

## Optimizing Brain Health: Take home points for you, your family, and your patients

**Victoria Braund, MD, FACP, CMD**  
Director, Division of Geriatrics  
NorthShore University HealthSystem,  
Evanston IL



1

### Objectives:

- Understand how the “Silver Tsunami” is causing an increase in the incidence of dementia
- Discuss evidence based recommendations for optimal brain health
- Summarize recommendations for patient education



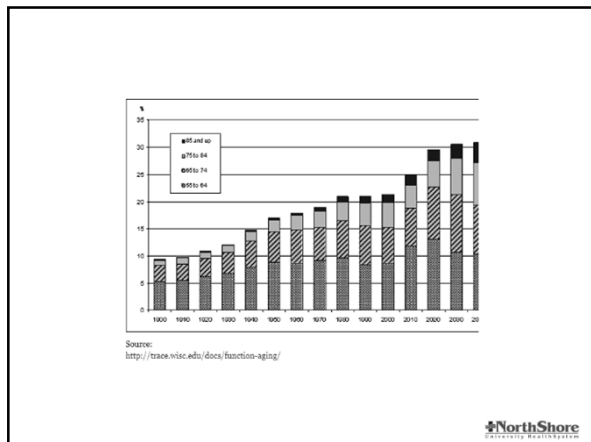
2



3



4




5



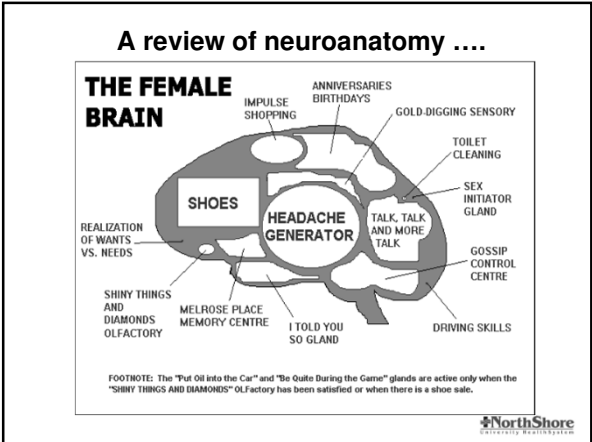
6

**So we need to keep  
all these aging brains healthy....**

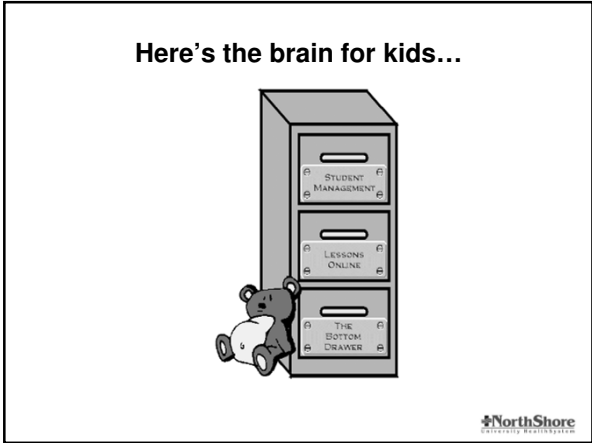
**But first, a review of neuroanatomy....**



7



8




9



10


**Normal brain aging :  
the good news**

- The older brain "works harder" than a younger brain
- Familiar skills, ability, and knowledge are preserved



TheHealthSite.com


UpToDate®, accessed 12/20/18




11

**Normal brain aging :  
the not-so-good news**

- Processing speed, working memory and executive function decrease
- Attention span decreases – *No more multi-tasking*
- Learning new info decreases after age 30 – *No Snapchat® for you*




UpToDate®, accessed 12/20/18



12

**So we need to keep  
all these aging brains healthy....**

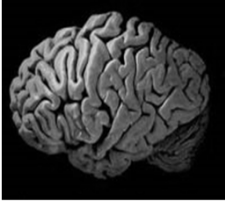

**What do we tell our  
patients and our moms?**



13

## What doesn't work for brain health???

- Brain games
- Vitamins and supplements

14



**FEDERAL TRADE COMMISSION**  
PROTECTING AMERICA'S CONSUMERS

**Lumosity to Pay \$2 Million to Settle FTC Deceptive Advertising Charges for Its "Brain Training" Program**

Company Claimed Program Would Sharpen Performance in Everyday Life and Protect Against Cognitive Decline

January 5, 2016

The creators and marketers of the Lumosity "brain training" program have agreed to settle Federal Trade Commission charges alleging that they deceived consumers with unbounded claims that Lumosity games can help users perform better at work and in school, and reduce or delay cognitive impairment associated with age and other serious health conditions.

As part of the settlement, Lumos Labs, the company behind Lumosity, will pay \$2 million in redress and will notify subscribers of the FTC action and provide them with an easy way to cancel their auto-renewal to avoid future billing.

"Lumosity preyed on consumers' fears about age-related cognitive decline, suggesting their games could stave off memory loss, dementia, and even Alzheimer's disease," said Jessica Rich, Director of the FTC's Bureau of Consumer Protection. "But Lumosity simply did not have the science to back up its claims."

**Related Cases**  
Lumos Labs, Inc. (Lumosity Mobile and Online Cognitive Game)

**Related Refunds**  
Lumosity Refunds

**Related Actions**  
Concurring Statement of Commissioner Julie Brill in the Matter of Lumos Labs, Inc. ("Lumosity"), Kunal Sarkar, and Michael Scanlon


**For Consumers**  
Blog: "Brain training" with Lumosity — does it really work?  
Health & Fitness



15

## The problem with all supplements

- Not FDA approved!!!
- Effectiveness ????
- Safety????
- Purity????
- Medication interactions??
  - Warfarin? DM meds?



16

Lancet Neurology, 2012; 11(10):851-6. doi:10.1016/S1473-9724(12)70206-5. Epub 2012 Sep 5.

**Long-term use of standardised Ginkgo biloba extract for the prevention of Alzheimer's disease (GuidAge): a randomised placebo-controlled trial.**

Valera B<sup>1</sup>, Cohen NJ, Castel PA, Benoit O, Desjardins JF, Dupuis B, Grandjean L, Poiroux C, Piatek F, Robert P, Tranchesi J, Gagnon P, Mathias-Cornilard A, Andrew B, Guisbiers-Milou-Clouet

Collaborators (117)


Author information

**Abstract**  
**BACKGROUND:** Prevention strategies are urgently needed to tackle the growing burden of Alzheimer's disease. We aimed to assess efficacy of long-term use of standardised ginkgo biloba extract for the reduction of incidence of Alzheimer's disease in elderly adults with memory complaints.

**METHODS:** In the randomised, parallel-group, double-blind, placebo-controlled OutAge clinical trial, we enrolled adults aged 70 years or older who spontaneously reported memory complaints to their primary-care physician in France. We randomly allocated participants in a 1:1 ratio according to a computer-generated sequence to a twice per day dose of 120 mg standardised ginkgo biloba extract (EGb761) or matched placebo. Participants and study investigators and personnel were masked to study group assignment. Participants were followed-up for 5 years by primary-care physicians and in expert memory centres. The primary outcome was conversion to probable Alzheimer's disease in participants who received at least one dose of study drug or placebo, compared by use of the log-rank test. This study is registered with ClinicalTrials.gov, number NCT00226530.

**FINDINGS:** Between March, 2002, and November, 2004, we enrolled and randomly allocated 2054 participants, of whom 1426 received at least one dose of ginkgo biloba extract and 1414 received at least one dose of placebo. By 5 years, 61 participants in the ginkgo group had been diagnosed with probable Alzheimer's disease (1.2 cases per 100 person-years) compared with 73 participants in the placebo group (1.4 cases per 100 person-years; hazard ratio [HR] 0.84, 95% CI 0.65–1.10; p=0.306), but the risk was not proportional over time. Incidence of adverse events was much the same between groups. 75 participants in the ginkgo group died compared with 82 participants in the placebo group (0.94, 0.69–1.28; p=0.68). 65 participants in the ginkgo group had a stroke compared with 60 participants in the placebo group (risk ratio 1.12, 95% CI 0.77–1.63; p=0.57). Incidence of other haemorrhagic or cardiovascular events also did not differ between groups.



**INTERPRETATION:** Long-term use of standardised ginkgo biloba extract in this trial did not reduce the risk of progression to Alzheimer's disease compared with placebo.



17

## Supplements to Consider (none are FDA approved)

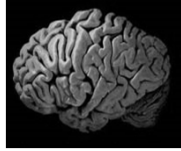
- B12/ B complex vitamin?
  - Esp if B12 is low normal
- Curcumin?

18

## What can we do now to keep our brains healthy??

- Move it!
- Feed your brain!
- Get good sleep
- Wear your hearing aids
- Use it or lose it!
- Heart health
- Be cool!



NorthShore  
UNIVERSITY HEALTHSYSTEM

19

## Move it!

- There is no pill that can give the benefits of a regular exercise program
- Improves circulation, balance, strength
- Linked to better thinking!



NorthShore  
UNIVERSITY HEALTHSYSTEM

20

## Move It!

- Studies show that it is never too late to start
- Encourage mom to find something that is fun
  - Senior center?
  - YMCA?
  - Walk with a friend?
  - Get a dog?



NorthShore  
UNIVERSITY HEALTHSYSTEM

21

## Feed Your Brain!

- More and more studies point to good nutrition as a cornerstone of health
- Focus on fresh, "real" foods!

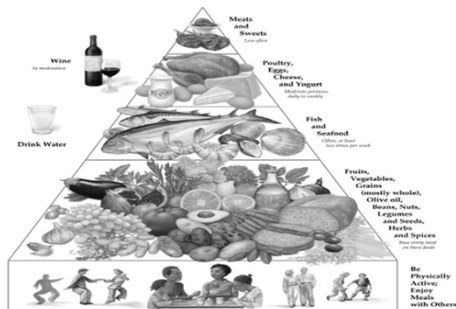


NorthShore  
UNIVERSITY HEALTHSYSTEM

22

## Mediterranean Diet Pyramid

A contemporary approach to delicious, healthy eating.

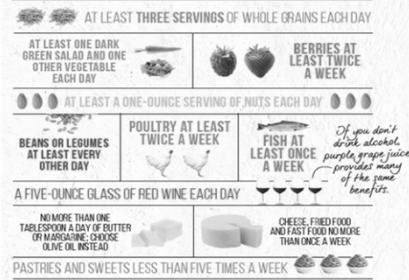


© 2009 Oldways Preservation and Exchange Trust • www.oldwayspt.org

hore

23

## WHAT'S ON THE MIND DIET?



HuffPost

NorthShore  
UNIVERSITY HEALTHSYSTEM


24

The JAMA Network **Sleep**

From: **Sleep-Disordered Breathing, Hypoxia, and Risk of Mild Cognitive Impairment and Dementia in Older Women by Dr Yaffe**  
 JAMA. 2011;306(6):613-619. doi:10.1001/jama.2011.1115

We found that among women with a mean age of 82 years, sleep-disordered breathing was associated with an increased risk of cognitive impairment.

Our results indicate that this relationship seems to be related primarily to measures of hypoxia.

Date of download: 1/12/2016 Copyright © 2016 American Medical Association. All rights reserved. 

25


The JAMA Network **Sleep**

From: **Sleep-Disordered Breathing, Hypoxia, and Risk of Mild Cognitive Impairment and Dementia in Older Women by Dr Yaffe**  
 JAMA. 2011;306(6):613-619. doi:10.1001/jama.2011.1115

We found that among women with a mean age of 82 years, sleep-disordered breathing was associated with an increased risk of cognitive impairment.

Our results indicate that this relationship seems to be related primarily to measures of hypoxia.

*Dr Mercury's talk at 5:30 tonight!*

Date of download: 1/12/2016 Copyright © 2016 American Medical Association. All rights reserved. 


26

**No Geriatrics lecture is complete without a Benadryl® slide!**

**Benadryl® (diphenhydramine) is Bad!**

**Benadryl® = the PM as in Tylenol PM**

Do you know why??




27

**Benadryl® (diphenhydramine)**


- Anticholinergic medications
  - Dry eyes, dry mouth, constipation, urinary retention, mental confusion
  - Significant side effects in seniors
- It's really an allergy med!
  - Not indicated for sleep...that's just a side effect!

Should not be used routinely for sleep!




28

**Hearing and Cognition**



- Many recent studies link hearing problems to brain shrinkage
- Use of hearing aids keeps people aware and connected



29

JAMA Otolaryngology-Head & Neck Surgery | Original Investigation



**Association of Age-Related Hearing Loss With Cognitive Function, Cognitive Impairment, and Dementia**  
 A Systematic Review and Meta-analysis


David G. Loughrey, BA(Hon), Michelle E. Kelly, DPsychBSc, George A. Kelley, DA, Sabina Brennan, PhD, Brian A. Lawlor, MD, FRCP, FRCPsych

**IMPORTANCE:** Epidemiologic research on the possible link between age-related hearing loss (ARHL) and cognitive decline and dementia has produced inconsistent results. Clarifying this association is of interest because ARHL may be a risk factor for outcomes of clinical dementia.

**OBJECTIVES:** To examine and estimate the association between ARHL and cognitive function, cognitive impairment, and dementia through a systematic review and meta-analysis.

**DATA SOURCES AND STUDY SELECTION:** A search of PubMed, the Cochrane Library, EMBASE, and SCOPUS from inception to April 15, 2016, with cross-referencing of retrieved studies and personal files for potentially eligible studies was performed. Keywords included hearing, cognition, dementia, and Alzheimer disease. Cohort and cross-sectional studies published in peer-reviewed literature and using objective outcome measures were included. Case-control studies were excluded.


 Invited Commentary page 127  
 Supplemental content



30

JAMA Otolaryngology-Head & Neck Surgery | Original Investigation  
**Association of Age-Related Hearing Loss With Cognitive Function, Cognitive Impairment, and Dementia**  
 A Systematic Review and Meta-analysis

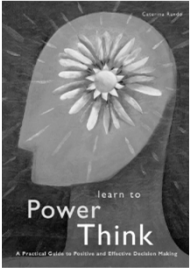

**CONCLUSIONS AND RELEVANCE** Age-related hearing loss is a possible biomarker and modifiable risk factor for cognitive decline, cognitive impairment, and dementia. Additional research and randomized clinical trials are warranted to examine implications of treatment for cognition and to explore possible causal mechanisms underlying this relationship.



31

**Use it or Lose It!**


- Pay attention!
- Never stop learning
- Word games
- Stay active socially
- Keep organized

32

**“Cognitive retraining”**

- Novel neural challenges make other parts of the brain help
- “Compensatory scaffolding” may help maintain function and cognition
- UpToDate®, accessed 12/20/18



33



Clifton Park Canine Crew





34

**Heart Health**

Management of these...

- Blood pressure
- Lipids
- Obesity
- Diabetes
- Smoking



...can lead to this

35

**Be Cool!**

- Focus your attention
  - Quit multitasking
- Reduce stress
- Choose to snooze
- Structure your environment
  - Calendars, key rack

36

## Resources

- [https://alz.org/help-support/brain\\_health](https://alz.org/help-support/brain_health)
- [www.AARP.org](http://www.AARP.org)
- *The Memory Bible* and *The Memory Prescription* by Dr. Gary Small
- <https://www.aarp.org/health/brain-health/>



37

alzheimers.org/association

About Home Events Publications E-news

Alzheimer's & Dementia Help & Support Research Get Involved Local Resources Search Q

RESEARCH CENTER

### Brain Health

Research is all evolving, but evidence is strong that people can reduce their risk of cognitive decline by making key lifestyle changes, including participating in regular physical activity, staying socially engaged, and maintaining good heart health.

Select a Topic

- 10 Ways to Love Your Brain**  
Learn key lifestyle habits that can help keep your brain and heart healthy.
- Stay Physically Active**  
Even the smallest amount of time in your daily routine can reduce your risk of dementia.
- Adopt a Healthy Diet**  
Some diets can help reduce your risk of dementia and may reduce the risk of dementia.



38

~~Thank you~~  
Enjoy your day!



39