Now What?

Psychoeducation

Why?

- Research shows that knowing more about pain and how it works leads to:
  - Lower pain intensity
  - Moving and exercising more
  - Improved quality of life

- Understanding how pain works helps us know what skills to use to decrease pain intensity and optimize functioning

How?

- Learning about the function of pain
- Learning about acute pain versus chronic pain
- Helping patients understand the role of the brain in pain perception
  - Learning about the autonomic nervous system

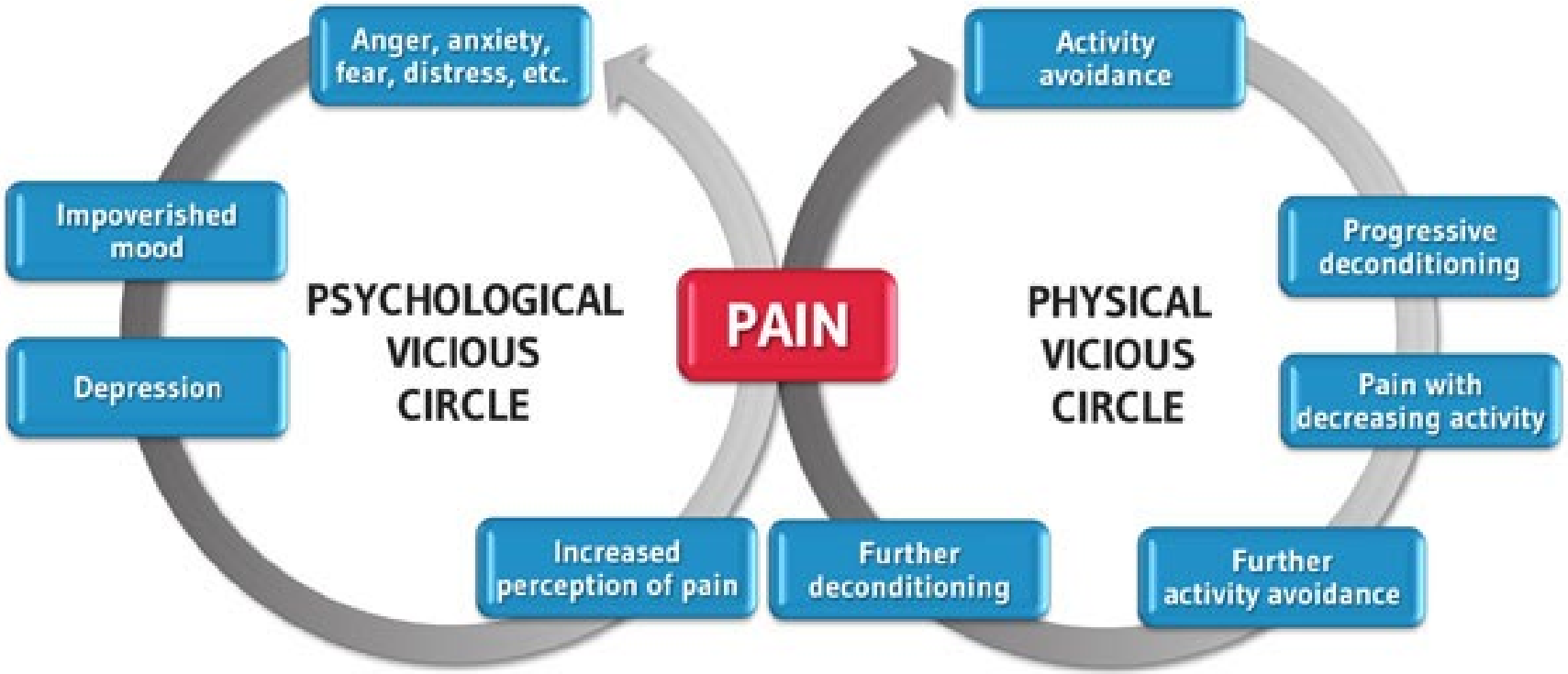
If you could press this button to get rid of all pain, would you?

Acute versus Chronic Pain

- Acute pain
  - Tissue damage
  - "Harm"
  - Cure

- Chronic pain
  - Pain that is ongoing and lasts beyond expected point
  - "Hurt"
  - Manage

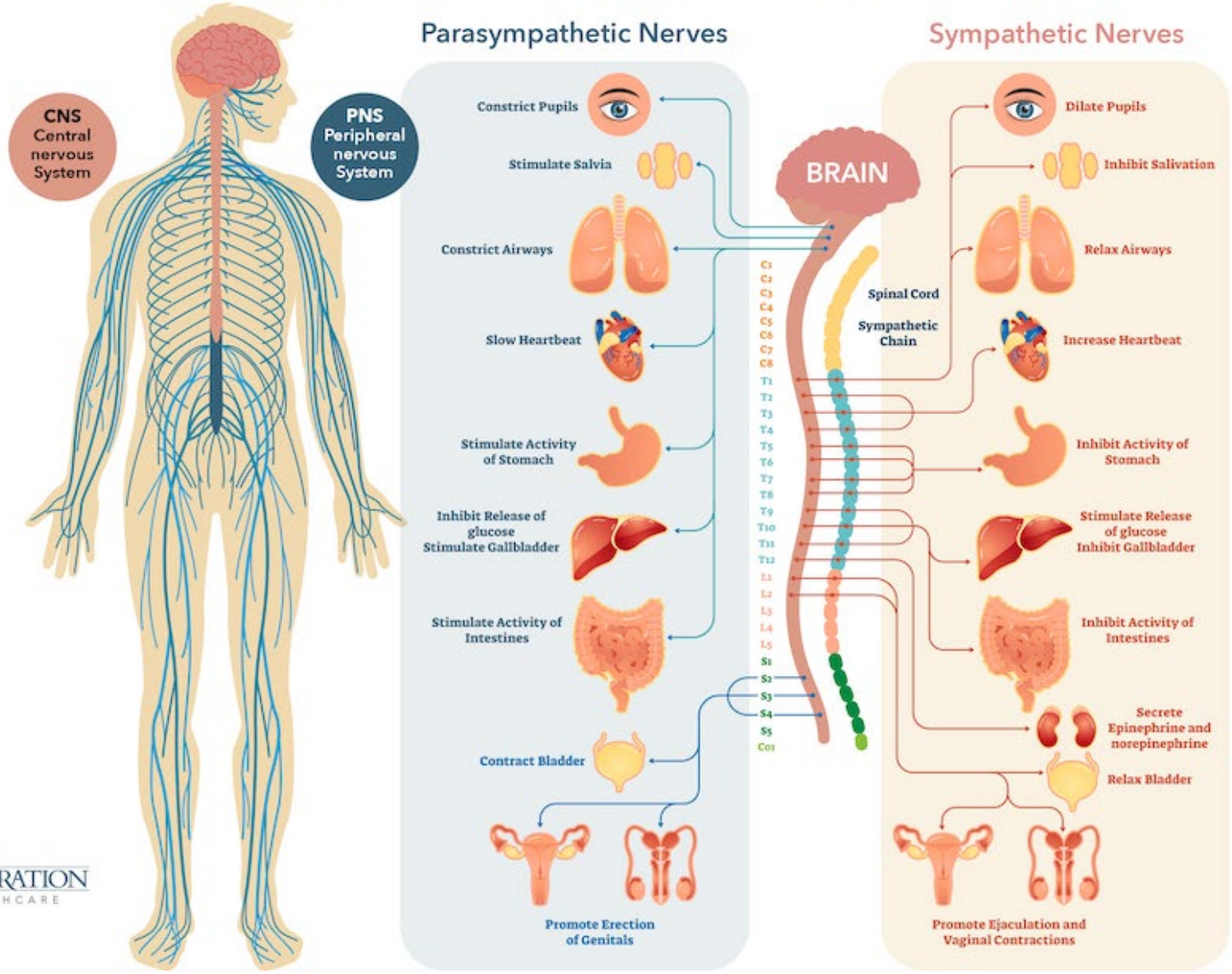
Cycle of Chronic Pain



Psychoeducation about the Autonomic Nervous System

- **Two Branches**
  - **Sympathetic Nervous System**
    - **Fight, flight or freeze**
    - **Fires when the mind perceives threat**
  - **Parasympathetic Nervous system**
    - **Rest and digest**

HUMAN NERVOUS SYSTEM



RESTORATION HEALTHCARE

UCSF

- **Signs that the sympathetic nervous system is activated**

Physical: shortness of breath, muscle tension, heart rate increases, blood vessels constrict, bladder relaxes, pupils dilate

Emotional: panic, fear, anger

Cognitive: anxious thoughts, attention to threat, negative interpretation of ambiguous stimuli, over/under estimation of perceived control

Behavioral: social withdrawal, avoid or escape

- **Pain psychology skills**

Physical: diaphragmatic breathing, mindfulness based practices

Emotional: cognitive behavioral therapy, mindfulness

Cognitive: cognitive behavioral therapy

Behavioral: activity pacing and engagement in pleasurable activities

UCSF

Mindfulness/Relaxation Training

Why?

Meditation can be helpful for patients with chronic pain

- Pain can be reduced
- Learn to non judgmentally observe bodily sensation
- Learn to distance from emotions that can worsen pain
- Reduce stress
- Relaxation of the muscles

How?

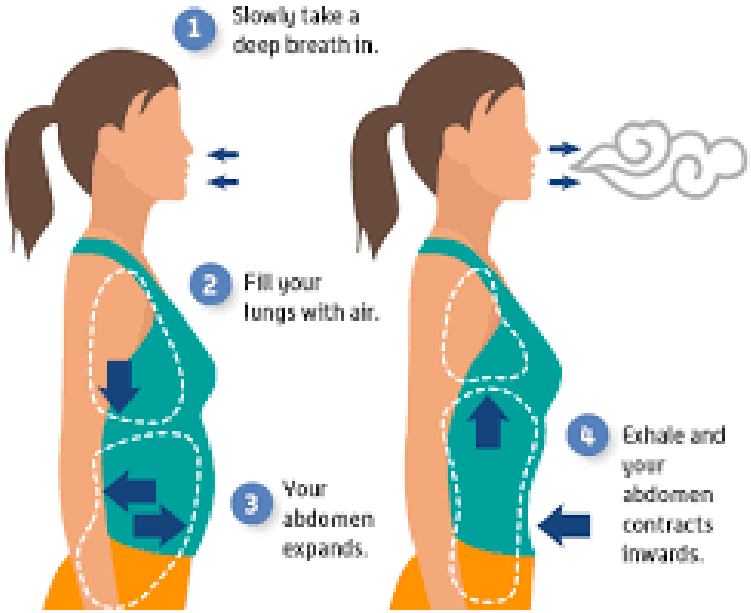
Mindfulness Meditation definition

Mindfulness is a particular way of paying attention, on purpose, in the present moment, and non-judgmentally.

Jon Kabat Zinn

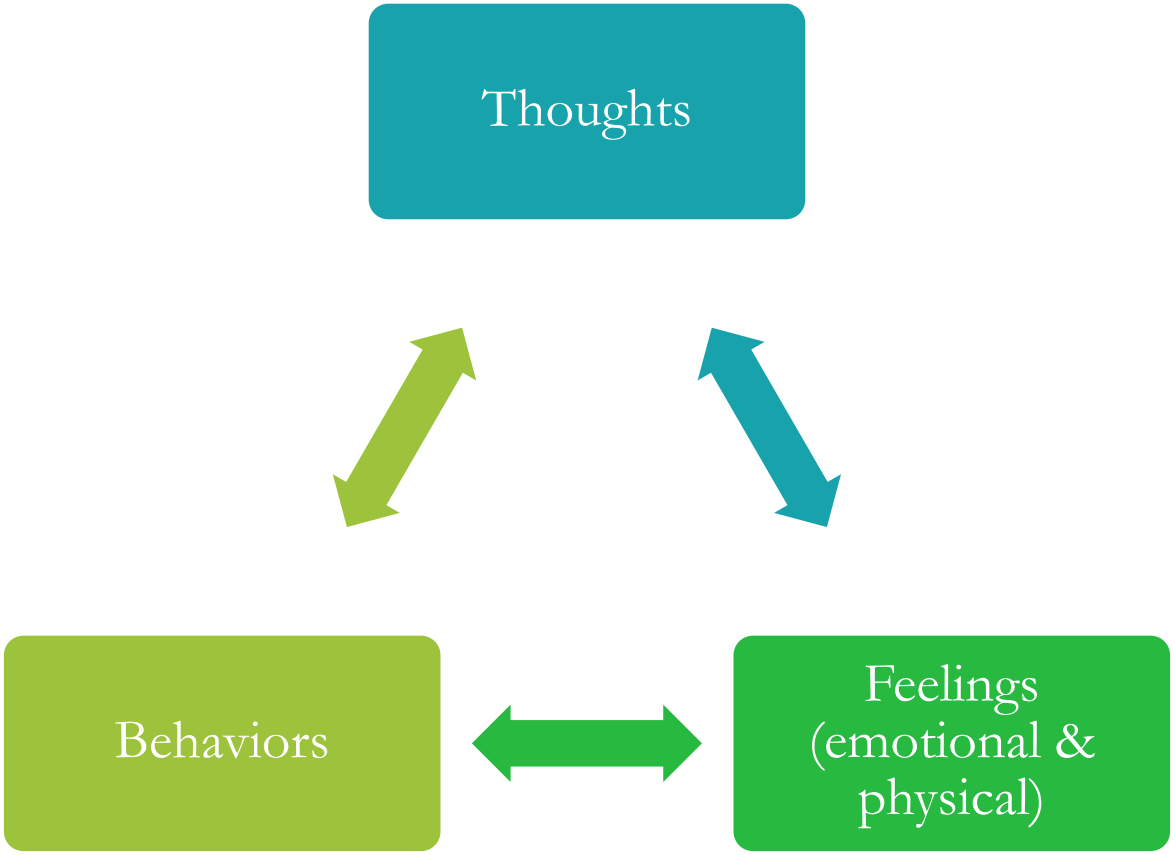
Common practices

- Diaphragmatic "deep belly breathing"
- Progressive Muscle Relaxation
- Body Scan
- Mindful Movement
- Sitting meditation
  - Breath
  - Body
  - Feelings
  - Internal events (thoughts, emotions)
- Walking meditation
- Loving Kindness meditation
- Mindful Eating



Cognitive Behavioral Therapy

Basic Organizing Theory of CBT



Why?

- Changing how we think, feel, and respond to our pain improves functioning
- Encourages use of active coping
- Reduces avoidance of movement

Why?

Low back pain: RCT: Group CBT reduced pain & disability at 1 yr f/u, cost-effective

(Lancet; Lamb 2010)

Headaches: CBT-based interventions (relaxation, biofeedback, and cognitive therapy) reduced headache 30%–60%.

(Andrasik, 2007)

Orofacial pain: CBT alone or with biofeedback reduced pain intensity, pain interference, and depression in long-term

(Aggarwal et al, 2011)

Arthritis pain: CBT reduced pain

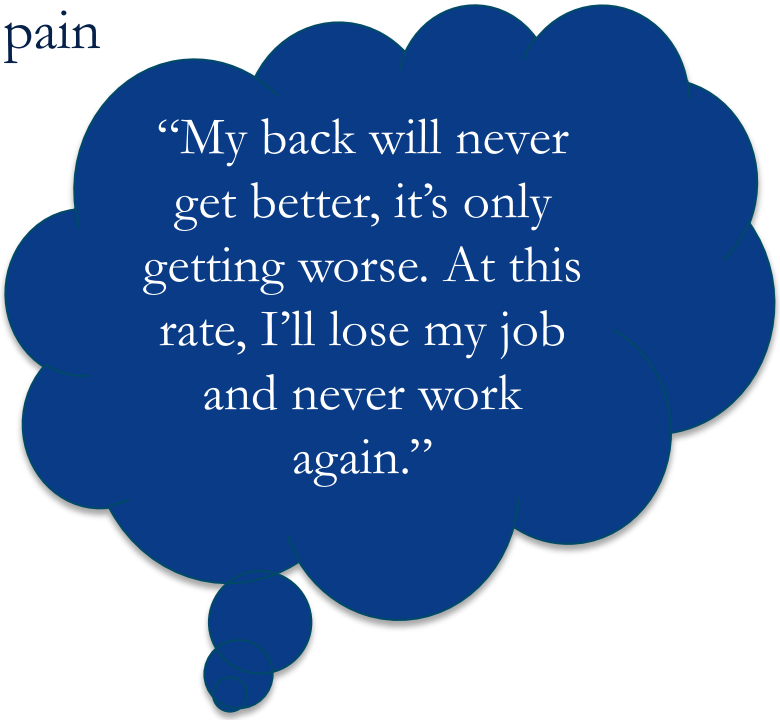
(Astin et al, 2002)

Fibromyalgia pain: CBT reduced pain

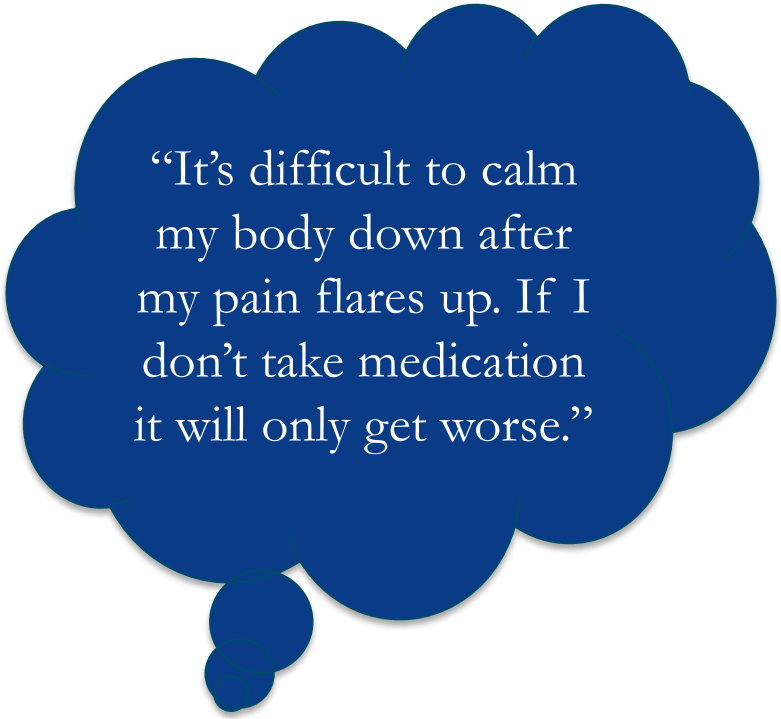
(Glombiewski et al, 2010)

Unhelpful thoughts

Pain catastrophizing: persistent negative cognitive and emotional responses to actual or anticipated pain



Pain anxiety: fear in response to pain and anxiety about experiencing pain



Take away: What you think can affect how you react and feel (emotionally and physically)

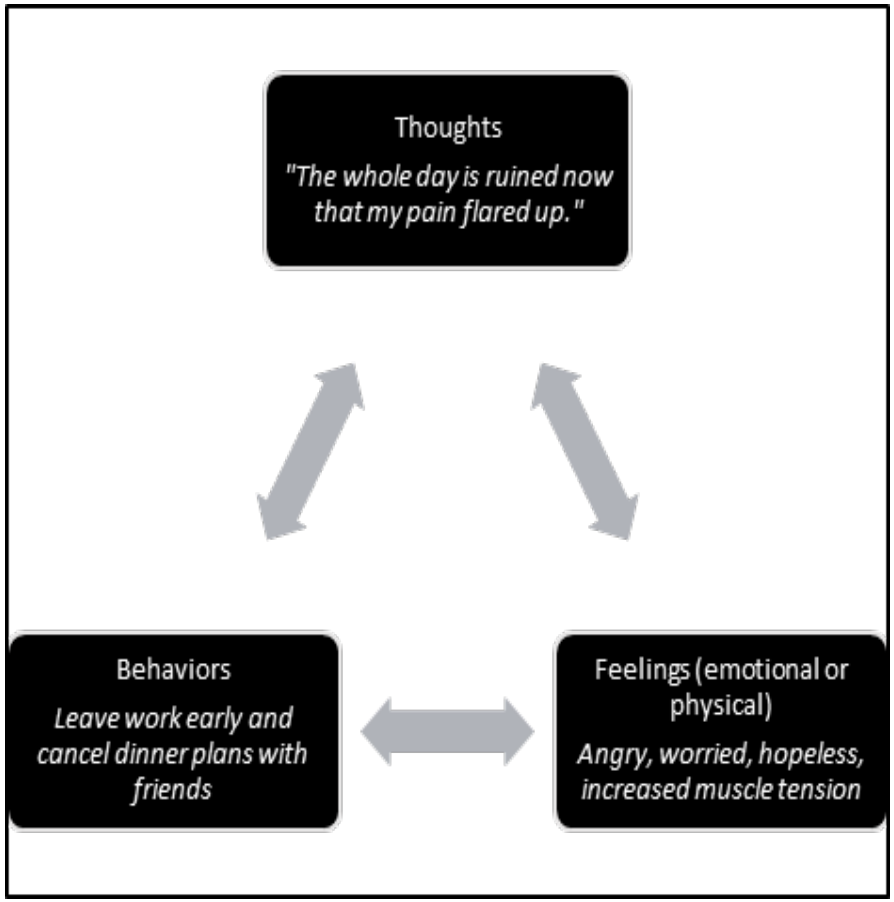
How?

- Belief: "I am unable to function because of pain and I am helpless to improve my situation"

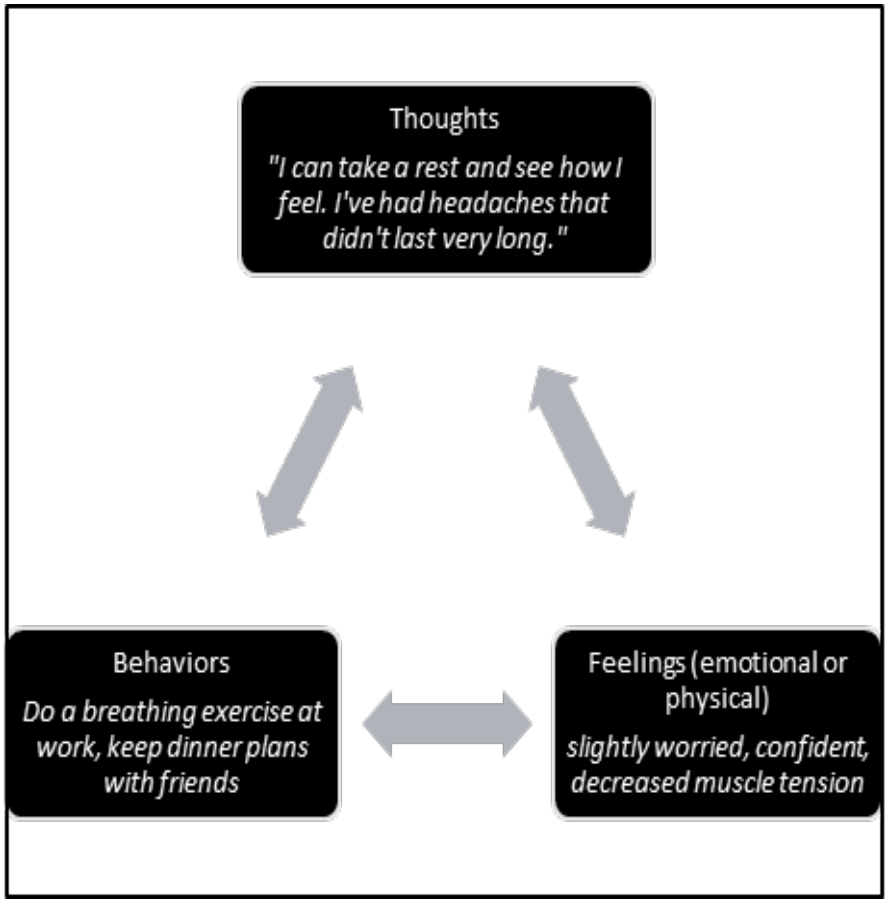
- Goals:
  - Helping people with pain to realize that they can manage their problems
  - Provide skills to respond in more adaptive ways
  - Maintain skills after treatment is terminated

Example situation: Back pain and headache flares up while at work

Before



After



UCSF

Future Advances in Pain Psychology

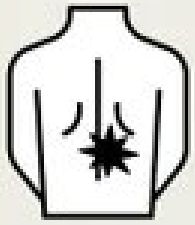
Pain Reprocessing Theory

JAMA Psychiatry

RCT: Pain Reprocessing Therapy for Chronic Back Pain

POPULATION

70 Men, 81 Women



Adults with primary chronic back pain

Mean (SD) age, 41.1 (15.6) y

SETTINGS / LOCATIONS

1 University research setting in Boulder, Colorado

INTERVENTION

151 Individuals

50 Pain reprocessing therapy (PRT) A total of 9 psychological treatment sessions over 4 wk focused on reconceptualization of pain

51 Open-label placebo injection A subcutaneous saline injection described as placebo administered to the back

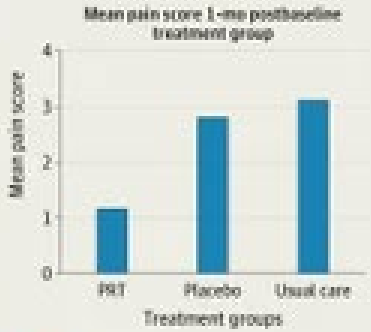
50 Usual care No additional treatment provided, continue current treatments

PRIMARY OUTCOME

Mean pain over last week assessed by the Brief Pain Inventory-Short Form, at 1-mo postbaseline. Score range: 0-10 over the last week (0 = no pain to 10 = most severe pain)

FINDINGS

Individuals randomized to PRT reported large reductions in pain compared with individuals randomized to placebo or usual care



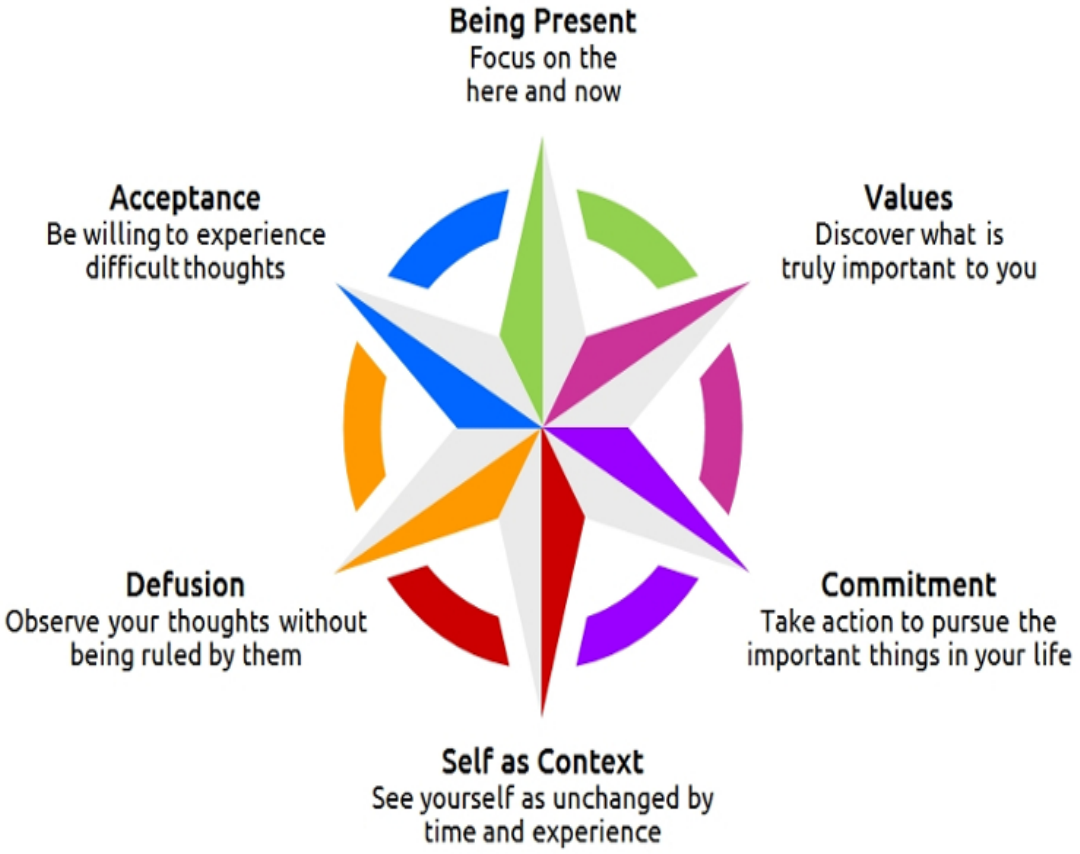
PRT group: Mean (SD) score, 1.18 (1.24)
Placebo group: (SD) score, 2.84 (1.64)
(effect size PRT vs placebo: -1.14; P<.001)
Usual care group: Mean (SD) score, 3.13 (1.45) (effect size PRT vs usual care: -1.74; P<.001)

Ashar YK, Gordon A, Schubiner H, et al. Effect of pain reprocessing therapy vs placebo for patients with chronic back pain: a randomized clinical trial. JAMA Psychiatry. Published online September 29, 2021. doi:10.1001/jamapsychiatry.2021.2669

UCSF

Acceptance and Commitment Therapy

Psychological Flexibility Model



In sum, it takes a village

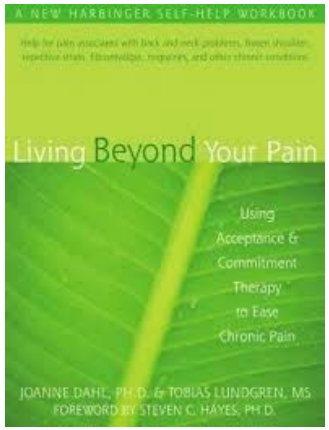
Medical interventions alone are insufficient to treat patients with trauma and pain

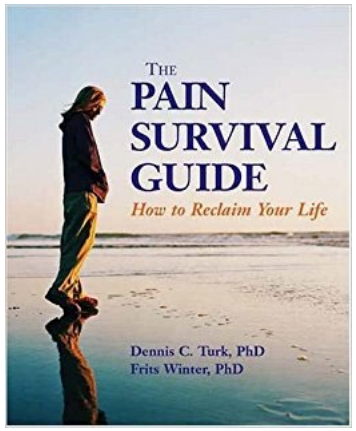
Addressing psychological distress and providing coping strategies improves function

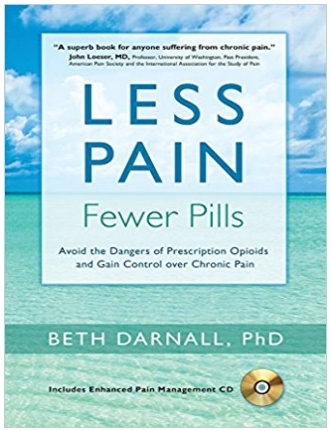
Whole-person, interdisciplinary approach with ongoing collaboration improves health outcomes

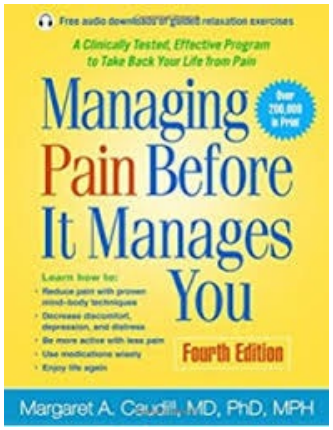
Resources

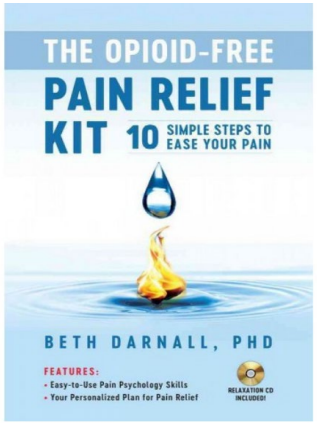
Self Help Books











UCSF

FREE APPS FOR RELAXATION AND PAIN MANAGEMENT

Calm introduces you to mindfulness with 5 minute instructions. It also has guided body scan, relaxation scenes and sounds to support self-guided meditation.

Headspace teaches you the basics of meditation and mindfulness in just 10 minutes a day.

Breathe2Relax is a hands-on paced breathing exercise. Capitalizing on touch-screen technology, as user can vary their breath rate by simply swiping on the screen.

Cureable is an app that can be helpful in understanding the mind-body connection and pain coping skills. There is a free version with many free and interesting podcasts on pain research and treatments.

1. Free Somatic Tracking exercise
https://www.curablehealth.com/prt-exercises
2. Free Podcast- Like Mind, Like Body
https://www.curablehealth.com/podcast
3. Free Podcast- Tell Me About Your Pain
https://www.curablehealth.com/podcast/your-pain
4. Free blog
https://www.curablehealth.com/blog

WEBSITES

Chronic pain self-management tools: www.painaction.com

American Chronic Pain Association (peer support and education): https://theacpa.org

Excellent video on understanding pain (5 min): https://youtu.be/C_3phB93rvI

Pain Education and Self Management in many languages: https://www.retrainpain.org

FREE ONLINE MINDFULNESS BASED STRESS REDUCTION (MBSR) CLASS

You can find free classes online: https://palousemindfulness.com

MINDFULNESS BASED STRESS REDUCTION (MBSR) CLASS at the UCSF OSHER CENTER

1) You can enroll in a mindfulness-based stress reduction (MBSR) class to assist with developing relaxation strategies to aid with stress and pain management.

Classes based on the curriculum of Jon Kabat-Zinn are available through the Osher Center at UCSF (415-353-7718) and other medical centers.

Online Mindfulness-Based Stress Reduction (MBSR)

Offered by the UCSF Osher Center for Integrative Medicine

8-week class with new cohorts starting every month

Mindfulness-Based Stress Reduction (MBSR) introduces participants to mindfulness practice in the form of sitting meditation, body awareness, and mindful movement. The program was modeled by Jon Kabat-Zinn, PhD, and has since been administered and studied extensively. Participation can reduce chronic physical or mental distress and enhance health and well-being. For more information, please go to: https://osher.ucsf.edu/public-classes/mindfulness-based-stress-reduction-mbsr

Questions or comments?

Contact: Valerie.Jackson@ucsf.edu

or

Iulia.Ivan@ucsf.edu

UCSF

Virtual Reality

- https://bmjopen.bmj.com/content/11/6/e050545

Six Core Processes

- **Acceptance:**
  - Learning to accept physical sensations, emotions, thoughts

- **Cognitive defusion:**
  - Seeing/acknowledging thoughts, emotions, physical sensations and not attaching to them
  - For example thinking "I'm in a lot of pain today and it's really hard to deal with" saying I'm having the thought "I'm in a lot of pain today and it's really hard"

- **Present moment awareness:**
  - Awareness that when you are in pain, without realizing it, it becomes habit to worry about how the pain will impact you the rest of the day or years to come.
  - Here we try to focus on present moment, not going to the past and not going into the future, dealing with things one moment at a time.

- **Self as context:**
  - Connecting more with you as a person
  - You are your "self" despite changes in height, weight, professions, identities.
  - Pain is something you are experiencing, you are not your pain.

- **Values:**
  - Your compass, what you want to stand for in life
  - Goals are specific behaviors that can be used to measure living in line with your values.
  - Pt with a chronic pain condition feel they have lost what they can do, who they are.

- **Committed action:**
  - Taking action in the direction of your values/goals despite unpleasant physical sensations, emotions, thoughts.