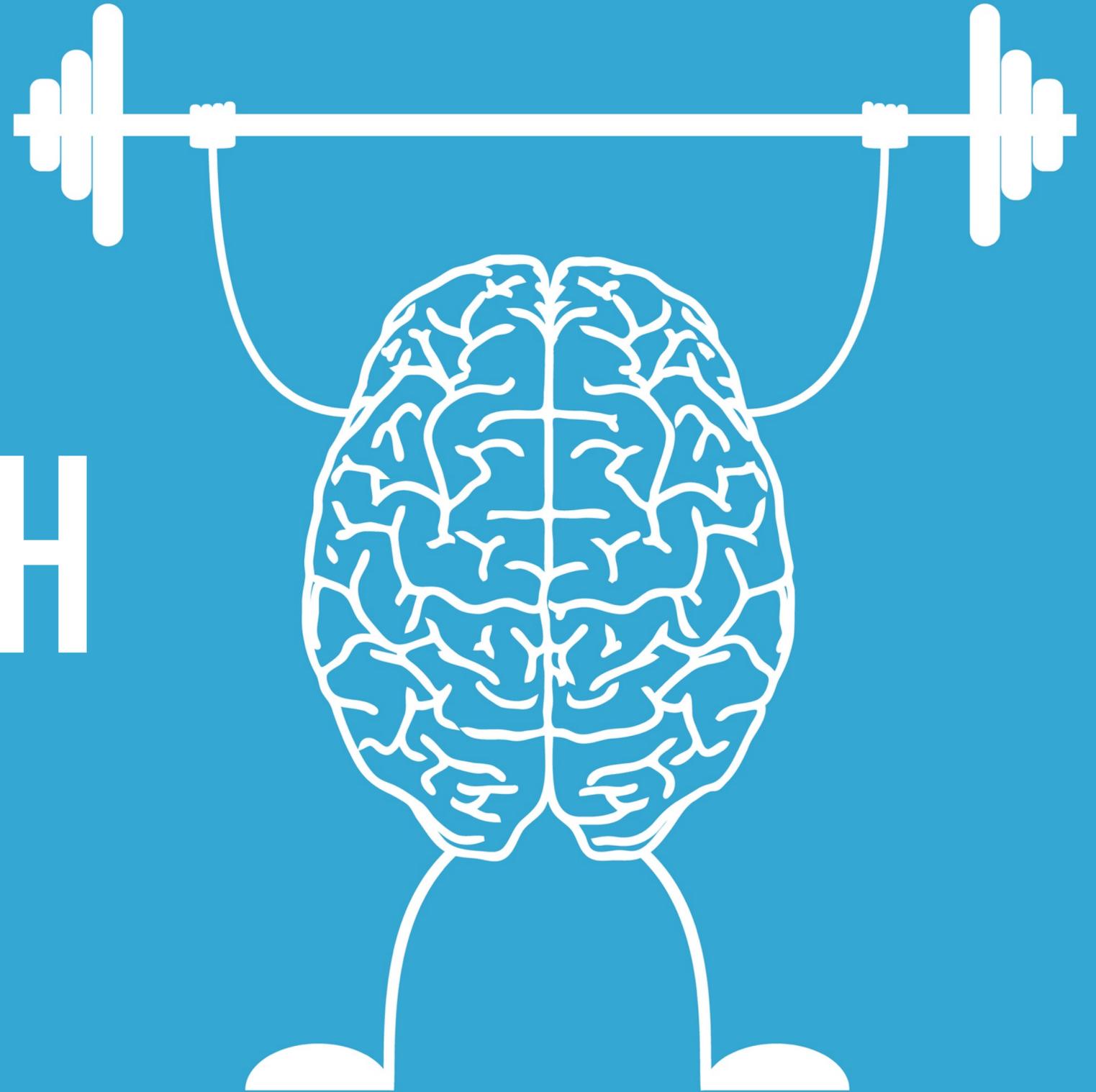


*The*

**BRAIN HEALTH**

**WORKSHOP**



# LAST WEEK

- ▶ **Root Cause Neurology**
- ▶ **TOP 3 Neural Networks**
- ▶ **Root Cause Quiz Pack**
- ▶ **Experience Dependent Neuroplasticity**
- ▶ **Brain Training**

## TODAY'S AGENDA

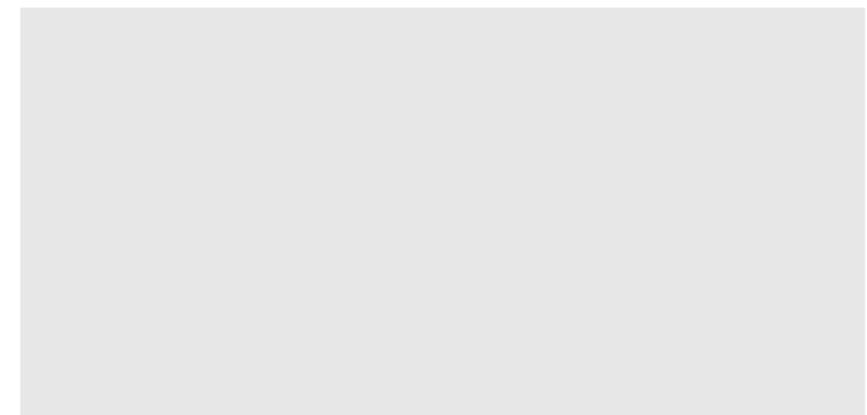
### Daily Tasks



### Schedule for Today

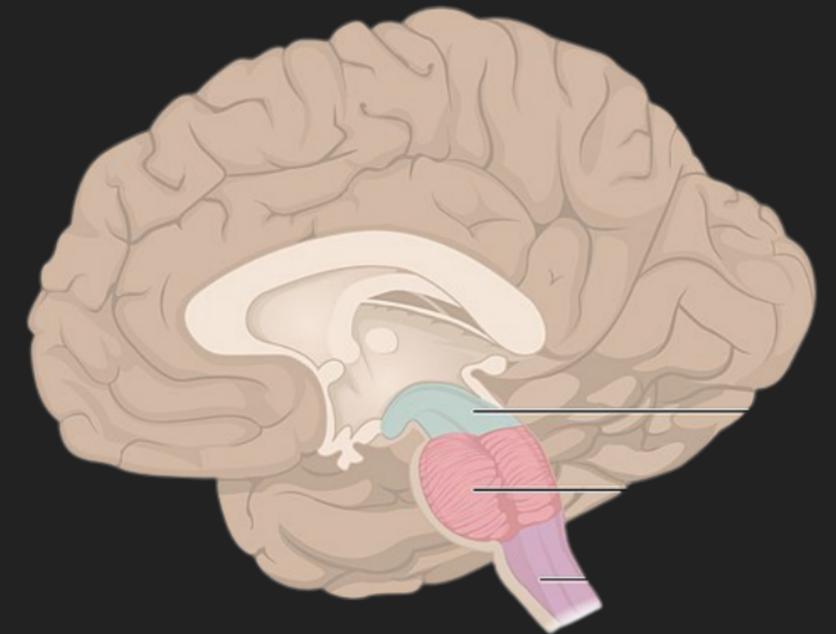
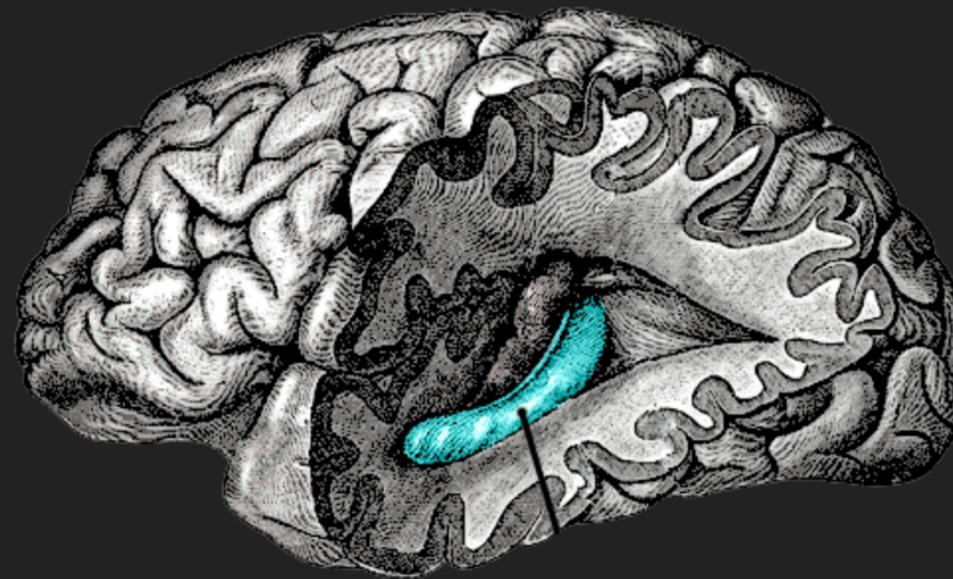
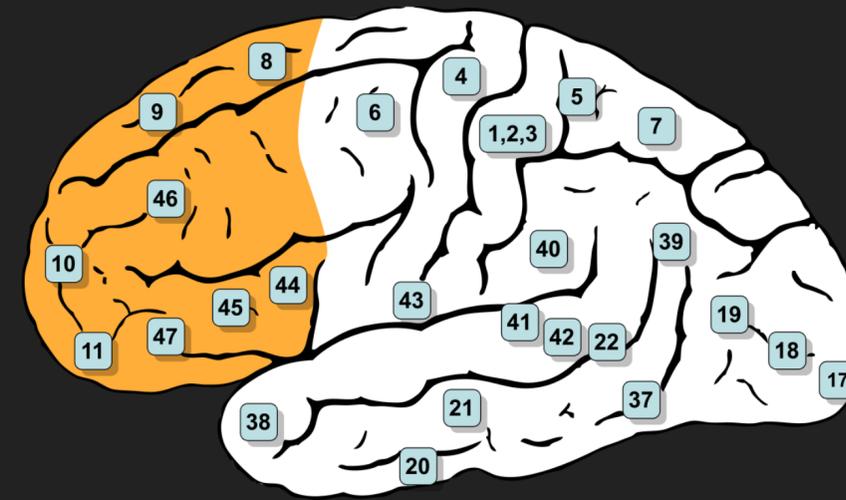


### Inspirational Quote



# THIS WEEK

- ▶ **Key Concepts**
- ▶ **VIP Tour of Your Brain**
  - ▶ **Prefrontal Cortex**
  - ▶ **Hippocampus**
  - ▶ **Brainstem**
- ▶ **Brain Training Exercises**



**Any information in this workshop is provided for educational purposes only and is not intended to diagnose, treat, cure, or prevent any specific diseases or medical conditions.**

**You should always speak with your physician or other healthcare professional before taking any nutritional, herbal, or homeopathic supplement or adopting any treatment for a health problem.**

**Information and statements regarding dietary supplements, have not been evaluated by the Food and Drug Administration, and are not intended to diagnose, treat cure or prevent any disease.**

**For a full Disclaimer, go to [brainsave.com](https://brainsave.com)**



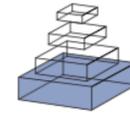
# KEY CONCEPTS

**YOUR BRAIN  
IS UNIQUE**





**EXPERIENCE  
DEPENDENT  
NEUROPLASTICITY**



## Brain plasticity-based therapeutics

**Michael M. Merzenich<sup>1\*</sup>, Thomas M. Van Vleet<sup>1,2</sup> and Mor Nahum<sup>1,3</sup>**

<sup>1</sup> Posit Science Corporation, San Francisco, CA, USA

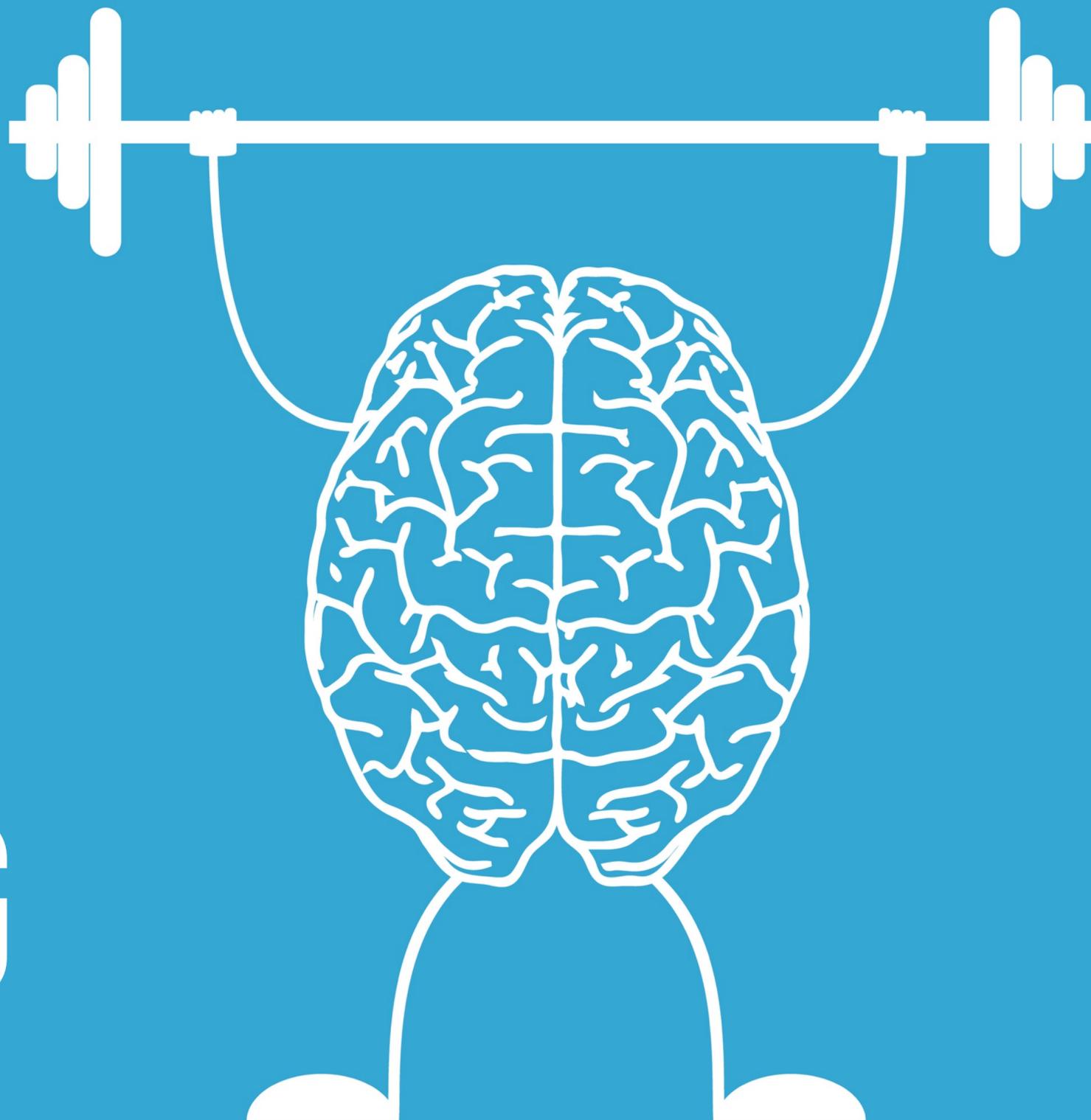
<sup>2</sup> Medical Research, Department of Veteran Affairs, Martinez, CA, USA

<sup>3</sup> Department of Optometry, University of California at Berkeley, Berkeley, CA, USA

**“Not so many years ago, mainstream neuroscience and neurological medicine contended that plasticity was limited to an early childhood epoch—a “critical” or “sensitive period.”**

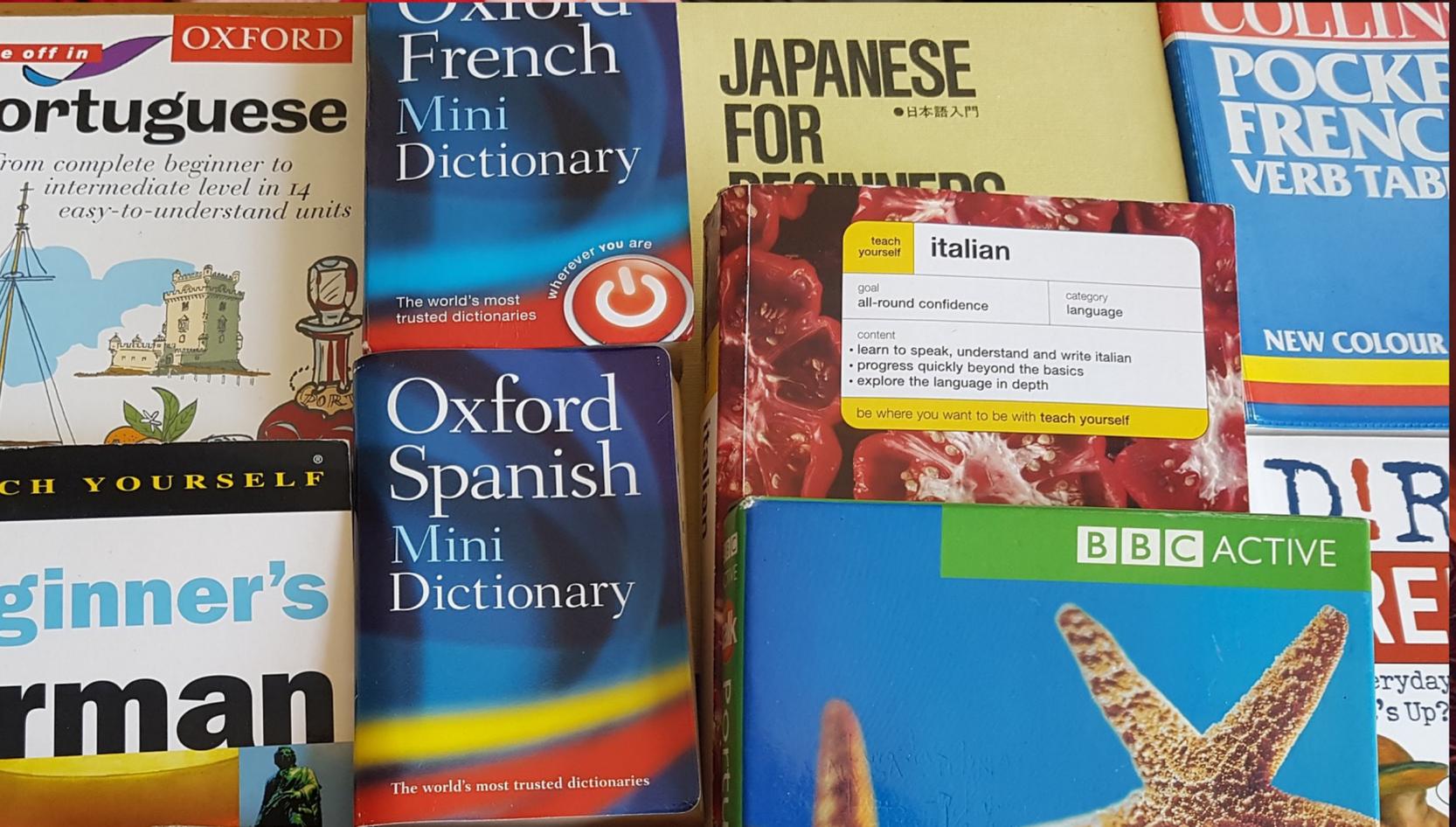
**“We now know that brain remodeling can be induced on a large scale at any age in life”**

# BRAIN TRAINING



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**WHAT COMES TO MIND WHEN YOU THINK  
ABOUT BRAIN TRAINING?**



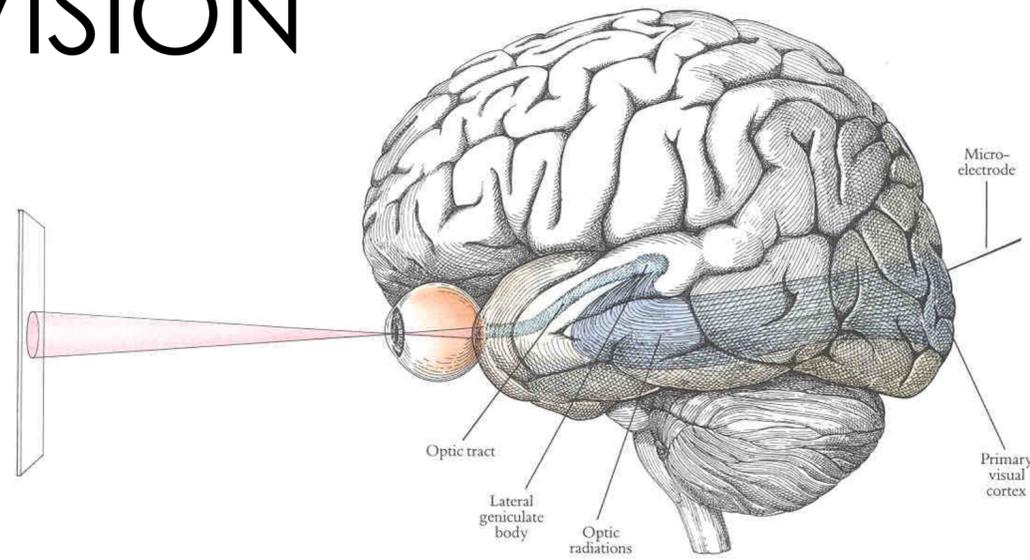
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# EXPERIENCE DEPENDENT NEUROPLASTICITY

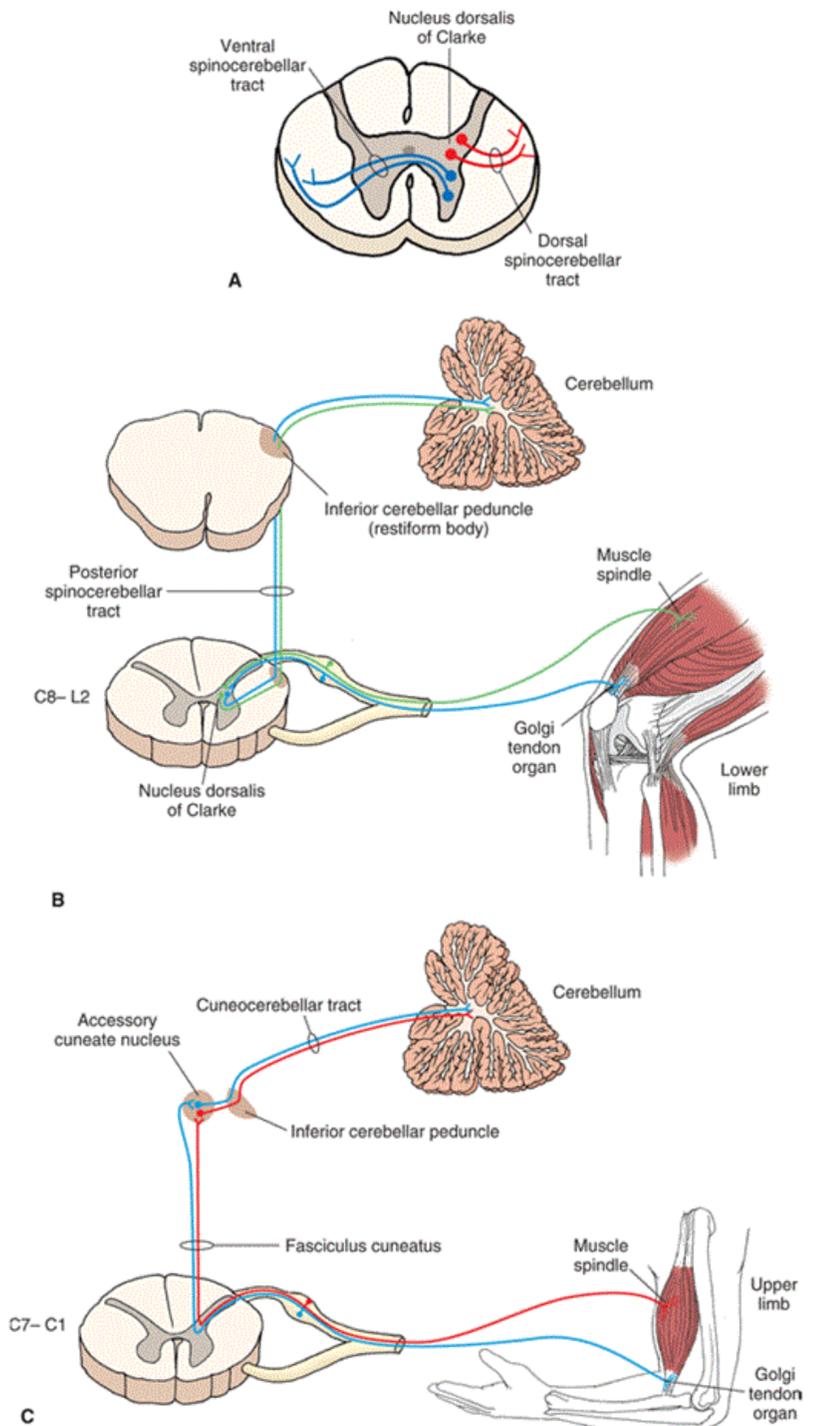
- ▶ **Top-Down**
- ▶ **Bottom-Up**



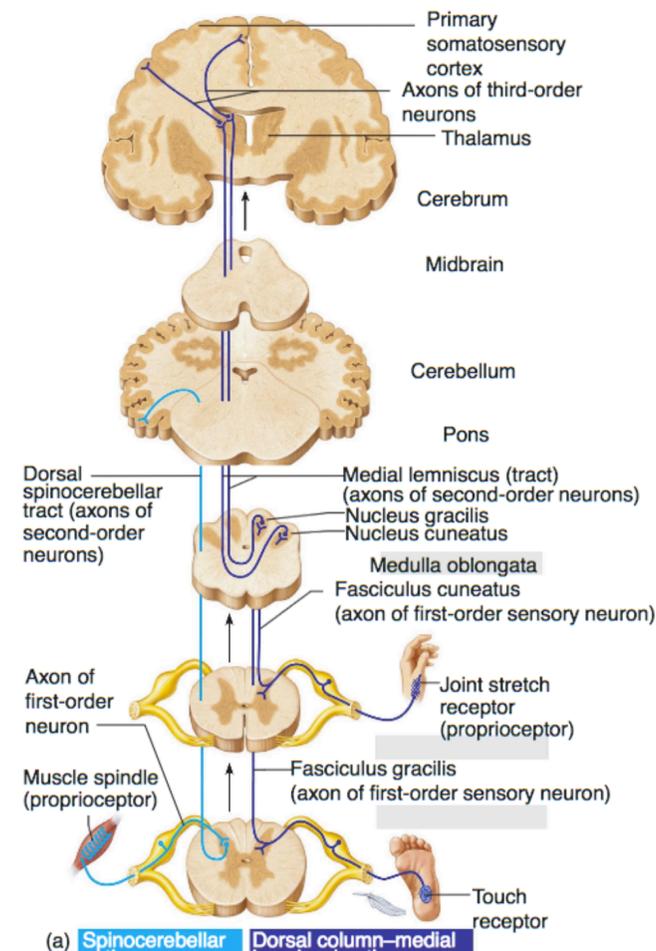
# VISION



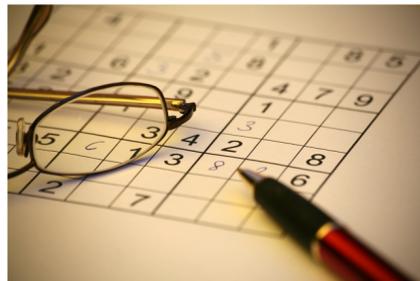
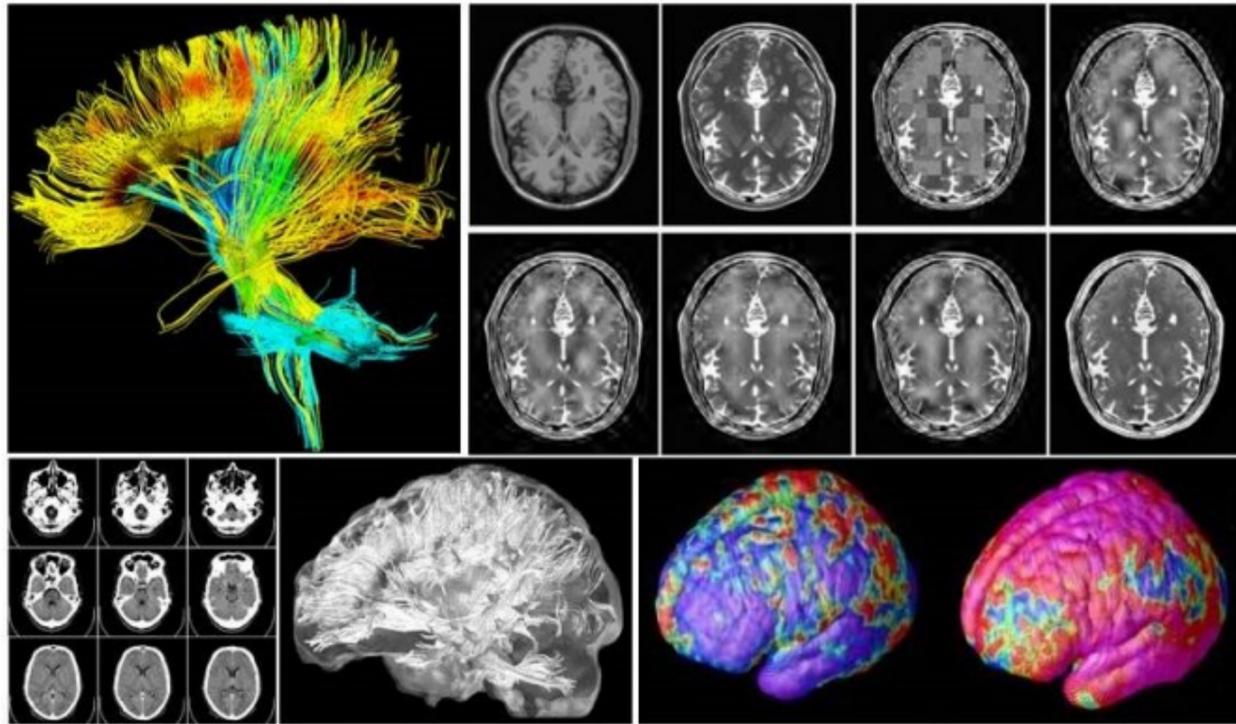
# MOVEMENT



# TOUCH



# BRAIN TRAINS



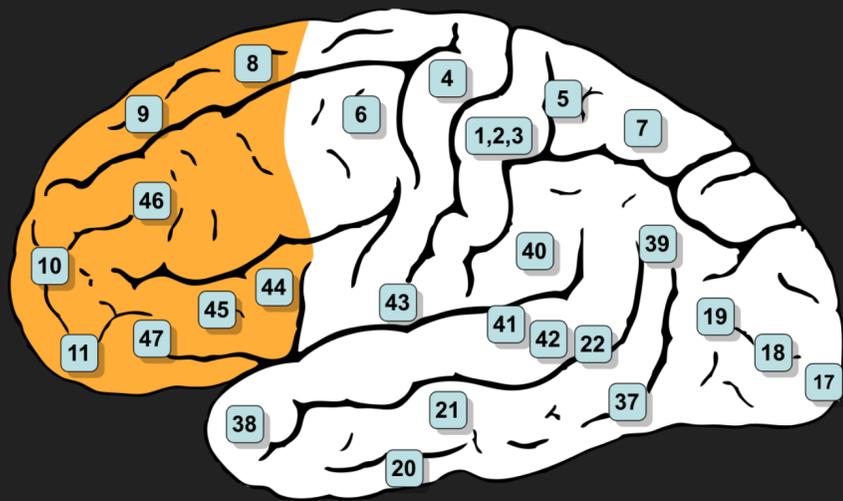
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**ARE YOU READY FOR A VIP TOUR OF  
YOUR BRAIN???**

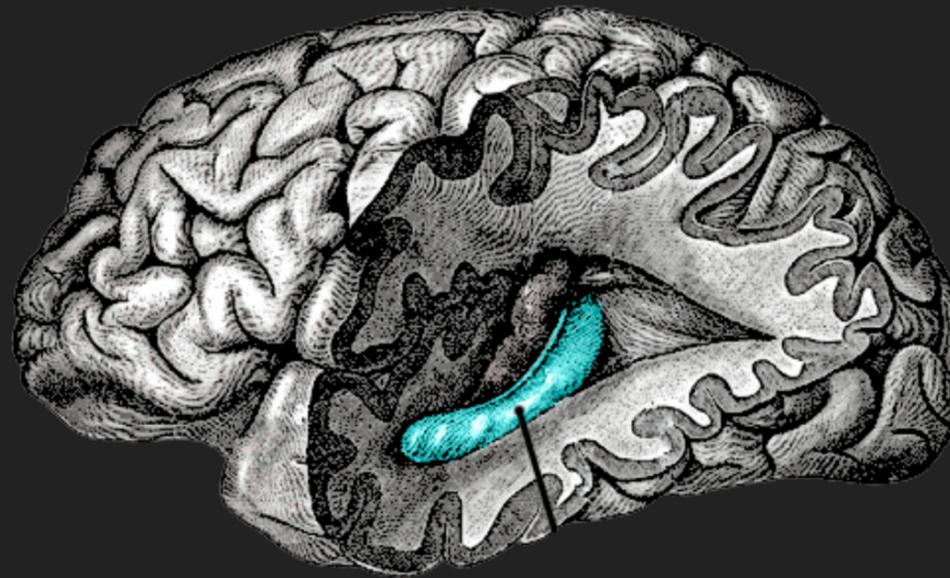
# VIP TOUR OF YOUR BRAIN



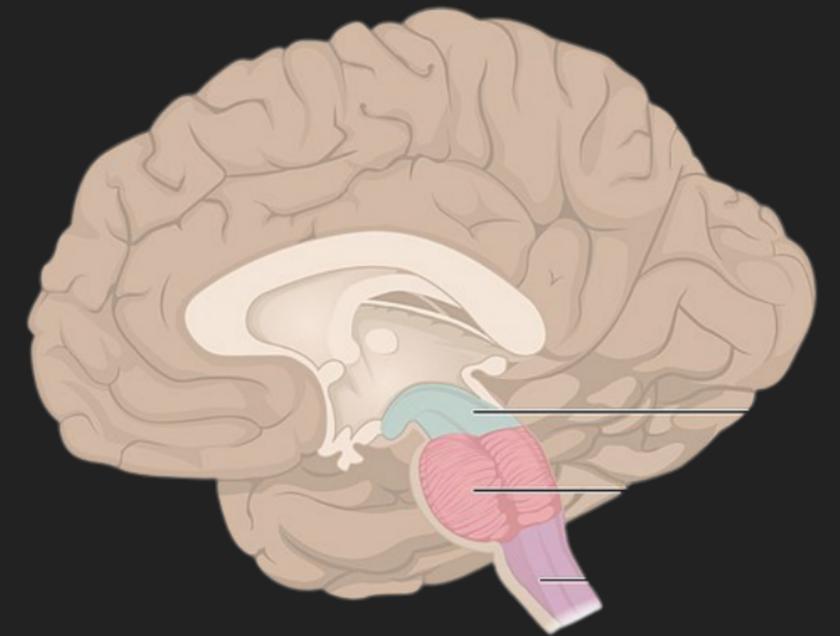
# TOP 3 NEURAL NETWORKS



**1. Prefrontal Cortex**



**2. Hippocampus**



**3. Brainstem**

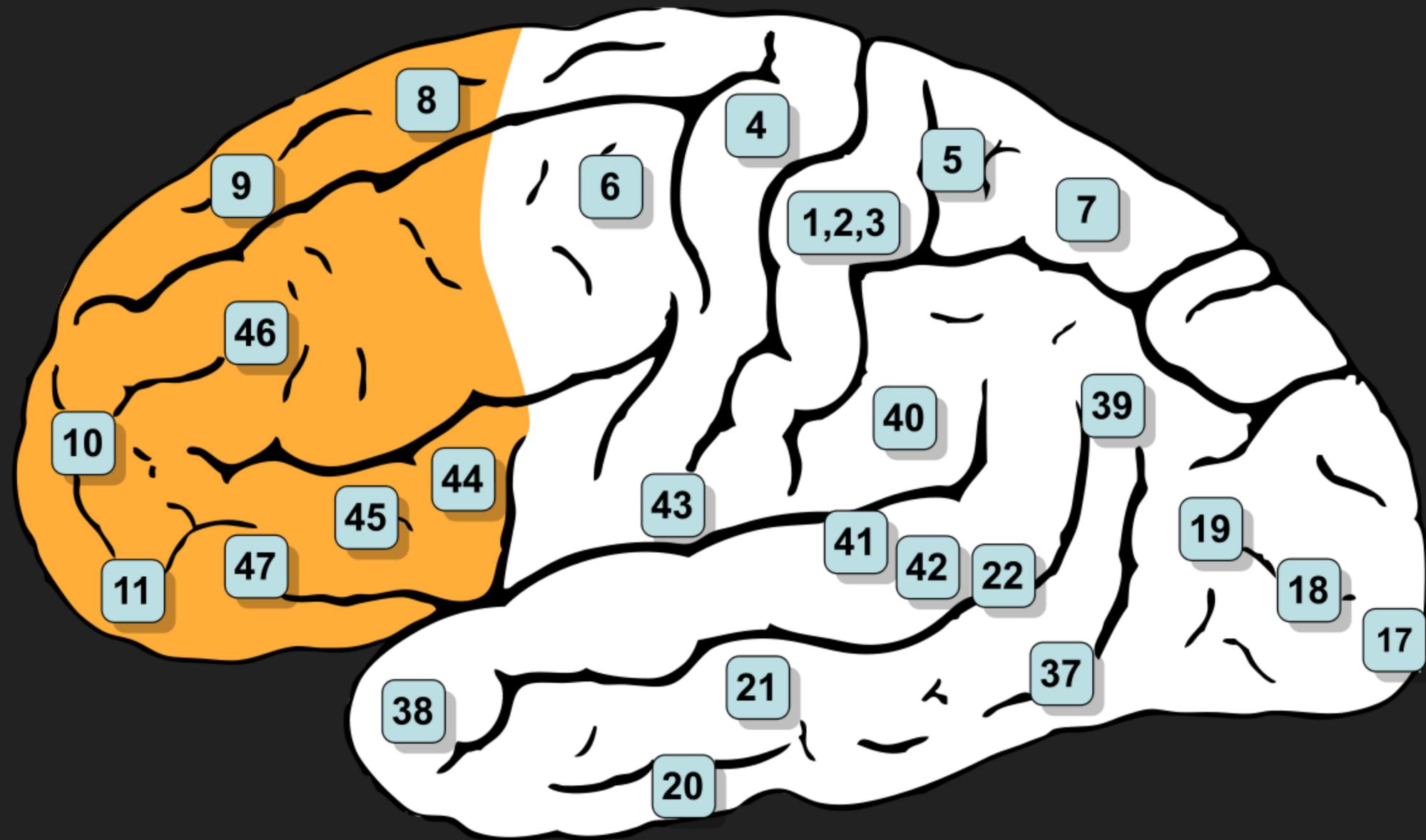
**NEURAL NETWORK #1**

**PREFRONTAL CORTEX**

I have brain fog	
I often feel depressed	
I get distracted easily	
I have trouble with focus and concentration	
I have issues with short term memory	
I struggle with addictions	
I act out impulsively either saying or doing things I probably shouldn't have	
I'm always running late to appointments	
It's hard to keep my thoughts organized	
I struggle with low motivation	
<b>TOTAL SCORE</b>	

# PREFRONTAL CORTEX

# WHERE ITS AT



An underwater photograph of three dolphins in clear blue water. One dolphin is at the top, another is on the right, and a third is at the bottom. They are arranged in a triangular pattern, with their heads pointing towards each other. The bottom dolphin has a white bandage on its head. The background is filled with sunlight filtering through the water, creating a shimmering effect. The title 'DOLPHIN BRAIN' is overlaid in large, bold, yellow letters across the center of the image.

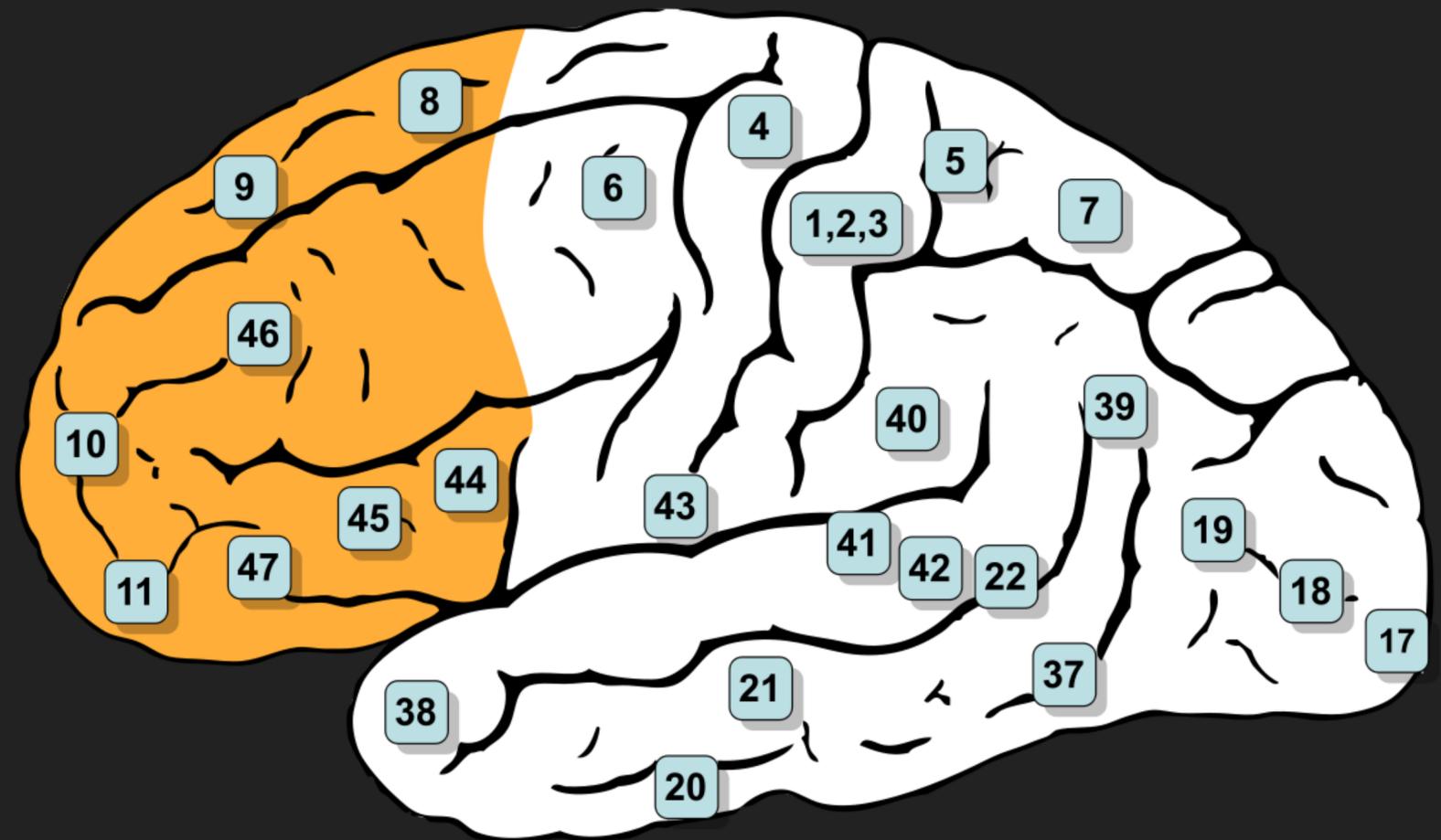
# DOLPHIN BRAIN

**BEING**

**HUMAN**

# WHAT IT DOES

- **Executive functions**
- **Working memory**
- **Decision making**
- **Fine motor**
- **Eye movements**



# CLUES

- **Brain fog or fatigue**
- **Problems with executive functions**
- **Poor focus & concentration**
- **Fine motor control issues**
- **Indecisive**
- **Easily distracted**
- **Difficulty with verbal expression**



# COMMON CONDITIONS

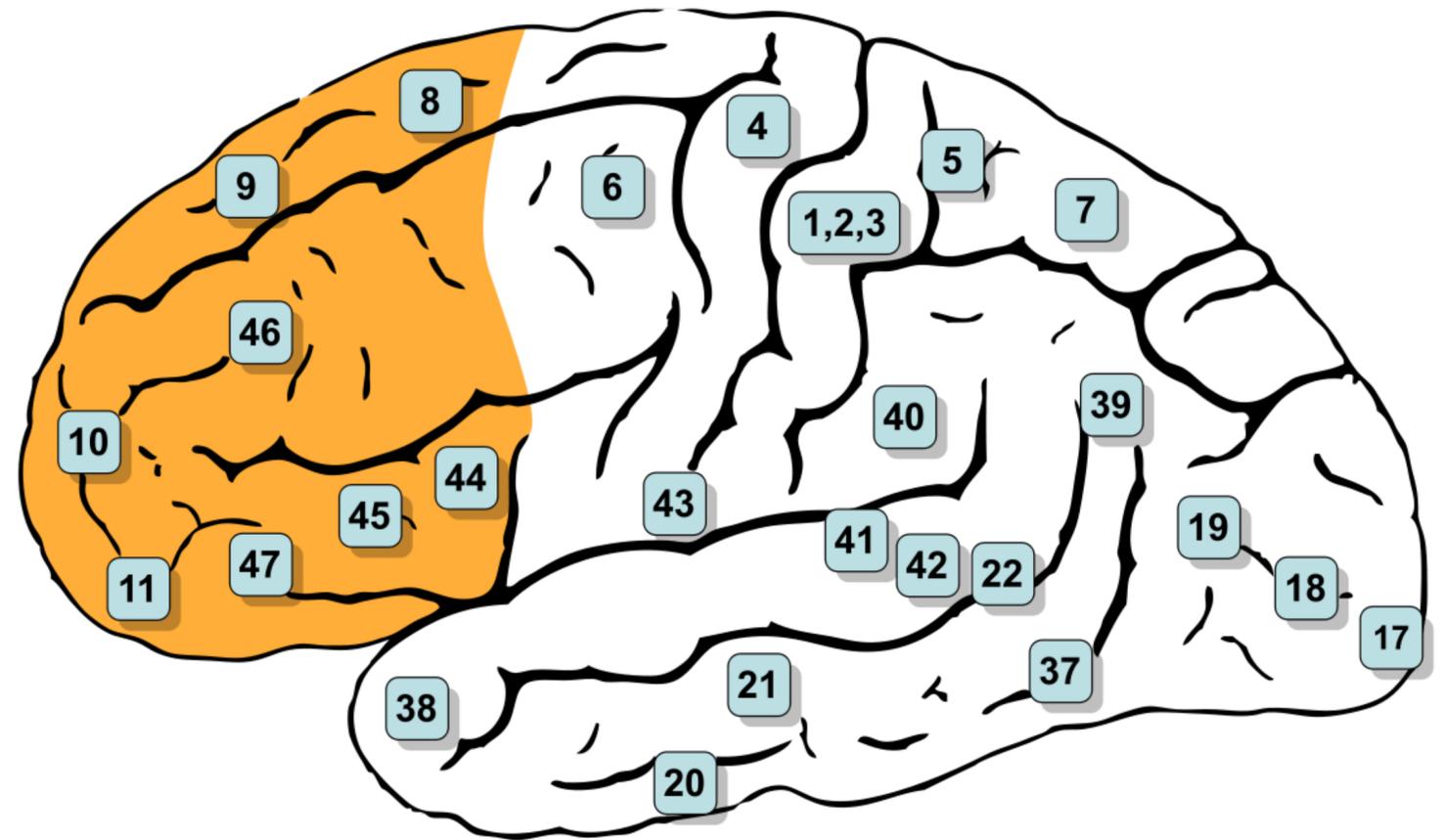
- **ADHD**
- **Depression**
- **Alzheimer's**
- **Impulsivity**
- **Expressive aphasia**



---

**DOES ANY OF THIS SOUND LIKE YOU?**

# ROOT CAUSE



**BRAINTRAIN**

**FIGURE-8**

**BRAINTRAIN**

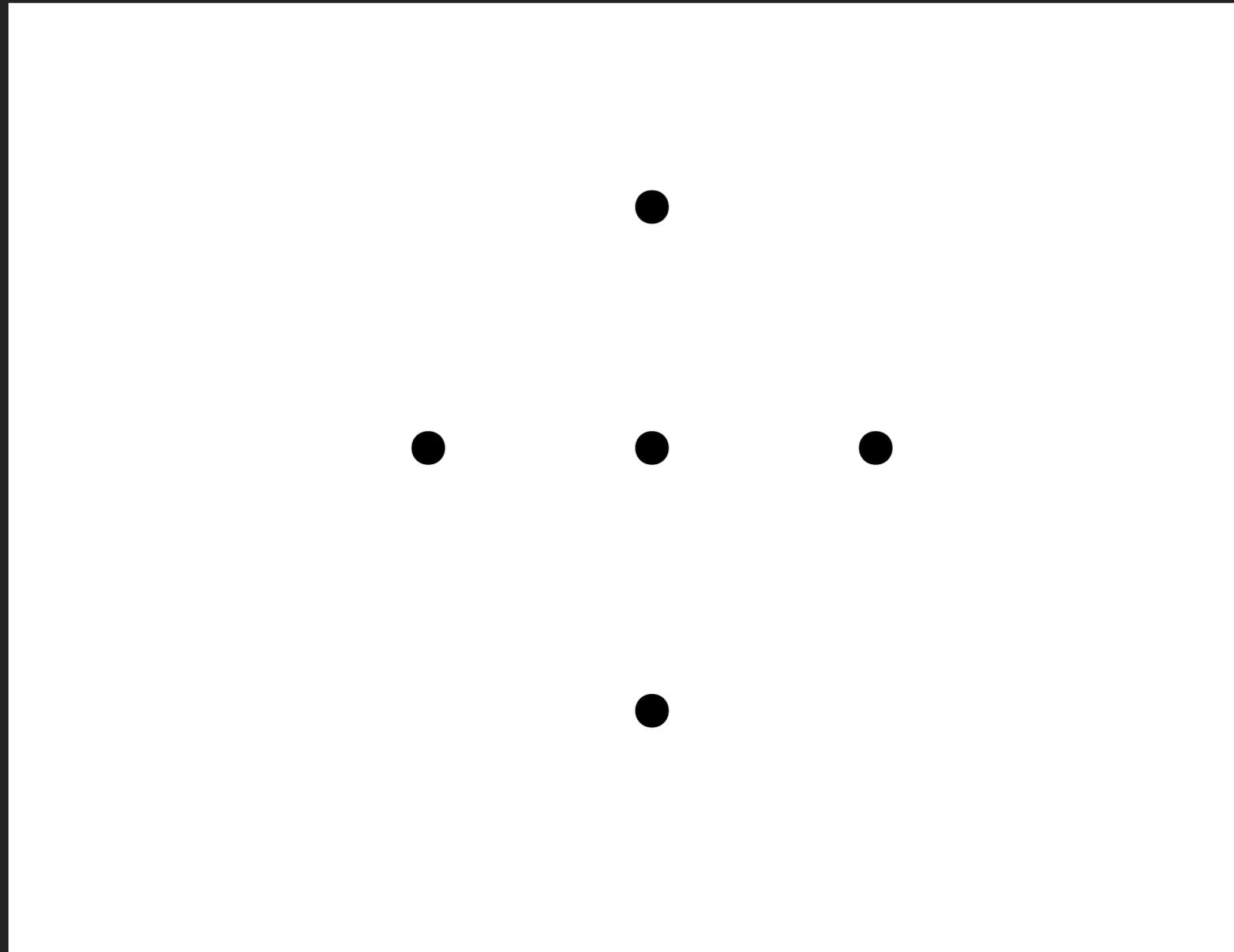
**FRONTAL LOBE FINGER TAP**

**PROTIP**

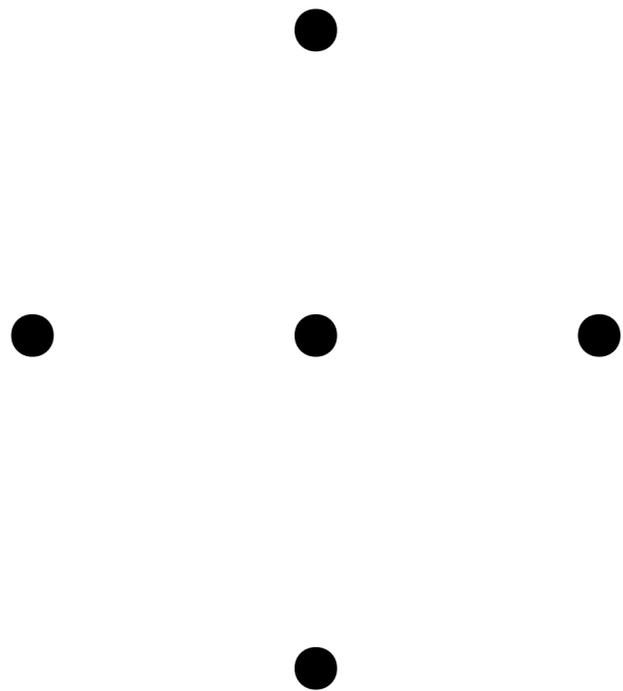
**BRAINTRAIN**

**MINI EYE JUMPS**

# MINI EYE JUMPS



# PROTIP

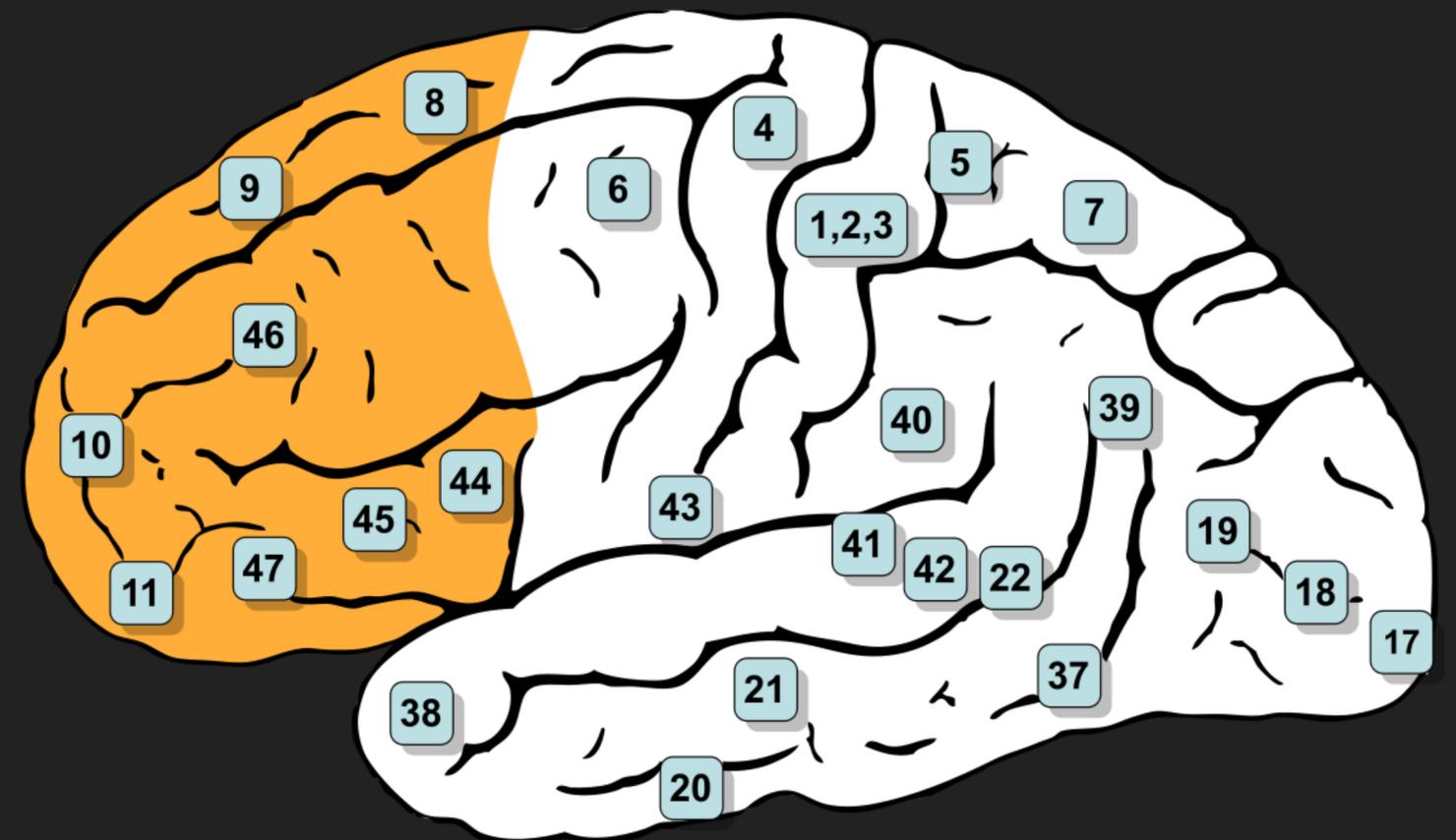


# MINI EYE JUMPS



# PREFRONTAL BRAINTRAINS

1. Figure-8
2. Frontal lobe finger tap
3. Mini eye jumps



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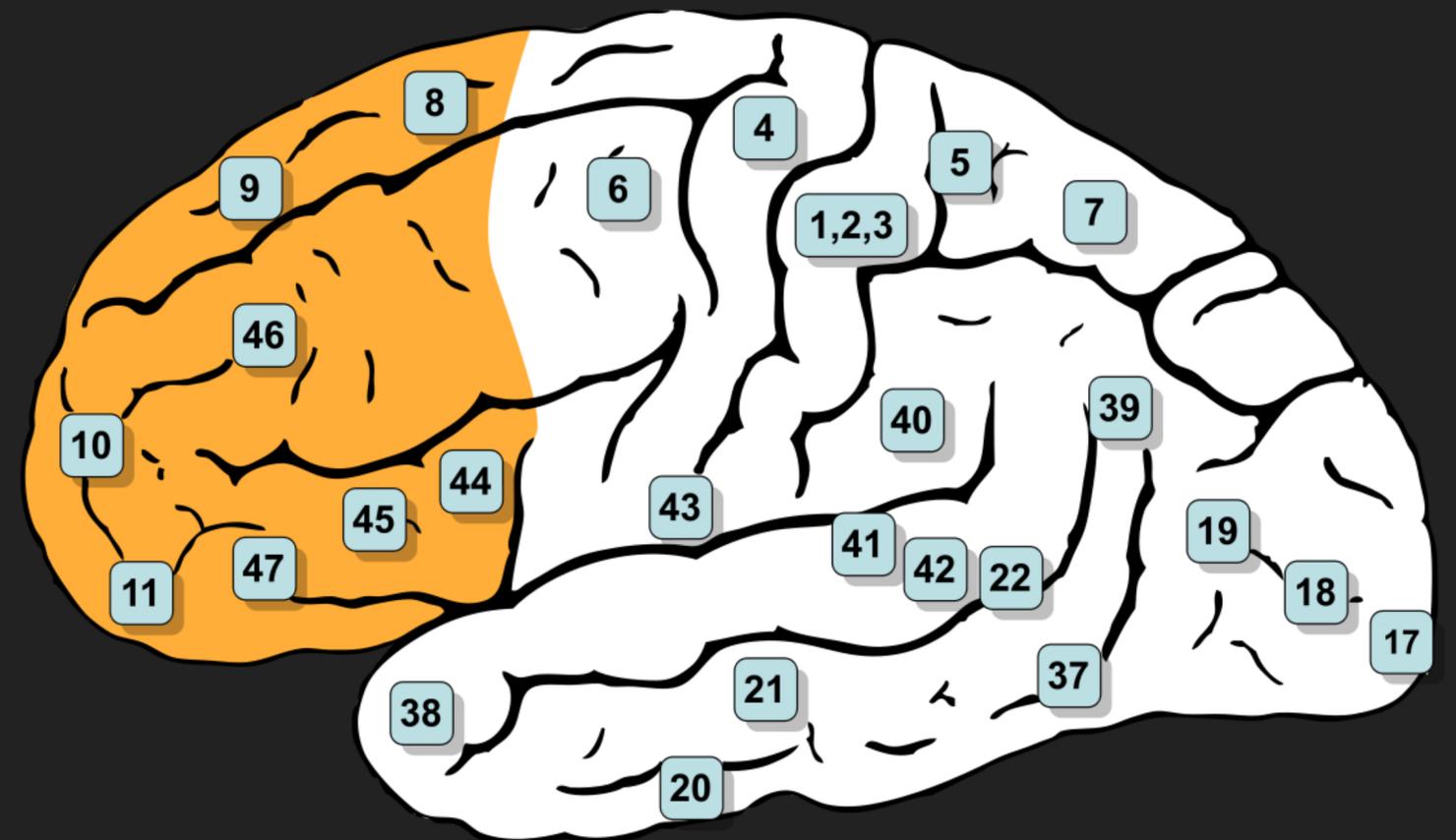
**WHICH PREFRONTAL CORTEX BRAIN  
TRAINS ARE YOU GOING TO TRY?**

**BRAINTRAIN**

**UPGRADES**

# PREFRONTAL UPGRADES

1. Meditation
2. Ping pong
3. Dancing
4. Chess
5. Juggling



---

**WHICH PREFRONTAL UPGRADES ARE  
YOU GOING TO ADD?**

**NEURAL NETWORK #1**

**PREFRONTAL CORTEX**

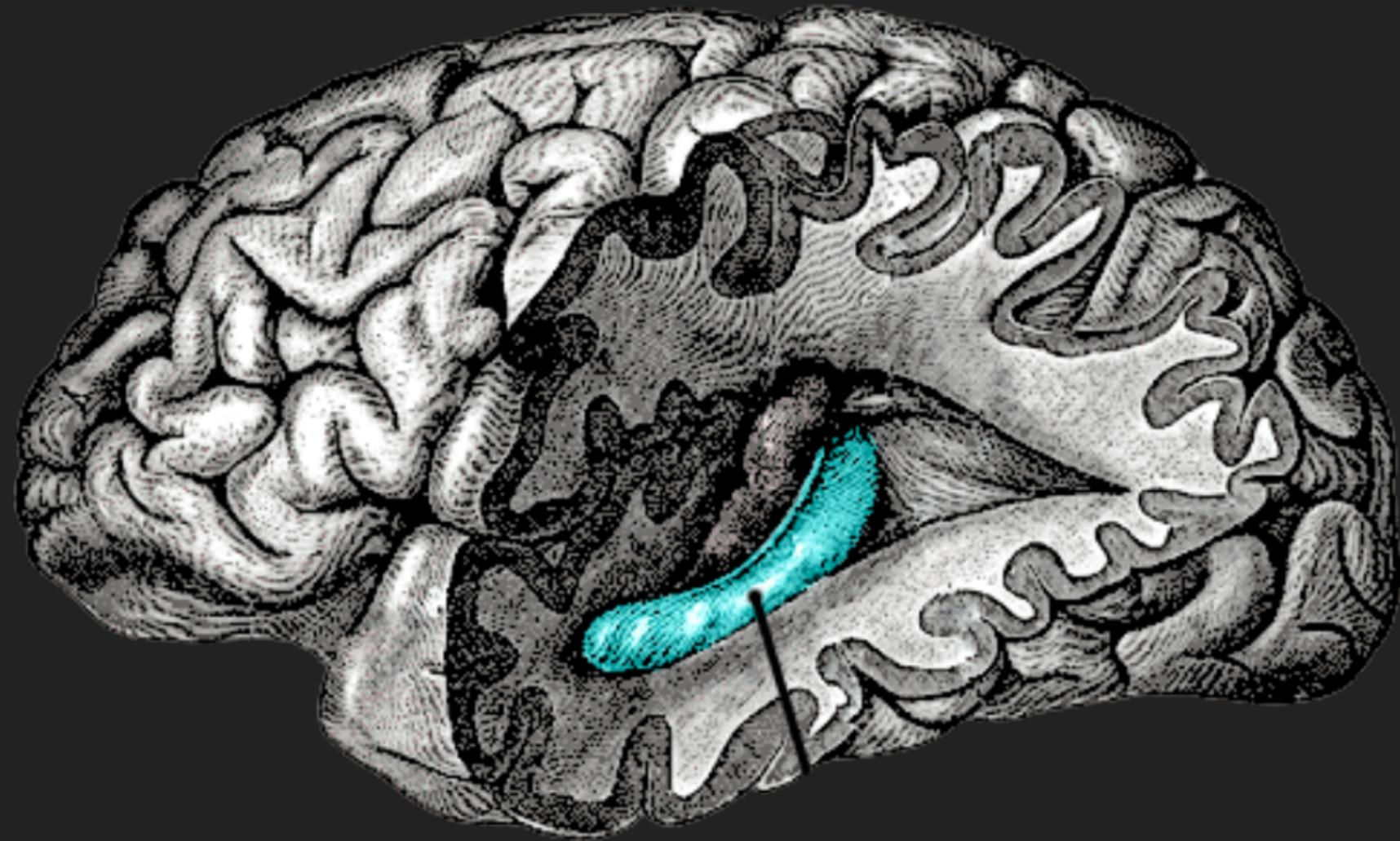
**NEURAL NETWORK #2**

**HIPPOCAMPUS**

I have trouble remembering things	
It's hard for me to learn and retain new facts, ideas or concepts	
I have a hard time dealing with my stress	
I don't exercise regularly	
I often forget where I parked my car, or put my keys, or other objects	
I have a hard time getting from point A to B if I don't use a car navigation system	
I often feel anxious	
I have been stressed for a long period of time	
I have PTSD	
I have early Alzheimers or dementia or a family history of these conditions	
<b>TOTAL SCORE</b>	

# HIPPOCAMPUS

# WHERE ITS AT



# MAMMALIAN BRAIN



**MEMORY**



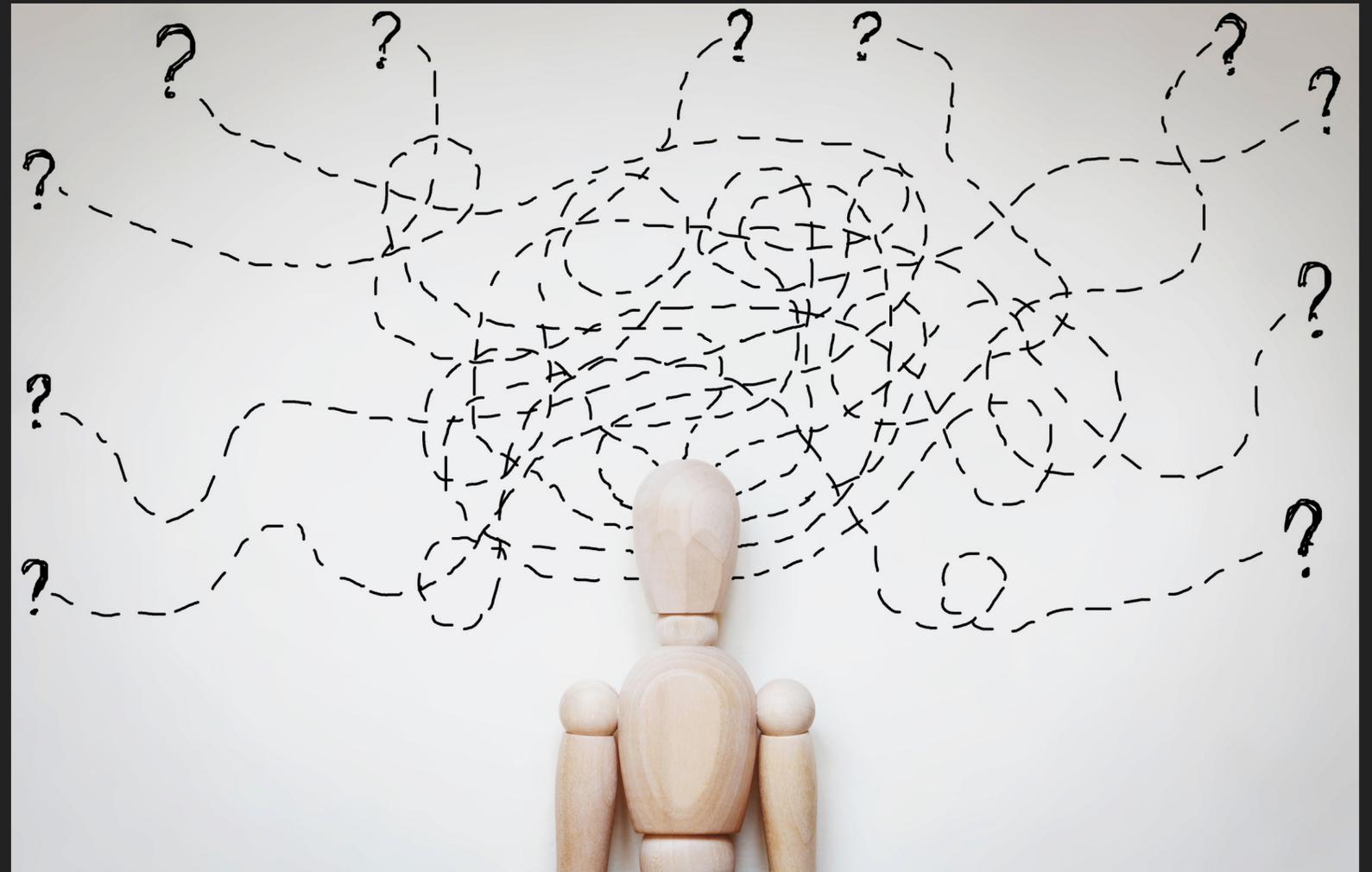
# WHAT IT DOES

- **Consolidation of memory**
- **Spatial navigation**
- **Controls the stress response**



# CLUES

- **Memory issues**
- **Easily getting lost**
- **Need to rely on GPS**
- **Disorientation**
- **Trouble handling stress**



# COMMON CONDITIONS

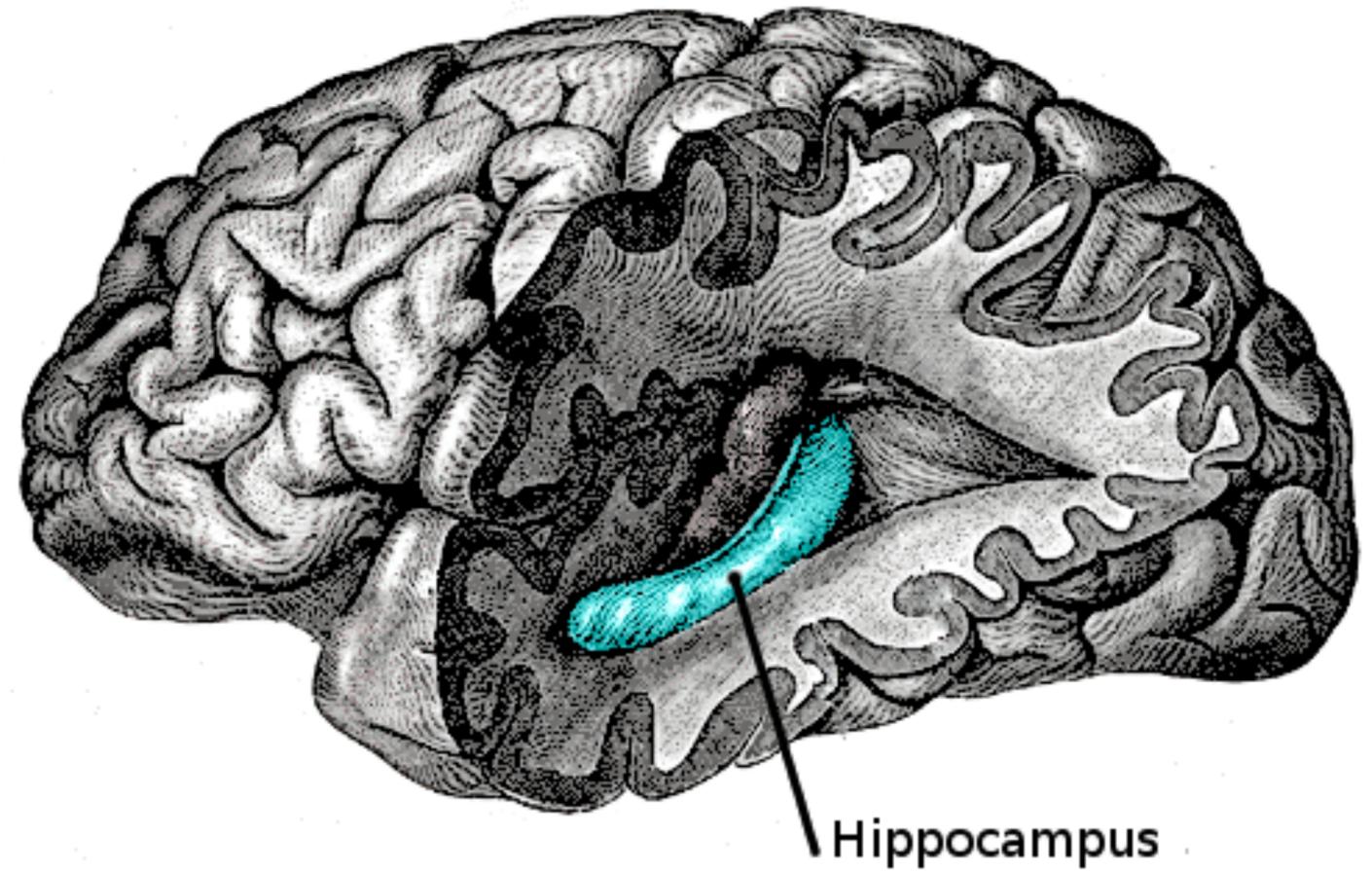
- **Alzheimer's**
- **Dementia**
- **Amnesia**
- **Seizures**



---

**DOES ANY OF THIS SOUND LIKE YOU?**

# ROOT CAUSE



Hippocampus

**BRAINTRAIN**

**PHYSICAL EXERCISE**

# 2011 STUDY



[Proc Natl Acad Sci U S A.](#) 2011 Feb 15; 108(7): 3017–3022.

PMCID: PMC3041121

Published online 2011 Jan 31. doi: [10.1073/pnas.1015950108](https://doi.org/10.1073/pnas.1015950108)

PMID: [21282661](https://pubmed.ncbi.nlm.nih.gov/21282661/)

Neuroscience

## Exercise training increases size of hippocampus and improves memory

[Kirk I. Erickson](#),<sup>a</sup> [Michelle W. Voss](#),<sup>b,c</sup> [Ruchika Shaurya Prakash](#),<sup>d</sup> [Chandramallika Basak](#),<sup>e</sup> [Amanda Szabo](#),<sup>f</sup> [Laura Chaddock](#),<sup>b,c</sup> [Jennifer S. Kim](#),<sup>b</sup> [Susie Heo](#),<sup>b,c</sup> [Heloisa Alves](#),<sup>b,c</sup> [Siobhan M. White](#),<sup>f</sup> [Thomas R. Wojcicki](#),<sup>f</sup> [Emily Mailey](#),<sup>f</sup> [Victoria J. Vieira](#),<sup>f</sup> [Stephen A. Martin](#),<sup>f</sup> [Brandt D. Pence](#),<sup>f</sup> [Jeffrey A. Woods](#),<sup>f</sup> [Edward McAuley](#),<sup>b,f</sup> and [Arthur F. Kramer](#)<sup>b,c,1</sup>

Walk 40 min a day  
3 times per week

**BRAINTRAIN**

**TURN OFF YOUR GPS**

**PROTIP**

**BRAINTRAIN**

**ALTERNATE NOSTRIL**

**BREATHING**

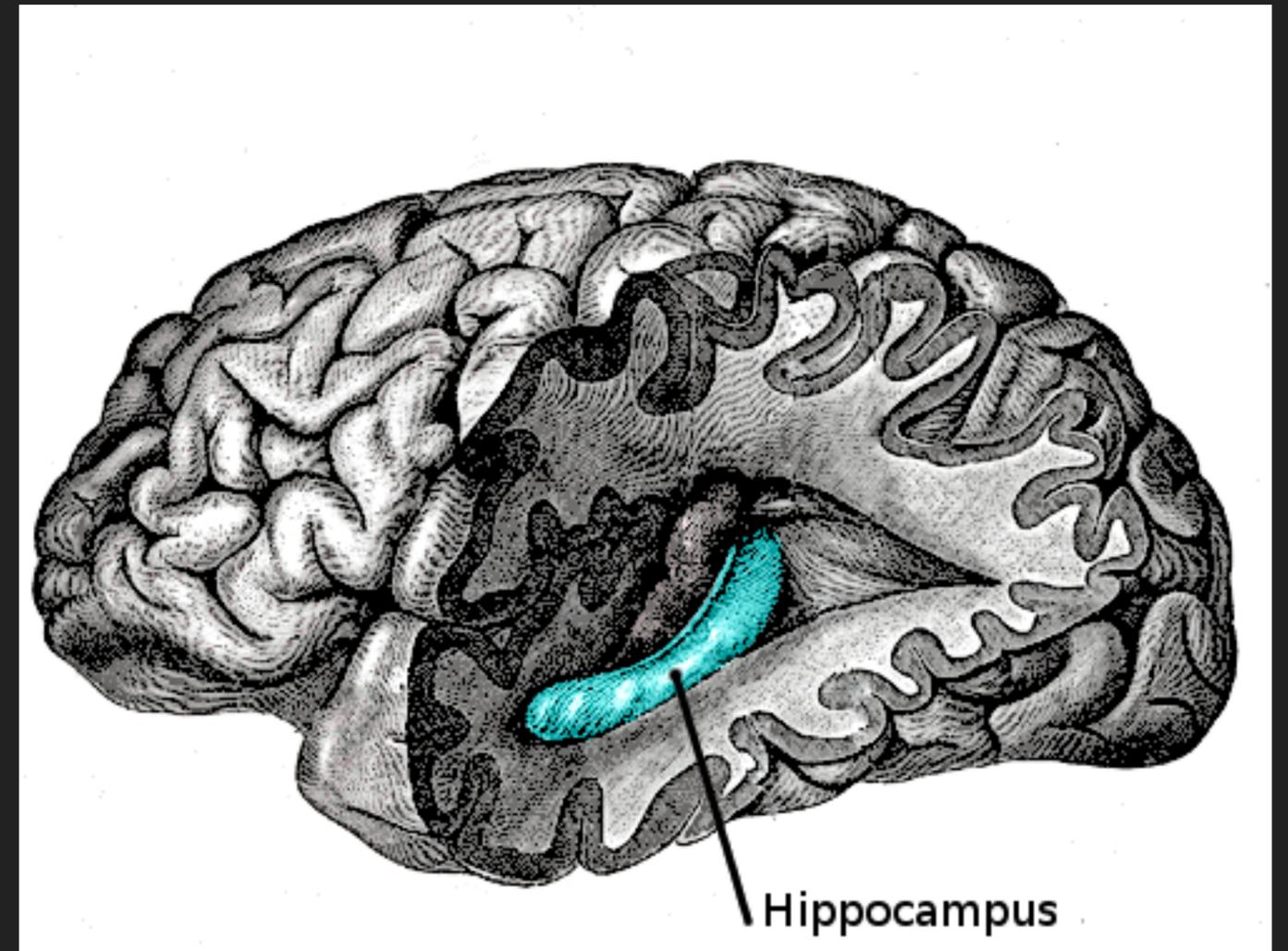
# ALTERNATE NOSTRIL BREATHING

- 1. Sit comfortably**
- 2. Exhale completely**
- 3. Use your right thumb to close your right nostril**
- 4. Inhale through left nostril then close it with right pinky**
- 5. Open right nostril and exhale through right**
- 6. Inhale through right nostril then close with right thumb**
- 7. Open left nostril and exhale through it**
- 8. Repeat 5 to 10 times**



# HIPPOCAMPUS BRAINTRAINS

1. Physical exercise
2. Take a new route home
3. Alternate nostril breathing

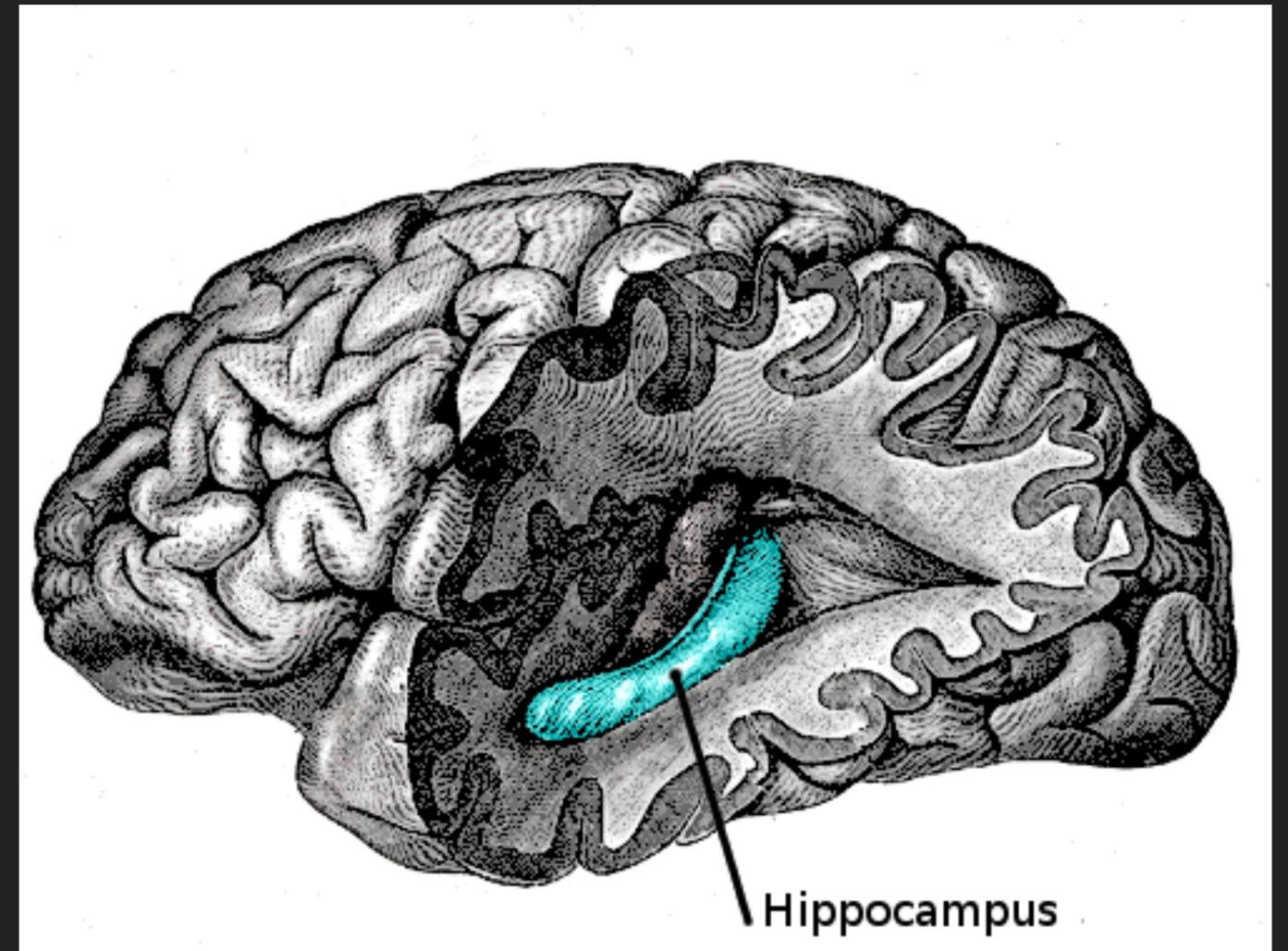


**BRAINTRAIN**

**UPGRADES**

# HIPPOCAMPUS UPGRADES

1. Stress management practices
2. Meditation
3. Memory games
4. Learning a new language
5. Hyperbaric oxygen



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**WHICH HIPPOCAMPUS UPGRADES ARE  
YOU GOING TO ADD?**

**NEURAL NETWORK #2**

**HIPPOCAMPUS**

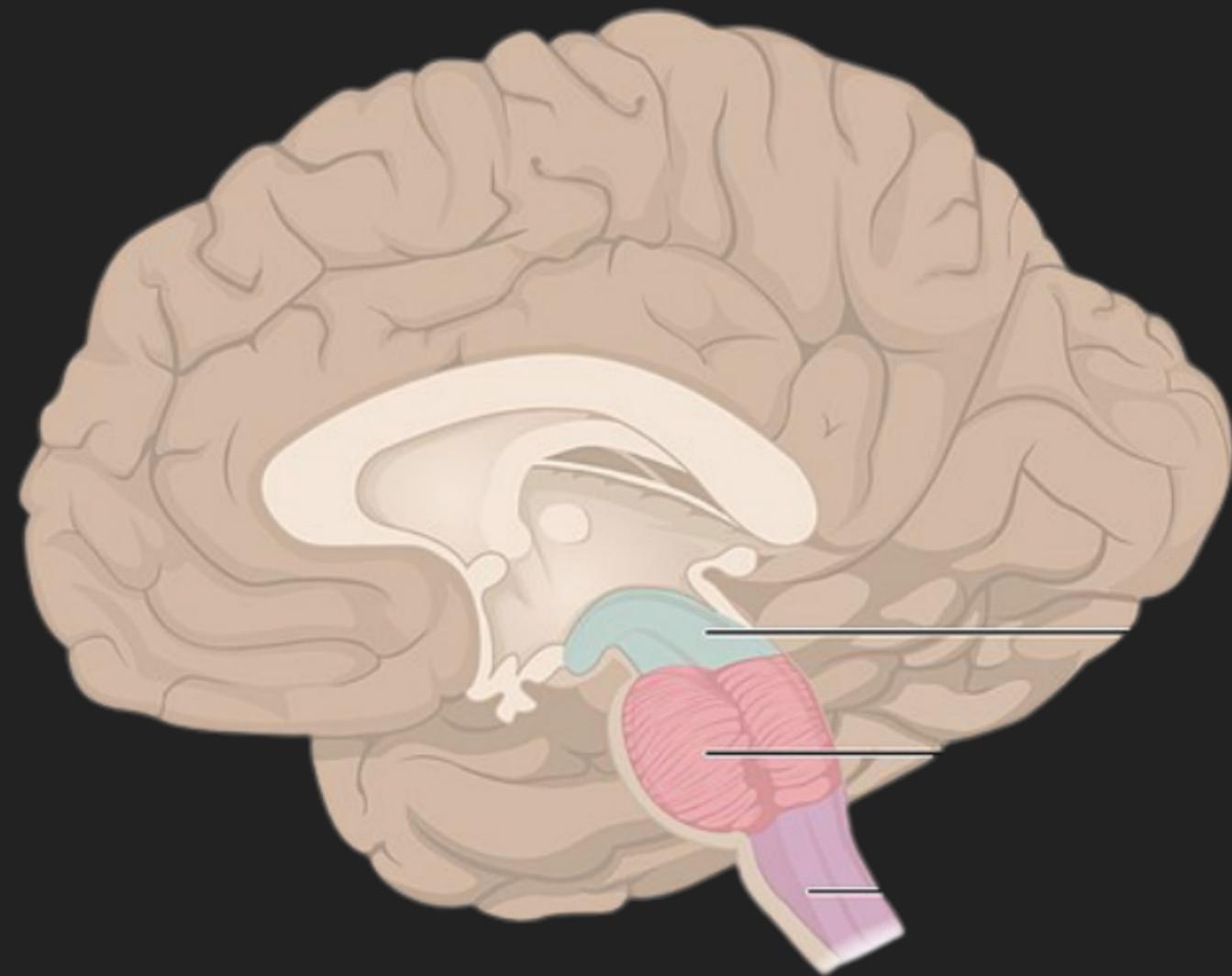
**NEURAL NETWORK #3**

**BRAINSTEM**

I am sensitive to light and sound	
I have sleep disturbances	
I have an exaggerated startle or fight-or-flight response	
I am sensitive to pain	
I experience dizziness or migraine headaches	
I have cold hands and feet or poor circulation	
My symptoms get worse when reading a book or looking at a computer for very long	
I have chronic digestive symptoms - gas, bloating, SIBO, leaky gut	
I have high/low blood pressure	
I often feel anxious	
<b>TOTAL SCORE</b>	

# BRAINSTEM

# WHERE ITS AT



# REPTILIAN BRAIN

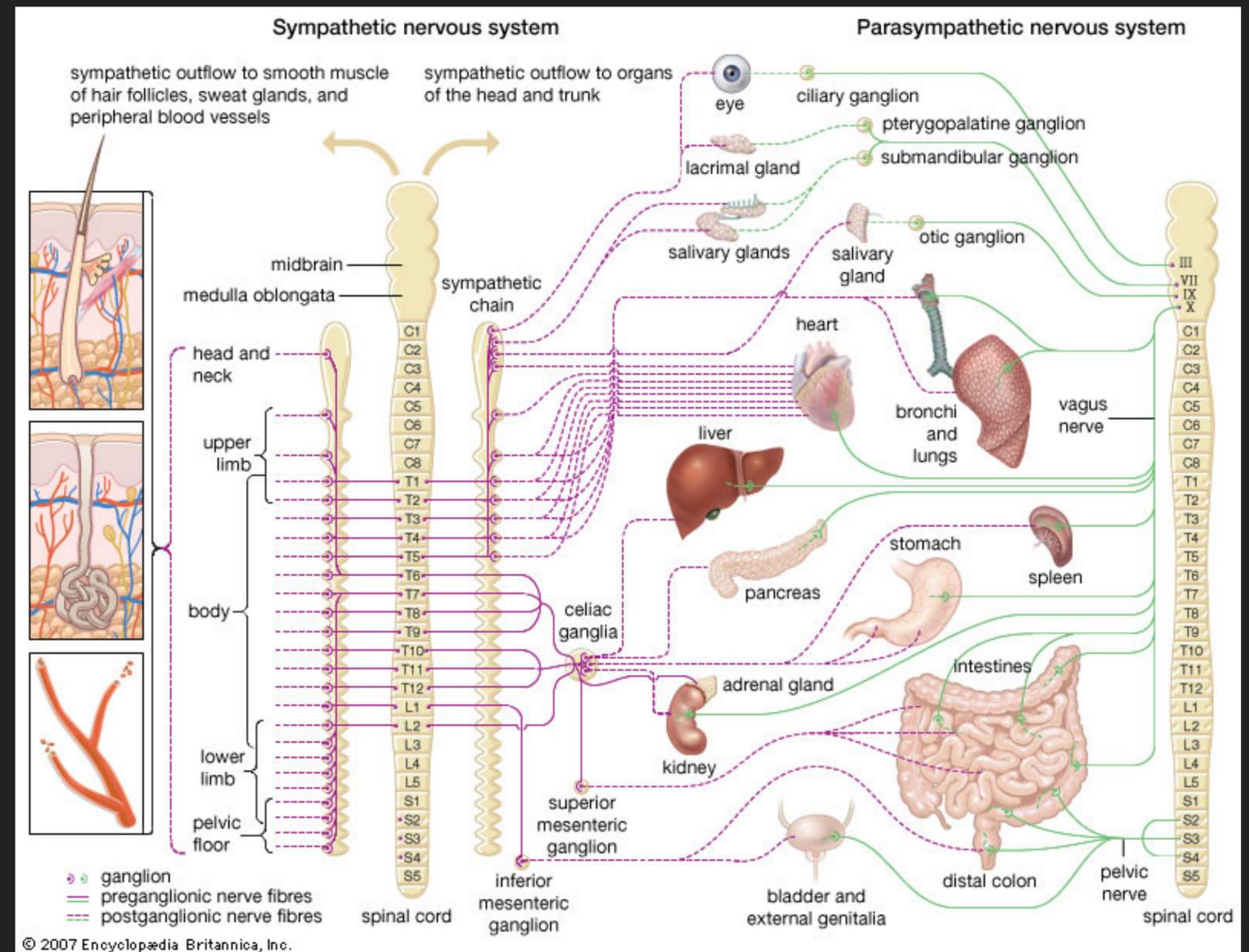


# SURVIVAL



# WHAT IT DOES

- **Alertness**
- **Pain sensitivity control**
- **Sleep cycle**
- **Circulation**
- **Digestion**
- **Heartbeat**



# CLUES

- **Startle easily**
- **Chronic pain/stress**
- **Anxiety**
- **Sleep problems**
- **Poor circulation**
- **Stubborn gut issues**



# COMMON CONDITIONS

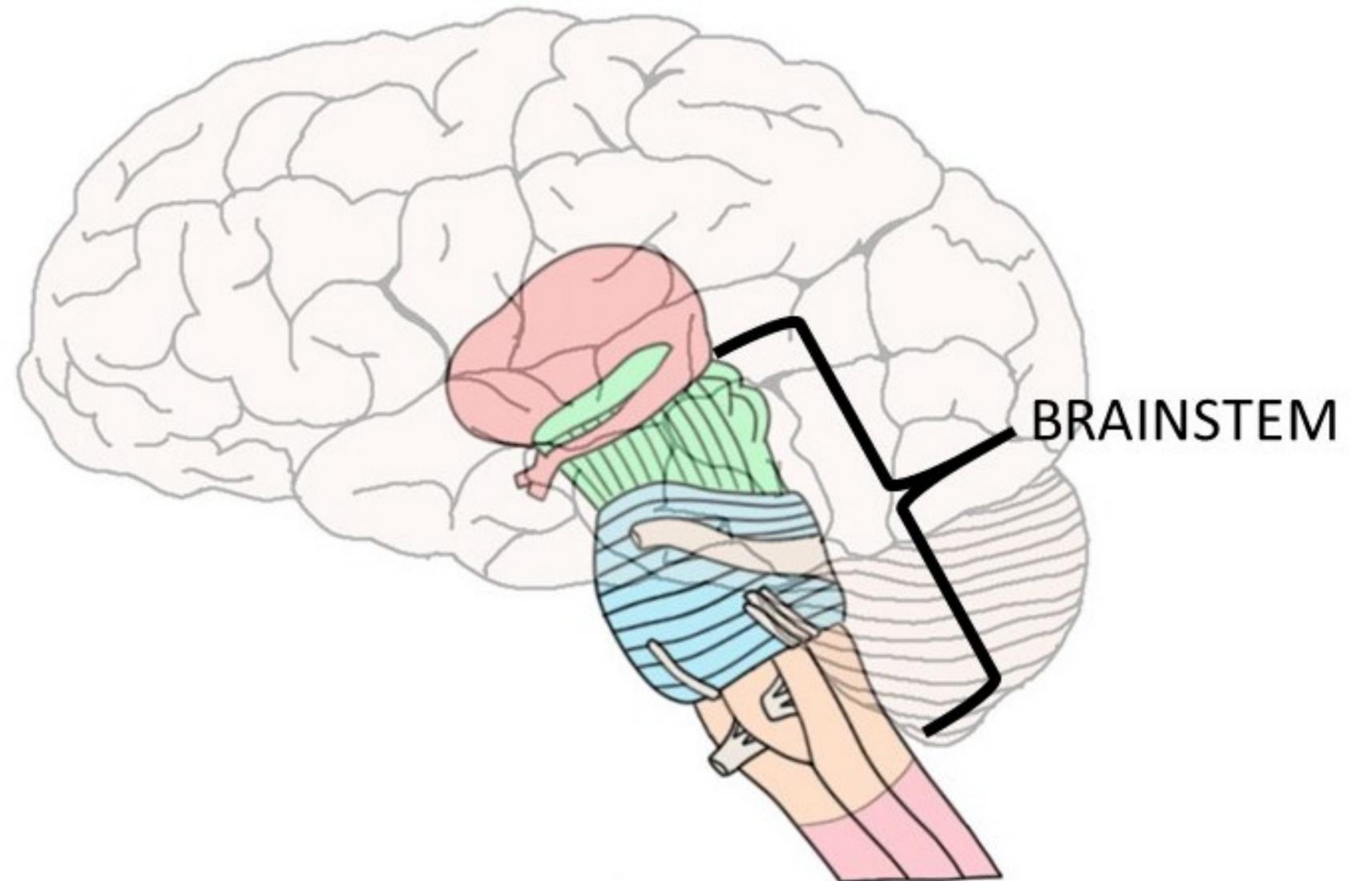
- **Migraines/headaches**
- **Anxiety**
- **Insomnia**
- **Chronic pain**
- **Dysautonomia**
- **Chronic digestive symptoms**
- **PTSD**



---

**DOES ANY OF THIS SOUND LIKE YOU?**

# ROOT CAUSE



**BRAINTRAIN**

**1:2 BREATHING**

**BRAINTRAIN**

**TONING**

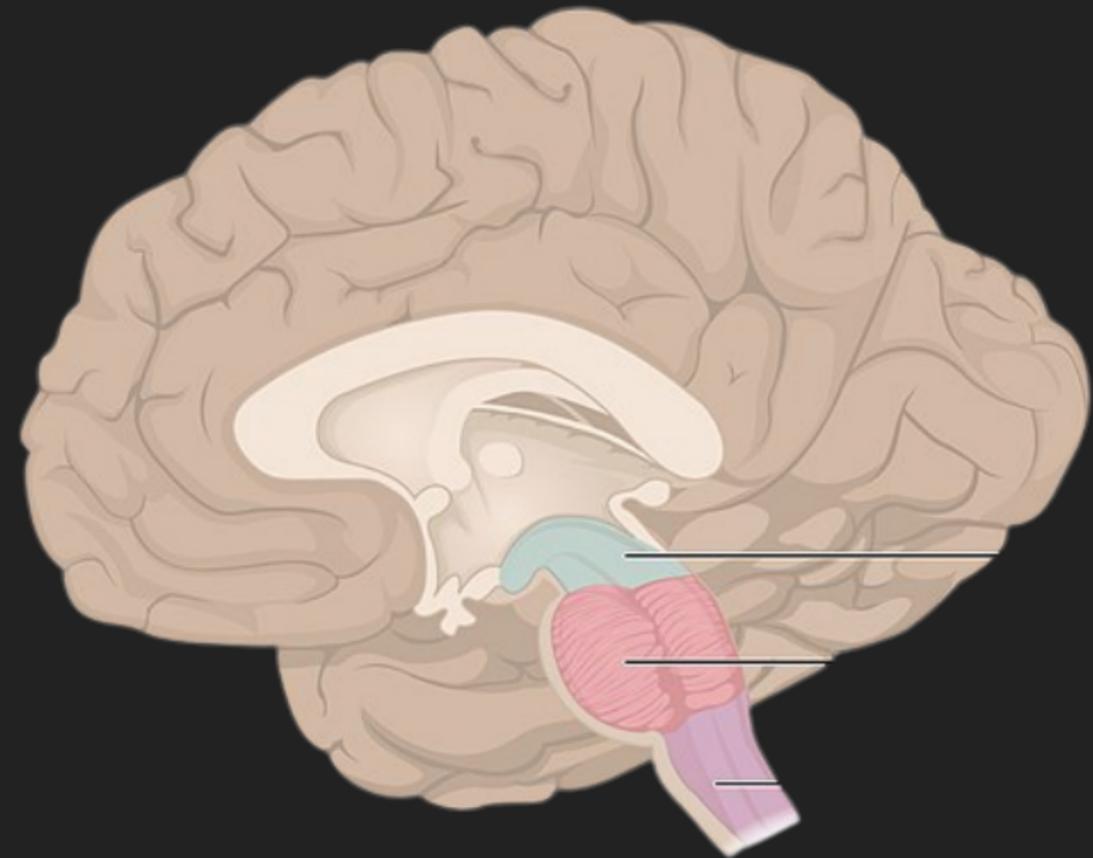
**BRAINTRAIN**

**PALMING**

---

# BRAINSTEM BRAINTRAINS

1. 1:2 Breathing
2. Toning
3. Palming



---

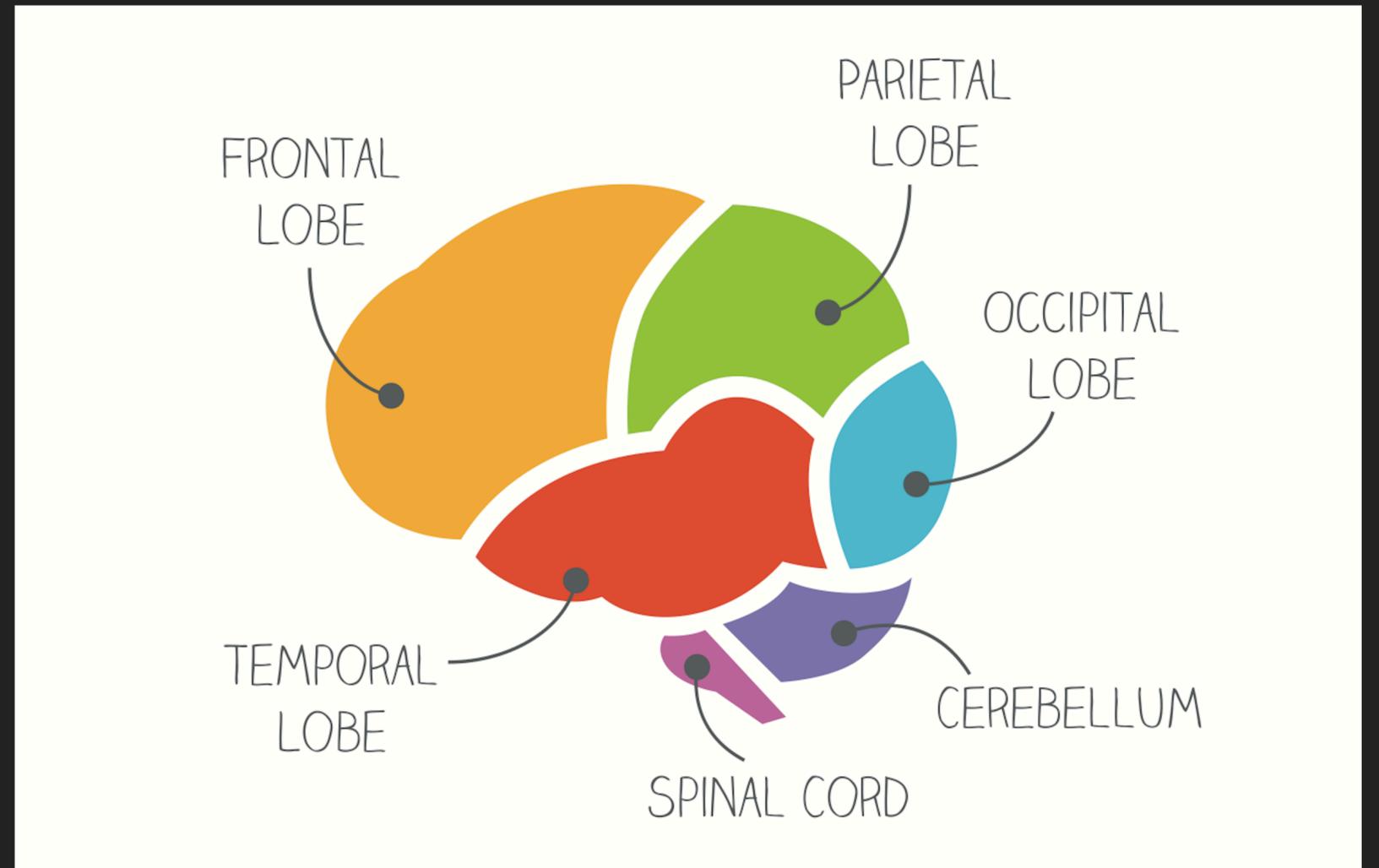
**WHICH BRAINSTEM BRAIN TRAINS ARE  
YOU GOING TO TRY?**

**BRAINTRAIN**

**UPGRADES**

# BRAINSTEM UPGRADES

1. Face/earlobe massage
2. Humming
3. Belly massage
4. Enemas
5. Cold shower



---

**WHICH BRAINSTEM UPGRADES ARE YOU  
GOING TO ADD?**

**AN IMPORTANT POINT  
TO REMEMBER...**

**IT'S NOT ABOUT "WORKING"  
ON YOUR HEALTH**

IT'S ABOUT THE  
EXPERIENCE OF HEALTH

---

# JEN'S STORY

- ▶ **Suffered a concussion**
- ▶ **Brain fog, fatigue, headaches**
- ▶ **Doing all the "RIGHT" things**
- ▶ **Not getting better**



---

# ROOT CAUSE NEUROLOGY

- ▶ [Prefrontal cortex](#)
- ▶ [Brainstem](#)



---

# JEN'S SUCCESS! STORY

- ▶ **More sustained energy throughout the day**
- ▶ **Focus improved by 80%**
- ▶ **Daily headaches from a 6/10 to 1/10**



**SOMETIMES YOU NEED TO  
SLOW DOWN TO GO FASTER**

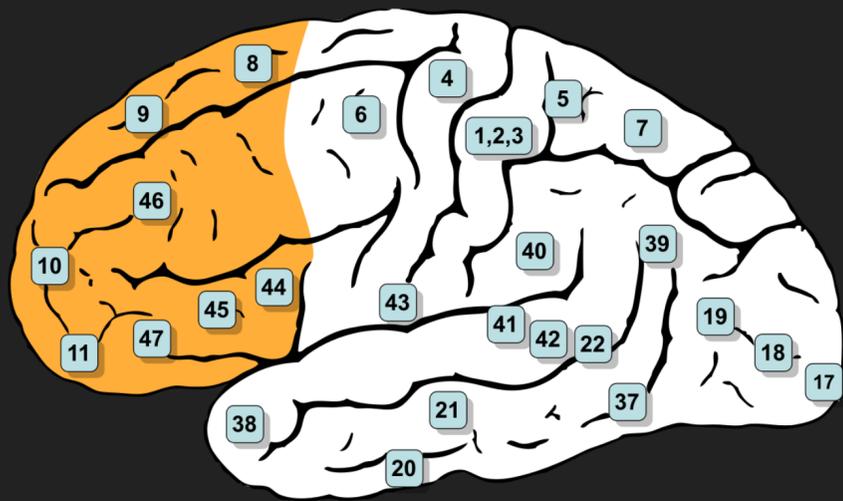


Success!

**NEURAL NETWORK #3**

**BRAINSTEM**

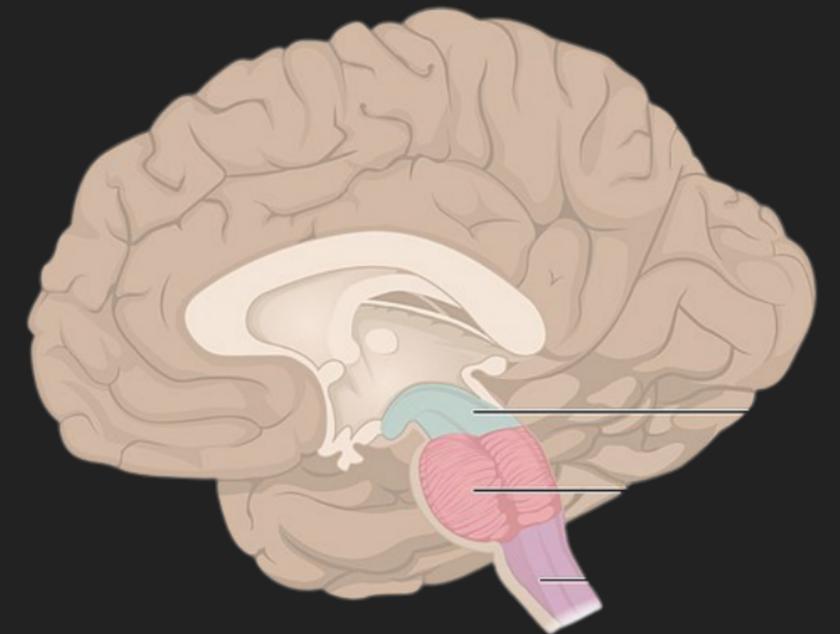
# 3 KEY NEURAL NETWORKS



**1. Prefrontal Cortex**



**2. Hippocampus**



**3. Brainstem**

**DO'S & DONT'S**

**EASE INTO YOUR  
BRAINTRAINS**

**DON'T OVERDO IT**

**GIVE YOURSELF**

**ENOUGH DOWNTIME**

**EVEN IF YOU DIDN'T SCORE HIGH  
ON ANY OF THE QUIZZES...**

**BUILD THESE BRAINTRAINS &  
UPGRADES INTO YOUR  
EVERYDAY LIFE**

---

# ESTHER'S STORY

- ▶ **55 year-old woman**
- ▶ **Difficulty remembering things**
- ▶ **"Scatterbrained"**
- ▶ **Increasing brain fog**



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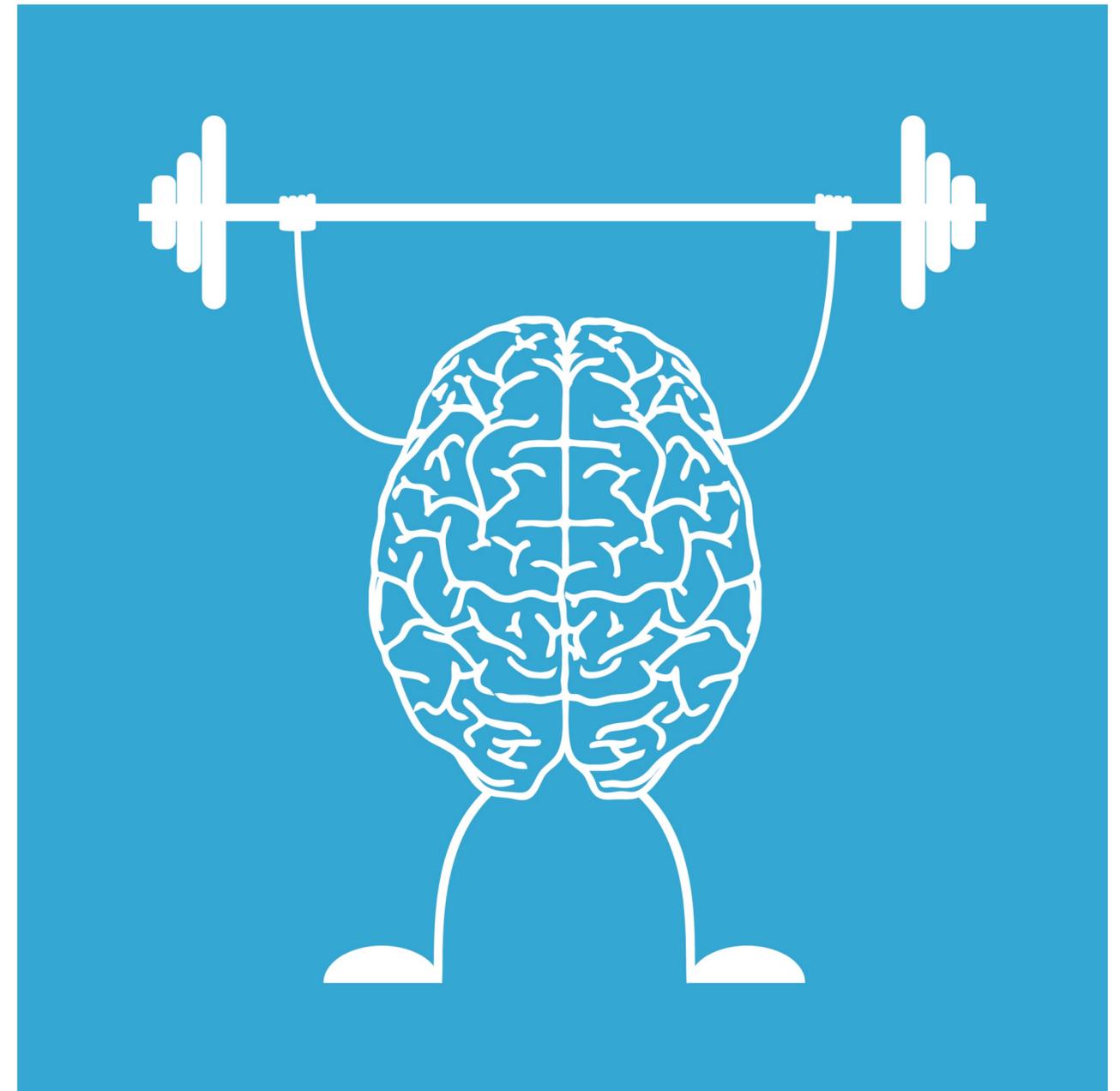
# ROOT CAUSE NEUROLOGY

- ▶ **Root Cause QUIZ Pack**
  - ▶ [Prefrontal Cortex](#)
  - ▶ [Hippocampus](#)



# ESTHER'S STORY

- ▶ **Brain training exercises**
  - ▶ **Prefrontal Cortex**
    - ▶ **Frontal lobe finger tap 1 minute, 3x/week**
  - ▶ **Hippocampus**
    - ▶ **Walking 30 minutes, 3x/week**
  - ▶ **Brainstem**
    - ▶ **Toning & Palming in the AM, 5x/week**
- ▶ **Diet, nutrients, lifestyle and mindset practices**



---

# ESTHER'S SUCCESS! STORY

- ▶ **No longer forgetting things**
- ▶ **Focus and concentration 70% better**
- ▶ **Brain fog improved by 85%**
- ▶ **More sustained energy throughout the day**





# VIP TOUR OF YOUR BRAIN



# REVIEW

- ▶ **VIP Tour of Your Brain**
  - ▶ **Prefrontal Cortex**
  - ▶ **Hippocampus**
  - ▶ **Brainstem**
- ▶ **Brain Training Exercises**

## TODAY'S AGENDA

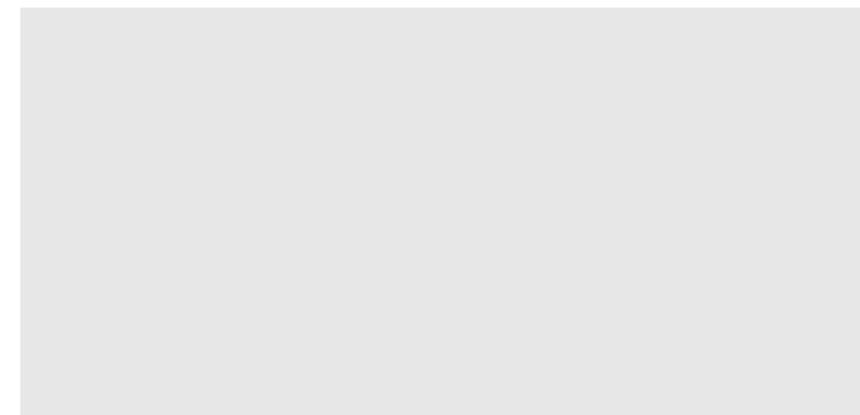
### Daily Tasks



### Schedule for Today



### Inspirational Quote



# NEXT WEEK

- ▶ **Hidden Force**
- ▶ **What you can do about it**



# HOMEWORK:

1. TRY ONE PREFRONTAL CORTEX BRAIN TRAIN

2. TRY ONE HIPPOCAMPUS BRAIN TRAIN

3. TRY ONE BRAINSTEM BRAIN TRAIN

# BRAIN BONUS:

- PICK ONE UPGRADE
- SCHEDULE TIME FOR IT

**THIS WEEK**

**ENGAGE IN OUR**

**ONLINE COMMUNITY**