

Brain/Mind Health: What is the Role of Developmental/Neuro Rehabilitation Optometrist?

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Disclosure

- None

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Thanks

- Optometric giants
- IBO Study Group (Washington DC/MD/VA)
- Tuesday Think Tank

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What is Our Role?

- Intervention in our practice?
- What to address?
- At what level?
- When?
- When to refer?
- Whom to refer to?



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Questionnaire

- Do you suffer from any brain related ailments now?
- Do you avoid strenuous exercise?
- Do you sit for most of the day?
- Are you overweight or obese?
- Are you a woman?
- Have you been diagnosed with cardiovascular disease?
- Do you have metabolic disorders (HBP, diabetes)?
- Have you had an infection that can lead to chronic inflammation and neurological effects (Lyme, herpes)

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Questionnaire – Part II

- Do you take meds with possible brain effects ex. antidepressants, anti-anxiety drugs, HBP, statins, proton pump inhibitors, antihistamines?
- Have you ever had a TBI or head trauma or played an impact sport? Had a concussion?
- Do you smoke or have a history of smoking?
- Do you have a history of depression?
- Do you lack social engagement with others?

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Questionnaire – Part III

- Did your formal education end at high school or earlier?
- Do you live with chronic unrelenting stress (trouble coping)?
- Do you have a history of alcohol abuse?
- Do you suffer from a sleep disorder?
- Do you have hearing loss?
- Does your day lack cognitive challenges, i.e. learning something new or playing a game that requires a lot of thinking?

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Questionnaire – Part IV

- Are you over 65 years old?
- Do you have a family history of Alzheimer's disease or APOE₃ or APOE₄ or both?
- Do you care for someone who suffers from some form of dementia including Alzheimer's disease?
- **Significant: Answered Yes to 5 or more questions**
- **If 1-2 questions you can still use information to optimize health and performance**

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Degrees

- Forgetful
- Brain fog
- Dementia
- Alzheimer's



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Dementia

- Mild cognitive impairment (MCI) – beginning stage
- Vascular dementia – impaired blood supply
- Dementia with Lewy Bodies (DLB) - 20%
- Frontotemporal Lobar Dementia (FTLD)
- Alzheimer's disease – 60 to 80%

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Metabolic Disorders

- Link to mental health
- Diabetes
- Obesity
- Cardiovascular disease
- ADD/ADHD?

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Contributing Factors

- Genetics
- Epigenetics
- Inflammation
- Neurotransmitters
- Hormones (age)
- Sleep
- Alcohol and drugs
- Mental status (trauma, loneliness, love, heartbreak)
- Purpose in life
- Affect metabolism and mitochondria, mental health

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Medications

- Side effects – Statins, anti-depressants, anti-anxiety
- Co-Morbid conditions

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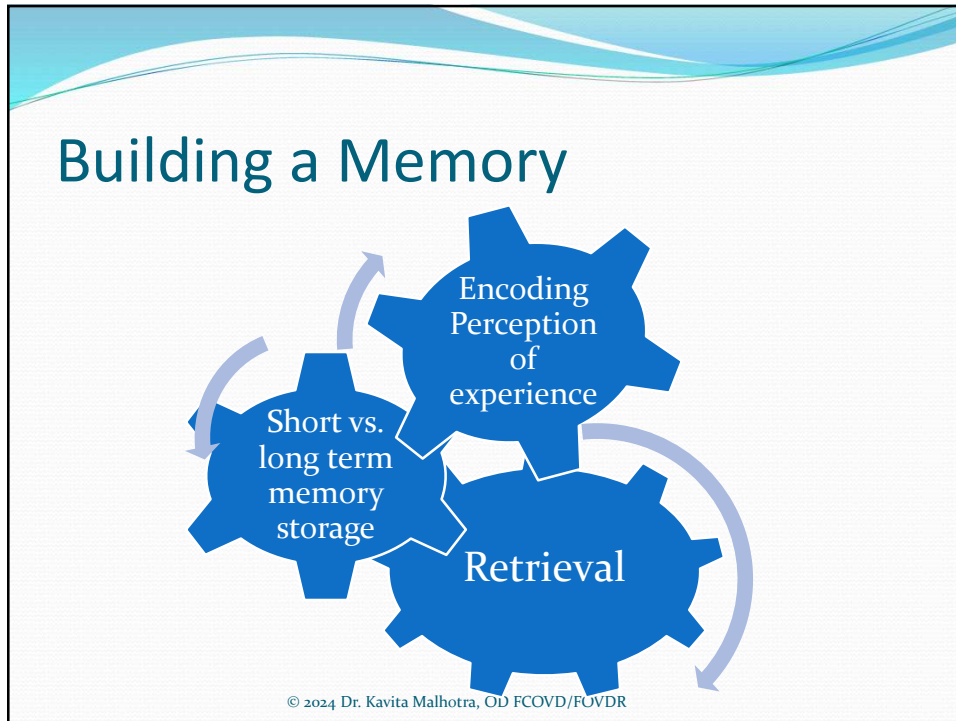
Diet

- Current diet
- Restrictions – allergy, religion, availability
- Willingness to make a change

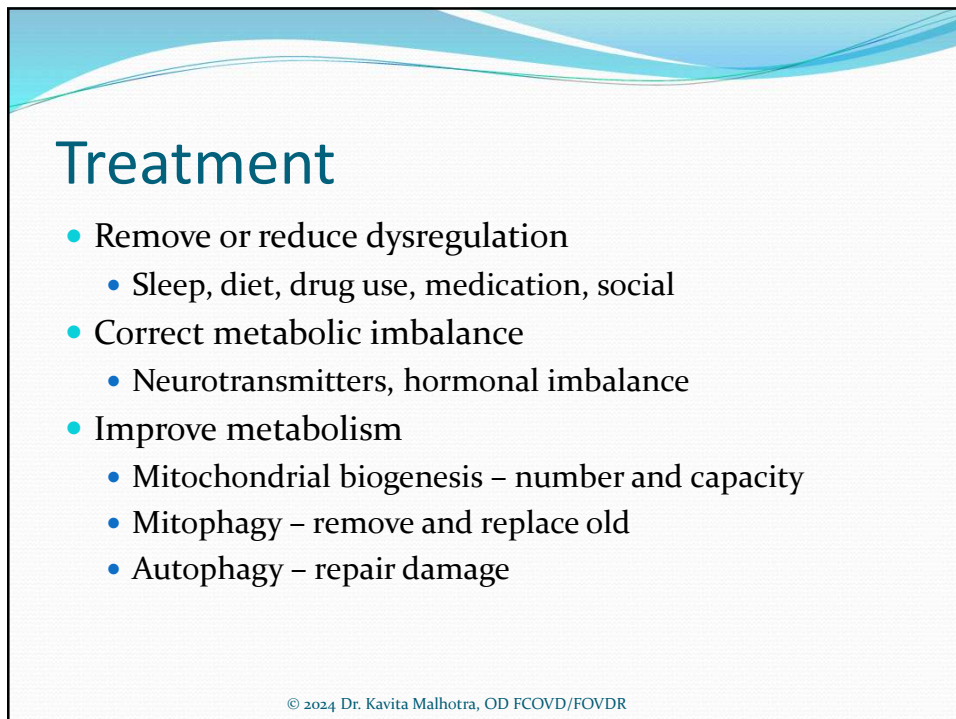


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Movement

- Move more
- Breathe!
- Regular physical fitness routine
- Mind body connection
- Ask patients how much they are doing
- Add during therapy sessions
- Ask patients to walk for home reinforcement



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Breathe!

- Various Forms
- 4-4-8
- 4-4-4-4
- 2-2-4 (8)
- Increase so exhalation is twice inhalation
- Shifting to parasympathetic

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Food

- Quality
- Vitamins, supplements and Nutrition
- Time restricted eating (intermittent fasting, ketones)
- Alcohol, drugs
- Gut-Brain axis



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Good Eating - SHARP

- Slash sugar
- Hydrate – water
- Add Omega-3 DHA, D₃ (Vitamin K)
- Reduce portions
- Plan ahead



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Supplements

- Post-Concussion
- Post stroke
- Long COVID
- Lyme disease
- MTHFR

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Continue Learning

- Brain resiliency (cognitive reserve)
- Need continuing education
- Read, audio books
- Brain training games
 - better at game, not reasoning or problem solving
- Learn a new skill ex. language, dancing

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Therapy

- Scaffolding
- Strategies they can use
- Finding opportunities to reinforce therapy
- Adapt activities of daily living

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Sense of Purpose

- Value of life lived with purpose
- Motivation to remain active and care for yourself
- Find ways to get involved
- Flow – state of immersion without distraction or agitation
- Intense energy – less stress Mihaly Csikszentmihalyi (MEE-high CHEECH-sent-mee-high)

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Environment

- Social/Emotional
- Contribute to society - value



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Make Connections

- Authentic

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Sleep/Light

- Light – Natural light, screens
- Circadian rhythms
- Red light – stimulate ATP production
- Blue light – inhibit ATP production
- Syntonics



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Sleep

- Stick to a schedule (avoid long naps)
- Don't be a night owl (sleep before midnight)
- Wake up to early morning light (Andrew Huberman)
- Get moving
- Watch what you eat and drink
- Medications
- Cool, dark, quiet
- Eliminate electronics before bedtime
- Bedtime rituals
- Warning signs of sleep disorders

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Ways to Reset

- Meditation
- Forgiveness
- Laugh
- Take breaks from social media
- Create time for yourself
- Reward yourself
- Don't multitask
- Declutter
- Daydream

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Olfactory

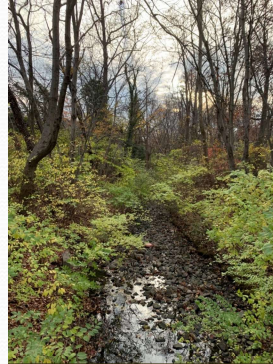
- Improved cognitive ability
- 2 hours per night, 7 nights, 6 months
- 7 essential oil odorants: Rose, orange, eucalyptus, lemon, peppermint, rosemary, and lavender; from The Essential Oil Company, Portland, OR

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Intervention

- Initiation
- Adaptation
- Maintenance
- Withdrawal



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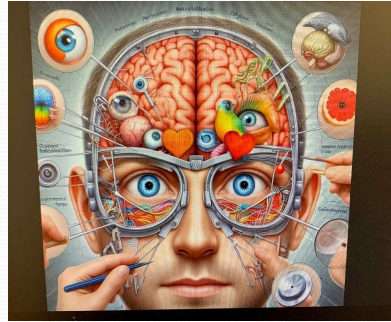
Patient Case Report

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