

THINKING OUTSIDE THE BOX FOR TBI CARE


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OBJECTIVES

- Briefly review my interest in this topic
 - Review traditional treatments for TBI
 - Discuss outside the box treatments for TBI
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BACK STORY

Worked in neuroscience
since 2000



RN since 2002



NP since 2012

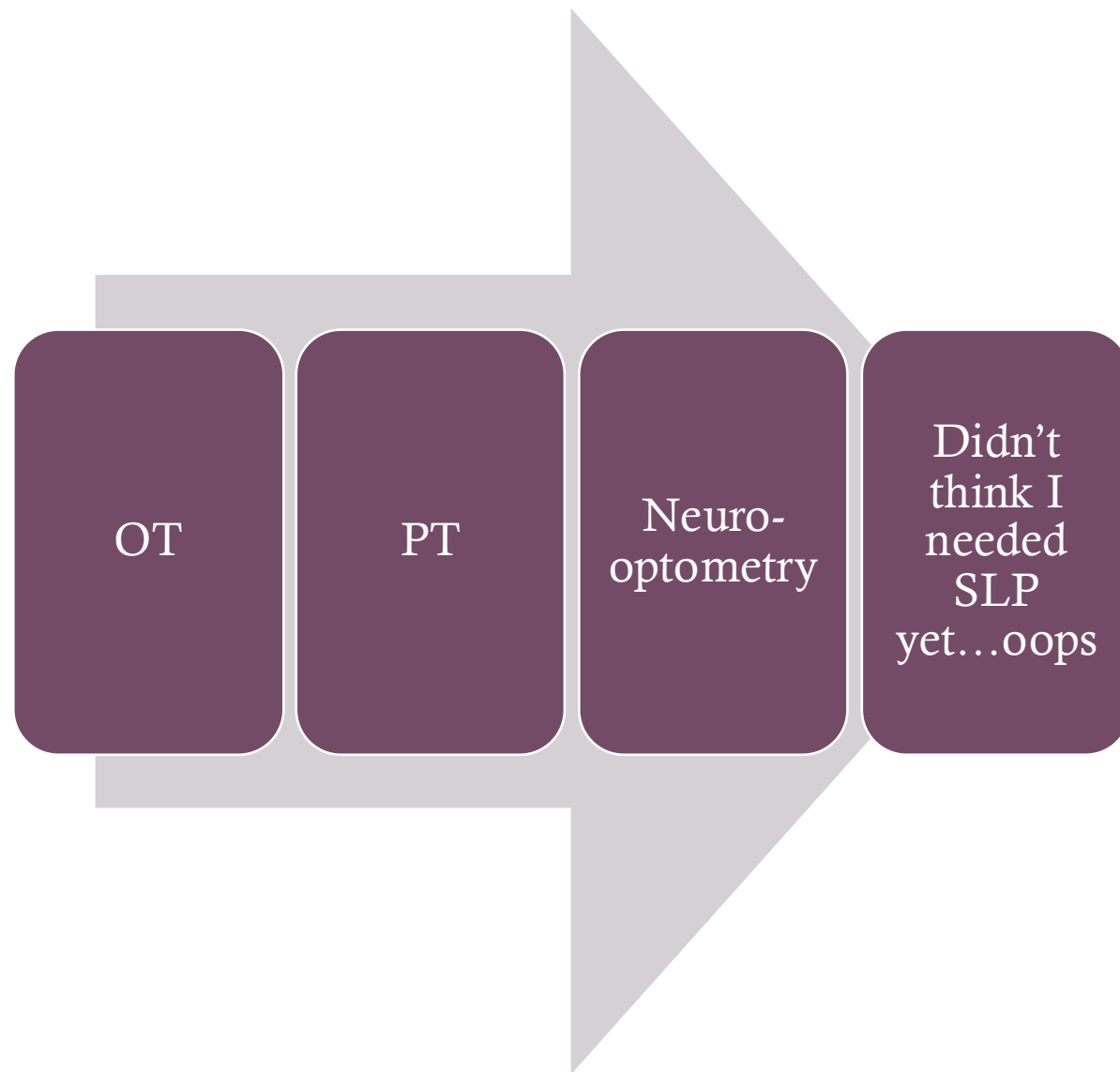


Podcast started 2022

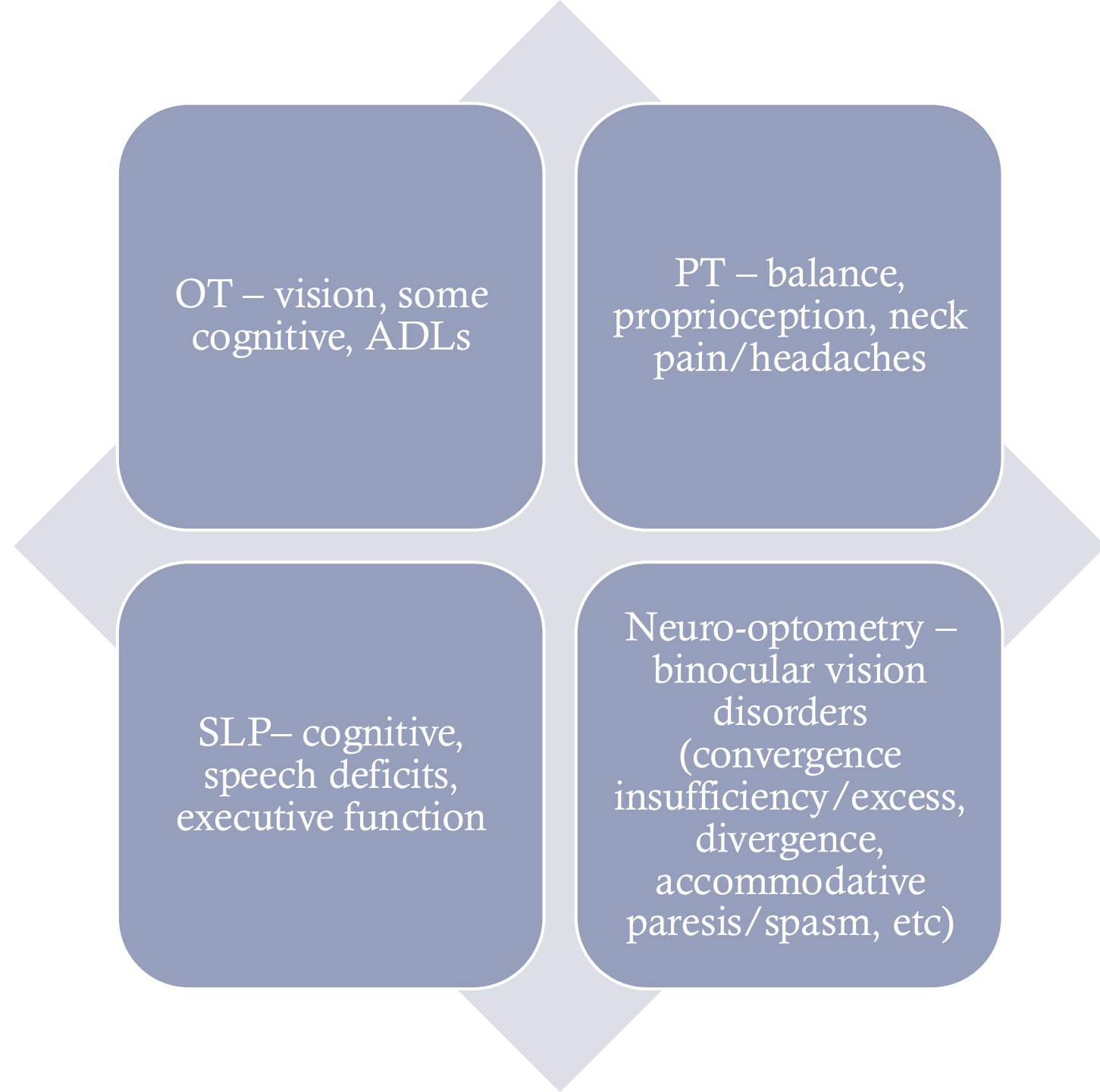


MVA 2023 – major life
change!

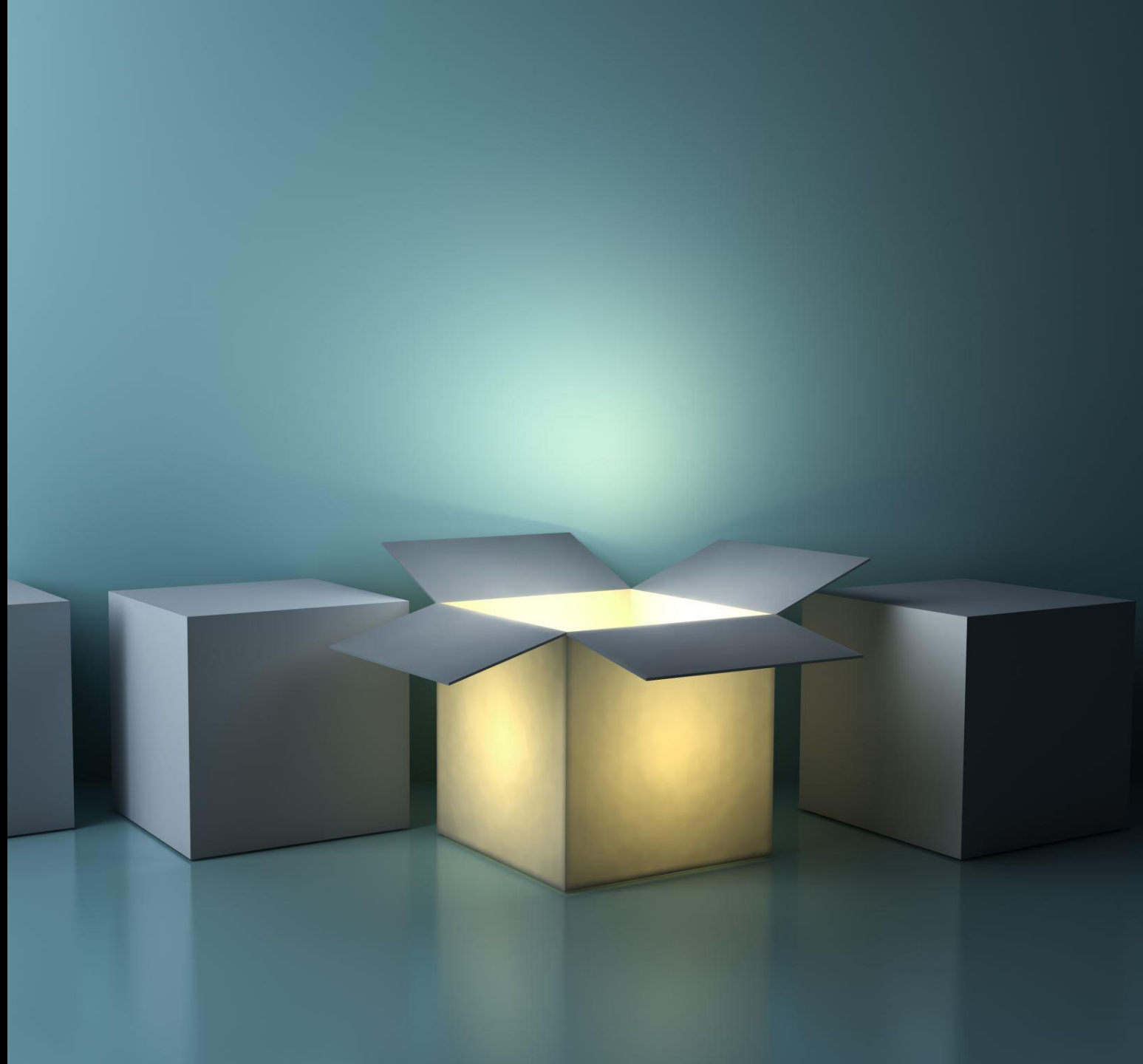
DID THE TRADITIONAL FIRST



FUNCTIONS OF TRADITIONAL TREATMENT



THEN WE
NEEDED TO
THINK OUTSIDE
THE BOX



OUTSIDE THE BOX TREATMENTS I DID

Red light
therapy

Transcranial
laser

EWOT

PEMF

Neurofeedback

Peripheral
nerve
stimulation

Audiology

Neurological
chiropractor

PHOTOBIO-MODULATION

- Red light therapy & transcranial laser therapy
- Specific frequencies for brain healing
- This is not the typical red light panels offered at many spas
- Identified in 1967, studies for brain started in 2007, not yet picked up by mainstream medicine
- Decreases inflammation, promotes improved blood flow to the brain, decreased headaches, improved cognition, improved mood



EWOT/HBOT

- EWOT (exercise with oxygen therapy)
 - 15 minutes on a bike breathing 92% O₂ via mask
 - Recommended 3-5 days/week
- HBOT (hyperbaric oxygen therapy)
 - 60-90 minutes in a chamber, 100% O₂
 - 3-5 days/week
- Improves blood flow to the brain, improved cognitive function, reduced headaches

PEMF

- PEMF (pulsed electromagnetic field)
 - Lay/sit on a mat with magnetic frequency = earth
 - Can do daily
 - Improve blood flow, reduce inflammation



NEUROFEEDBACK

- Starts with brain mapping
 - Map brain waves: Alpha, Beta, Theta, Delta
 - Neurofeedback EEG-based training specific to abnormalities
 - 20-40 sessions typically recommended
 - Can be done in office or at home
- Used to manage chronic pain, improve mood, cognitive improvement





PERIPHERAL NERVE STIMULATION

- Vagus nerve, median nerve, trigeminal nerve
 - Various devices used
 - Dolphin, Apollo, Pulsetto, Hoolest
 - Improve function of central nervous system
 - Enhance cognition, improve metabolism, reduce pain
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AUDIOLOGY

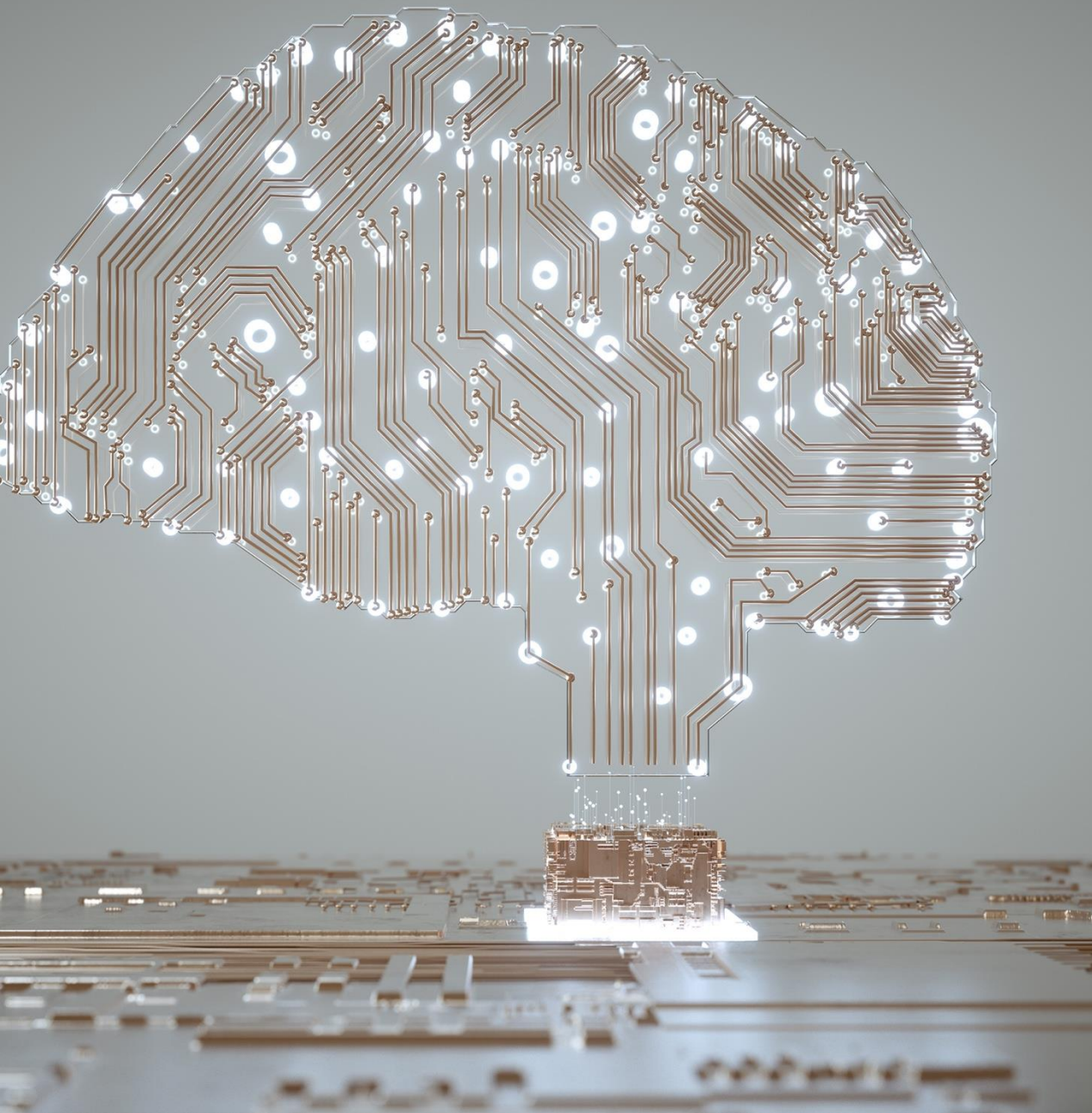
- Evaluations of tinnitus and auditory processing disorder
 - APD not found on typical audiometry
 - FFR (frequency following response) – advanced electrophysiological measure
 - Only 5 audiologists in the US using this method, one near me in MN
- Hidden hearing loss
- Reduced hearing impacts memory
- Treatment: sound therapy, hearing aids



NEUROLOGICAL CHIROPRACTOR

- Chiropractor with specialized neurology training
- Also known as functional neurologist
 - Stimulate neuroplasticity
 - Vestibular training, vision training, use of technologies
- Work alongside other practitioners to collaborate for functional improvement





TRAUMA THERAPY

- EMDR, ART, brainspotting
 - EMDR: 2-3 months of treatment
 - ART: 1-5 sessions
 - Brainspotting 1-3 sessions
- PTSD-specific therapy
- PTSD + TBI = prolonged recovery



ACUPUNCTURE/ACUPRESSURE

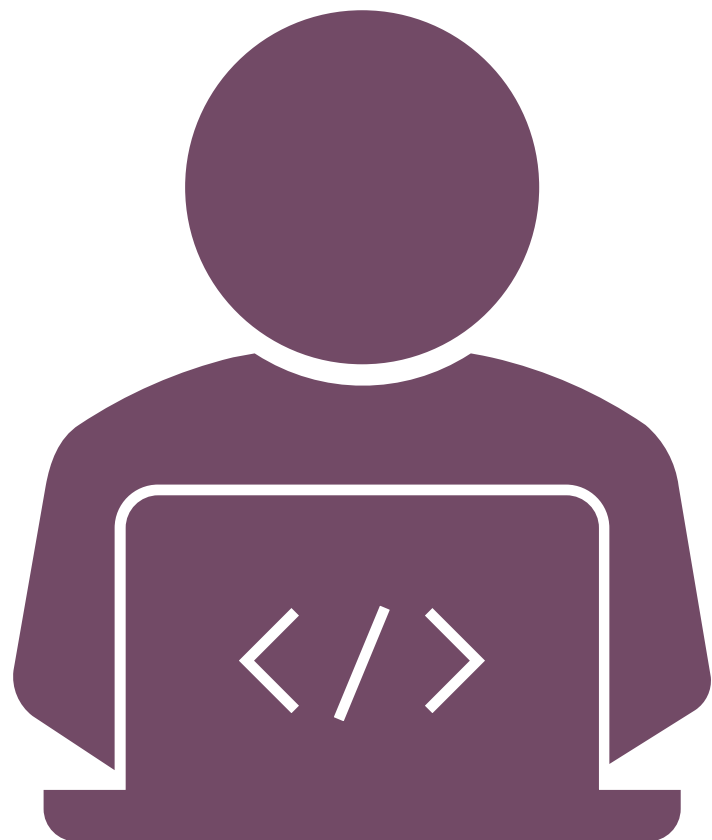
- Reduces inflammation, promotes neuroplasticity
- No set number of treatments available in research
- May involve more frequent acute treatments then taper off
- Individual variability



TMS

- rTMS and PrTMS
 - EEG- based technology
 - Start with brain map, as with neurofeedback
 - 20-30 minute sessions 5 days/week for 6 weeks
- FDA approved indications
 - Depression, OCD, migraine
 - Also used for PTSD, ADHD, autism, TBI

QUESTIONS?



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