"Identifying the demographics, biological, and psycho-social factors that can help people maintain or enhance their cognitive and emotional health as they grow older becomes a major public health goal for this county."

National Institutes of Health

Brain Power

A Presentation by Mallory Myers, MS,

for

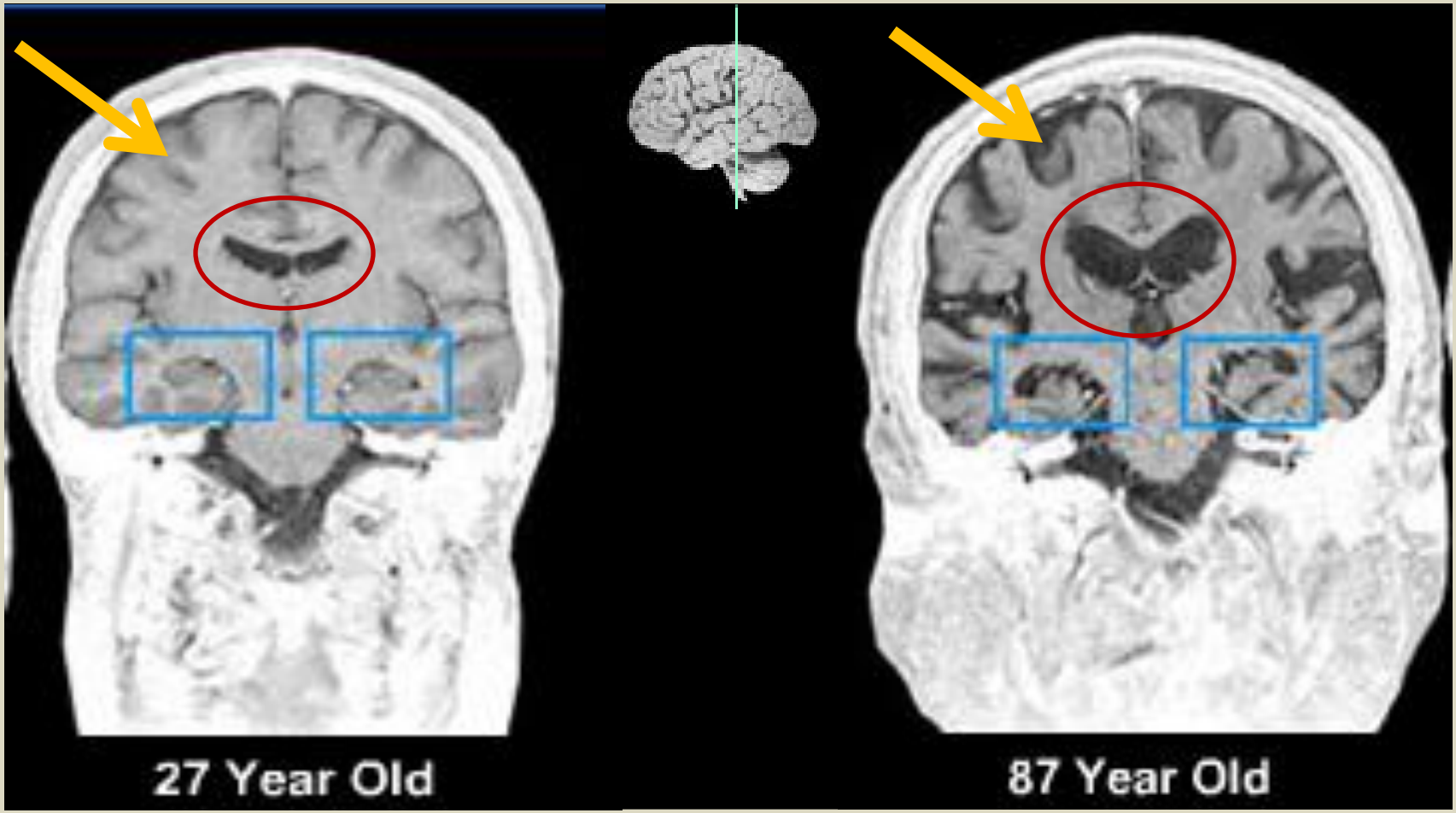
NY StateWide Senior Action Council

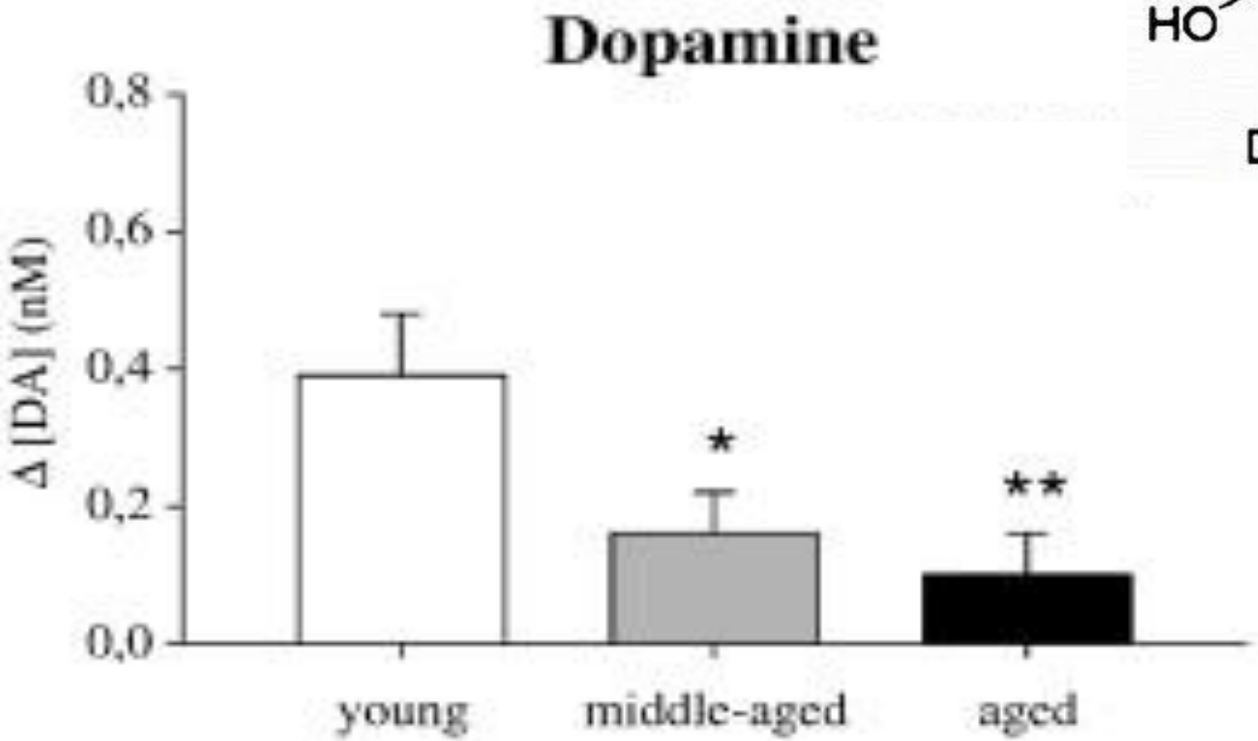
What is Brain Aging?

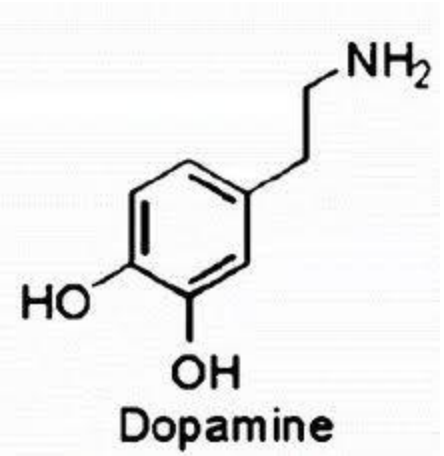
- “normal cognitive aging”
- “normal non-pathological” decline
- Age-related memory impairment (AMI)
- Age-associated memory impairment (AAMI)
- “Senior Moments”

- Affected by genetics, general health, medical disorders (atherosclerotic disease), inflammation, neurobiological changes, diet and lifestyle

What does Brain Aging look like?







doi: 10.1016/j.brainresrev.2007.10.006

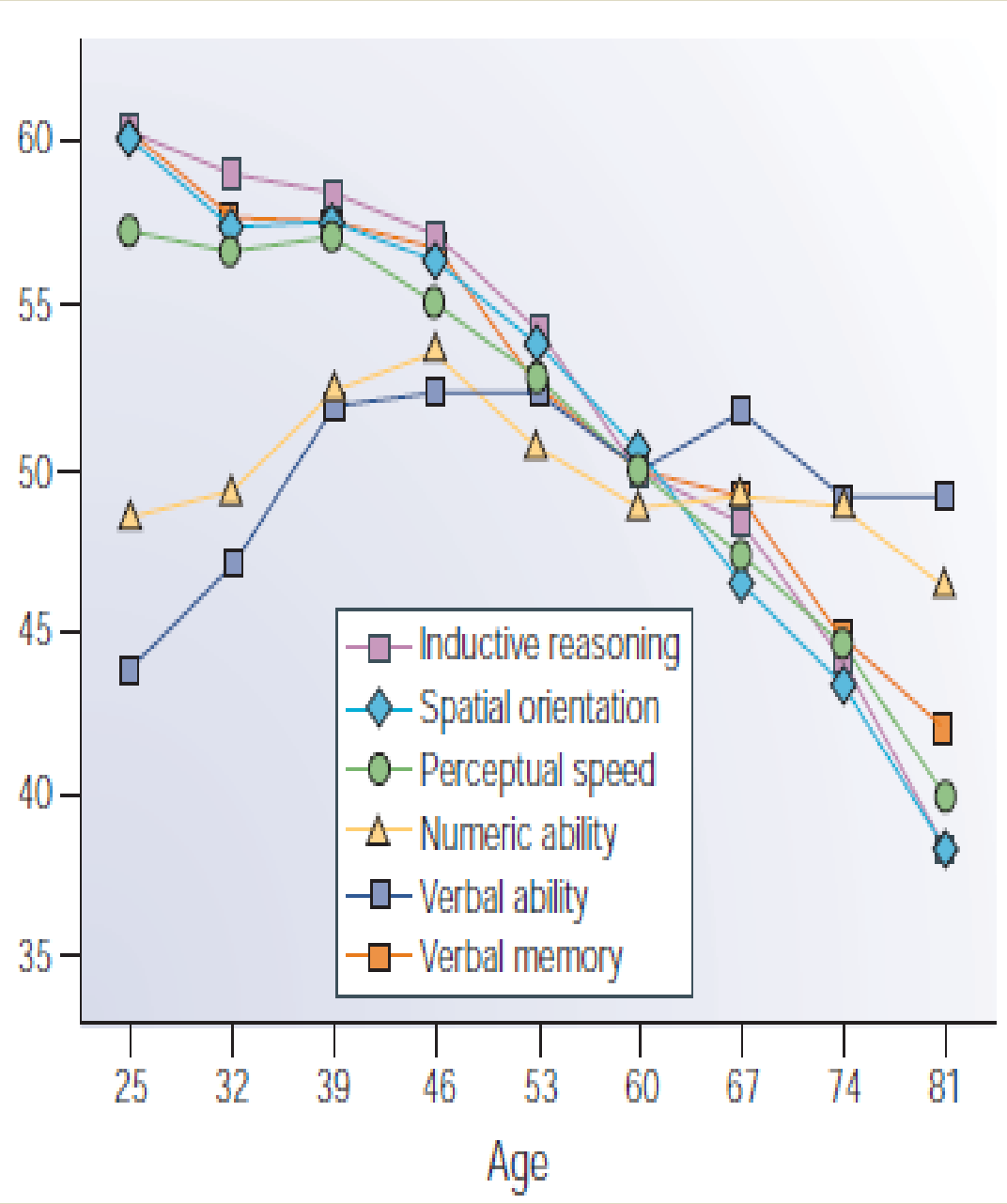
What changes occur with aging?

Decreases in Functioning

- Processing Speed
- Reasoning
- Spatial Memory
- Working Memory
- Executive Functioning
- General Cognitive Ability

Stable Processes

- Verbal Ability
- Numerical Ability (not all)
- General Knowledge
- Implicit (procedural) memory



doi:10.1038/nrn1323

- Individual differences in cognitive ability in old age reflect two things: differences in prior cognitive ability (50% of all variance seen) and differences in the degree to which change (typically deterioration) has taken place.

Remediation

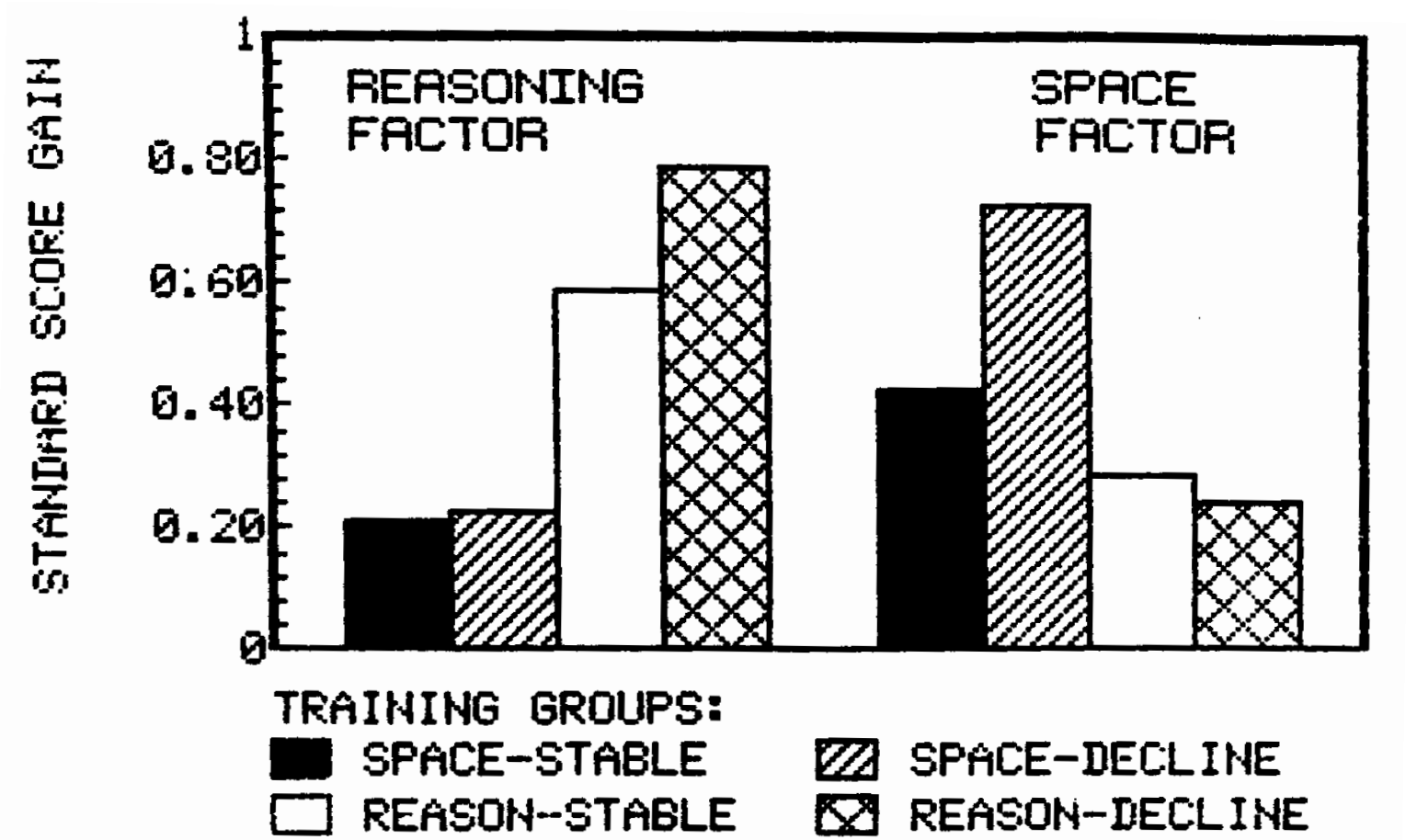
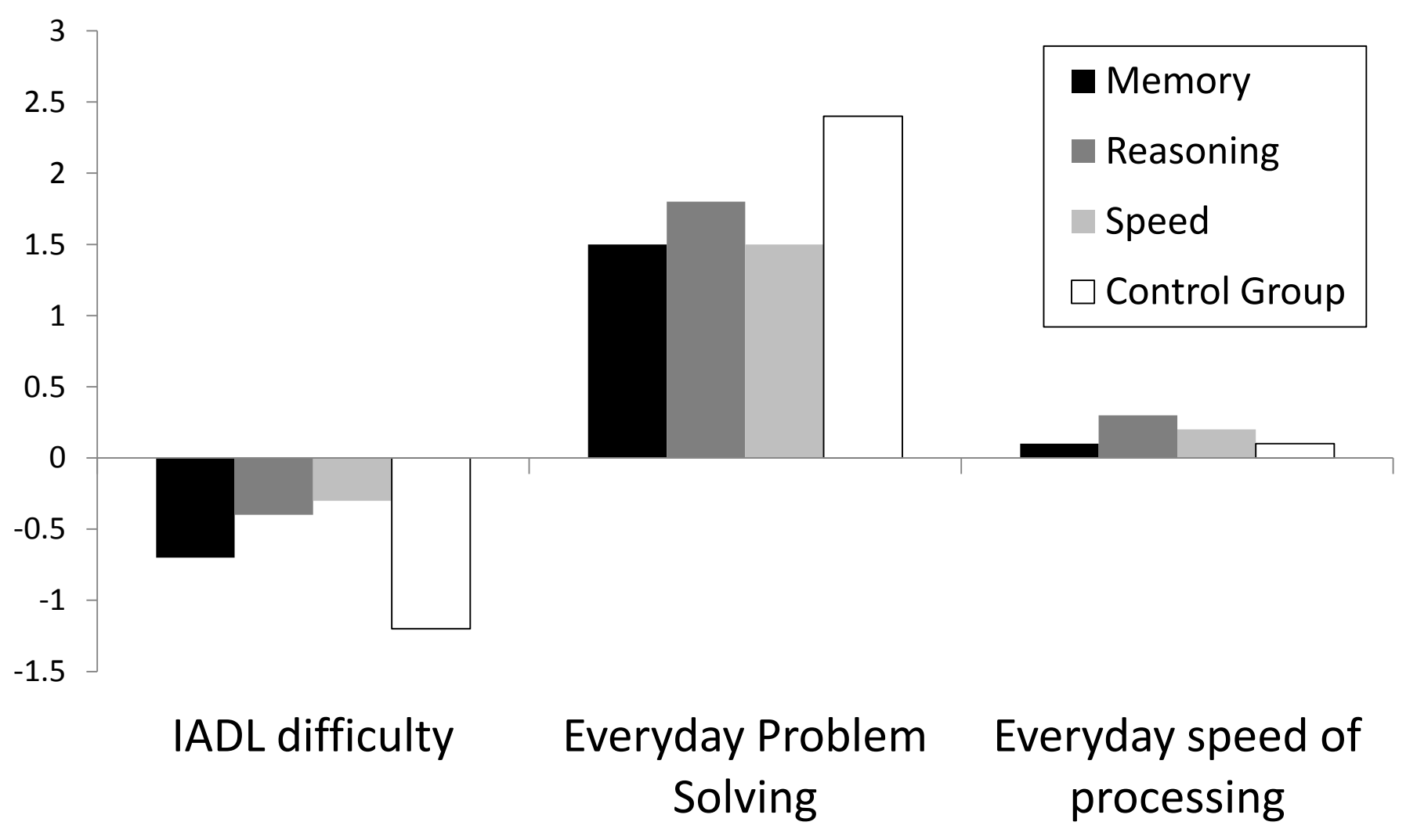


Figure 2. Mean factor score gains by training program and status (in standard score units).

doi: 10.1037/0012-1649.22.2.223

Prevention



doi:10.1001/jama.296.23.2805

Exercise!

games for the brain

Fit Brains

play with your mind

sporcle
mentally stimulating diversions

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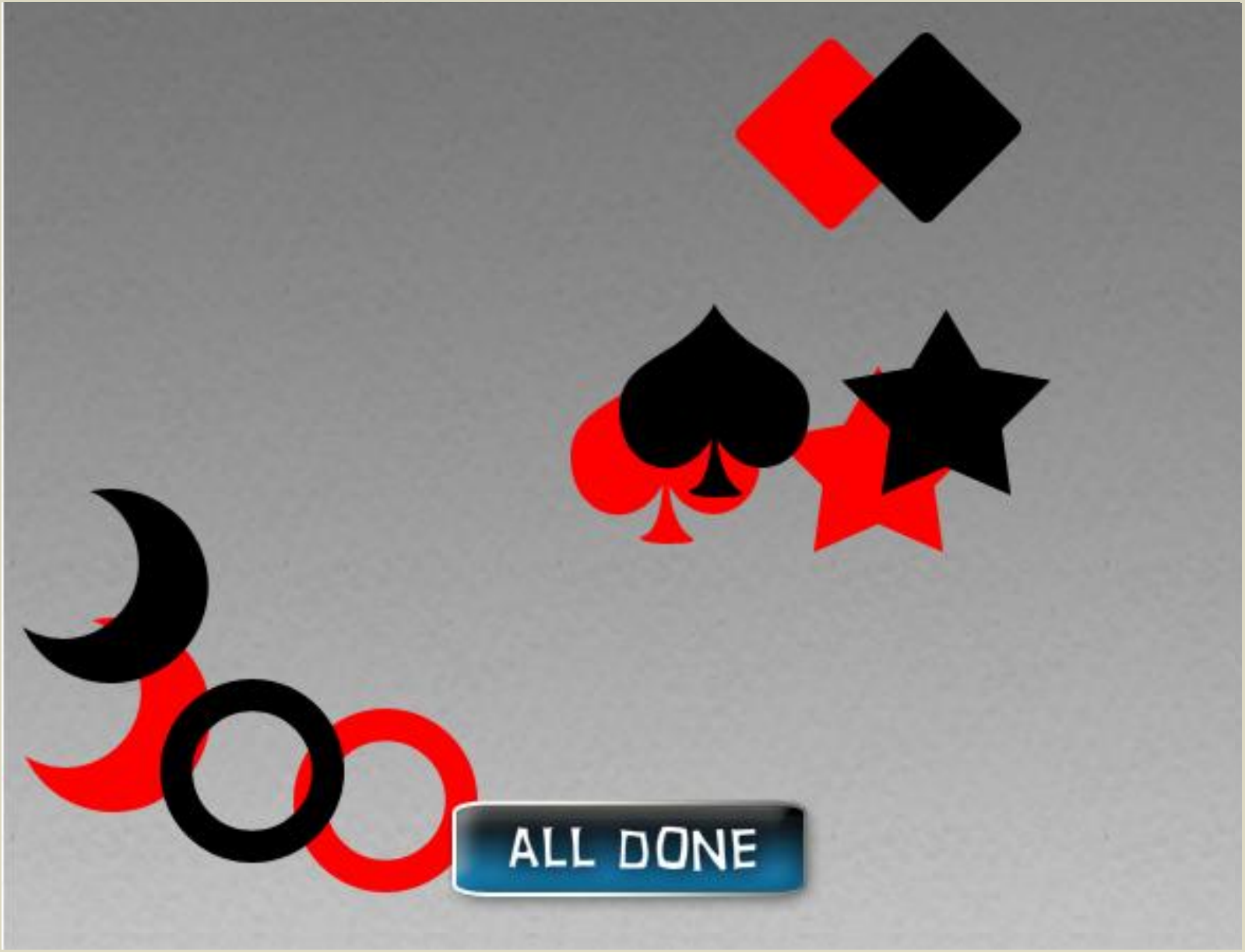
free thinking games


ALL DONE

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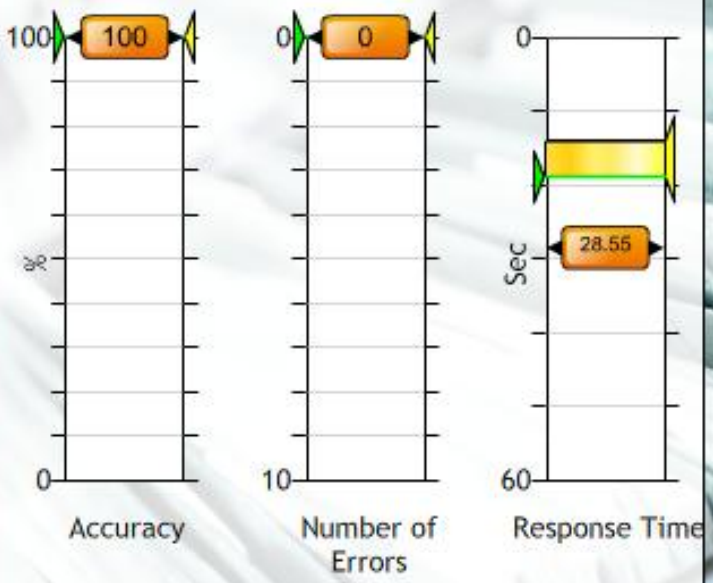
Secret Files

Your score :

Accuracy	100 %
Number of Errors	0
Response Time	28.55 Sec

Publish this score

Your results:



Your result

Results of the best 25%

Median

Play again

Results

Comments

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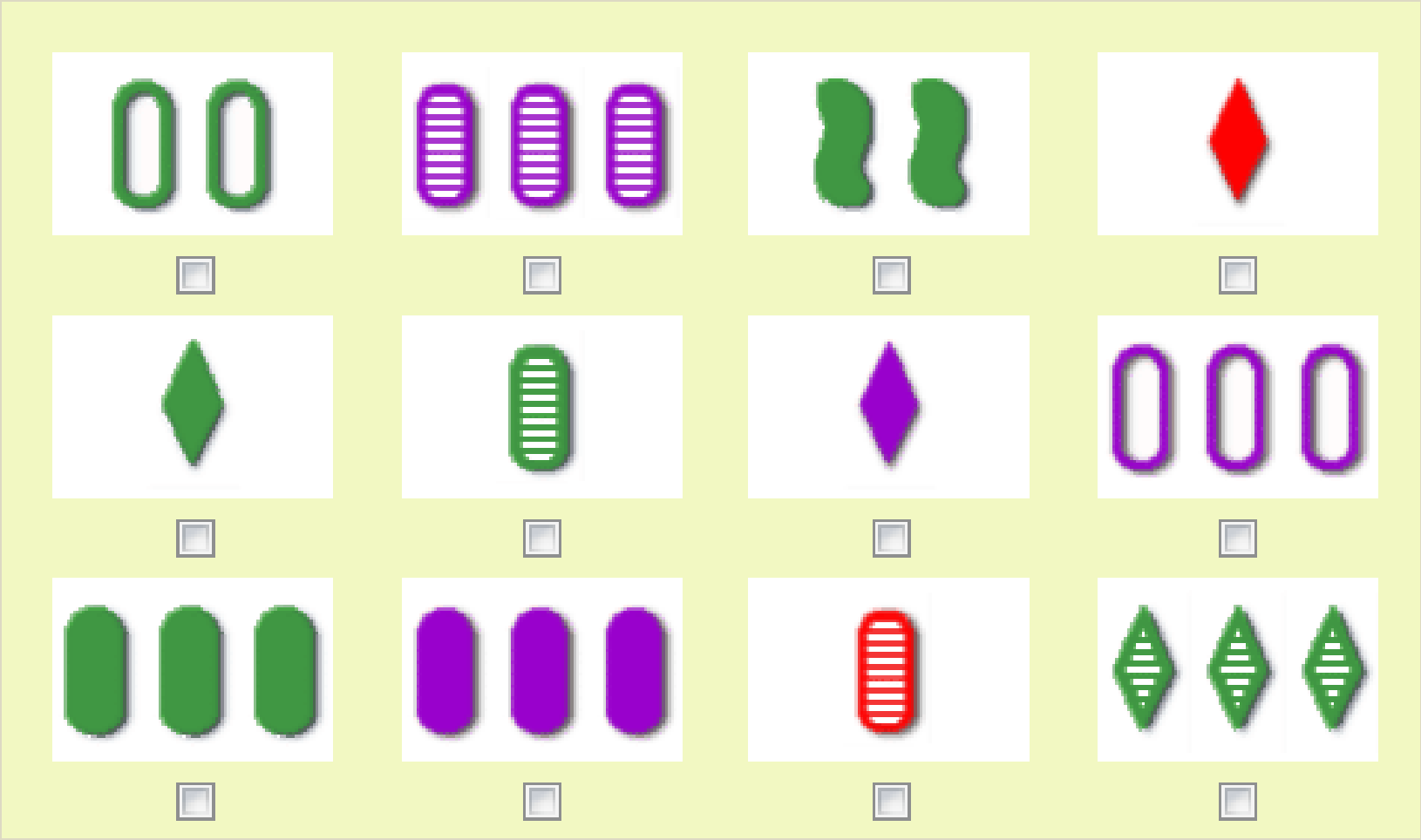
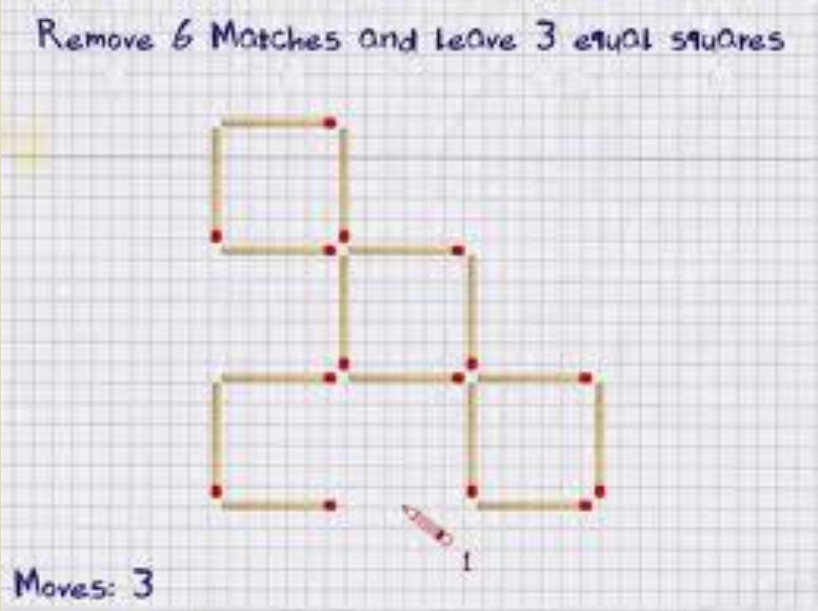
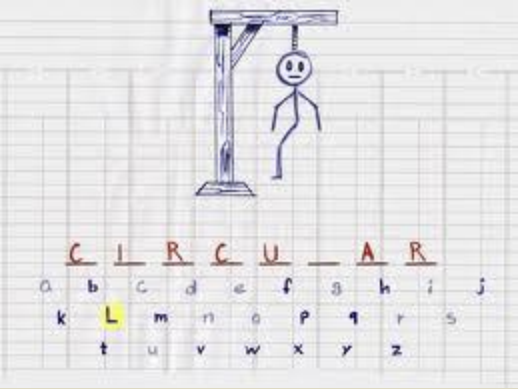
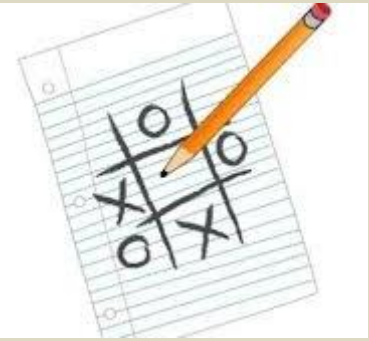
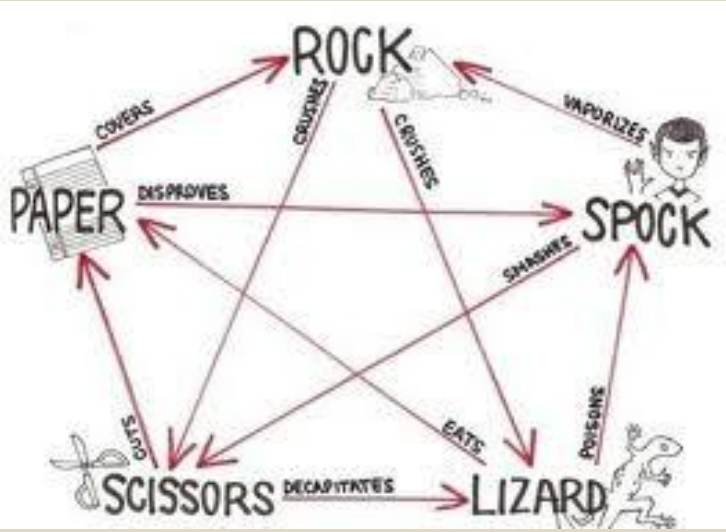


Even without technology



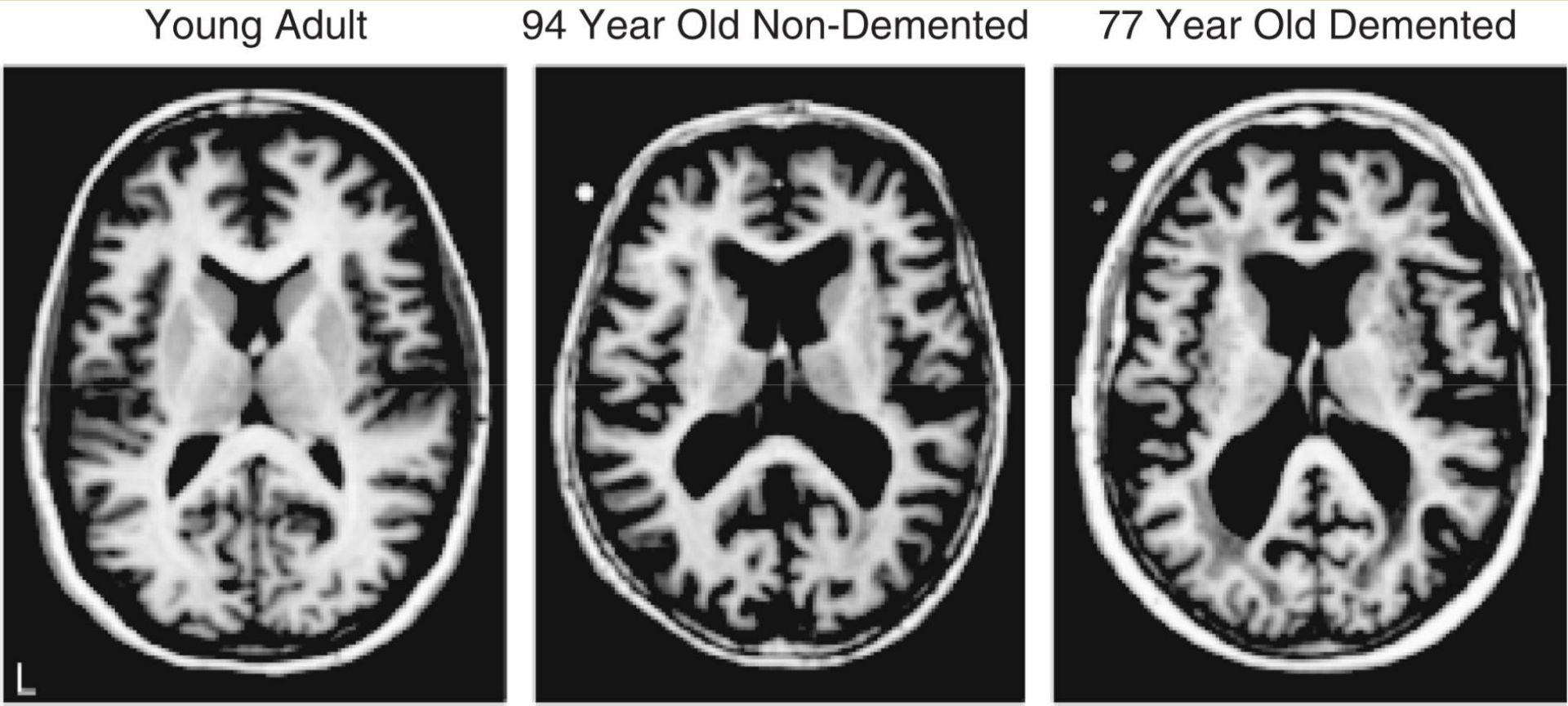






What to remember from today?

- Normal mental decline due to aging is affected by genetics but can be slowed with training
- Training does not always generalize so use a variety of tasks which target different types of mental ability
  - Include those that focuses on components of “fluid” mental abilities that decline with age
    - EX: reaction time
- Staying physically healthy will aid in slowing down mental decline



doi: 10.1016/S0731-2199(08)20009-9