

***DEFY***  
CONVENTION





**You CAN Grow Your Brain**  
Here's How.

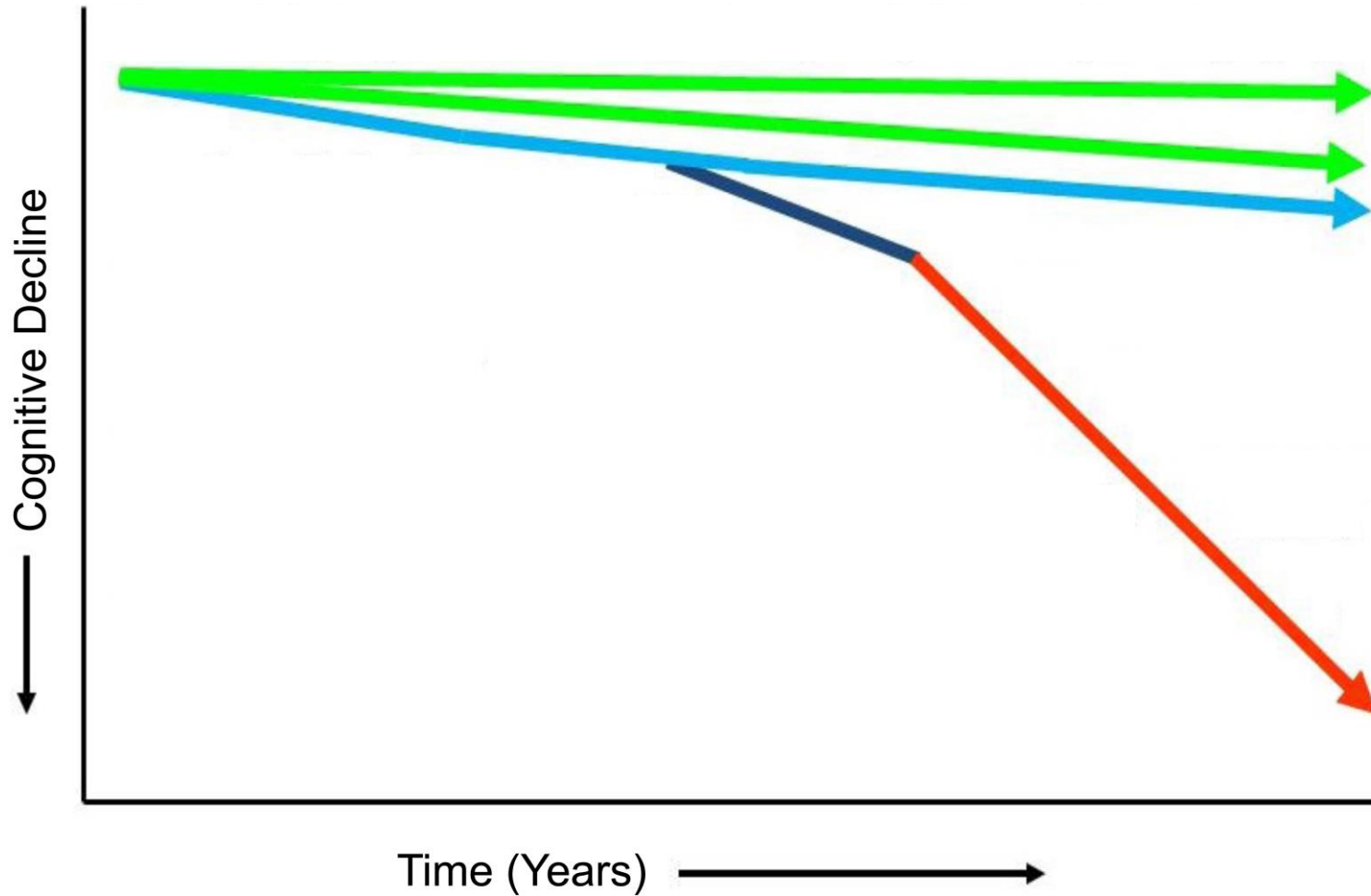


# Neuroplasticity in the Human Brain:

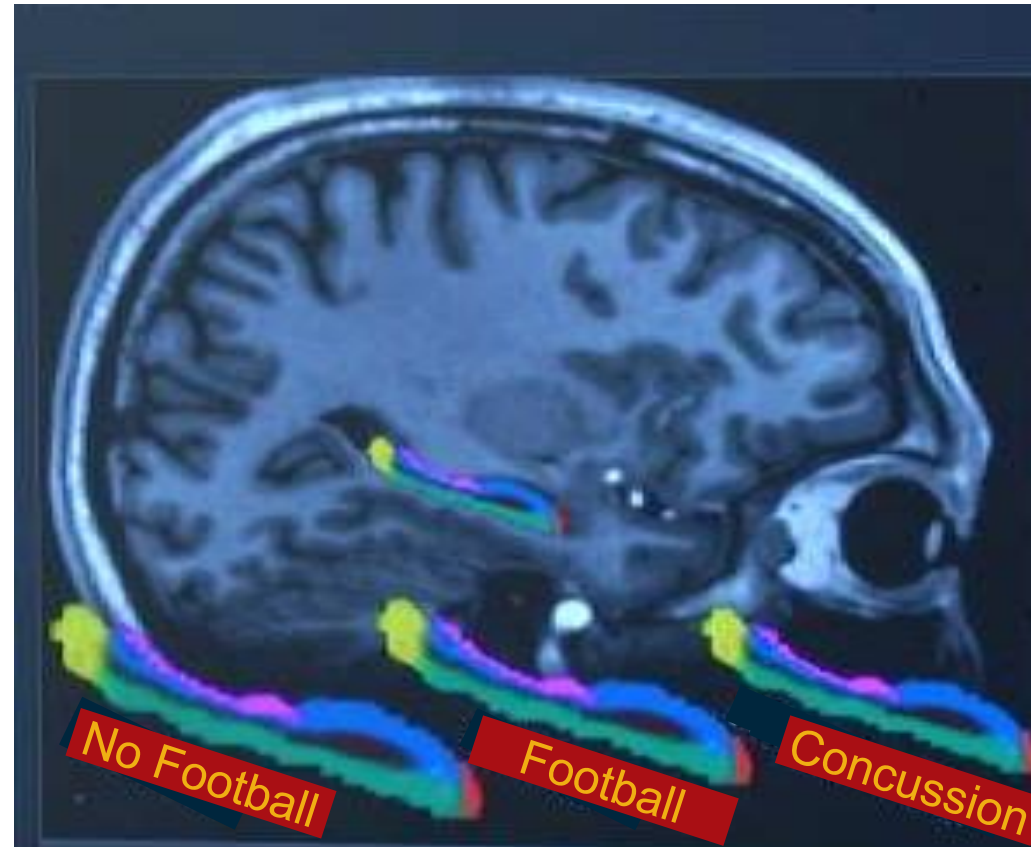
My Research & Publications



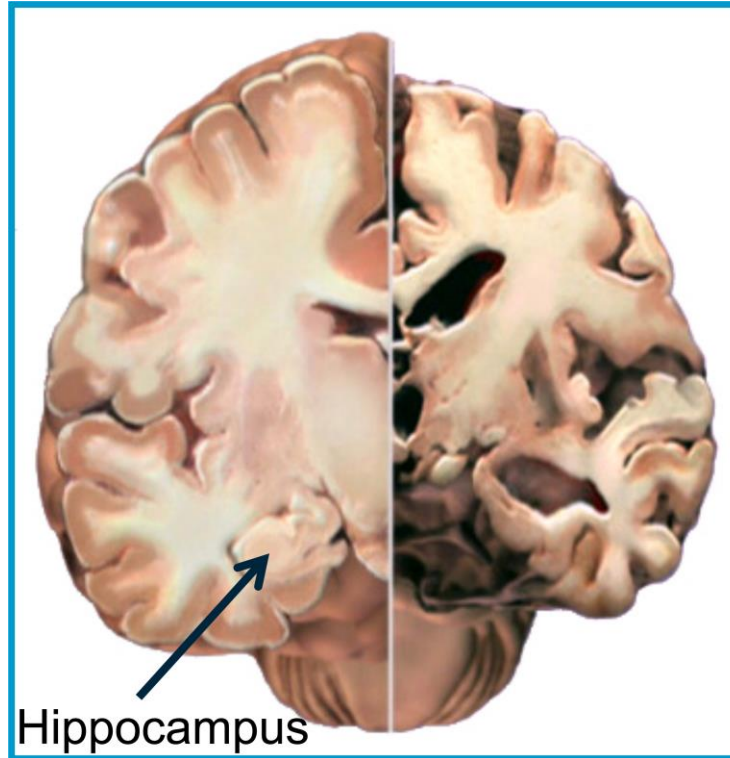
# Hippocampus and Cortex Shrink by About 0.5% per Year After Age 50



# More American Football and Concussions, Smaller Hippocampus



Singh, JAMA Neurology, 2014



**Sleep Apnea**

**Obesity**

**Insomnia**

**Stress**

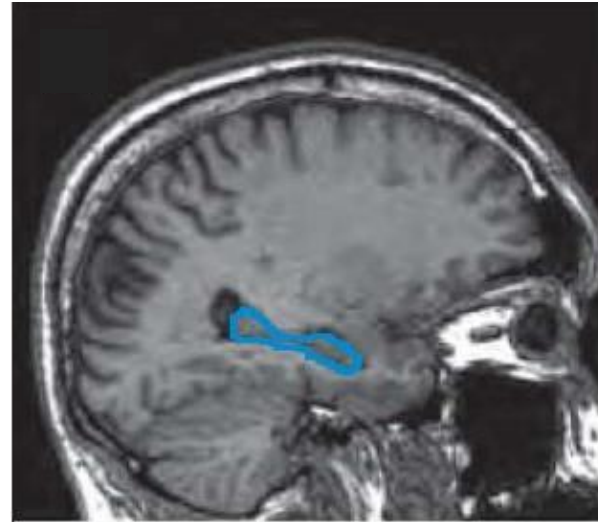
**Depression**

**Concussion**

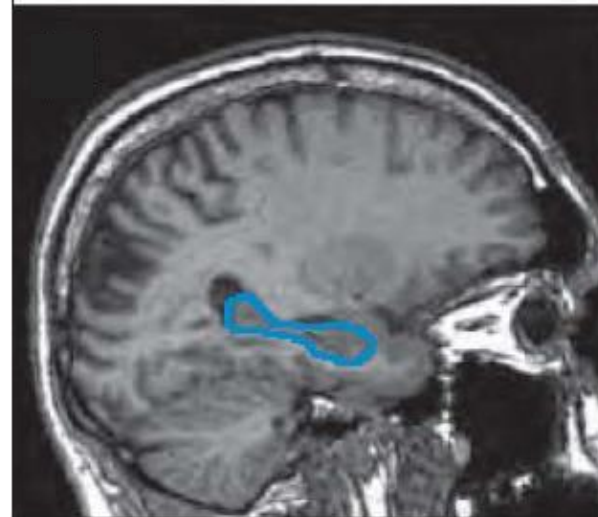
**Alzheimer's Disease**

# Three Months of Vigorous Exercise, Bigger Hippocampus

Before  
Exercise

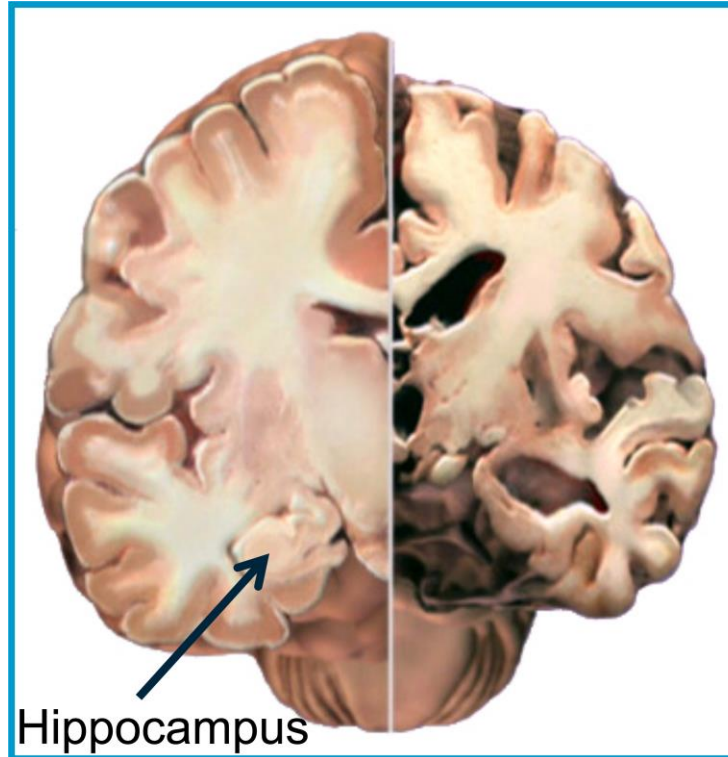


After  
Exercise



*Arch Gen Psychiatry, 2010*

**Exercise**  
**Mediterranean Diet**  
**Omega-3 Supplements**  
**Learning Something New**  
**Sleeping Well**  
**Meditation**  
**Having a Purpose in Life**



**Sleep Apnea**  
**Obesity**  
**Insomnia**  
**Stress**  
**Depression**  
**Concussion**  
**Alzheimer's Disease**

# Brain Fitness Program: A Personalized Set of Interventions

**Meditation Training**



**Brain Training**



**Sleep counseling**



**Diet Counseling**



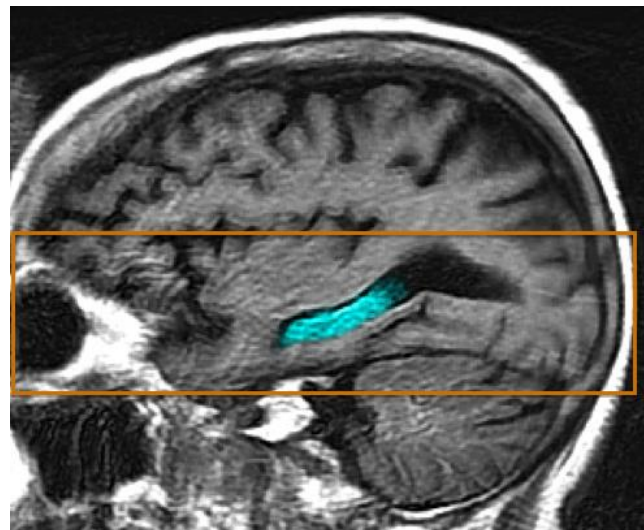
**Exercise Training**



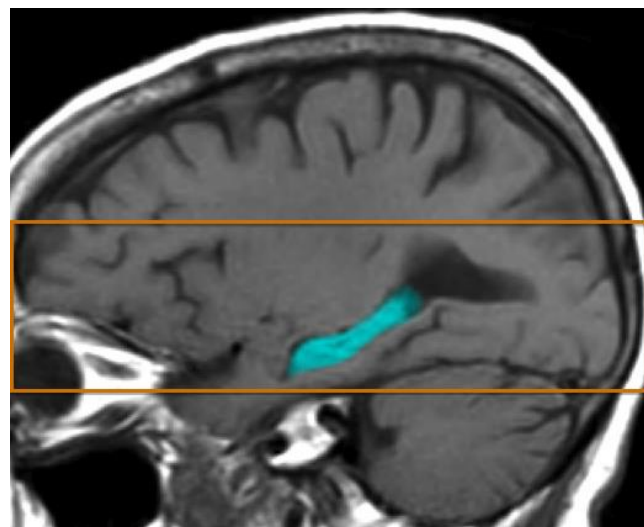
**Weekly Monitoring**



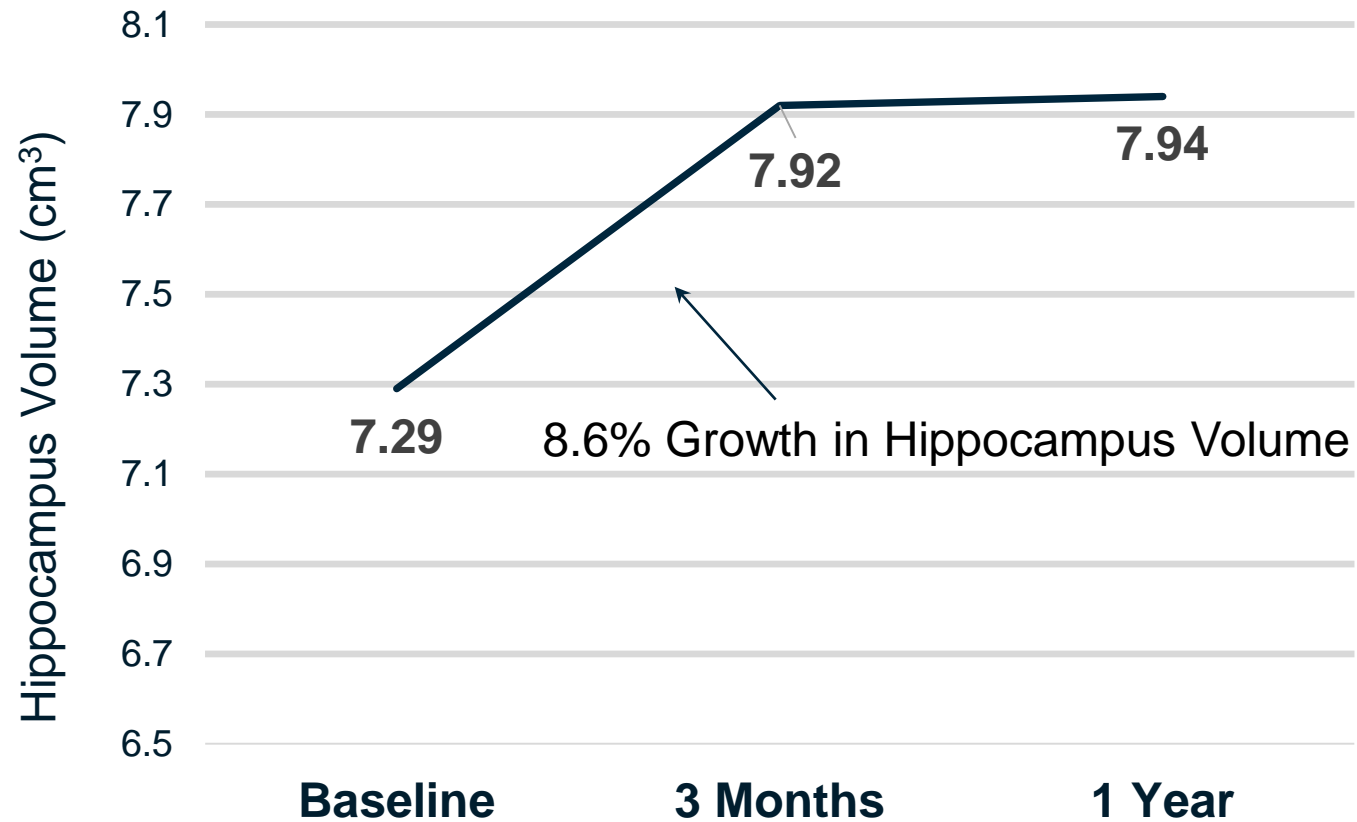
Before  
Program



After  
Program



## Sustained Benefits One Year Later



# Published in The Journal of Prevention of Alzheimer's Disease

*The Journal of Prevention of Alzheimer's Disease - JPAD©*

## A Personalized 12-week “Brain Fitness Program” for Improving Cognitive Function and Increasing the Volume of Hippocampus in Elderly with Mild Cognitive Impairment

*M. Fotuhi<sup>1,2</sup>, B. Lubinski<sup>1,3</sup>, N. Hausterman<sup>1,4</sup>, T. Riloff<sup>1</sup>, M. Hadadi<sup>5</sup>, C.A. Raji<sup>6</sup>*

TIME

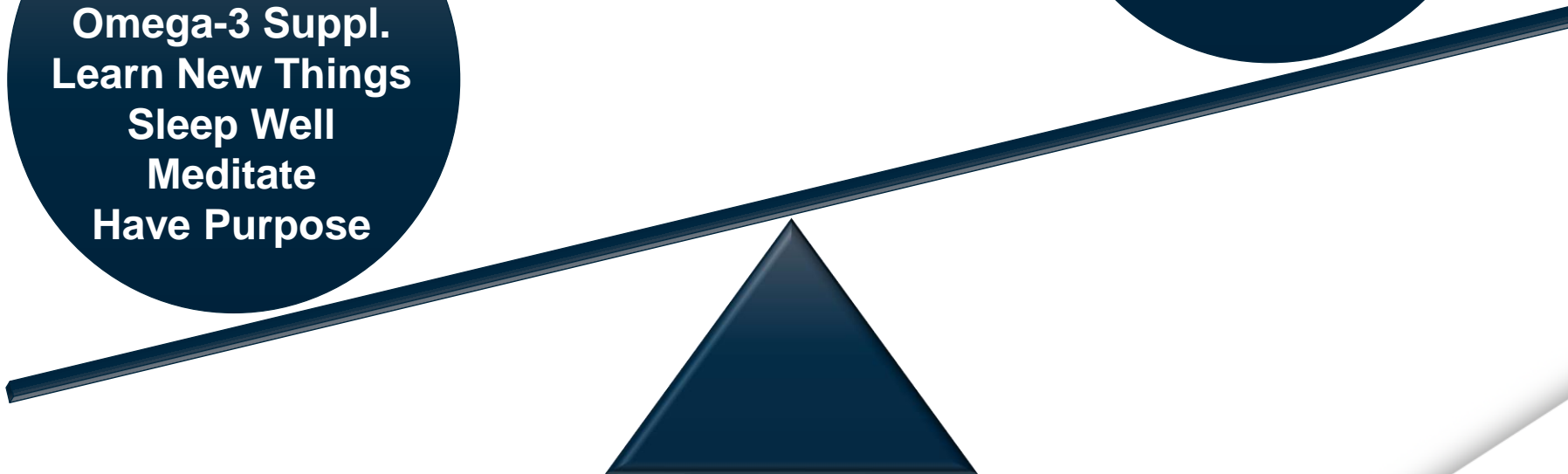
# Defy Aging



**Get Fit  
Medit Diet  
Omega-3 Suppl.  
Learn New Things  
Sleep Well  
Meditate  
Have Purpose**



**Diabetes  
Obesity  
Sleep Apnea  
Head Trauma  
Depression  
Stress  
Alzheimer's**



**You CAN  
Defy Aging**





# YPO EDGE

Singapore 2018