Conquer Your Brain

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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

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