

# Advances in the Management of Alzheimer's Treatment and Prevention

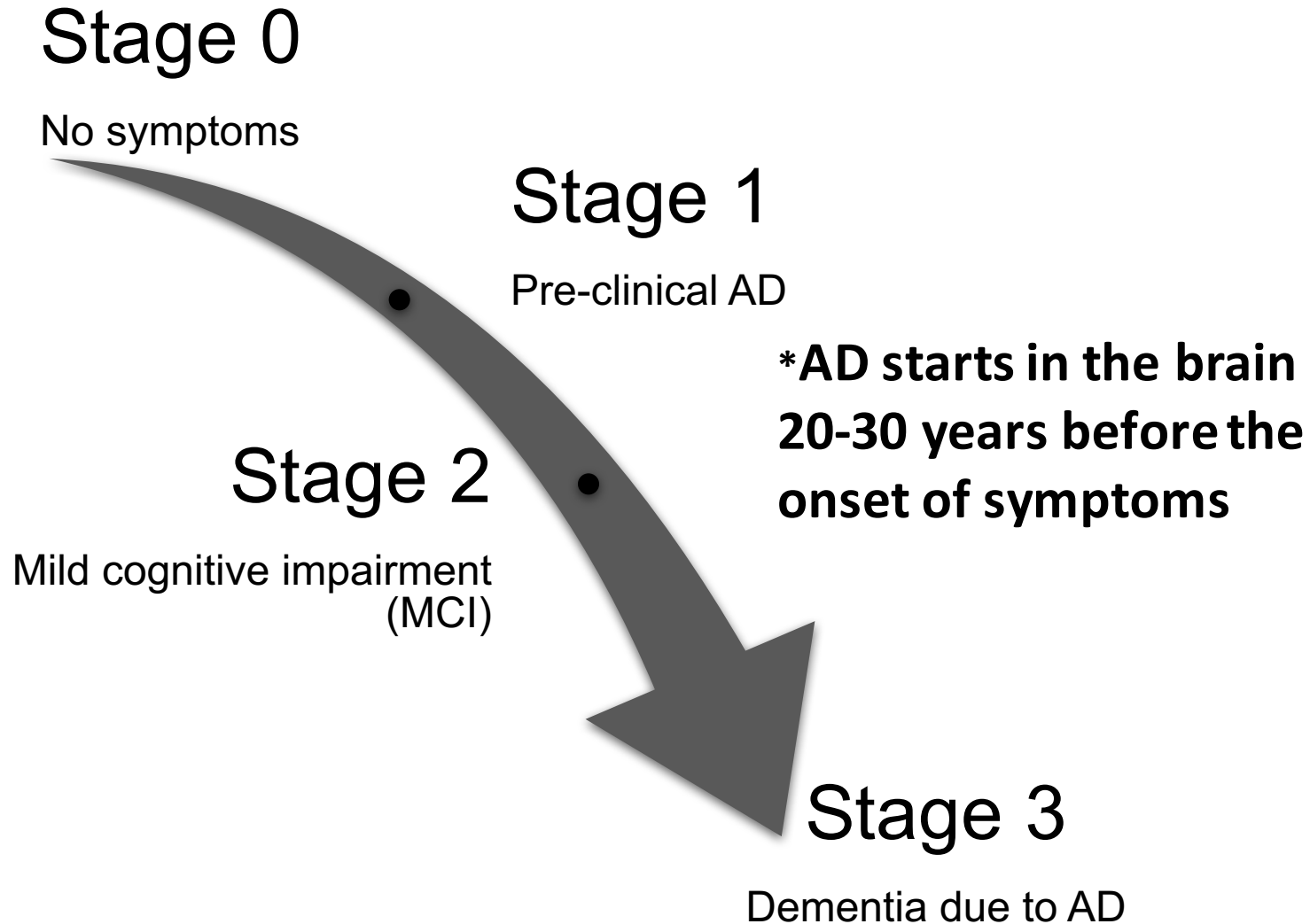
Hollie Webb, MSN, FNP-C  
Alzheimer's Prevention Clinic



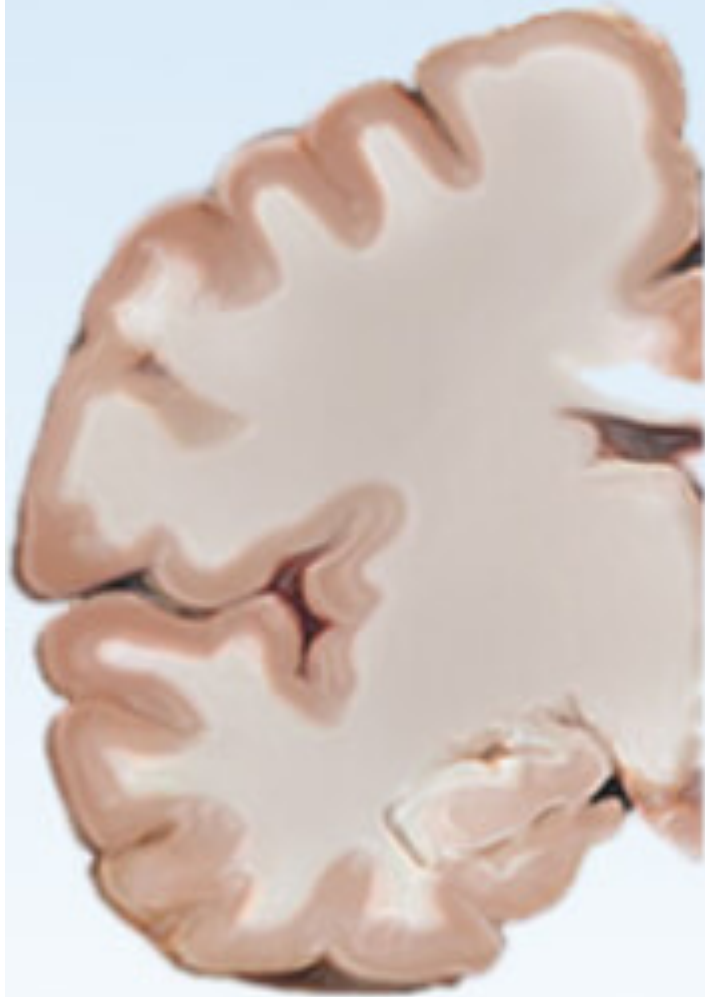
# Agenda

- Understanding Alzheimer's disease
- Clinical approach to Alzheimer's prevention
- MIND diet
- Multi-modal interventions used at the Alzheimer's Prevention Clinic
- Latest data in Alzheimer's Prevention

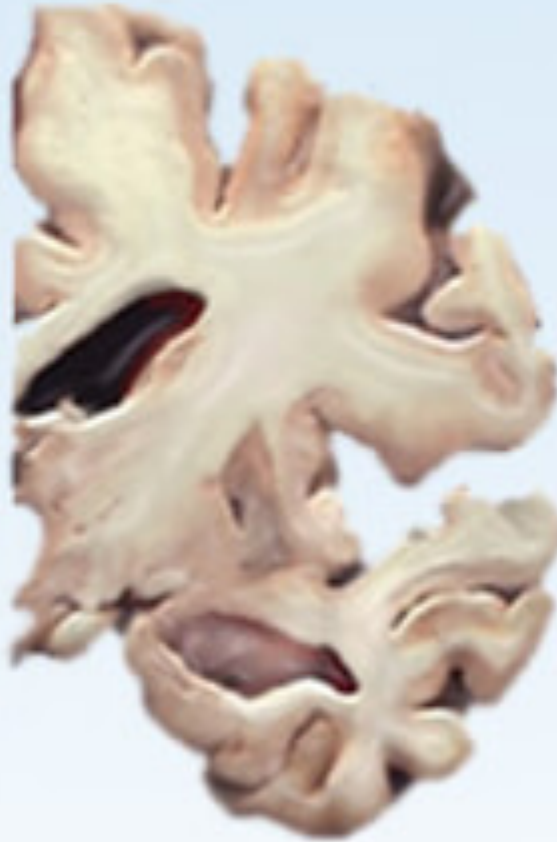
# Understanding Alzheimer's disease (AD)



**Healthy Brain**



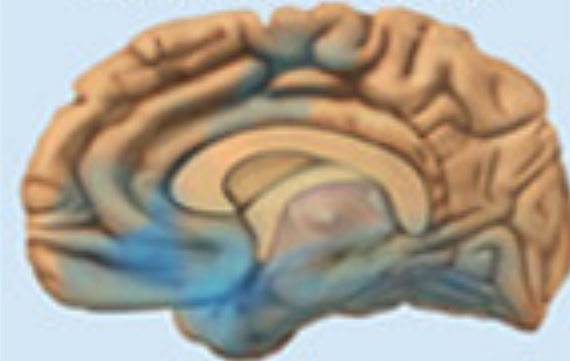
**Severe AD**



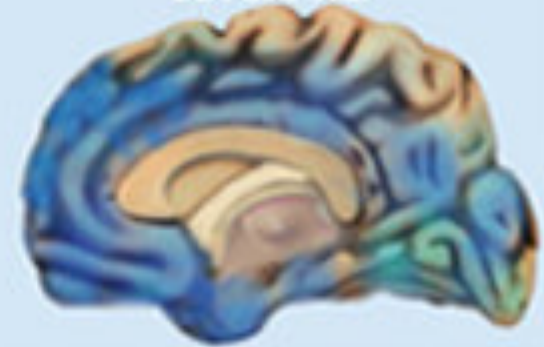
**Preclinical AD**



**Mild to Moderate AD**



**Severe AD**



## Non-Modifiable

- Age
- Family history
- Gender
- Race/ethnic background



## Risk Factors

## Modifiable

- Overweight
- Lack of physical activity
- Stress
- Sleeping patterns
- Environment
- Smoking

# 6<sup>th</sup>

leading cause of death in the United States  
and progressing to third

45% of those people  
are over 85

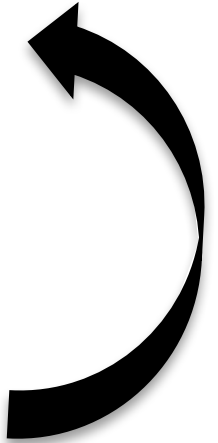
10% of those people  
are over 65

Five million Americans are suffering from AD

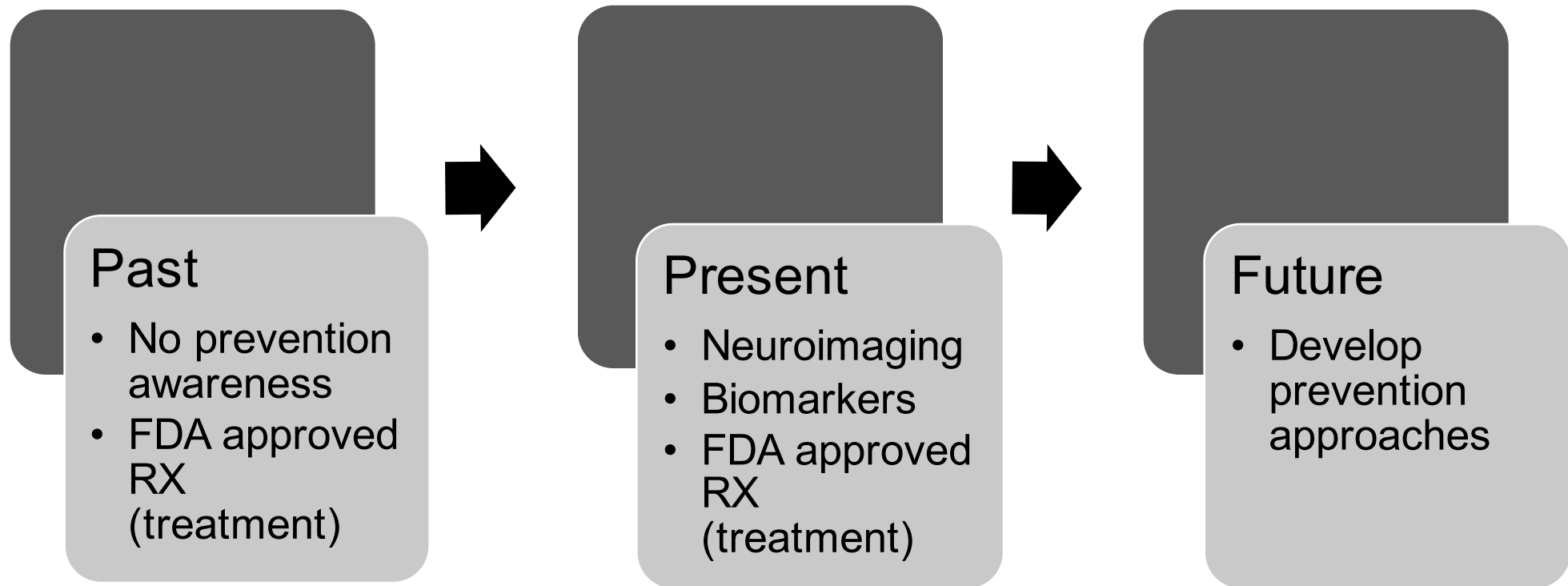
**\$236 billion in  
2016**



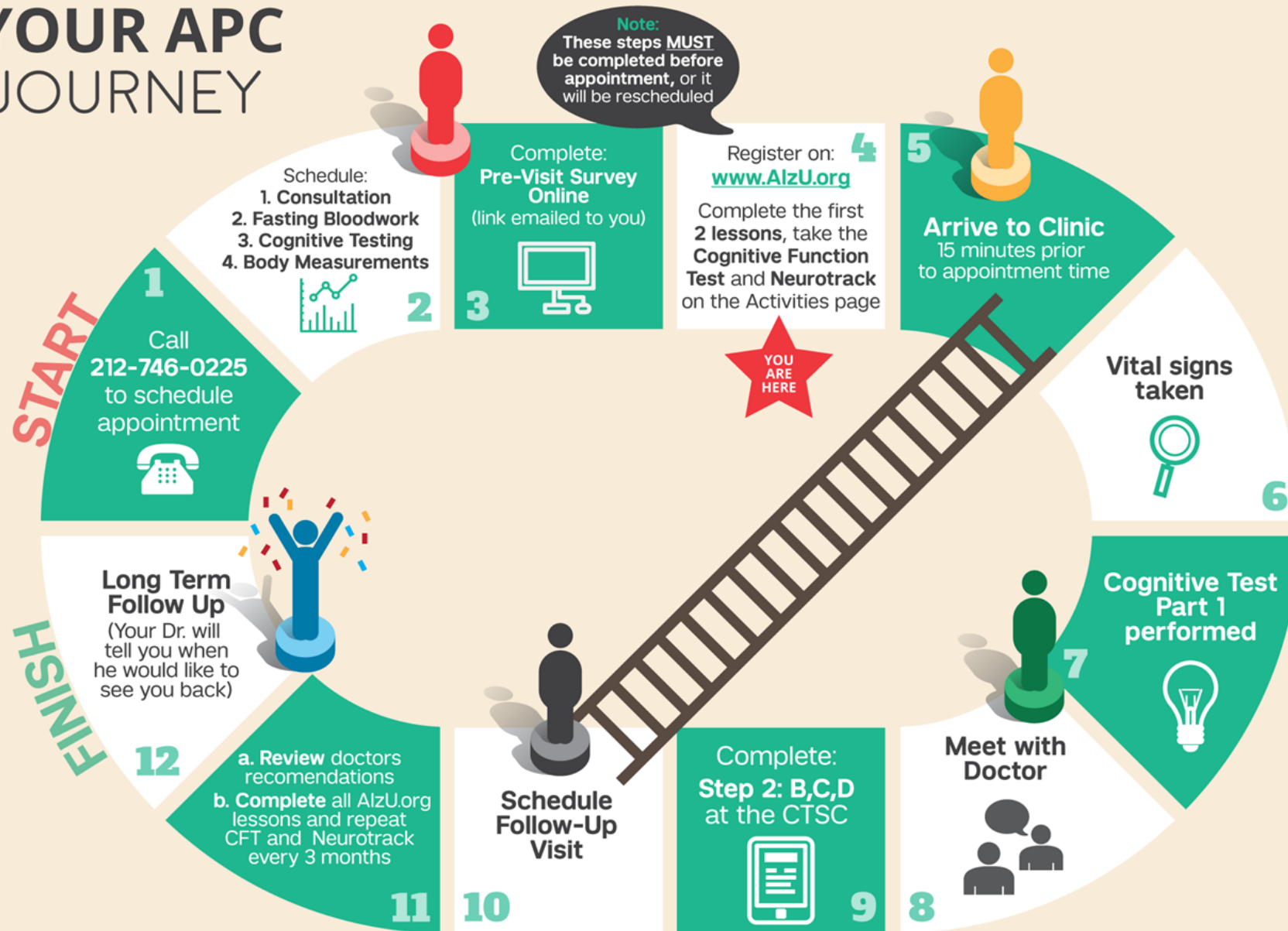
**\$1 trillion by  
2050**



# Clinical approach to Alzheimer's prevention



# YOUR APC JOURNEY







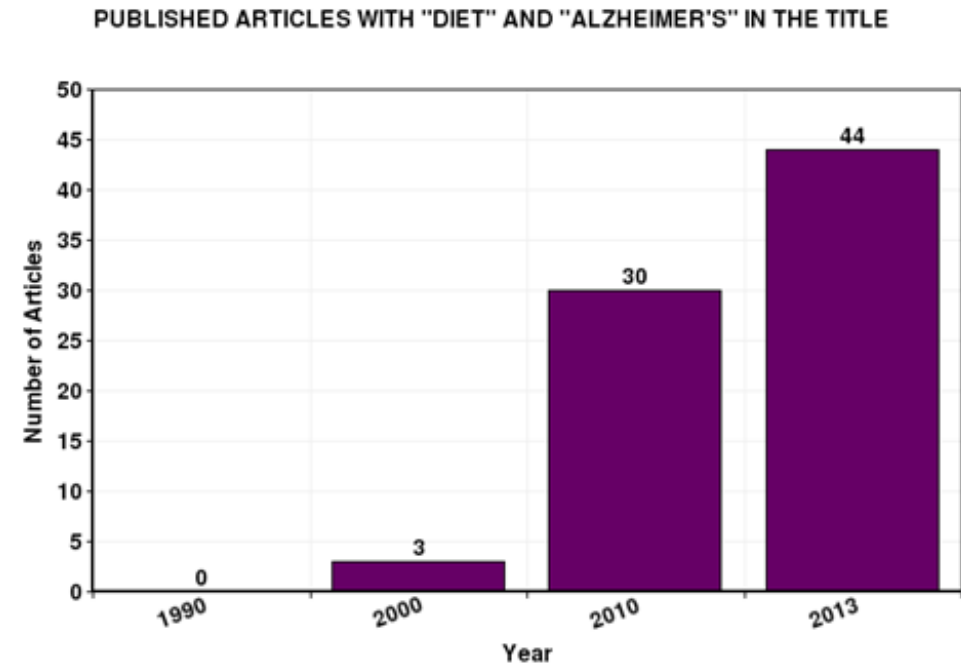
not a "one-  
size-fits-all"  
approach

evidenced-  
based

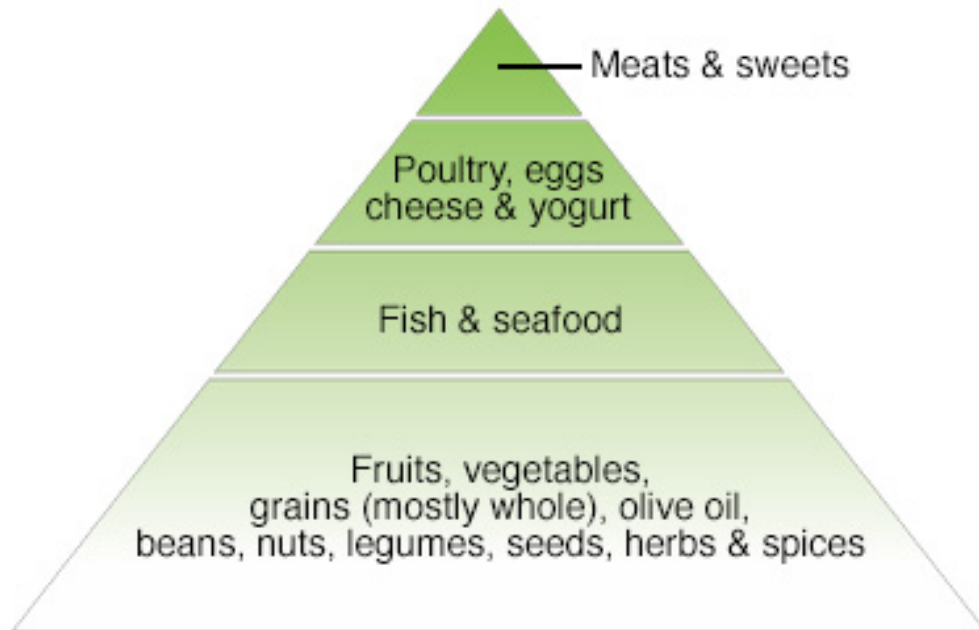
not an  
algorithm

# MIND Diet: What is it and why is it important?

- Exponential growth of clinical trial evidence
- Across spectrum of AD, MCI, cognitive decline, and AD risk reduction
- Therapeutic effects not limited to cognition
  - significant improvement in CV risk factors (e.g., BP, insulin resistance, body weight)



## Mediterranean diet



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## DASH diet

Type of food	Number of servings for 1600 - 3100 Calorie diets	Servings on a 2000 Calorie diet
Grains and grain products (include at least 3 whole grain foods each day)	6 - 12	7 - 8
Fruits	4 - 6	4 - 5
Vegetables	4 - 6	4 - 5
Low fat or non fat dairy foods	2 - 4	2 - 3
Lean meats, fish, poultry	1.5 - 2.5	2 or less
Nuts, seeds, and legumes	3 - 6 per week	4 - 5 per week
Fats and sweets	2 - 4	limited

[http://dashdiet.org/what\\_is\\_the\\_dash\\_diet.asp](http://dashdiet.org/what_is_the_dash_diet.asp)

# WHAT'S ON THE MIND DIET?



AT LEAST **THREE SERVINGS** OF WHOLE GRAINS EACH DAY

AT LEAST ONE DARK GREEN SALAD AND ONE OTHER VEGETABLE EACH DAY



BERRIES AT LEAST TWICE A WEEK



AT LEAST A ONE-OUNCE SERVING OF NUTS EACH DAY



BEANS OR LEGUMES AT LEAST EVERY OTHER DAY



POULTRY AT LEAST TWICE A WEEK



FISH AT LEAST ONCE A WEEK

*If you don't drink alcohol, purple grape juice provides many of the same benefits.*

A FIVE-OUNCE GLASS OF RED WINE EACH DAY



NO MORE THAN ONE TABLESPOON A DAY OF BUTTER OR MARGARINE; CHOOSE OLIVE OIL INSTEAD



CHEESE, FRIED FOOD AND FAST FOOD NO MORE THAN ONCE A WEEK

PASTRIES AND SWEETS LESS THAN FIVE TIMES A WEEK

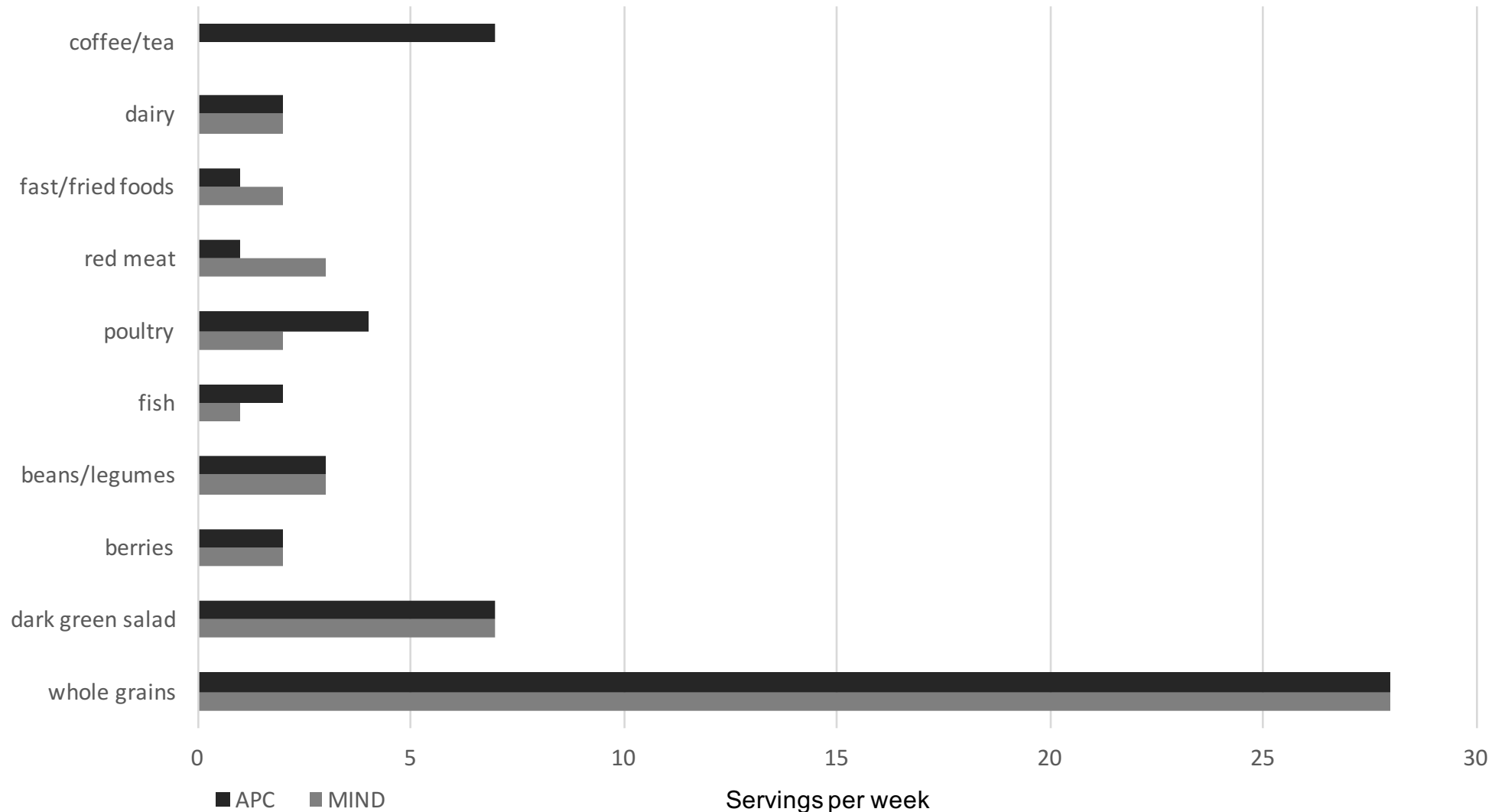


# Multi-modal interventions used at the Alzheimer's Prevention Clinic (APC)

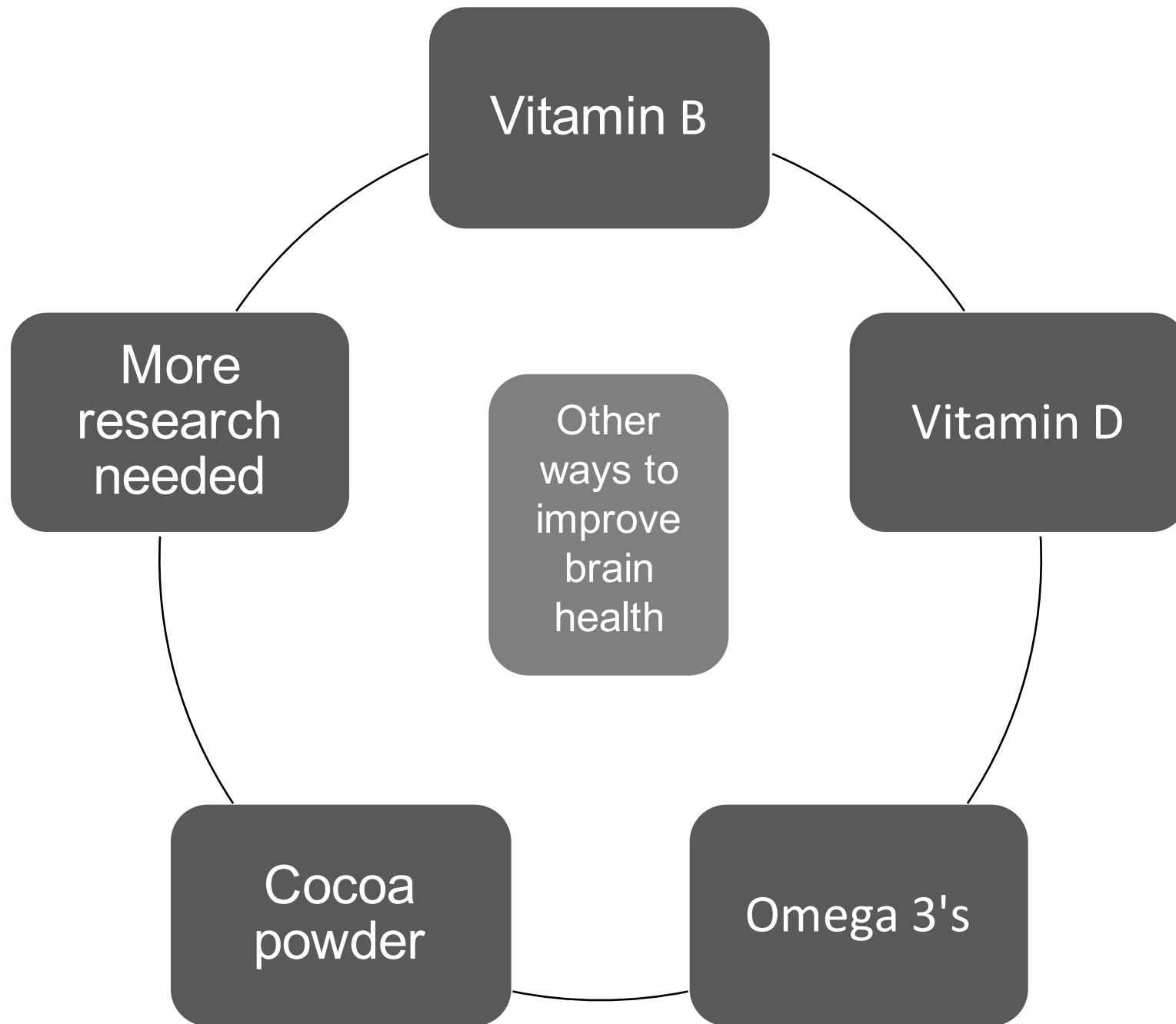
- Nutrition
- Physical Exercise
- Cognitive Activities
- Music interventions
- Regular f/u with primary doctor (CV risk factors)
- Stress reduction
- Social interaction
- Sleep hygiene
- Education – “Knowledge is Power”



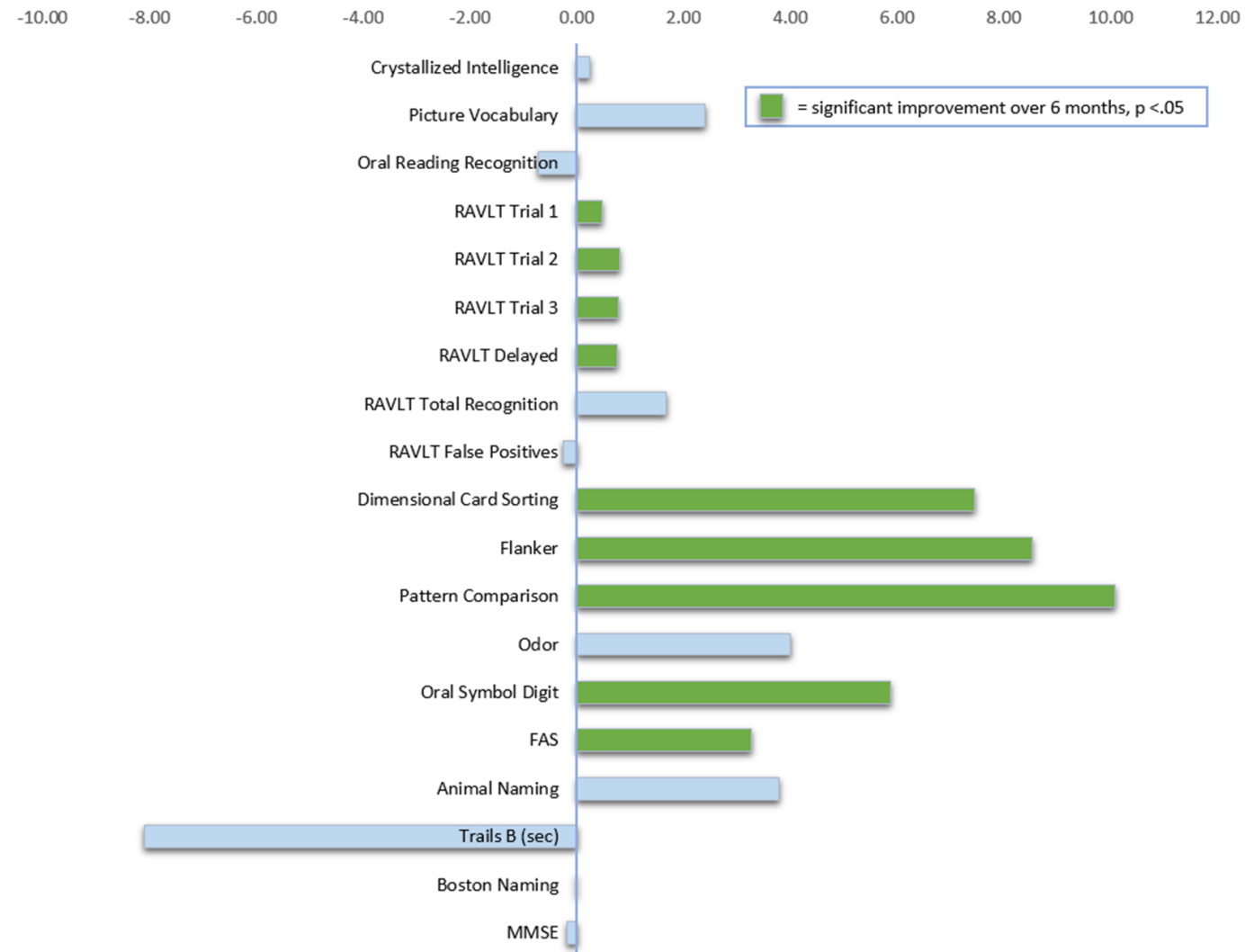
# APC diet vs. MIND diet



\*Not Included:  
EVOO  
Sweets  
Cheese  
Butter  
ETOH  
Other veggies



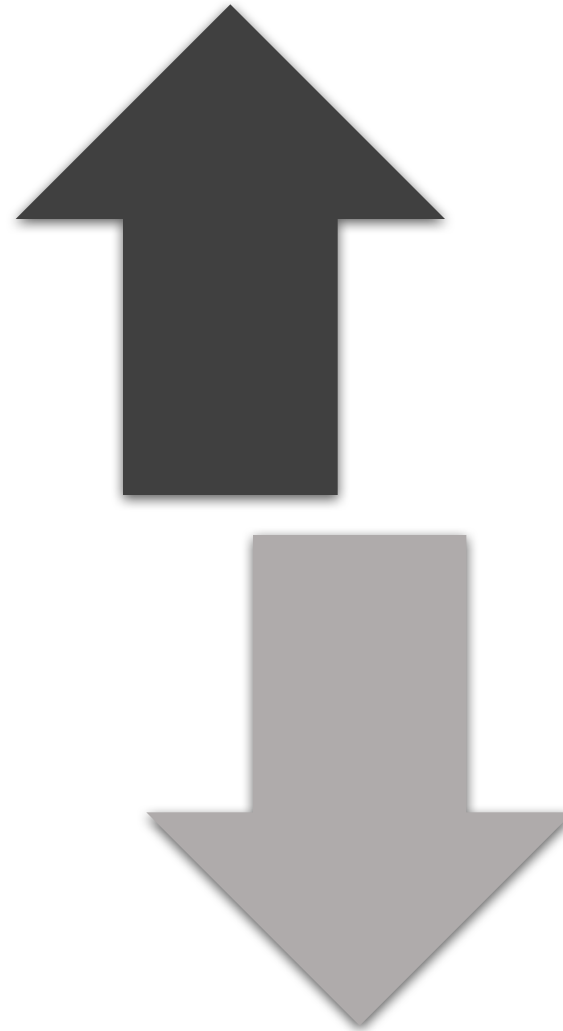
# Latest data in Alzheimer's prevention





# Results of Ketogenic Diet (23 patients) Krikorian et al.

- Improved verbal memory performance
- Weight loss
- ↓ Waist circumference
- ↓ Fasting glucose
- ↓ fasting insulin



High fat

Low carb

# Nutrigenomics/Epigenetics

## APOE 4

- Increase exercise
- Avoid non-organic produce outside of US or Mexico
- Monitor Omega 3:6 ratio

## MTHFR

- Change to methylated Vitamin B12/Folate (?)
- Monitor homocysteine

## APOE 4+lipids

- Reduce saturated fat (10%)
- Monitor anthropometrics

# Conclusion

- More hope now for AD than ever
- Clinical precision medicine approaches may yield the most benefit
- Until we have 110% proof that prevention is possible or until that "magic pill" comes, why wait. Intervene now!



**Alzheimer's Universe**  
[www.AlzU.org](http://www.AlzU.org)

# References

- Isaacson, R., & Ochner, C. (2016). *The Alzheimer's Prevention & Treatment Diet*. Garden City Park, NY: Square One Publishers
- Isaacson, R., et al. (Alzheimer's prevention education: if we build it, will they come?" *J Prev Alz Dis*. Sept 2014; 1(2) 91-98
- Krikorian, R., et al. "Dietary ketosis enhances memory in mild cognitive impairment." *Neurobiol Aging*. Feb 2012; 33(2):425e19-27
- Morris, M.C. et al. "MIND diet slows cognitive decline with aging." *Alzheimers Dement*. Sept 2015; 11(9): 1015-1022