

# Active Aging Update

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# Active Aging

Teasers:

- How many items does the brain best recall?
- What are the brain’s functions?
- Which movements best train the brain?
- Can we make new brain cells?
- What are the 5 types of age?
- Can we prevent dementia?

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# Active Aging

1. Welcome
2. Gratitude
3. Our Purpose:
4. Our Theme:
5. Introducing Bernadette C. O’Brien

**MAAP**

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# Active Aging

1. This program is really about making COLs: C \_\_\_\_\_ of L \_\_\_\_\_.
2. Instead of “seniors” or “aged” let’s call this population the C.E.
3. The “old school” method of training “seniors” involved.....
4. 2013: Daily \_\_\_\_\_ people turn age 65 in North America and the largest growing population segment is \_\_\_\_\_.
5. Baby Boomers (46-64) and Generation X (64-81), and Generation Y (1978)
6. The good news and the challenge: the most heterogeneous group of our world!

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# Active Aging

1. **Chronological Age:** 365-day cycles since birth, “0”
2. **Functional Age:** for executing Activities of Daily Life (ADLs) body-test  
Takeaway: Pelvic Floor-TVA-Tongue Control, Memory games, train to fear
3. **Biological Age-**physical functions at cellular level (e.g. antioxidants). check out [realage.com](http://realage.com); “People who exercise regularly with task-dependent exercises have lower biological ages than people of the same chronological age who do not exercise.” Takeaway: Intermittent games
4. **Social Age:** what is expected and accepted of a particular group.  
Takeaway: group dynamics (A/1), teams, walking around the area, and pets.
- 5 **Psychological Age:** cognitive and self-efficacy age. “Aerobic and strength exercise improve cognitive functioning when combined.” Takeaway: combination training, reaction games, training neuroplasticity

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# Active Aging

**FUNCTIONAL AGE:**

**1. Muscular Areas:**

**S.T.A.N.D.:**

- Standing: FAT Work: Feet, Ankles (T.A.), Toes
- Tongue: incisive papilla
- Activate the Core: PFM (*pelvic floor muscles*)
- Navel: TVA (*transverse abdominus*)
- Direct the Eyes

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# Active Aging

Origin: Tibia

Tibialis Anterior

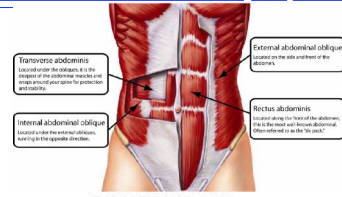


Insertion: Metatarsal

Actions: Ankle dorsi flexion



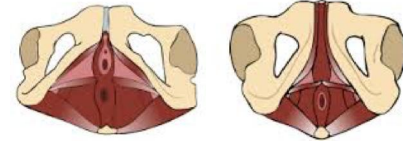
# Active Aging



Pelvic Floor Muscles

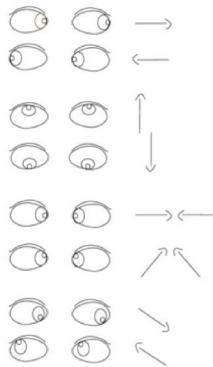
Female

Male



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# Active Aging



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# Active Aging

BIOLOGICAL AGE:

1. Cardiovascular, Strength, Flexibility & Balance 5-7 Days per week  
(ACE, *Guide to Seniors Training*, 2013)  
(ACSM, *FITT Principles for Active Ageds*, 2014)
2. Intensity (Talk Test)
3. Wearable Technology for "N.E.A.T"  
*non-exercise activity thermogenesis*

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# Active Aging

SOCIAL AGE:

1. Loneliness & Depression (*Scripps*, 2012)
2. Group Dynamics
3. Partner Pairings

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# Neuroplasticity

Hey Old Friend  
Are You Okay, Old Friend  
What Do You Say, Old Friend  
Are We or Are We "Unique"  
Time Goes By  
Everything Else Keeps Changing

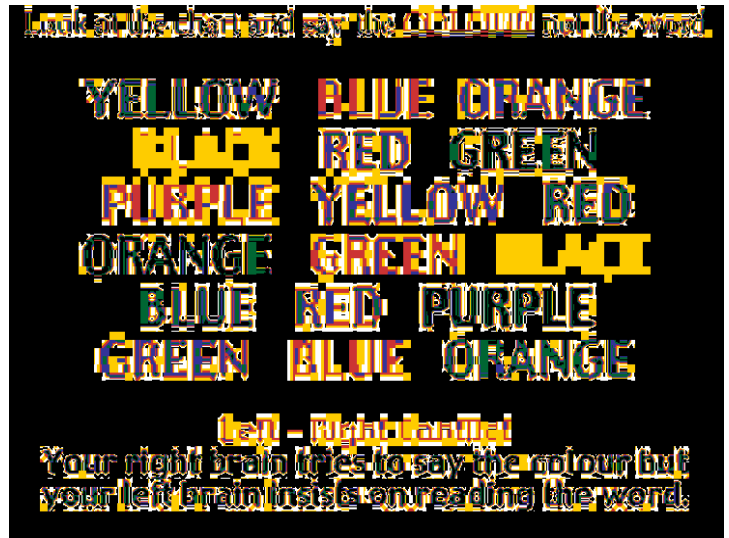
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# Active Aging

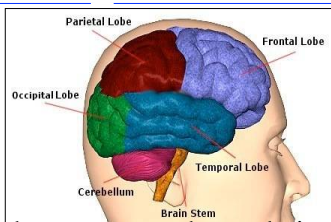
## PSYCHOLOGICAL AGE:

1. Neurogenesis
2. Neuroplasticity
3. Numbers: the Cochrane Studies
4. Naming: verbal tasks with L and R brain

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# Neuroplasticity



**LEFT:** speech & language, math, analytical, memories of names & words, motor skills, right side of the body

**RIGHT:** creative & problem solving, emotions, memories of faces & images, left side of the body skills of the left side of the body.

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# “chunking”



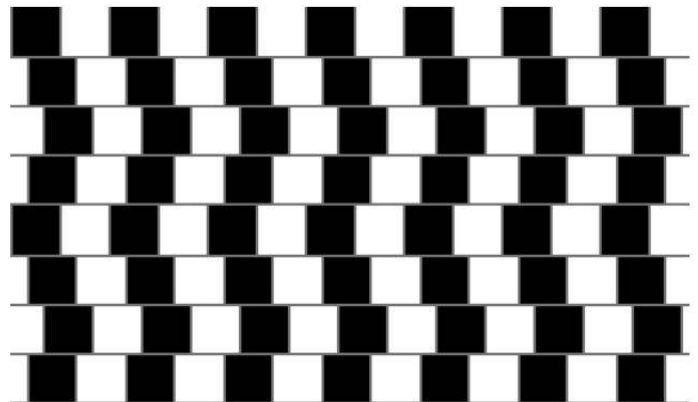
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# Neuroplasticity

3. Find a positive way of expressing each of the following ideas:
- a) Three out of ten people can't operate the new system.
  - b) I disagree with most of what Sue says.
  - c) I'm hopeless at estimating how much paper we'll need.
  - d) It's no good talking to George when he's in that mood.
  - e) Everyone knows that's a stupid idea.

Don't

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Are the horizontal lines parallel or do they slope?



# Neuroplasticity

- SHORT TERM MEMORY WORKS BEST UP TO 7 ITEMS
- ↑CORTISOL = ↓ MEMORY (CORTISOL KILLS OFF BRAIN CELLS!)
  - ↑ SLEEP + REST = ↑ COGNITIVE PROBLEM SOLVING
    - ↑ GLUCOSE = ↑ MEMORY
  - ↑ ANTIOXIDANTS + CHOLINE = ↑ MEMORY
  - ↑ BACKGROUND MUSIC + NOISE = ↓ MEMORY
  - ↑ STORIES = ↑ MEMORY, ↑ LISTS = ↓ MEMORY
    - ↑ DEPRESSION = ↓ MEMORY
    - ↑ STRESS = ↓ MEMORY
      - ALCOHOL

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# Neuroplasticity

Hey Old Friend  
 Are You Okay, Old Friend  
 What Do You Say, Old Friend  
 Are We or Are We "Unique"  
 Time Goes By  
 Everything Else Keeps Changing  
 You and I...  
 We Get Continued Next Week...

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# Neuroplasticity

Research  
 Study:

U. S. Department of Health and Human Services, Center for Disease Control and Prevention. 2012. Healthy aging: What is a healthy brain? New research explores perceptions of cognitive health among diverse older adults. Retrieved from <http://ihseniorhealth.gov/>.

Take-Away:  
 Learning Lyrics

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# Neuroplasticity

Homework:

Howard, P. 2006. *The Owner's Manual for The Brain*. Austin, TX: Bard Press.  
 and  
 Eckmann, T. 2013. *101 Brain Boosters*. Healthy Learning. Monterrey, CA.

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# Active Aging

Summary:

Resources:

Take home message:

Homework:

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