

Successful Aging in Retirement

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Road Map

- Structure and Purpose
- Meaningful Activities
- Affect Balance
- How to Build a Better Brain



What is it about work that's engaging?



Structure and Purpose



Retirement and Health

- “When I’m 64”,
 - RAND, Summer 2010
- Earlier retirement is associated with a reduction in cognitive performance
- United States, England, Denmark 
- Italy, France, Spain 

Meaningful Activities

Robot & Frank



[Videos of robot and frank trailer](#)

Meaningful Activities

- Activities that can be done in one hour or less
 - 1.
 - 2.
 - 3.
- Activities that can be done in one day or less
 - 1.
 - 2.
 - 3.
- Activities that require more than one day
 - 1.
 - 2.
 - 3.

Affect Balance

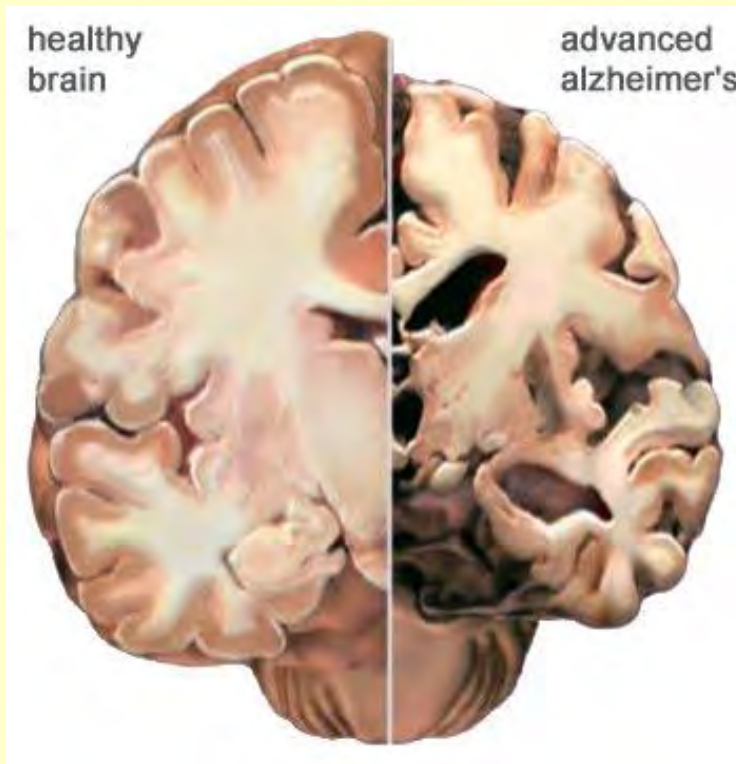
- Positive Affect (PA) Negative Affect (NA) Scale
- Affect balance = PAscore - NAscore
- Resilience versus Distress

Positive Affect/Positive Psychology

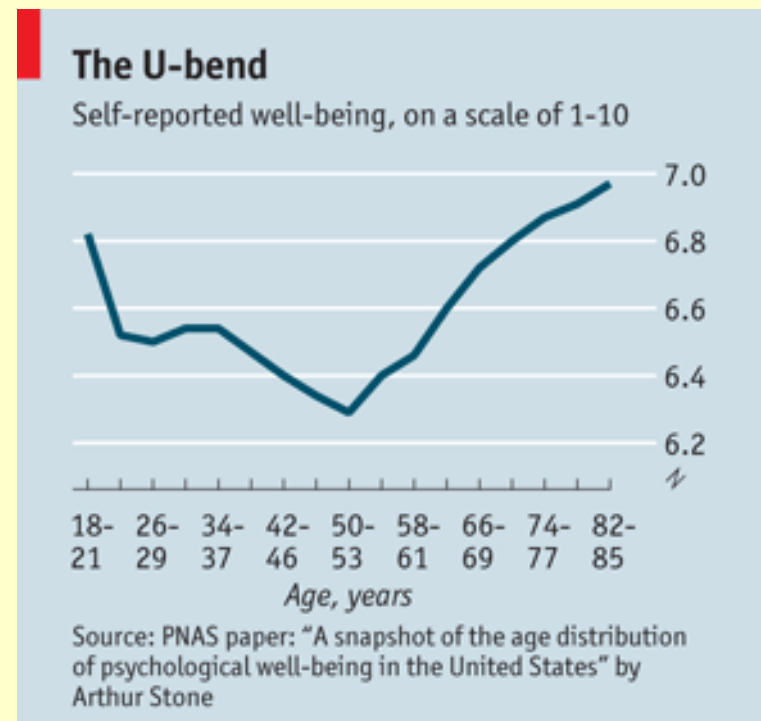
- Seligman & Csikszentmihalyi, 2000
- The Science of Happiness
- The study of
 - Positive emotions
 - Positive character traits
 - Enabling institutions

Background

The Nun Study

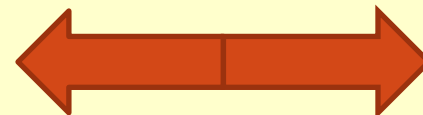


Carstensen's Socio-Emotional Selectivity Theory



The Research

- **Happiness defined** (Seligman, 2002; Peterson et al., 2005)
 - Positive emotion and pleasure (**the pleasant life**)
 - Engagement (**the engaged life**)
 - Meaning (**the meaningful life**)
- “Happy people are healthier, more successful, and more socially engaged.”
(Seligman et al., 2005, p.414)



Initial Study

- Randomized controlled trial
 - 577 adult participants (42% male)
 - 64% between 35 and 54 years of age
- Internet study
 - 5 happiness exercises
 - 1 placebo exercise
- Measured happiness at pre-test, post-test, 1 week and 1, 3 and 6 months

Measuring Happiness

- Steen Happiness Index
- Adapted from Beck Depression Inventory
 - 20 questions
 - Three kinds of happy life: pleasant, engaged, meaningful
 - Range of scores for each statement:



STEEN HAPPINESS INDEX

INSTRUCTIONS: Please read each group of statements carefully. Then pick the one statement in each group that best describes the way you have been feeling for the past week, including today. Be sure to read all of the statements in each group before making your choice.

- **Question 1**
- A. I dislike my daily routine. (1)
- B. I neither enjoy nor dislike my daily routine. (2)
- C. I enjoy my daily routine, but I do like to get away from it. (3)
- D. I enjoy my daily routine so much that I rarely take breaks from it. (4)
- E. I enjoy my daily routine so much that I almost never take breaks from it. (5)

Happiness Exercises

- **Gratitude** visit
 - Write and deliver a letter of gratitude
- **Three good things** in life
 - Write down 3 things each day that went well and why
- You at **your best**
 - Write about when you were at your best and reflect on personal strengths in the story. Review story each day.

Happiness Exercises (con't.)

- Identifying **signature strengths** (top five)
 - www.authentichappiness.org
 - www.viacharacter.org
 - Use one of these each day in a new and different way.
- Using **signature strengths**
 - Use five highest strengths more often during the next week.

Placebo Exercise

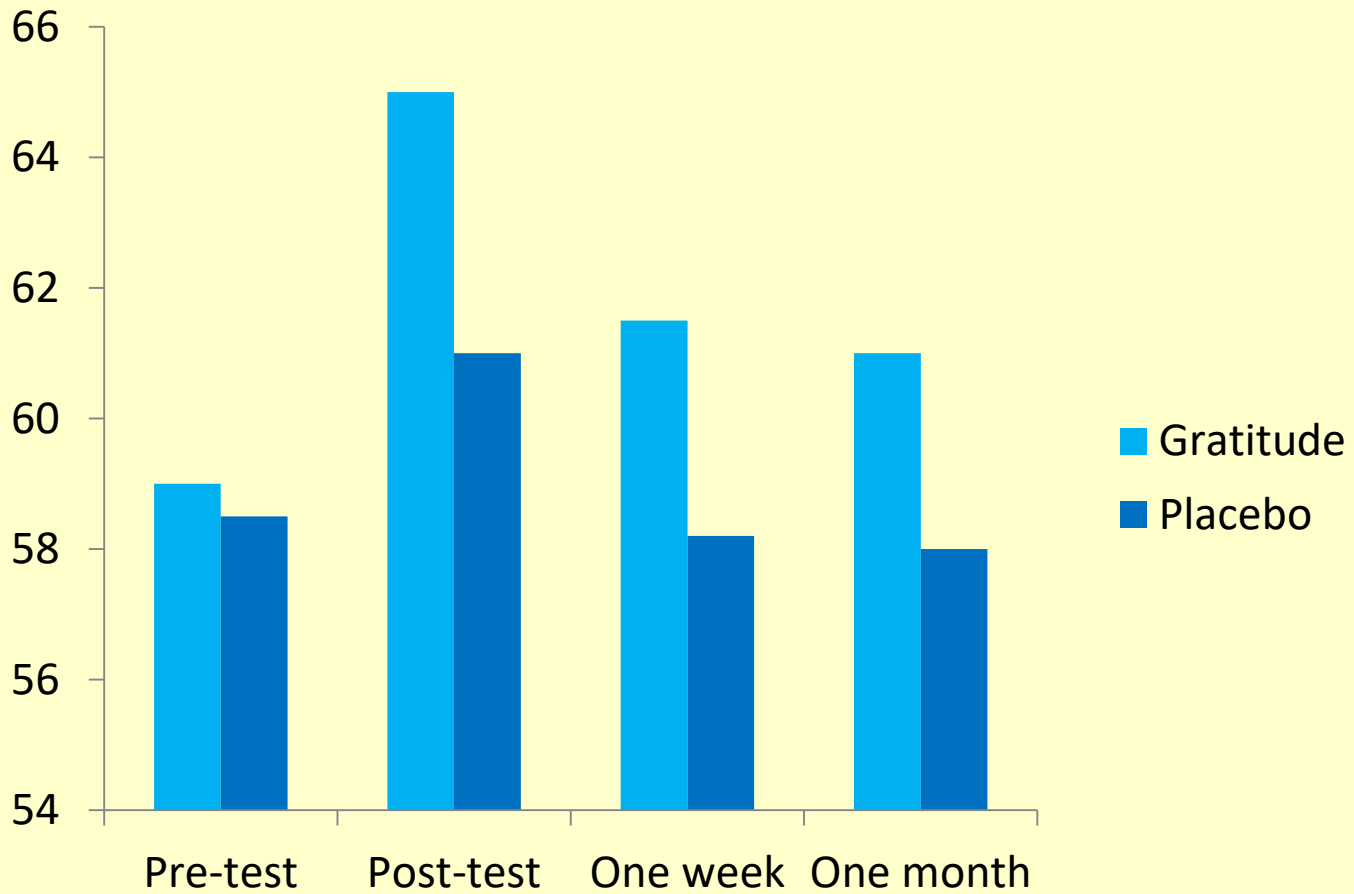
- **Early memories**

- Write about your early memories every night for one week.



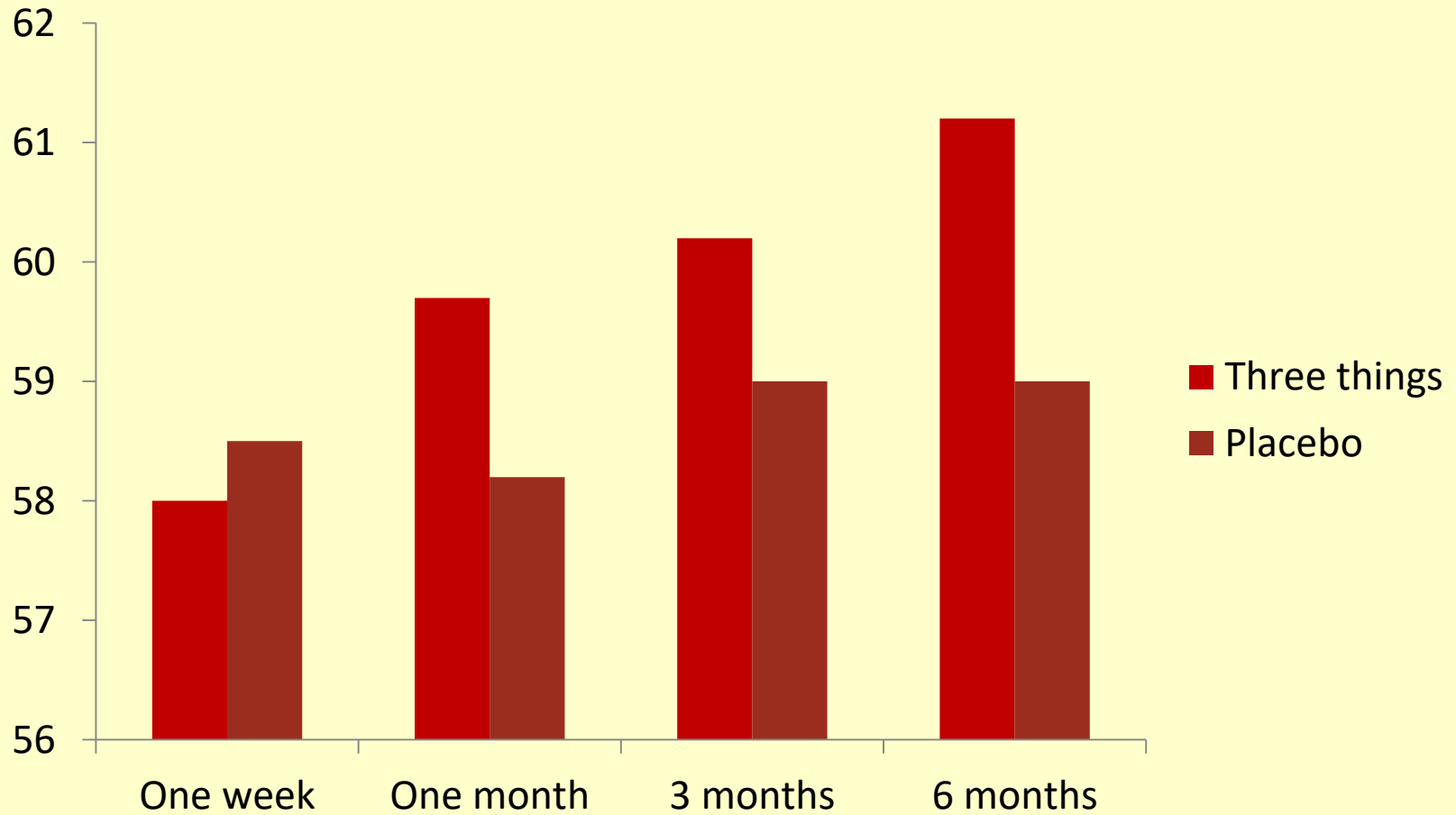
Results

Gratitude



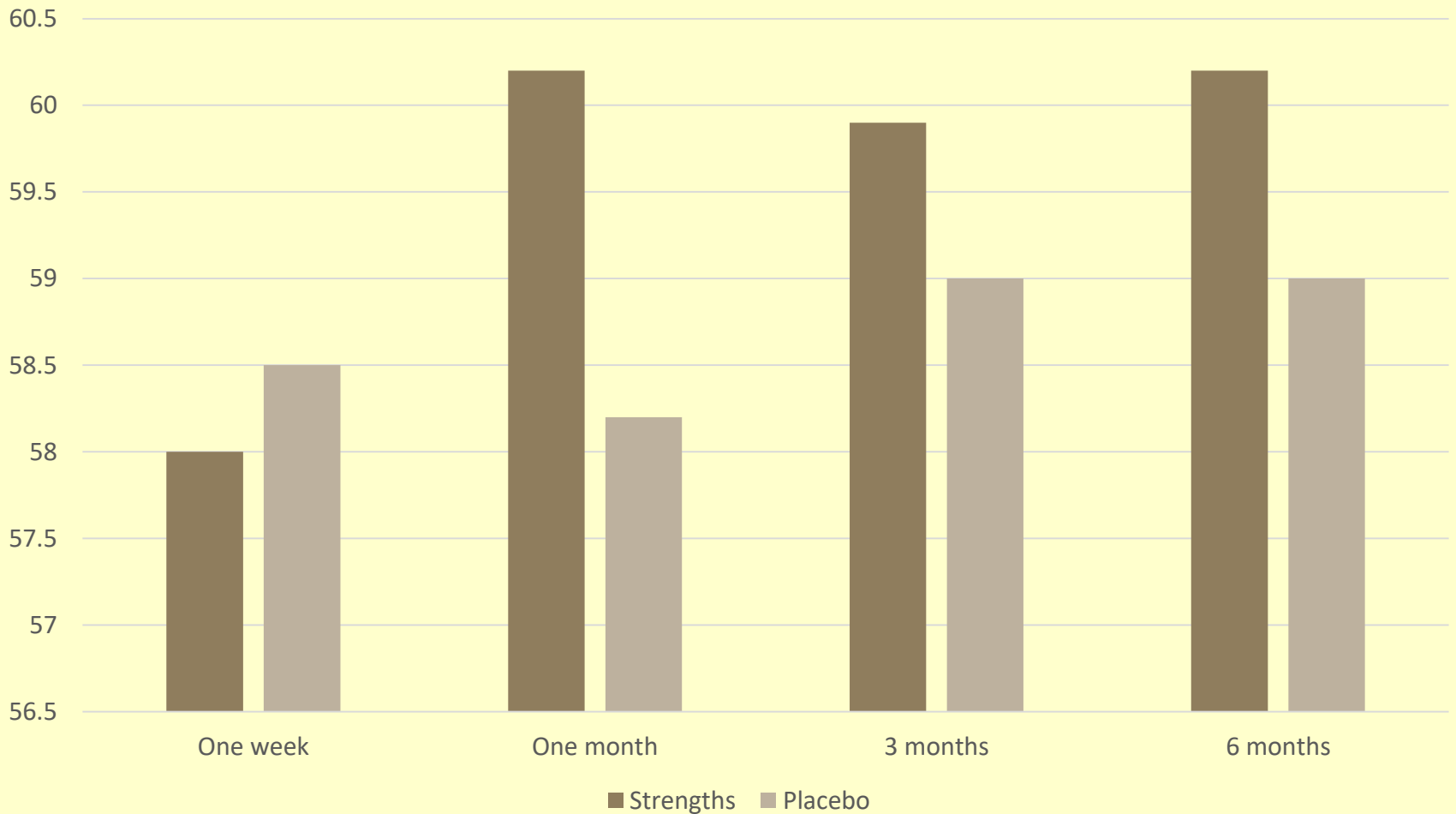
Results

Three good things



Results

Using signature strengths



Conclusions

- **Gratitude** -- highest increase in happiness
- “Lasting” happiness
 - Three good things
 - Using signature strengths
- Those who persisted with exercises showed highest gain

Considerations

- Benefits without on-the-ground treatment
- Cost-effective
- Health benefits in an easy-to-deliver way

Affect Balance Study

- Affect Balance =
positive minus negative affect scores
- **Higher** numbers, **better** affect balance
- Measured cognitive and physical function—
 - Performance (objective) and
 - Perceived (subjective)

Participants

(2014 data collection) n = 91

FM & Chronic Pain Center

	Healthy Controls (n=42)	FM participants (n=49)
Gender (% female)	69	88
Age (in years)	72	64
Education (in years)	16	16

Cognition

Episodic Memory

- Immediate recall
 - Trials 1, 2, 3
- Delayed recall
- Recognition



CERAD

CONSORTIUM TO ESTABLISH A
REGISTRY FOR ALZHEIMER'S DISEASE

Physical Performance

- Balance, Lower body strength, Aerobic Endurance



Perceived Function

- Forgetfulness
 - On a scale from 0 to 10
 - 10 extremely forgetful
 - How forgetful are you?

- Activities of Daily Living



Results

- Regression analyses
- Three steps: Age, FM status, Affect Balance

Objective Measures	R^2 Change
Immediate Recall	.08
Delayed Recognition	.09
Balance	.07
30s chair stand	.08

Results

- Regression analyses
- Three steps: Age, FM status, Affect Balance

Subjective Measures	R^2 Change
Forgetfulness	.09
Activities of Daily Living	.07

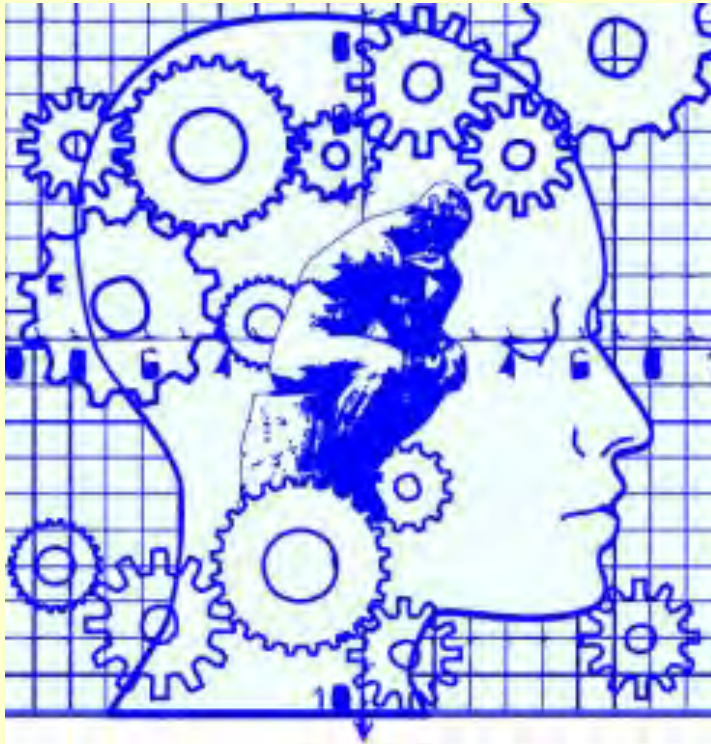
Affect Balance Revisited

- More positive **Affect Balance**
- Regardless of age and FM status
- Related to better cognitive and physical performance
 - Memory, Balance, Lower body strength
 - Forgetfulness, activities of daily living

How to build a better brain



Cognitive and Neural Reserve



cognitive



biological

Cognition



Cognitive Assessments

BLUE **GREEN** **YELLOW**
PINK **RED** **ORANGE**
GREY **BLACK** **PURPLE**
TAN **WHITE** **BROWN**

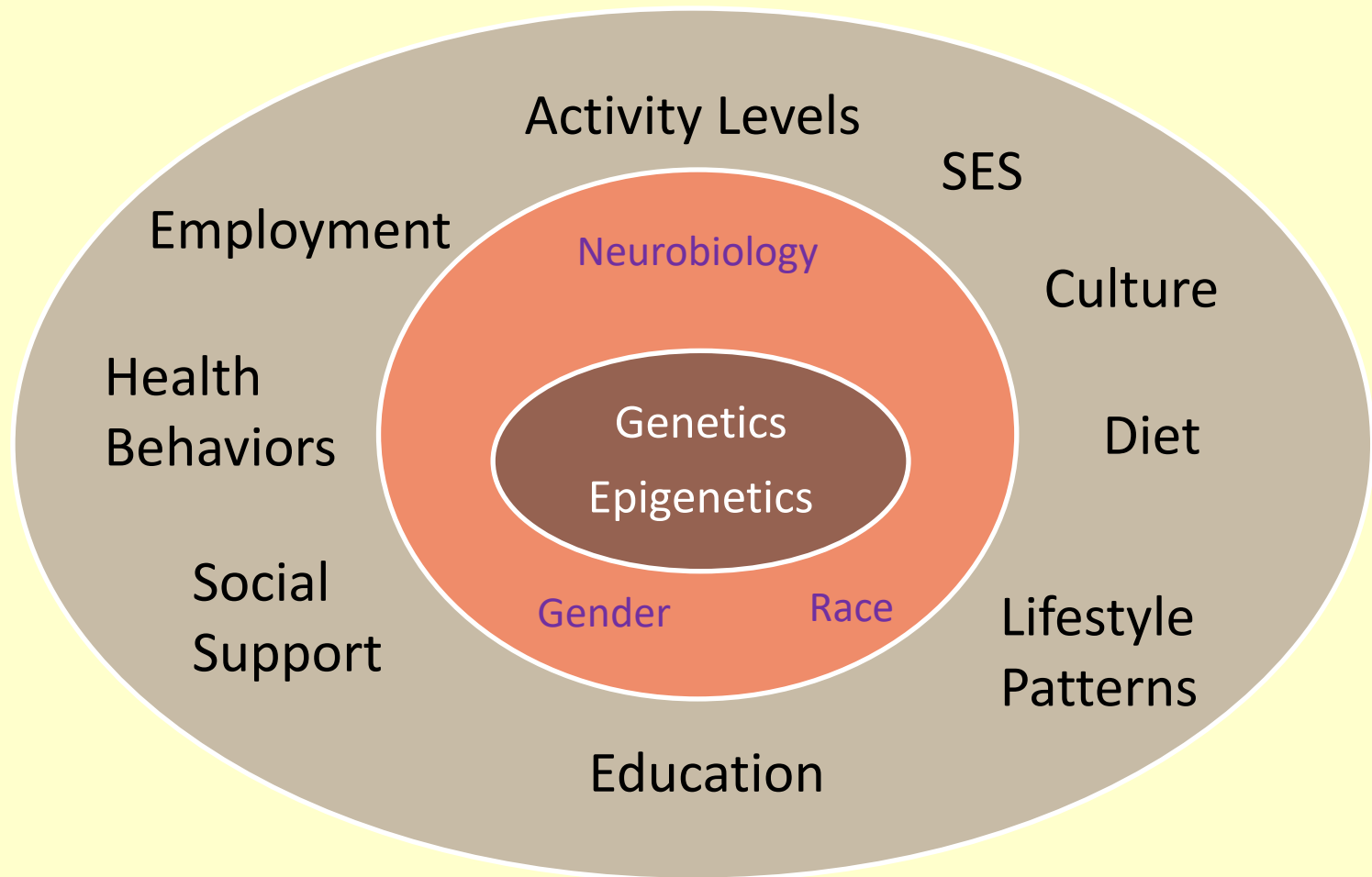
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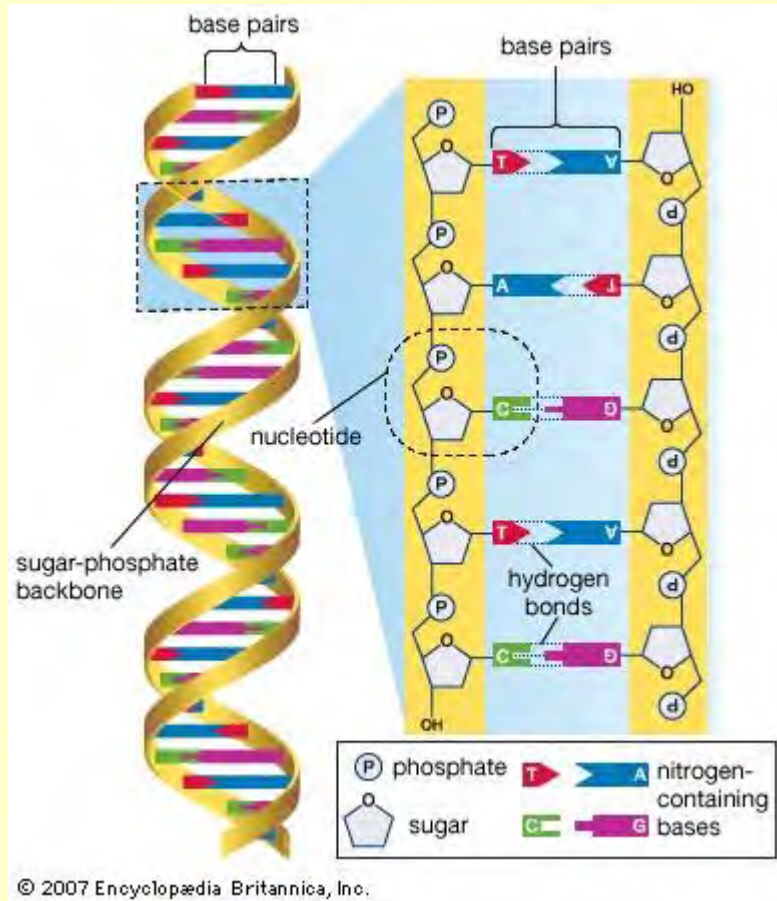
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	1	5	4	2	7	6	3	5	7	2	8



Cognitive Reserve



The Human Genome



The Human Genome Project

- <http://www.abc.net.au/science/slab/genome2001/dna.htm>
- Genetics and Epigenetics

Epigenetics



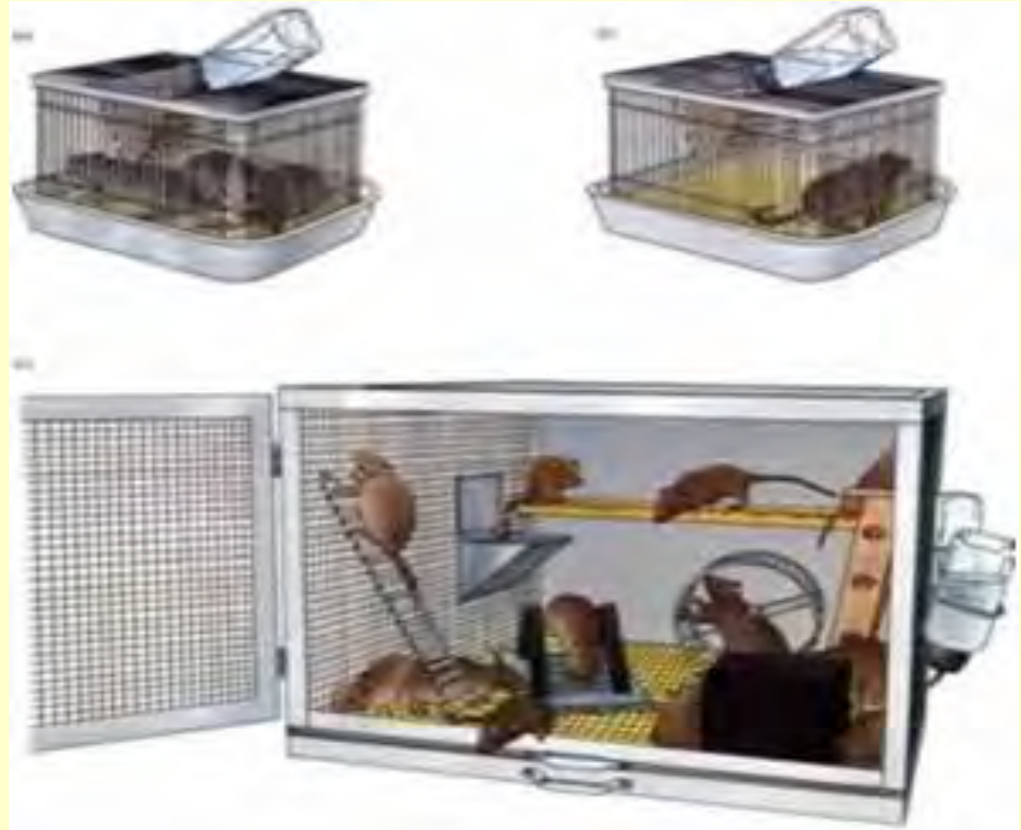
Building Cognitive Reserve

- Engage in meaningful activities
- Be happy

- Get moving
- Learn new things
- Feed your brain

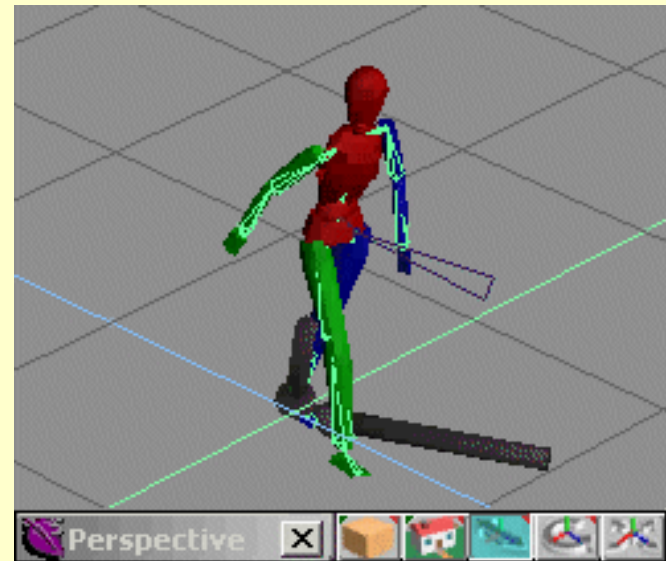
Get Moving

- Oxygen to the brain
- Running in rats
 - Improves learning
 - Stimulates synaptic plasticity
- AD mice and exercise
 - Improves learning
 - Less beta-amyloid



Exercise your body

- Better physical performance is related to higher cognitive function



Adults 50 years and older

- 2007 study
 - 51 participants with fibromyalgia
 - Physical performance predicted cognitive function
- 2008 study
 - Physical & cognitive status of participants (50+ yrs.) with and without fibromyalgia
 - Physical performance predicted cognitive function
- 2017 Aging Well
 - Processing speed, inhibition, and working memory related to balance and aerobic endurance

Keep moving!

- Take the stairs
- Park farther from the door
- Walk a dog
 - borrow a dog
 - walk a cat



Sedentary Behavior

- Watching TV...but what about reading, playing games, etc.?

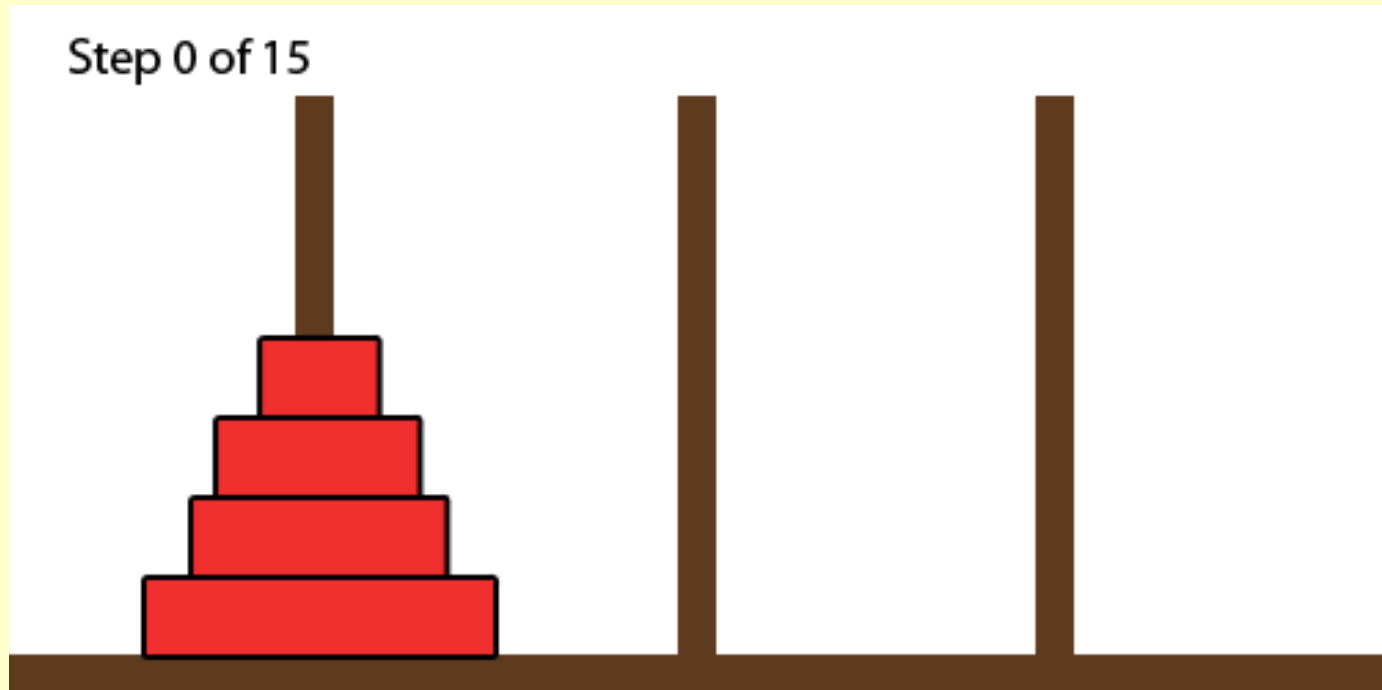


Brain Games

- Nifty after Fifty
- Posit Brain Fitness Program
- Wii
- Or..... visit your computer
 - Google: “free brain exercises”

Brain Exercises

- <https://www.mathsisfun.com/games/towerofhanoi.html>



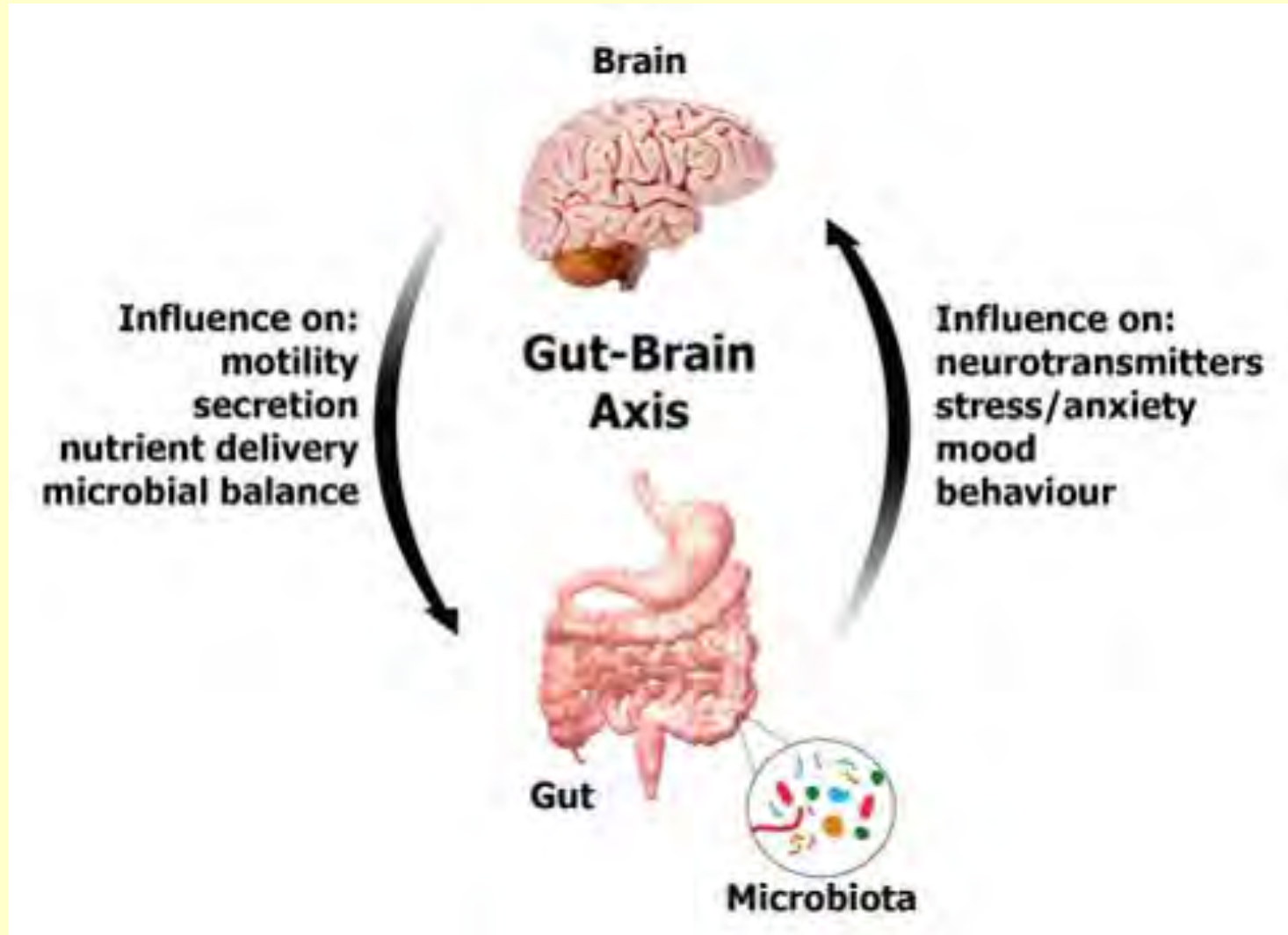
More Brain Games

- game-game.com/18394

<https://novelgames.com/en/missionaries>

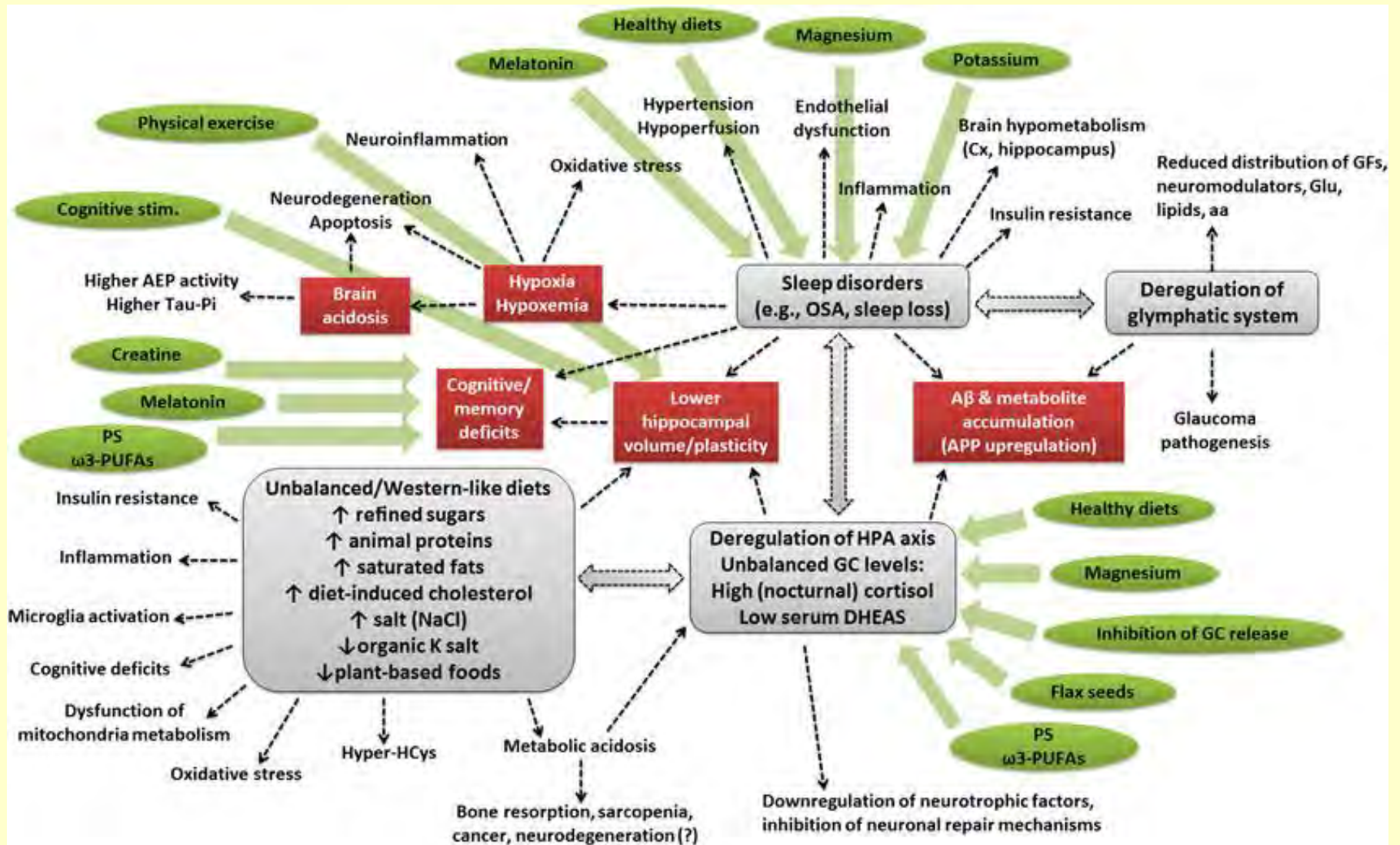


Feed your brain



Feed your brain tips

- Less sugar
- More fiber



In Conclusion

- Create structure and purpose in your retirement
- Plan/enjoy meaningful activities
- Build a better brain
- Promote affect balance in yourself and others
 - <https://www.youtube.com/watch?v=y6Sxv-sUYtM>