

# Conquer Your Brain

Peter Abaci M.D., Medical Director

*Bay Area Pain  
& Wellness Center*

IPM  
MEDICAL GROUP INC.  
treating pain. restoring life.



# Objectives?

Have a great life with chronic pain.

# Harry Potter



**Movie:** Harry Potter and the Deathly Hallows: Part 2, **Cast:** Daniel Radcliffe, Michael Gambon

# Structure and Function

- Gray matter- hardware
- White matter- cables and cords
- Chronic pain changes in brain structure lead to changes in function

# The Brain Game

- Neuroplasticity
- Neurogenesis
- Epigenetics
- Glial cells
- You've got the power!

# Pain Brain Changes

- Mood Regulation
- Memory and Learning
- Stress Response
- Reward System
- Motivation and Decision Making

# Pain Brain Changes

- Impulse Control
- Opinions and Judgements
- Attitude
- Homeostasis
- Sensory Perception

# Conquering the Pain Brain

- Create structural change
- Use the Rs- remodel, re-work, revise, reconfigure, regenerate, rejuvenate, repetition



# 5 Key Elements of Success

- Mobility
- Interaction
- Independence
- Validation
- Love

# The Storm

- Trauma- mood swings, flashbacks, panic attacks, social isolation, nightmares
- Fight, flight...or freeze?
- The three faces of trauma
- Trauma symptoms- hyperarousal of the limbic system- amygdala, hippocampus, anterior cingulate cortex, insula, thalamus, hypothalamus

# Calming the Storm

- Meditation- still or active, alters brain structure and function, more gray and better white
- Breathing exercises- parasympathetic induction
- Art therapy- periaqueductal gray, dorsolateral prefrontal cortex
- Yoga- neuroplastic changes, therapy not exercise
- EMDR- eye movement desensitization and reprocessing, uses rhythmic eye movements to quell traumatic feelings

# Harmful Thoughts



Bad environment → toxic inflammation → epigenetic changes →  
alters structure and function → more pain

# Harmful Thoughts- the Big 3

- Catastrophizing
- Fear
- Anger



# Healing Thoughts

- Acceptance
- Gratitude – Heals, energizes, and transforms lives” –Dr. Robert Emmons  
Improves mood, sleep and life satisfaction.
- Compassion – Responding to the needs of others.  
Improves relationships, lowers heart disease, prolongs life

# Exercise and the Brain

- Powerful effect in enhancing brain function
- Stimulates the production of neurotrophic factors
- Increases gray matter in the hippocampus
- Improves function in numerous brain regions including stress regulation pathways, motor cortex, somatosensory cortex, anterior cingulate cortex, insula



# Gut/Brain Connection

- Microbiome composition linked to health, chronic disease, immune function, mood disorders
- Two-way communication between microbes in the gut and the brain
- Microbiota can be disrupted by diet, opioids, antibiotics, and environmental toxins
- Rule of 7



# Sleep

*“A good laugh and a long sleep are the two best cures for anything.”*

- Sleep is key in the neuroplastic process
- The brain is very active during sleep - when it consolidates learning
- Less sleep = more pain
- Sleep hygiene is a must
- CBT works better than pills



# Harry Potter



**Movie:** Harry Potter and the Deathly Hallows: Part 2 (2011), **Star:** Daniel Radcliffe

# Contact Information

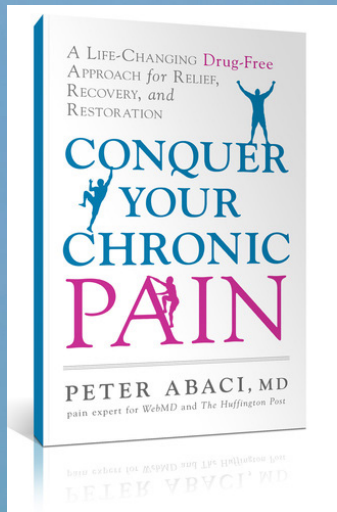
## Bay Area Pain & Wellness Center

15047 Los Gatos Blvd. Ste. 200 Los

Gatos, CA 95032

Phone (408) 364-6799

[www.bapwc.com](http://www.bapwc.com)



Resource [www.painreliefrevolution.com](http://www.painreliefrevolution.com)