



## Prevention of Cognitive Changes, Decline and Dementia: The Role of Lifestyle Changes

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# ILTCI Mobile App Download Instructions

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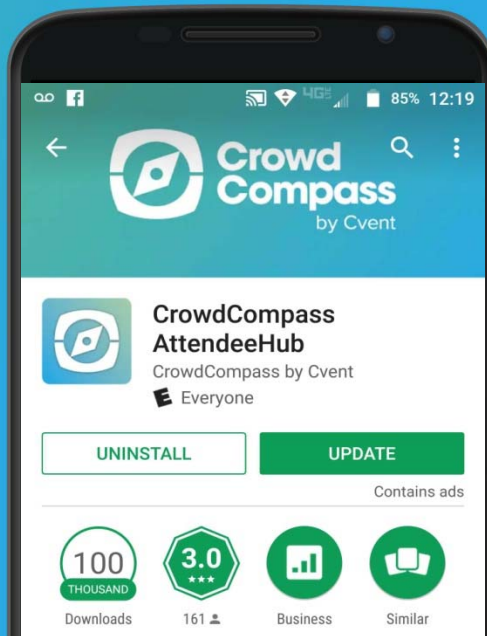
- 1) Type **<https://crowd.cc/iltci19>** in web browser
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android

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- 1) You’ll be using the web version of the app. Open the web browser, click the BlackBerry menu button, select “Go To” and type **<https://crowd.cc/iltci19>**



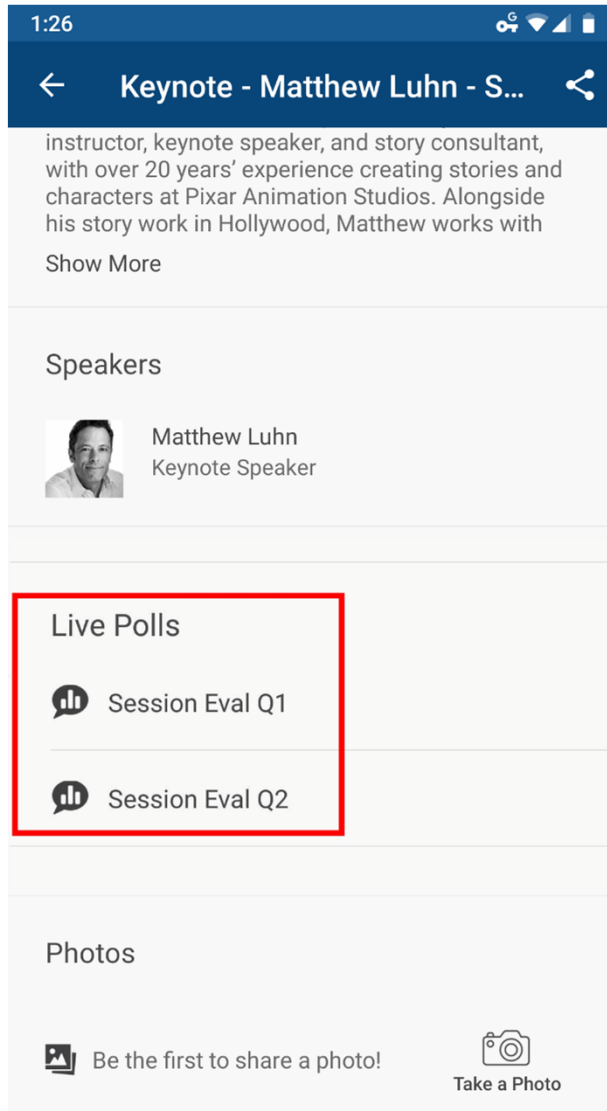
You can also just go to your app store and search ‘AttendeeHub’. Once installed search ‘ILTCI’ and you’ll find our app.

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# Live Polling & Session Survey Instructions



Once you are in the app go to the schedule and the session you are in.

Scroll to the bottom to find the Live Polling questions.

Session survey questions can be found in this section as well.

Web Based version of app:  
<https://crowd.cc/iltci19>

# Disclosures



Consulting Fee: Merck and Company – Adjudication Committee

Consulting Fee from Eli Lilly – US Clinicians Advisory Board

Research support: Eli Lilly, Novartis, Amgen

Other research support: NIA/NIH/PCORI

Investments: None

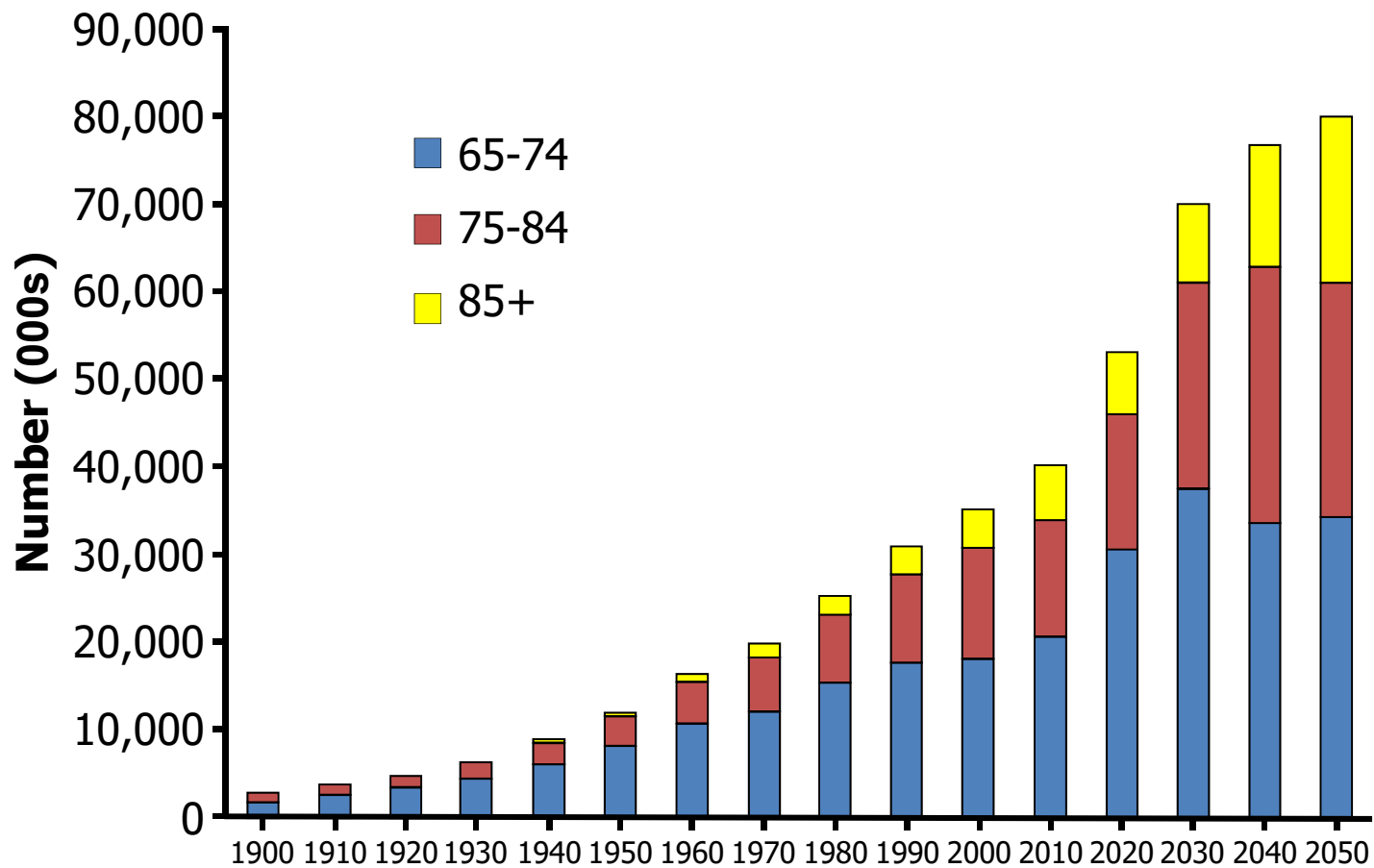
Speakers' bureaus: N/A

# Learning Objectives



- Overview of the field of cognitive aging and the role of prevention through lifestyle changes
- Review nutrients in foods thought to be important in cognitive aging
- Review the MIND diet and role in prevention of cognitive decline and dementia

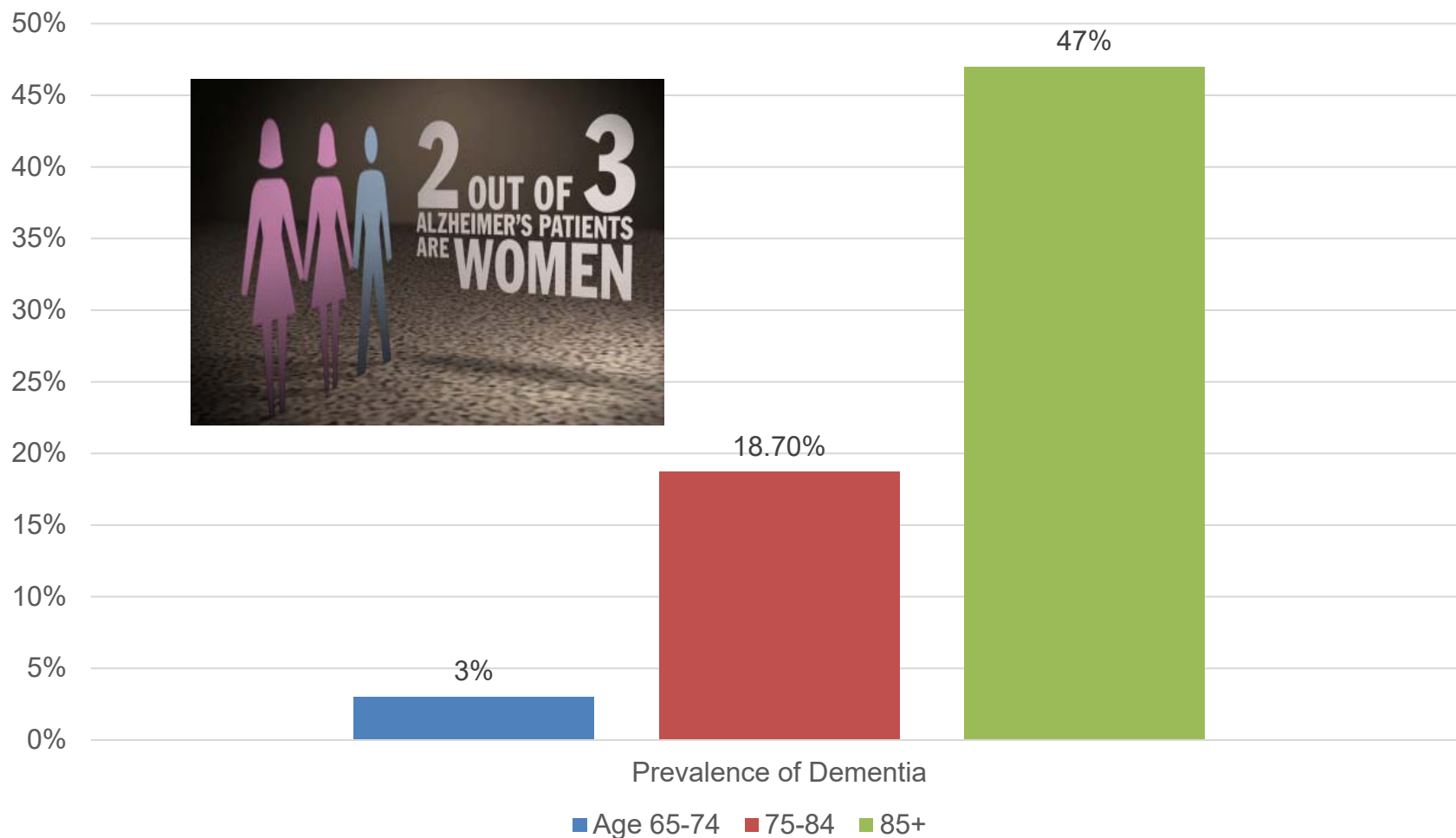
# Number of Persons Over 65 years in US



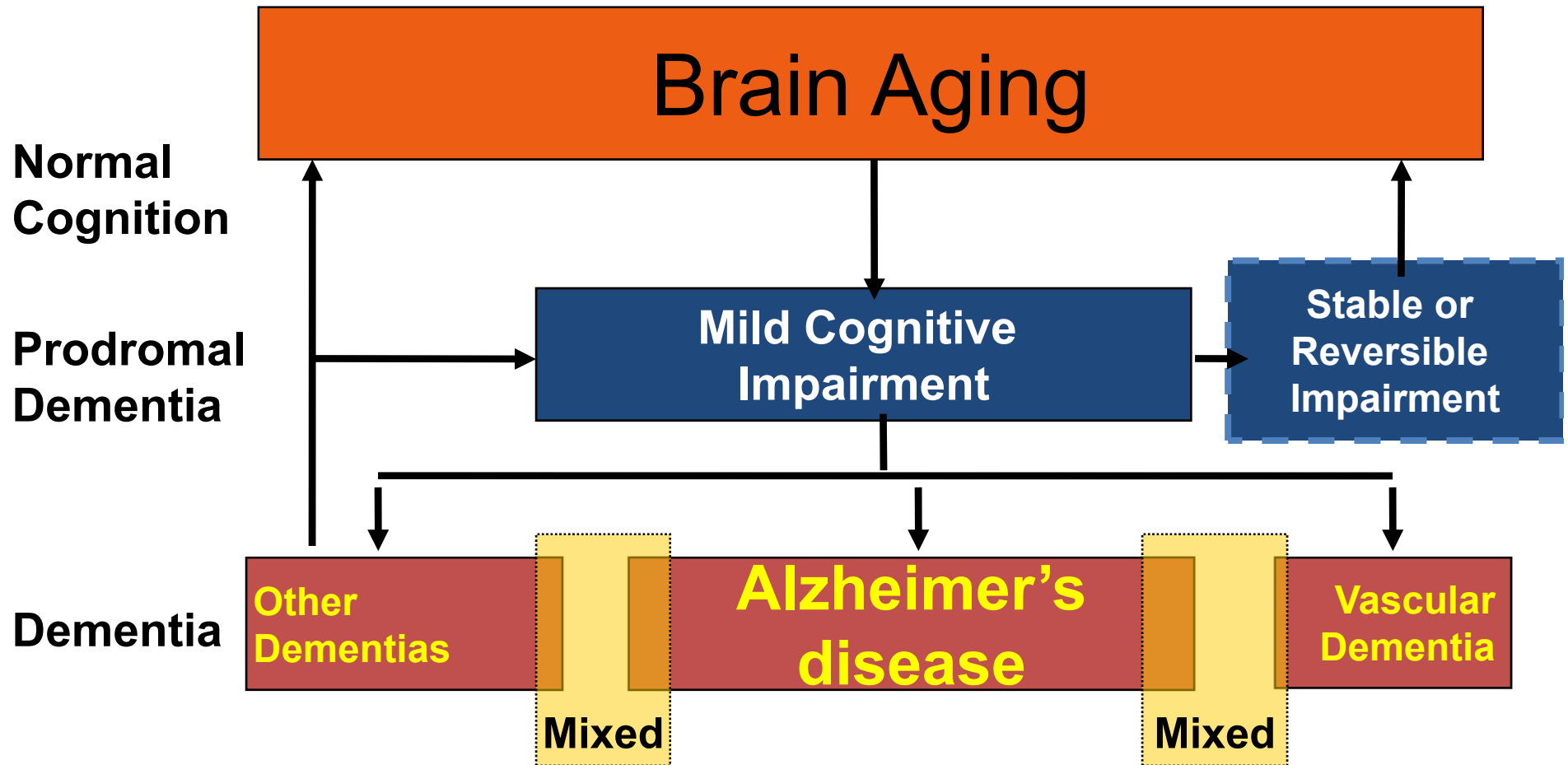
# Epidemiology of Dementia



## Prevalence Rises Sharply with Age



# Conceptual Framework of Cognition, Decline and Dementia



Golomb, Kluger, Ferris Neuroscience News, 2000



# Factors Associated with Cognitive Decline and Risk of Developing Alzheimer's Disease



## Risk Factors

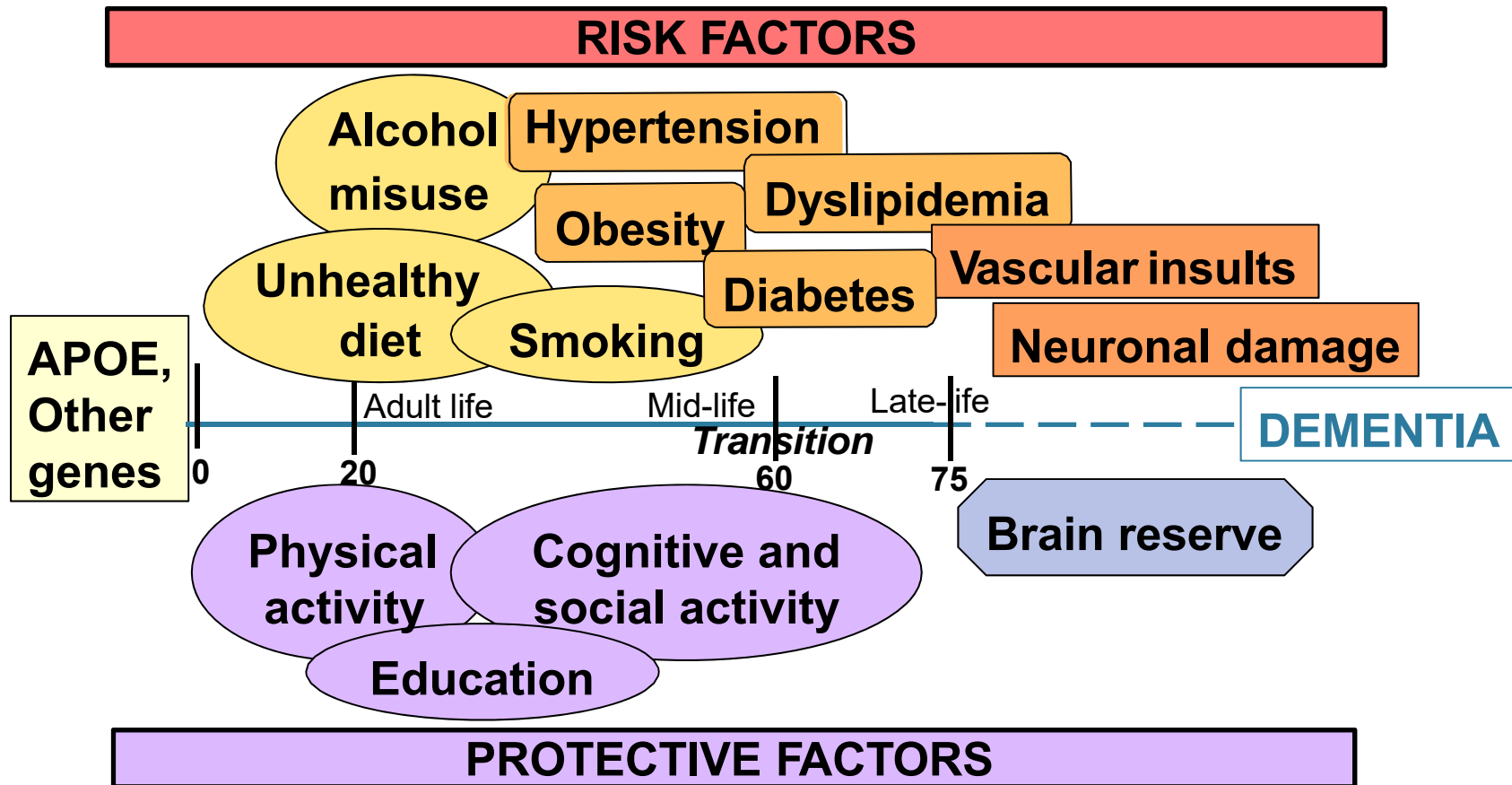
- **Age**
- **Women**
- Genetic mutations
  - Apolipoprotein E  $\epsilon$ 4 allele \*
- Diabetes\*
- **Cardiovascular/ Cerebrovascular disease\***
- Depressive symptoms\*
- Psychological distress
- Parkinsonian signs
- Race/Ethnicity

## Protective Factors

- Genetics: Apolipoprotein E  $\epsilon$ 2 allele
- Years of education
- Cognitive activities
- **Physical activities** \*
- Social activities
- Estrogen- timing
- **Nutrition**

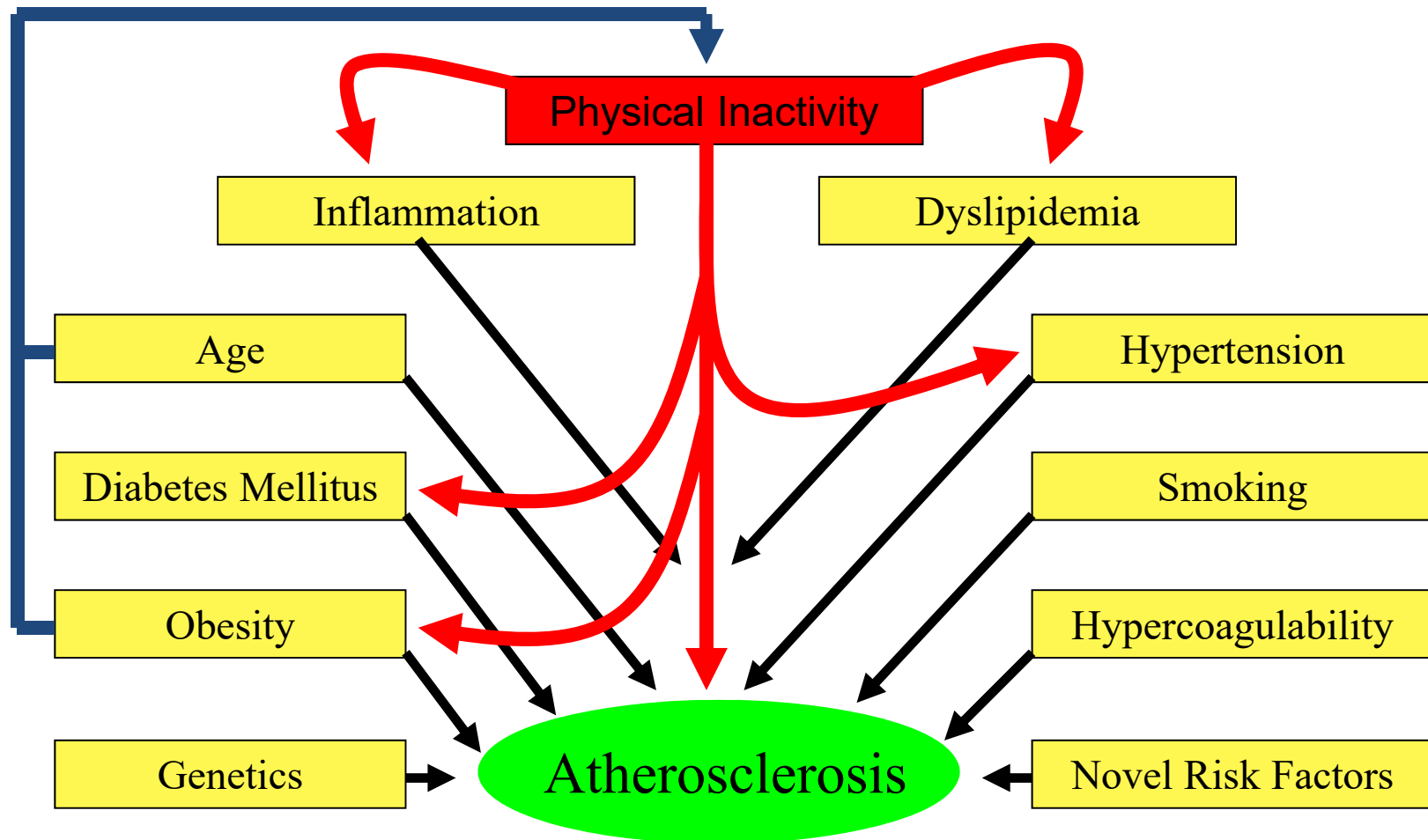
\*effect stronger in women

# Alzheimer's Disease is a Multifactorial Disease



*Mangialasche, Kivipelto et al., 2012*

# Adverse Effects of Physical Inactivity



# Nutrients and Cognition



## Strong

- Vitamin E ( diet sources)
  - Nuts, GLV, oils and seeds
- Folate
  - Vegetables, whole grains
- DHA
  - Fish
- Saturated Fat
  - Red meat, dairy, baked goods

## Moderate to Limited

- Vitamin D
  - Fish, dairy
- Flavenoids
  - Tea, Coffee, Berries
- Carotenoids
  - GLV, fruit, Vegetables
- Monounsaturated Fat
  - Olive oil

# Key Points Regarding Diet and Nutrition



*Dietary Patterns* may have stronger effect on prevention of cognitive changes and decline than individual nutrients

- Mediterranean diet adherence associated with less decline measured by a cognitive screener (MMSE) or cognitive composite score\*
- DASH diet adherence related to greater reduction in incident Alzheimer's Disease compared to MEDI diet \*\*

\*Trichopoulou A, et al. ( Eur J Nutr. 2015, 54 (8):1311-21)

Valls-Pedret C, Sala-Vila A, Serra-Mir M, et al. Mediterranean Diet and Age-Related Cognitive Decline: A Randomized Clinical Trial. *JAMA Intern Med.* 2015;175(7):1094–1103.

\*\*Morris MC, et al. *Alzheimers Dement* 11, 1007-14

# Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND)



- Three-year research study that compares two weight loss diets and their effects on brain health and cognitive decline. Combination of lifestyle and behavioral changes to help lose weight and live a healthier life.
- Study designed with knowledge that an effort of rigorous compliance = 53% reduction in Alzheimer's Disease
- Moderately strong compliance = 35% reduction
- *Much easier to adhere to than other research-based healthful diets*

Morris MC et al published in *Alzheimer's & Dementia: The Journal of the Alzheimer's Association* (March 2015)

[www.mind-diet-trial.org](http://www.mind-diet-trial.org)



# Diet Comparison



Mediterranean diet — high in fish, healthy fats, vegetables and whole grains and has been found to reduce the risk of heart disease and cancer

DASH (Dietary Approaches to Stop Hypertension) diet — which is heavy in fruits, vegetables and low-fat dairy and has been found to reduce the risk of hypertension, heart attack and stroke.



# Tips for Preserving Cognitive Function



- .....eat a healthier diet!
- ..... get MOVING !
- .....sleep!
- .....reduce stress!
- .....improve social engagements!



# What We Want to Look Like in our 90s





Thank You!