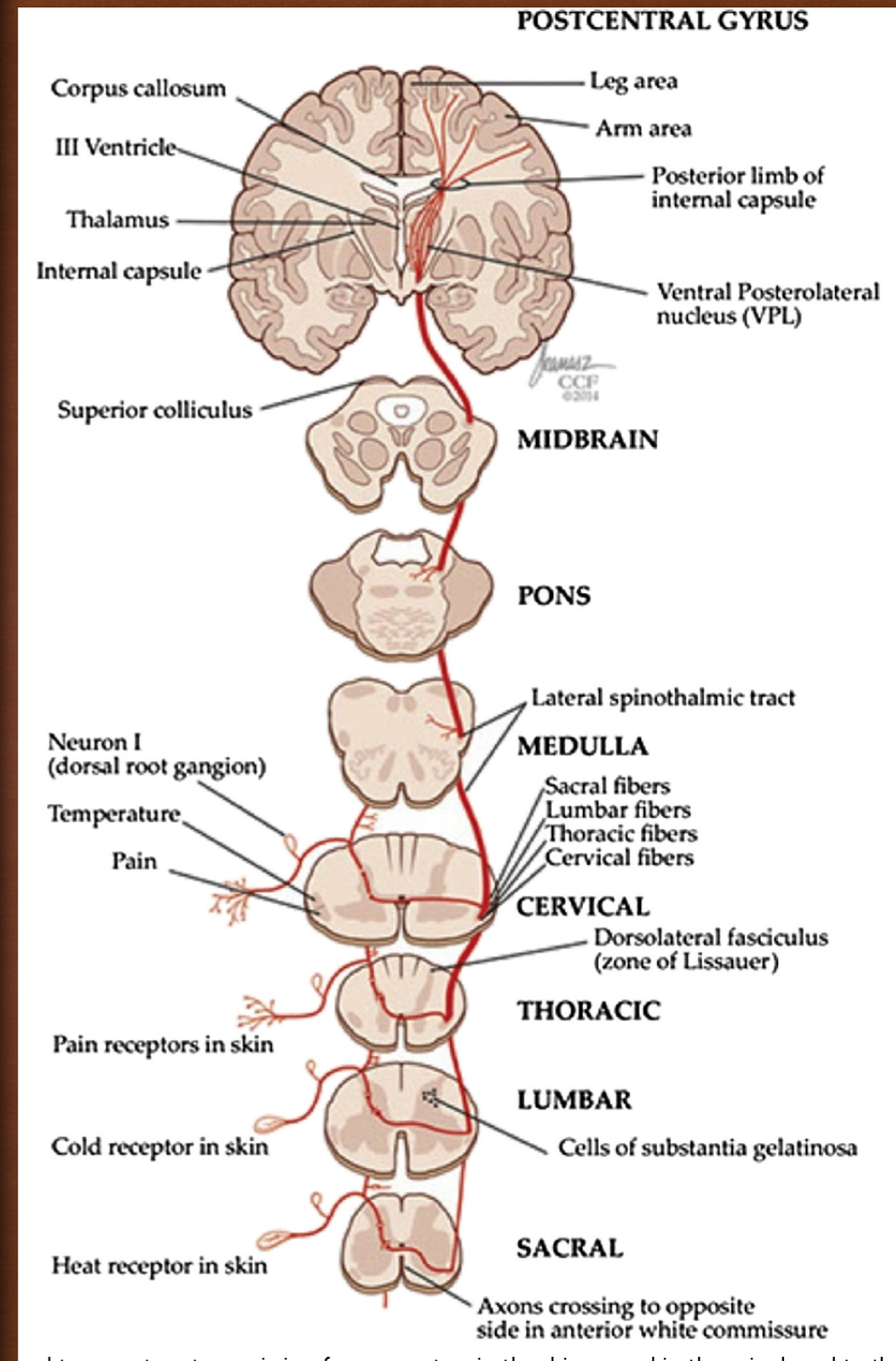
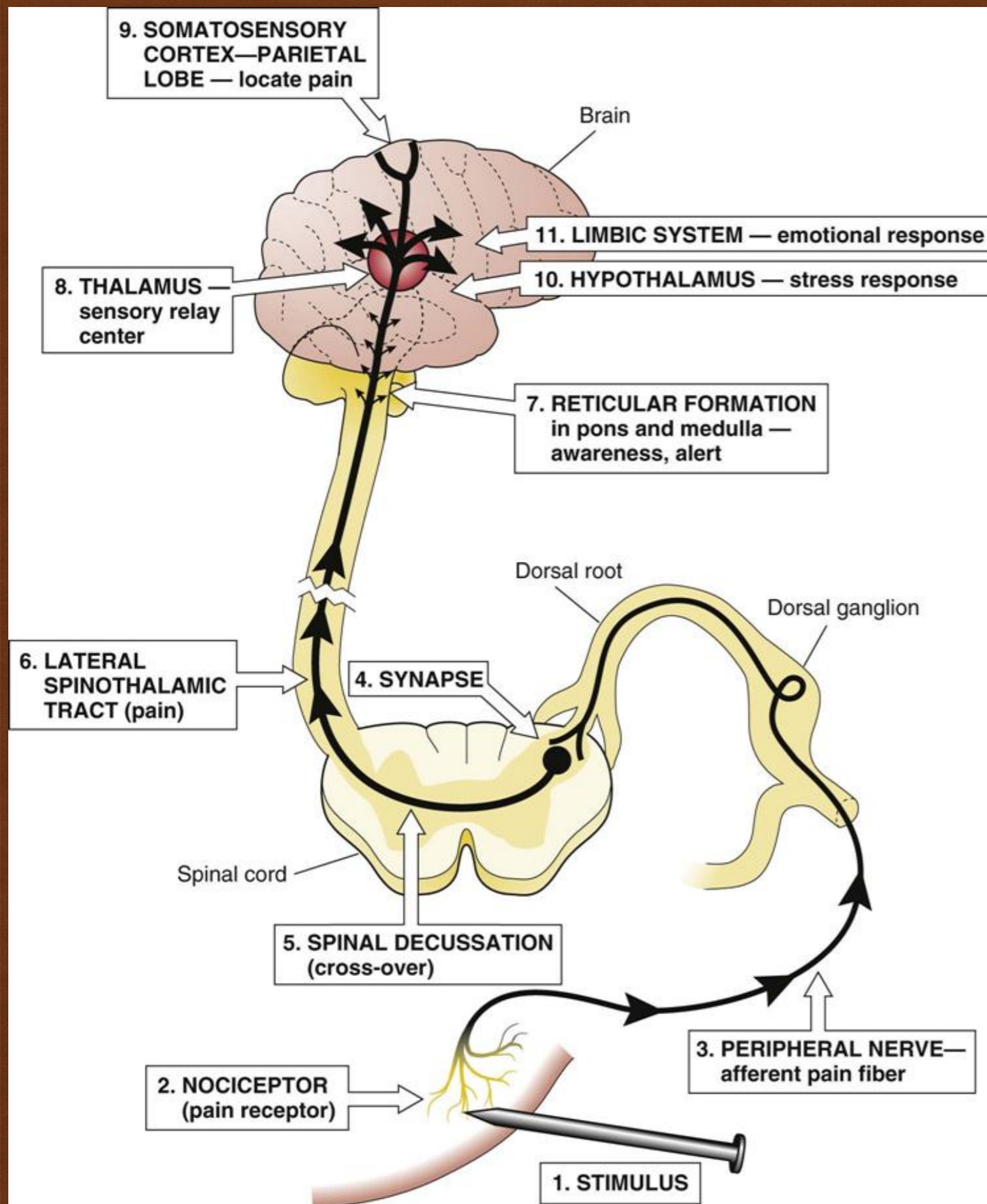
Once received by the thalamus, the third-order neurons transmit the signal to several important final destinations.

Somatosensory cortex (sensing the pain: dull, sharp or aching "ouch")

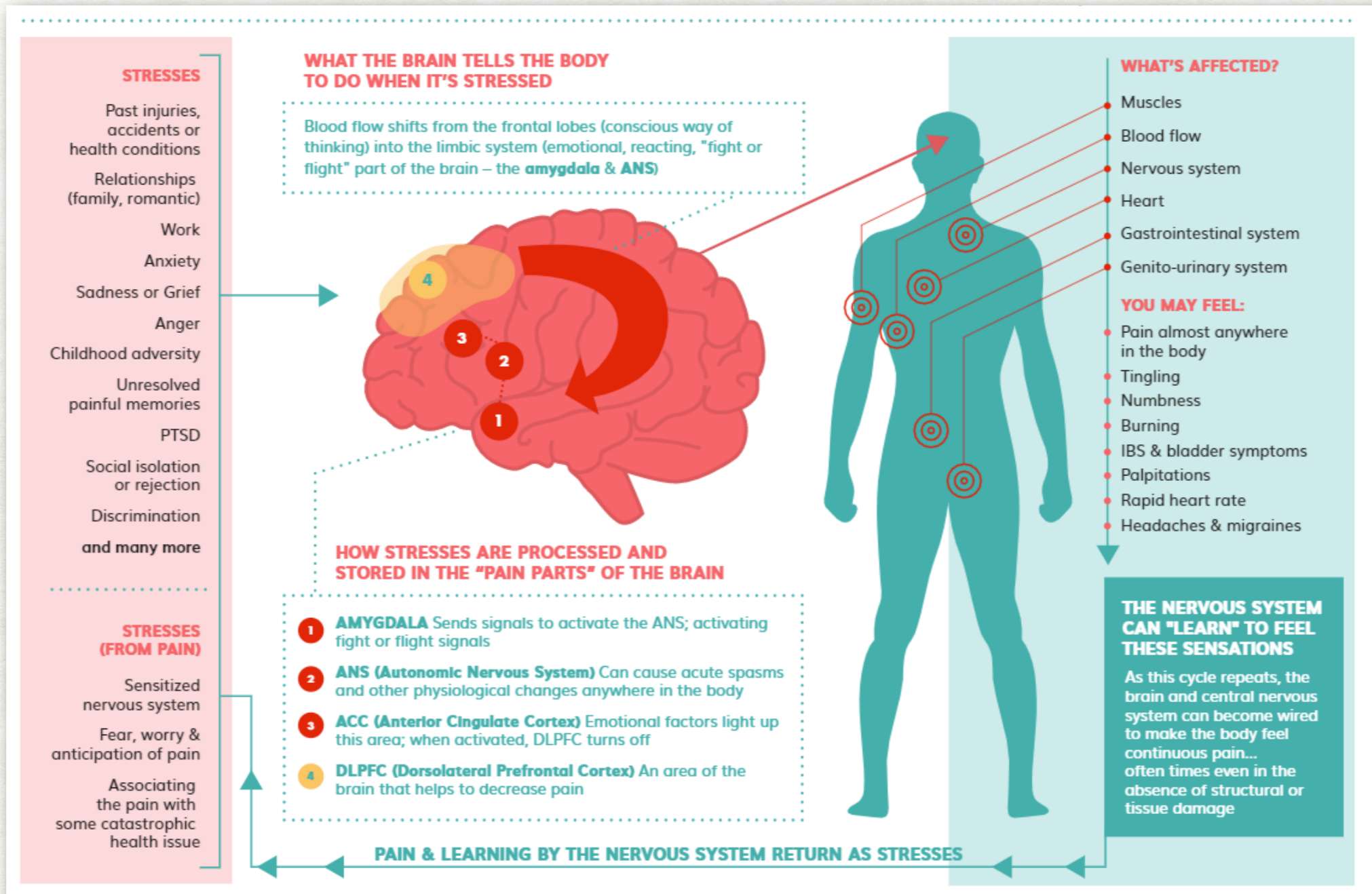
Frontal cortex (interpreting and thinking about the pain – "I should be more careful with fire") and the

Limbic system (memory, fear and emotional processing of the pain: withdrawing the hand, saying an expletive and remembering this experience next time.)

Pressure/Heat → Chemical → Electrical via neurons 1st order (Spinal cord) → 2nd Order (Thalamus) and 3rd order (Somatosenory/Frontal/Limbic)



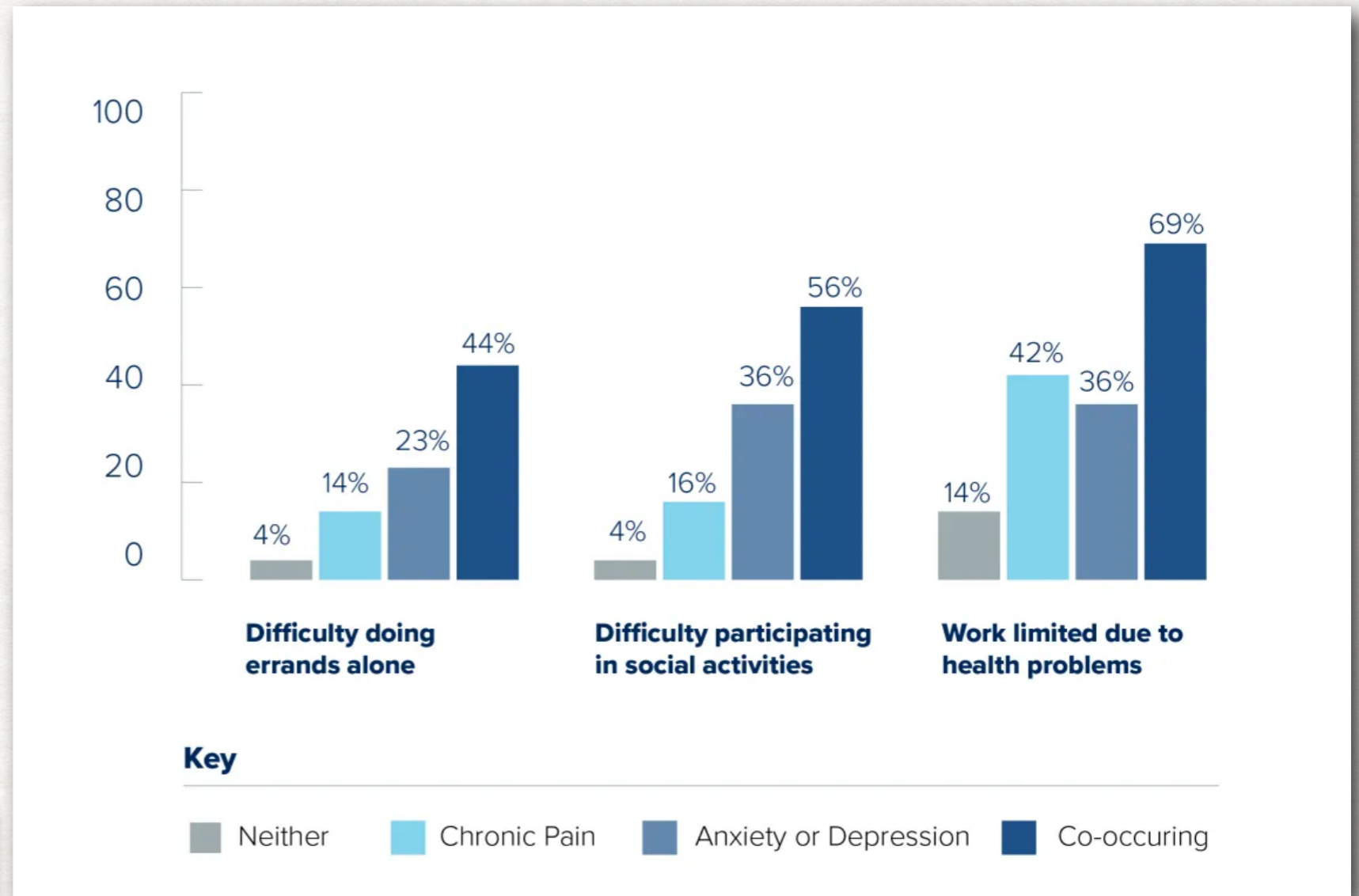
TENSION MYOSITIS SYNDROME



Tension Myositis Syndrome is a painful disorder wherein the brain orders a reduction of blood flow to a specific part of the body, resulting in oxygen deprivation, which causes pain depending on what tissues have been oxygen deprived. The tissues that may be targeted by the brain include the muscles of the neck, shoulders, back, or buttocks; any spinal or peripheral nerve; and any tendon. As a consequence, symptoms may occur virtually anywhere in the body. The nature of the pain varies depending on the tissues involved: muscle, nerve, or tendon. In addition to pain, nerve involvement brings with it the possibility of feelings of numbness and tingling and/or actual muscle weakness.

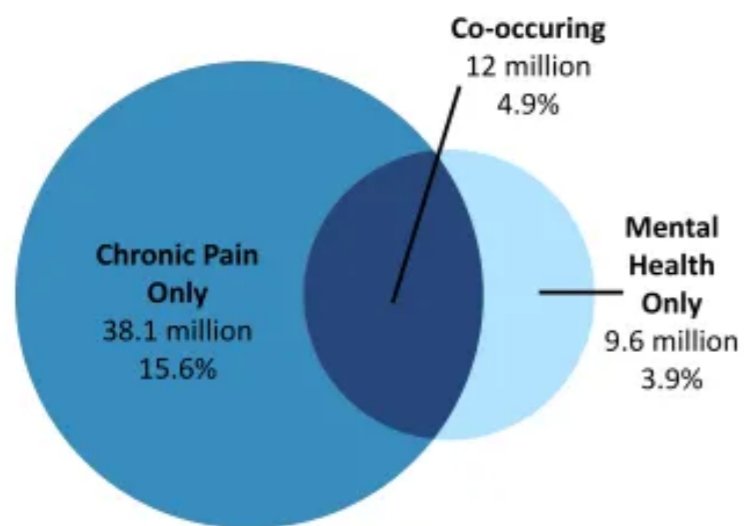
SYNDROMES CAUSED BY TMS

- BACK PAIN WITH RAD TO THE LEGS
- NECK PAIN WITH RAD SHOULDERS
- SCIATICA
- CARPAL TUNNEL
- TENDONITIS ANKLE/WRIST/ELBOW
- TMJ
- PIRIFORMIS SYNDROME
- FIBROMYALGIA
- GERD
- IRRITABLE BOWEL SYNDROME
- TENSION HA AND MIGRAINE
- PALPITATIONS
- SKIN: ACNE, ECZEMA, HIVES
- ALLERGIES: HAY FEVER, DUST
- FREQUENT INFECTIONS
- FREQUENT URINATION
- DEPRESSION/ANXIETY



The research team analyzed data from 31,997 people who participated in the National Health Interview Survey

According to new research from the University of Arizona Health Sciences Comprehensive Pain and Addiction Center, nearly 1 in 20 adults in the U.S. deal with chronic pain while also experiencing with anxiety or depression. So, nearly 12 million people, or 4.9% of the United States adult population has co-occurring chronic pain and anxiety or depression symptoms.



THE SYMPTOM IMPERATIVE

WHEN THERE IS AN UNDERLYING NEED FOR THE MIND TO DISTRACT, A NEW SYMPTOM ARISES TO REPLACE ANY SYMPTOM THAT HAS BEEN TREATED/ERADICATED. EX) BACK PAIN IMPROVES AND REFLUX BECOMES SEVERE OR NEUROPATHY IMPROVES BUT DEPRESSION GETS SEVERE

THE RAGE/SOOTHE RATIO

SYMPTOMS ARISE WHEN THERE IS TOO MUCH RAGE AND NOT ENOUGH SOOTHING ELEMENTS.

MANY OF THE TECHNIQUES WE HAVE TAUGHT HAVE TO DO WITH SOOTHING O DIMINISHING RAGE

COGNITIVE DISTORTIONS INCREASE THE PRESSURE WE PUT ON OURSELVES, WHICH AFFECT RAGE. FORGIVENESS MAY DECREASE THE RAGE.





ORIGINAL ARTICLE



Magnetic Resonance Imaging of the Lumbar Spine in People without Back Pain

Authors: Maureen C. Jensen, Michael N. Brant-Zawadzki, Nancy Obuchowski, Michael T. Modic, Dennis Malkasian, and Jeffrey S. Ross [Author Info & Affiliations](#)

Published July 14, 1994 | N Engl J Med 1994;331:69-73 | DOI: 10.1056/NEJM199407143310201 | VOL. 331 NO. 2

MRI examinations on 98 asymptomatic people
Only 36 percent of subjects had normal MRI
52% had a bulge at at least one level

27% had a protrusion

1% had an extrusion.

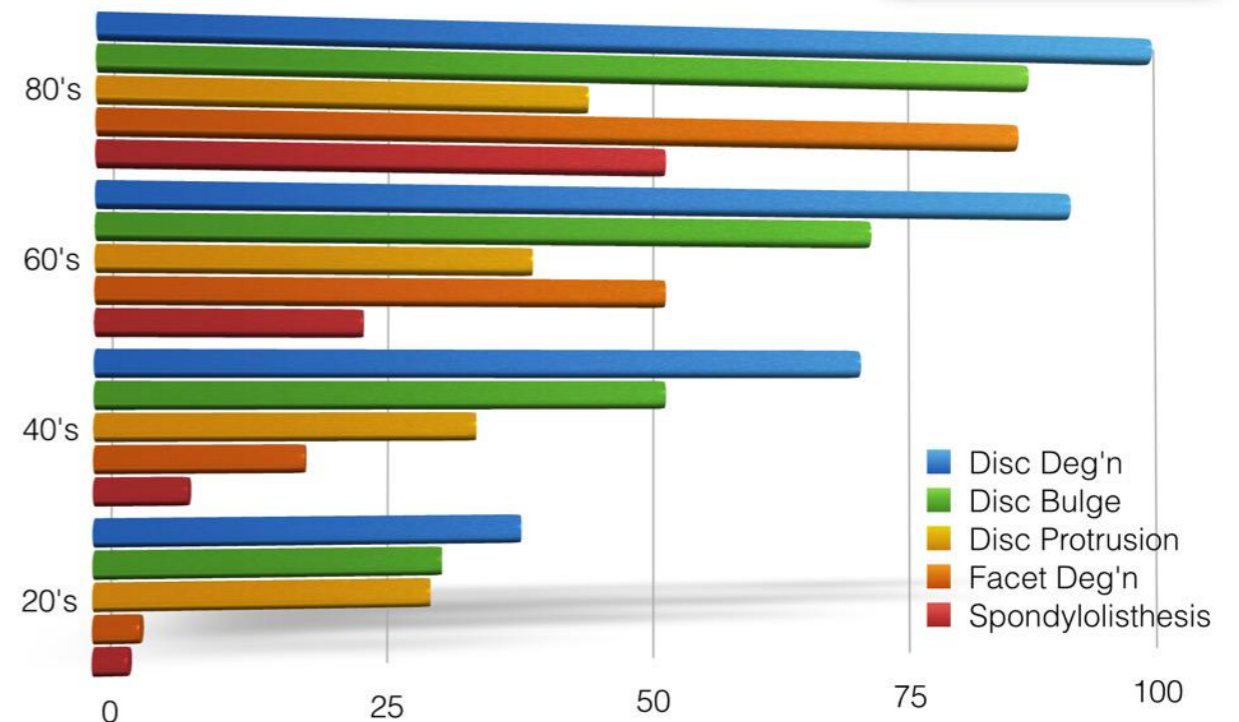
38% had an abnormality of more than one intervertebral disk.

“Given the high prevalence of these findings and of back pain, the discovery by MRI of bulges or protrusions in people with low back pain may frequently be coincidental”

Percentage of 'abnormal' findings on lumbar spine MRI & CT images in healthy pain free subjects

Brinjikji et al : Am J Neuroradiol (2014)

@adammeakins The Sports Physio



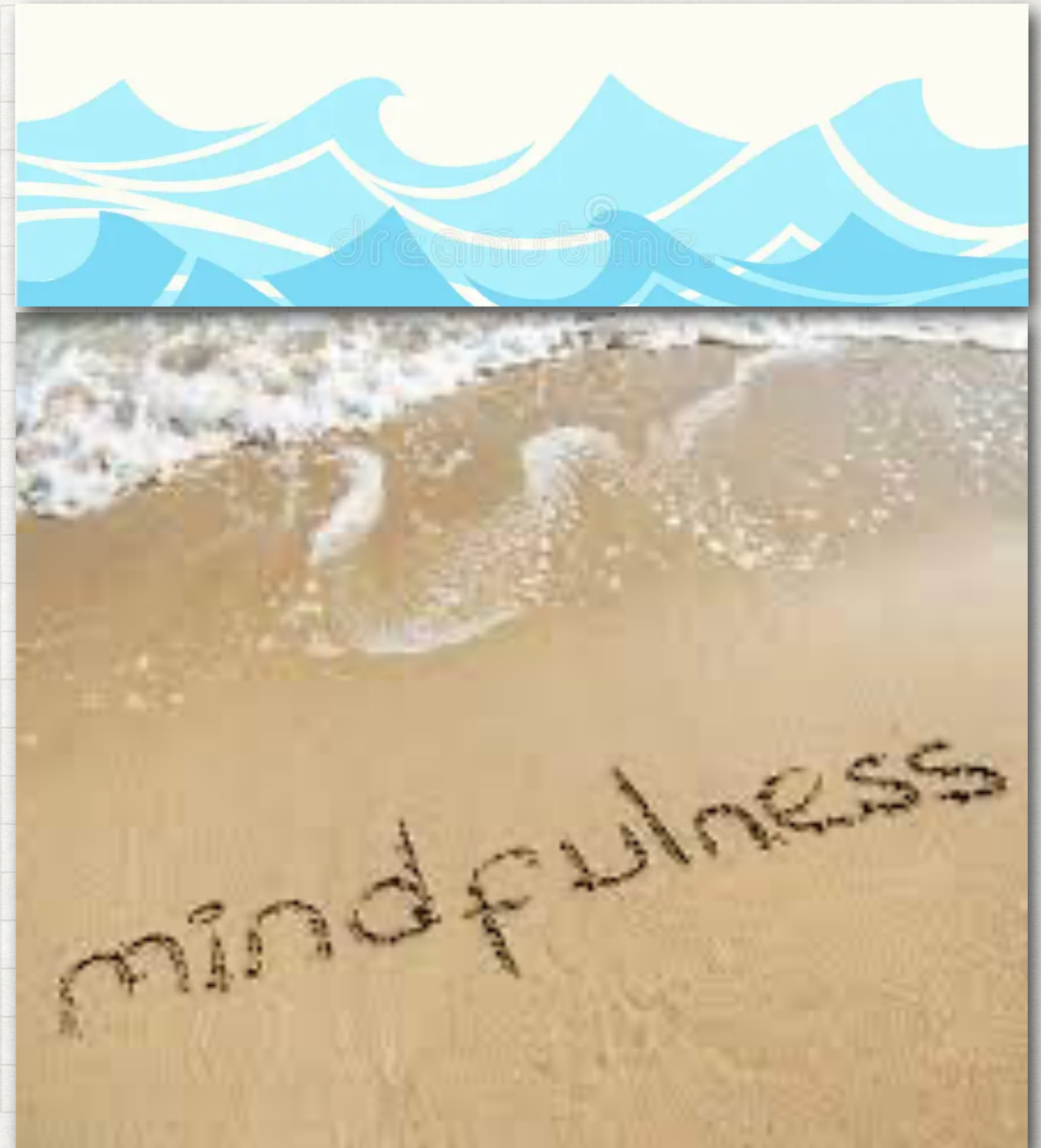
PSYCHOPHYSIOLOGIC SYMPTOM RELIEF THERAPY FOR CHRONIC BACK PAIN: HYPOTHESIS AND TRIAL RATIONALE

2024 Jul 18:5:1328495. doi: 10.3389/fpain.2024.1328495. eCollection 2024. Harvard - Beth Israel

[Myrella Paschali](#) ¹, [Garrett S Thompson](#) ², [Shivani Mehta](#) ², [Patricia M Howard](#) ², [Jolin B Yamin](#) ², [Robert R Edwards](#) ¹, [Michael W Donnino](#) ² ³Department of Anesthesiology, Harvard Medical School, Brigham & Women's Hospital, Chestnut Hill, MA, Department of Emergency Medicine, Beth Israel Deaconess Medical Center, Boston, MA

“ PSYCHOLOGICAL STRESSORS CREATE PROCESSES IN THE CENTRAL NERVOUS SYSTEM THAT CAN LEAD TO CHANGES IN PERIPHERAL TISSUE, SUCH AS PAIN . . .THE BODY'S STRESS RESPONSE CREATES MEASURABLE PHYSICAL CHANGES (SUCH AS MUSCLE SPASMS) COULD STILL BE PRESENT LIKE HOW EMBARRASSMENT MAY RESULT IN VASODILATION OF THE CAPILLARIES RESULTING IN BLUSHING OR SUDDEN TRAUMATIC NEWS CAN RESULT IN TAKOTSUBO CARDIOMYOPATHY”

“(PSRT) HAS FOUR MAJOR COMPONENTS: **PSYCHOPHYSIOLOGIC PAIN EDUCATION, DESENSITIZATION** (VIA VISUALIZATION TECHNIQUES), ENCOURAGING **EMOTIONAL AWARENESS**/EXPRESSION (DECREASING EMOTIONAL AVOIDANCE OR REPRESSION), AND **IMPROVING STRESS REDUCTION SKILLS** (I.E., MINDFULNESS MEDITATION).”



SARNO'S HYPOTHESIS

DAILY REMINDERS

1. PAIN IS DUE TO *TMS*, NOT TO A STRUCTURAL ABNORMALITY
2. THE REASON FOR THE PAIN IS OXYGEN DEPRIVATION
3. *TMS* IS A HARMLESS CONDITION CAUSED BY MY REPRESSED EMOTIONS
4. THE PRINCIPAL EMOTION IS REPRESSED *ANGER*
5. *TMS* EXISTS ONLY TO DISTRACT MY ATTENTIONS FROM THE EMOTIONS
6. SINCE MY BODY IS NORMAL THERE IS NOTHING TO FEAR
7. THEREFORE, PHYSICAL ACTIVITY IS NOT DANGEROUS
8. I MUST RESUME ALL NORMAL PHYSICAL ACTIVITY
9. I WILL NOT BE CONCERNED OR INTIMIDATED BY THE PAIN
10. I WILL SHIFT MY ATTENTION FROM PAIN TO THE EMOTIONAL ISSUES

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THE PHYSIOLOGY OF THE
PROCESS IS FAR LESS
IMPORTANT THAN
ACCURATE OBSERVATIONS
OF THE PROCESS ITSELF.

— *Sigmund Freud*

”

THE MODERN BODYMIND



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