

# MIND Diet for Dementia

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# Objectives



**Identify four major points that frame challenges related to nutrition.**



**Differentiate between *components* of nutrition and *patterns* of nutrition.**

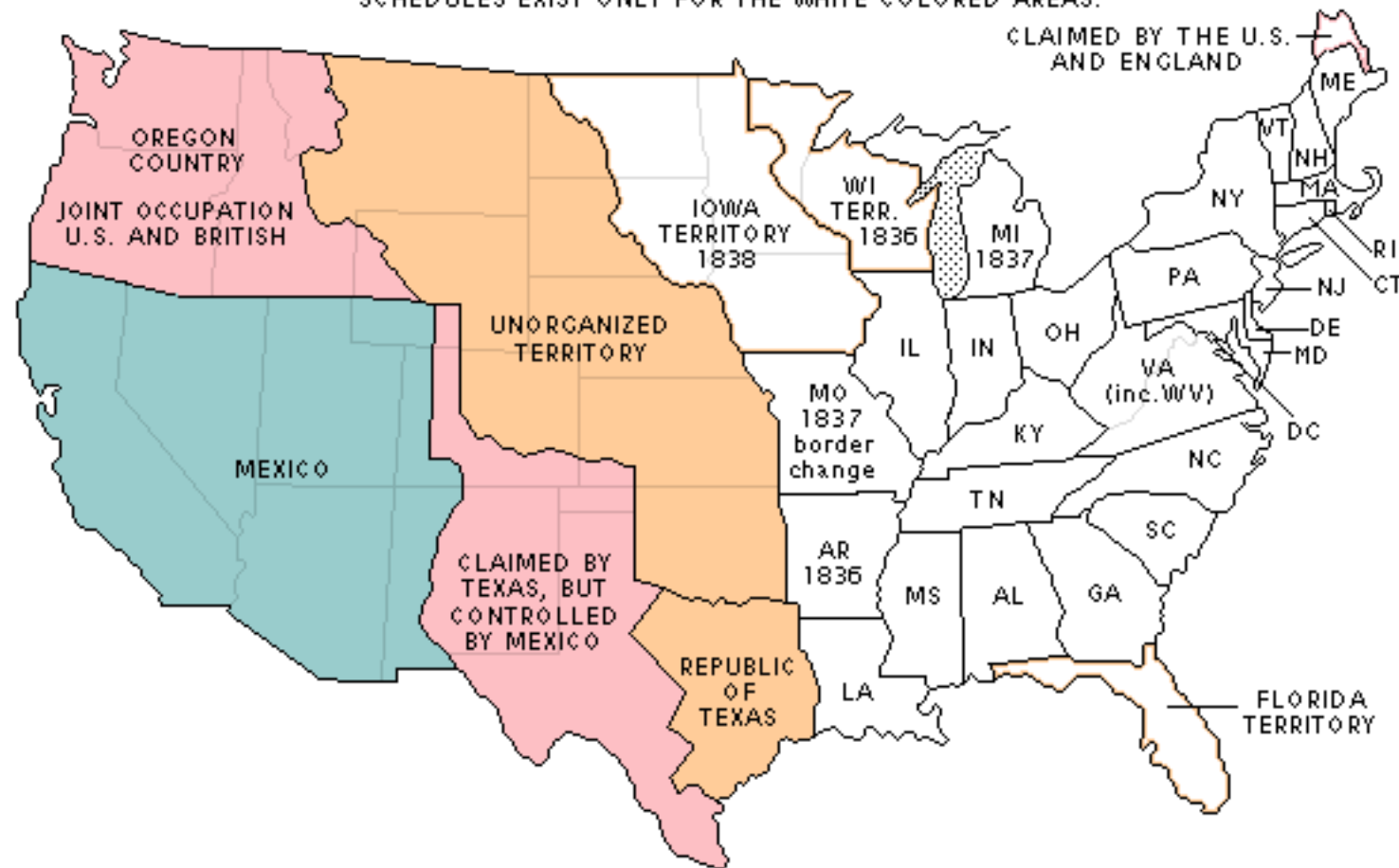


**Review evidence for Mediterranean, DASH, and MIND diets.**



**No disclosures to share.**

1840 - SIXTH CENSUS OF THE UNITED STATES. M704.  
SCHEDULES EXIST ONLY FOR THE WHITE COLORED AREAS.



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Point #1: Human Longevity → Lifestyles Impact Health

# New York Times

Copyright, 1931, by The New York Times Company.

NEW YORK, SUNDAY, JANUARY 4, 1931.

BURIED  
HONORS;

## 500 Farmers Storm Arkansas Town Demanding Food for Their Children

Drought Sufferers, Many Armed, Get Aid for Hungry Families  
...ing Into Stores—Are Appeased by Red Cross  
... 100,000 in the State.

WOMAN  
AT NO  
NEWS

Mrs. H

Point #2: Access to Excess

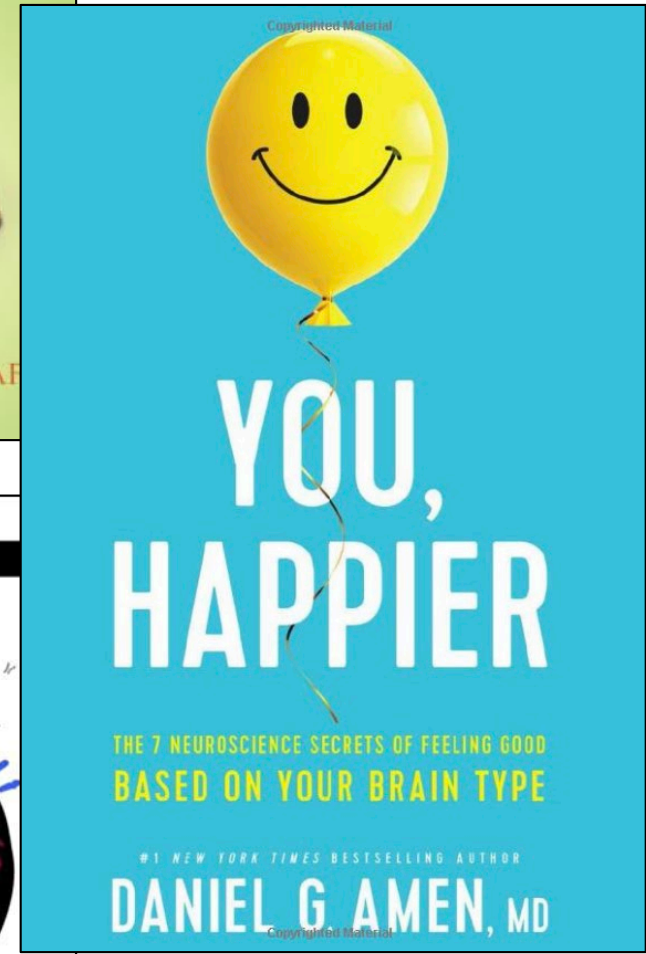
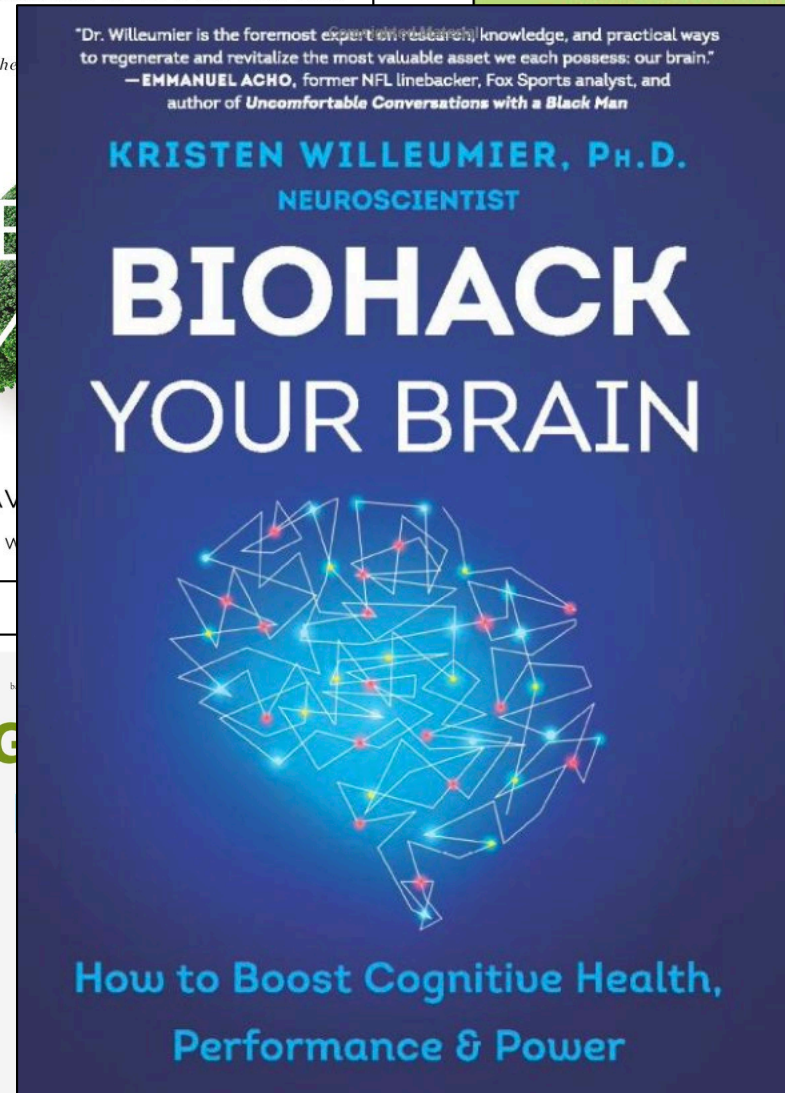
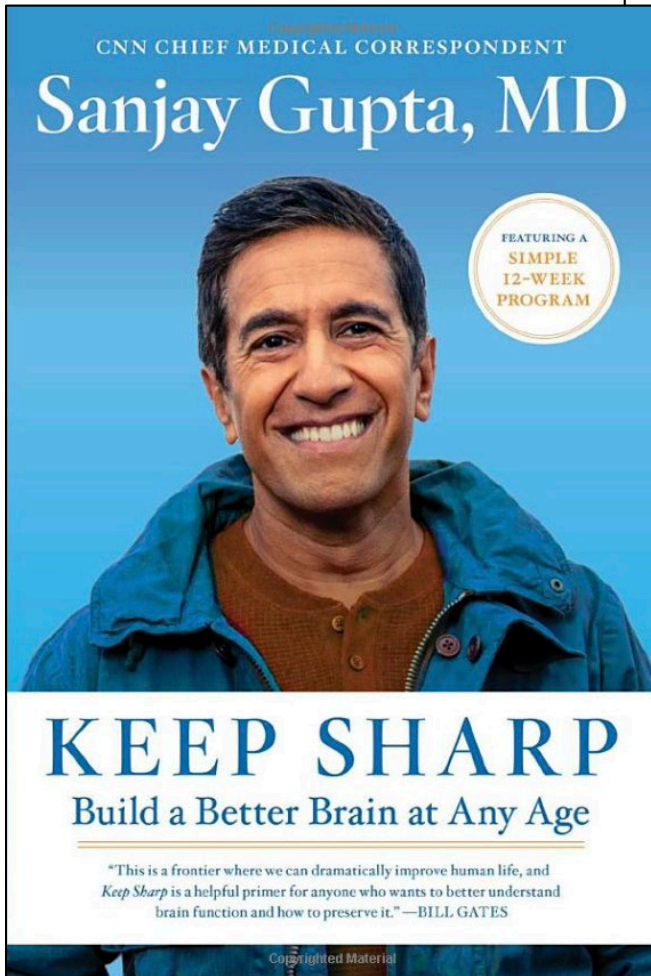


Point #3: Nutrition Research is Quite Challenging

"In an ideal world, I would take the next 1,000 children born, randomize them into two different groups, and have half of them eat nothing but fresh fruit and vegetables for the rest of their lives"

– British physician and epidemiologist, [Ben Goldacre](#)





Point #4: Information Abounds!

# Experience nootropics today

[Continue Quiz](#)







“The whole is greater than the sum of the parts.”



*“In the case of all things which have several parts and in which **the totality is not, as it were, a mere heap, but the whole is something besides the parts,** there is a cause; for even in bodies contact is the cause of unity in some cases, and in others viscosity or some other such quality.”*

Aristotle

Metaphysics, Book VIII, 1045a.8–10

~2370 years ago

Book VIII, 1045a.8–10





# Nutrition and prevention of cognitive impairment

Nikolaos Scarmeas, Costas A Anastasiou, Mary Yannakoulia

Lancet Neurol 2018; 17: 1006-15 Nutrition is an important lifestyle factor that can modify the risk of future cognitive impairment and dementia. Some,

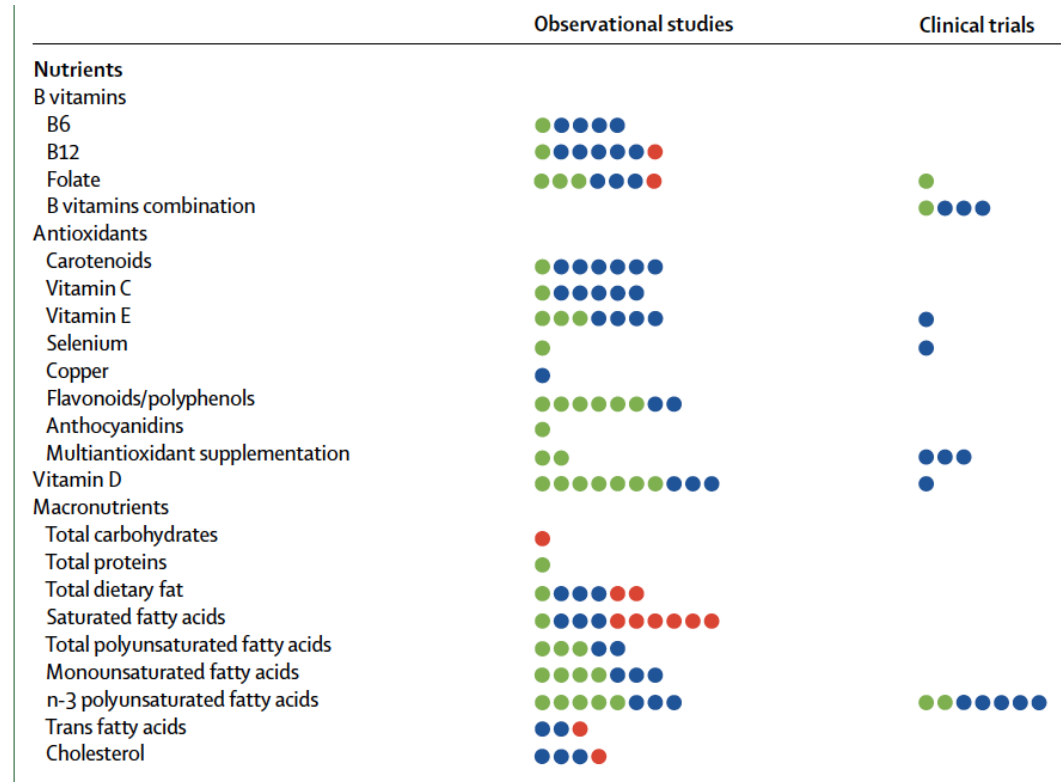
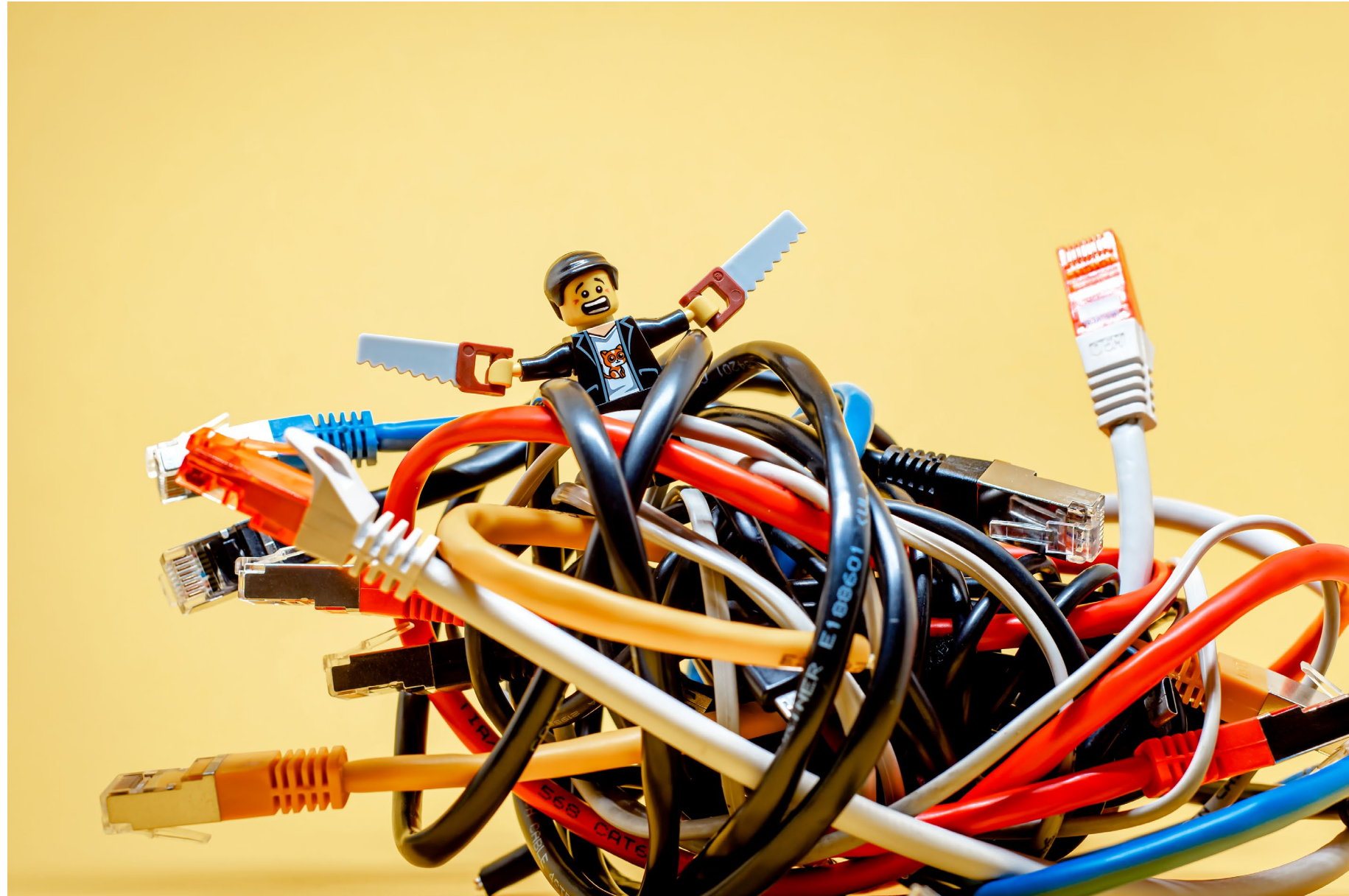


Figure: Summary of the evidence for the effects of nutrients, food groups, and dietary patterns on cognitive outcomes

Each circle represents a study. Green circles indicate a protective effect, blue circles a neutral (no significant) effect, and red circles a detrimental effect. DASH=Dietary Approaches to Stop Hypertension. MIND=Mediterranean-DASH Intervention for Neurodegenerative Delay.

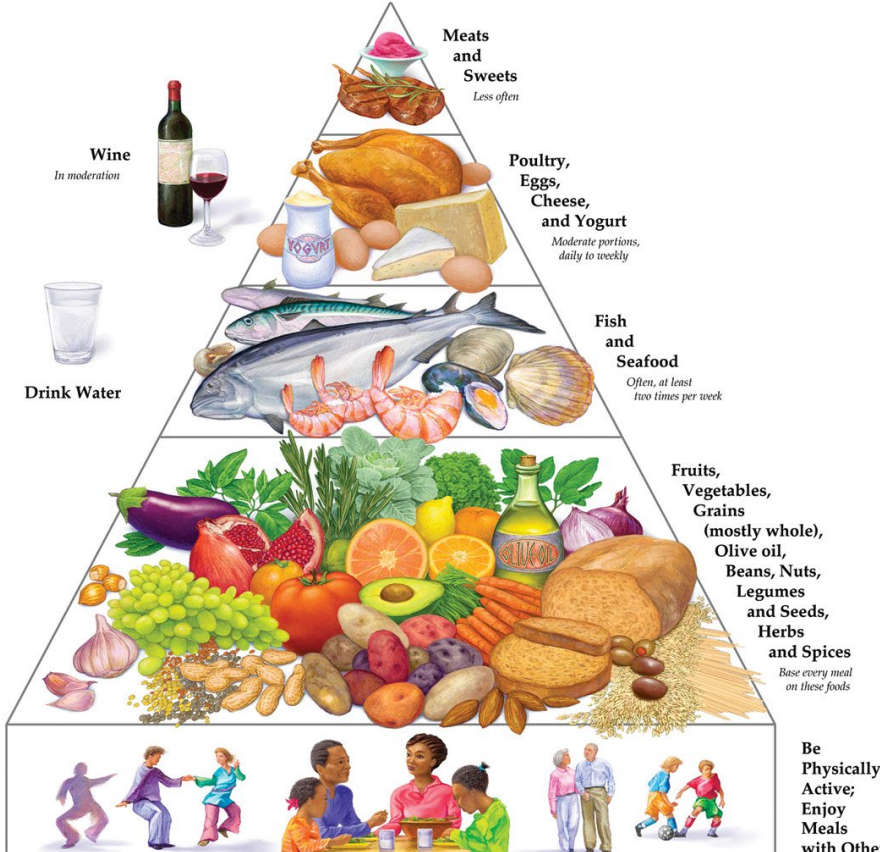
B vitamins  
Omega 3 Fatty Acids  
Homocysteine





rediscover  goodness  
**OLDWAYS**  
 CULTURAL FOOD TRADITIONS

## Mediterranean Diet Pyramid

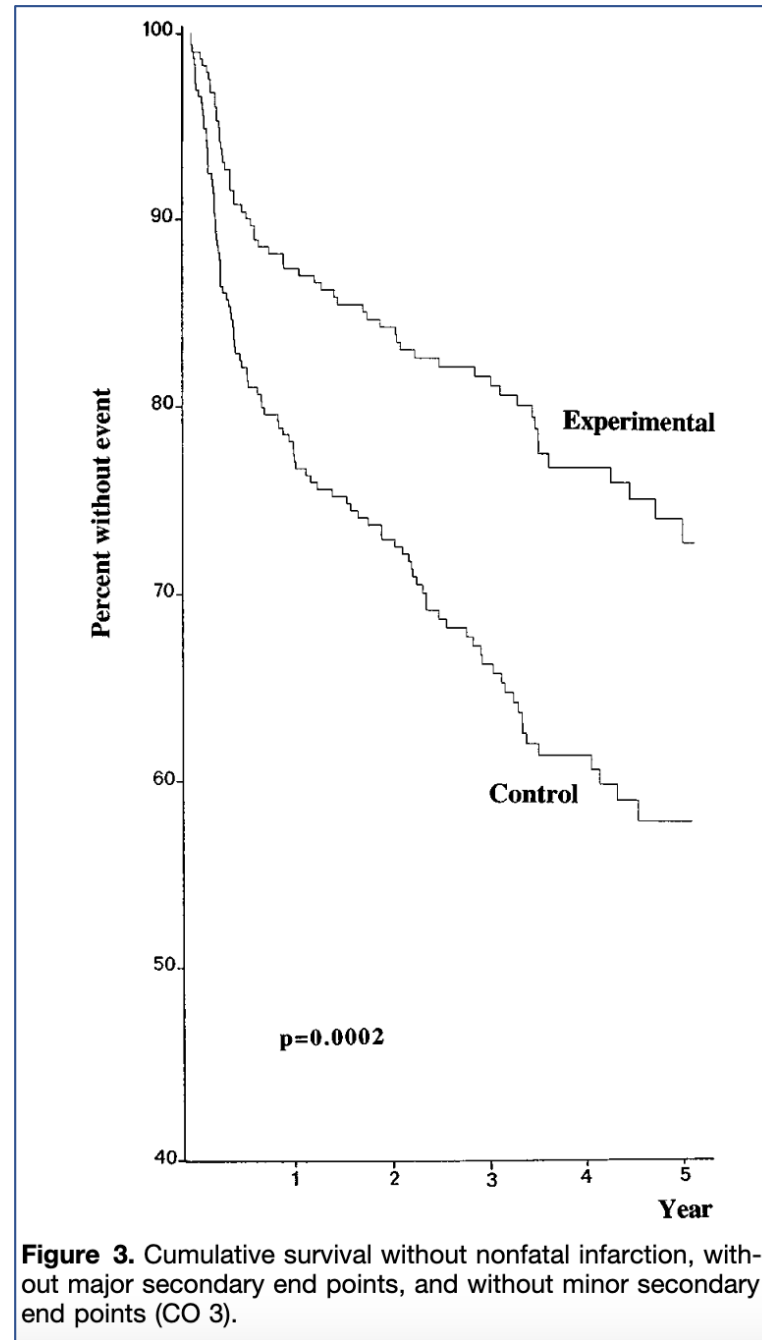




## The Seven Countries Study



# ”Lyon Heart Study”



de Lorgeril M, et al. Mediterranean Diet, Traditional Risk Factors, and the Rate of Cardiovascular Complications After Myocardial Infarction: Final Report of the Lyon Diet Heart Study. *Circulation*. 1999;99:779-785.



**Three of the first 3-stars Michelin restaurants were less than 30 min away from Lyon**

During the first edition of the Michelin restaurant guide delivering awards, 3 stars were given to 5 restaurants. Among them, 3 were female chefs living in Lyon or less than 30 km away from Lyon.



This article has been retracted.

A correction has been published [1](#)

ORIGINAL ARTICLE

# Primary Prevention of Cardiovascular Disease with a Mediterranean Diet

Ramón Estruch, M.D., Ph.D., Emilio Ros, M.D., Ph.D., Jordi Salas-Salvadó, M.D., Ph.D., Maria-Isabel Covas, D.Pharm., Ph.D., Dolores Corella, D.Pharm., Ph.D., Fernando Arós, M.D., Ph.D., Enrique Gómez-Gracia, M.D., Ph.D., Valentina Ruiz-Gutiérrez, Ph.D., Miquel Fiol, M.D., Ph.D., José Lapetra, M.D., Ph.D., Rosa Maria Lamuela-Raventos, D.Pharm., Ph.D., Lluís Serra-Majem, M.D., Ph.D., [et al.](#), for the PREDIMED Study Investigators\*

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**Article**   **Figures/Media**

**Metrics**

**April 4, 2013**

N Engl J Med 2013; 368:1279-1290

Table 1 Summary of the evidence of Mediterranean diet and Health Outcomes

Health outcome	Summary of cohort studies	Summary of intervention studies	Strength of the evidence
Cardiovascular disease	Inverse associations with CHD, CVD incidence and mortality. Weak evidence for stroke.	Reduction in risk factors: blood lipids, blood pressure and inflammatory biomarkers. Reduction in CHD, stroke, CVD incidence and mortality in large RCTs.	4 (Convincing)
Total mortality	Reduction in overall mortality.	Null evidence but limited data.	2 (Suggestive)
Diabetes	Lower risk of T2D incidence.	Meta-analysis showed better glycaemic control in T2D patients. RCTs for metabolic syndrome are supportive. In PREDIMED, lower incidence of T2D.	4 (Convincing)
Metabolic syndrome	Lower risk of developing MetS.	Greater probability of MetS remission with MedDiet.	4 (Convincing)
Overweight and obesity	MedDiet not associated with weight gain or increased waist circumference.	MedDiet greater weight loss than low fat diet at >12 months. Improved abdominal obesity, waist circumference and visceral fat than controls.	2 (Strongly suggestive, moderate effect)
Cancer	Inverse association with cancer incidence and mortality. Lower risks of colorectal, head and neck, respiratory, gastric, liver, bladder and breast cancer.	Lower risk of cancer incidence in the Lyon Heart Study and lower risk of breast cancer in the PREDIMED.	3 (Highly suggestive) for total cancer and breast cancer 2 (Suggestive) for other specific cancers
Cognitive function	Lower risk cognitive impairment and Alzheimer's disease.	Beneficial for cognitive decline.	3 (Highly suggestive)

- Cardiovascular Disease
- Total Mortality
- Diabetes
- Metabolic Syndrome
- Overweight and Obesity
- Cancer
- Cognitive Function

Guasch-Ferré M, Willett WC. The Mediterranean diet and health: a comprehensive overview. *J Intern Med* 2021; 290:549-566

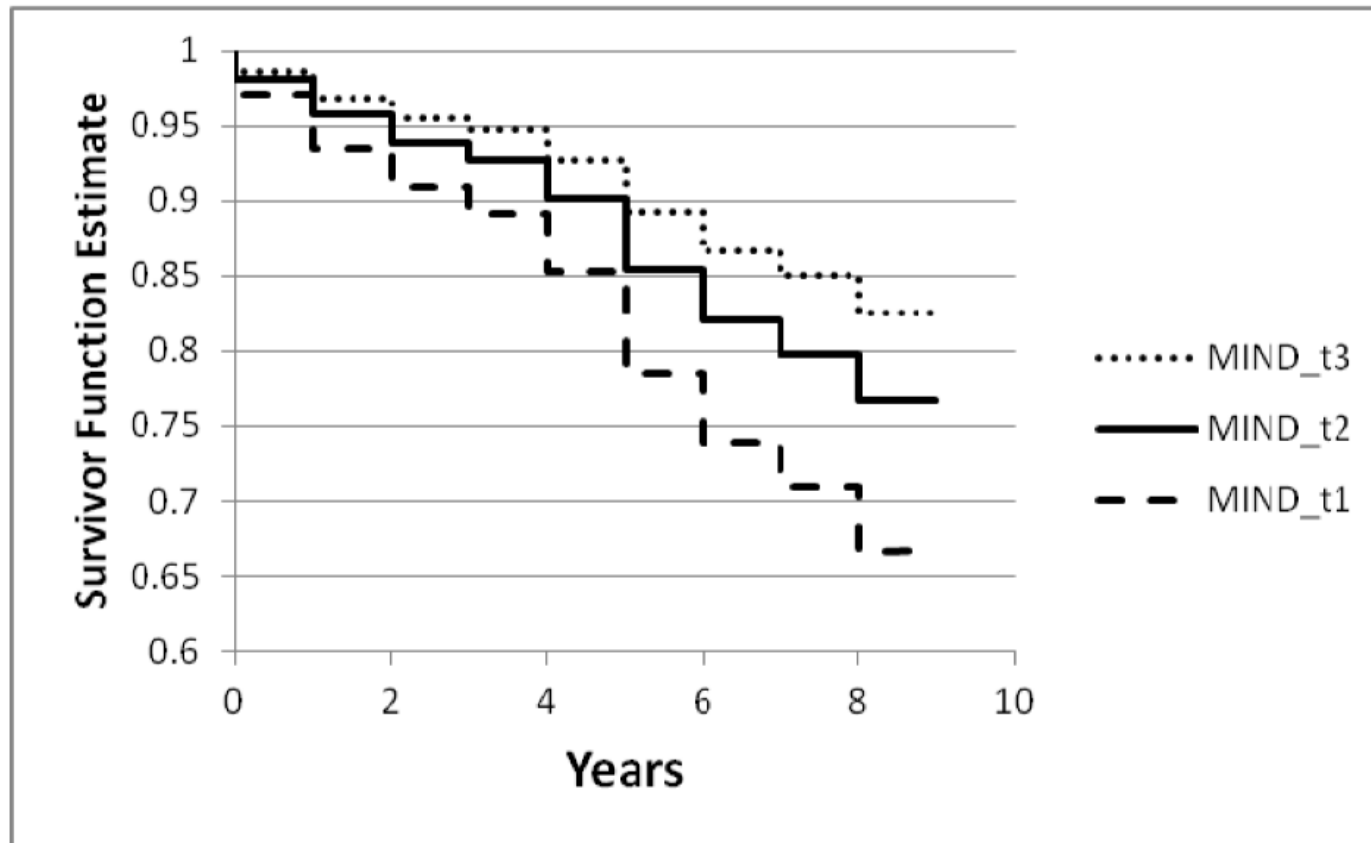


Published in final edited form as:

*Alzheimers Dement.* 2015 September ; 11(9): 1007–1014. doi:10.1016/j.jalz.2014.11.009.

## MIND Diet Associated with Reduced Incidence of Alzheimer's Disease

a.



DASH <sup>a</sup>		MedDiet <sup>b</sup>		MIND	
DASH components	Max Score	Mediterranean Diet components	Max Score	MIND components	Max Score
Total Grains $\geq 7/d$	1	Nonrefined Grains $>4/d$	5	Whole Grains $\geq 3/d$	1
Vegetables $\geq 4/d$	1	Vegetables $>4/d$	5	Green Leafy $\geq 6/wk$	1
		Potatoes $>2/d$	5	Other Vegetables $\geq 1/d$	1
Fruits $\geq 4/d$	1	Fruits $>3/d$	5	Berries $\geq 2/wk$	1
Dairy $\geq 2/d$	1	Full-fat Dairy $\leq 10/wk$	5		
Meat, poultry & fish $\leq 2/d$	1	Red meat $\leq 1/wk$	5	Red Meats and products $<4/wk$	1
		Fish $>6/wk$	5	Fish $\geq 1/wk$	1
		Poultry $\leq 3/wk$	5	Poultry $\geq 2/wk$	1
Nuts, seeds & legumes $\geq 4/wk$	1	Legumes, nuts & beans $>6/wk$	5	Beans $>3/wk$	1
				Nuts $\geq 5/wk$	1
				Fast/fried food $<1/wk$	1
Total Fat $\leq 27%$ of kcal	1				
Saturated Fat $\leq 6%$ of kcal	1				
		Olive oil $\geq 1/d$	5	Olive Oil primary oil	1
				Butter, margarine $<1T/d$	1
				Cheese $<1/wk$	1
Sweets $\leq 5/wk$	1			Pastries, sweets $<5/wk$	1
Sodium $\leq 2400mg/d$	1				
		Alcohol $< 300mL/d$ but $>0$	5	Alcohol/wine $1/d$	1
<b>TOTAL DASH Score</b>	<b>10</b>	<b>TOTAL MedDiet Score</b>	<b>55</b>	<b>Total MIND Score</b>	<b>15</b>



# A GLOBAL COLLABORATION FOR FUTURE GENERATIONS

The World Wide FINGERS (WW-FINGERS) is an interdisciplinary network to share experiences, harmonize data and plan joint international initiatives to reduce risk of cognitive impairment or dementia.

Dementia has been declared a public health priority by the World Health Organization (WHO)<sup>[1, 2]</sup>, which has also prioritized research into dementia prevention. Risk reduction and prevention are pivotal in managing the dementia epidemic globally, and the sharing of data is vital to informing this process. World Wide FINGERS will facilitate the use of data from several countries, creating a unique opportunity for rapid knowledge dissemination and implementation.

# A Few More Studies of Interest

Encarnacion M et al. **Mediterranean Diet and Risk of Dementia and Alzheimer's Disease in the EPIC-Spain Dementia Cohort.** *Nutrients* 2021, 13, 700.

Ballarini T et al. **Mediterranean Diet, Alzheimer Disease Biomarkers and Brain Atrophy in Old Age.** *Neurology* 2021;96:e2920-2932.



### Mediterranean Diet Pyramid

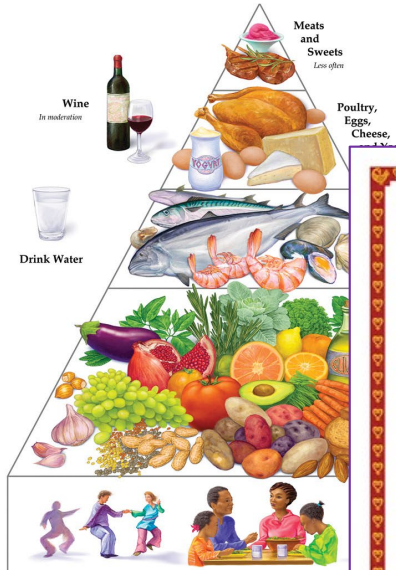


Illustration by George Middleton  
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Food And Nutrition  
Helping People Live Healthier

RESOURCES HEALTH

### AFRICAN HERITAGE DIET PYRAMID

CLAIMING YOUR HEALTH BY CLAIMING YOUR HISTORY



Illustration by George Middleton © 2011 Oldways Preservation and Exchange Trust www.oldwayspt.org

ENJOY A HEALTHY LIFESTYLE  
BE PHYSICALLY ACTIVE AND ENJOY MEALS WITH OTHERS



### Latin American Diet Pyramid

La Pirámide de La Dieta Latinoamericana

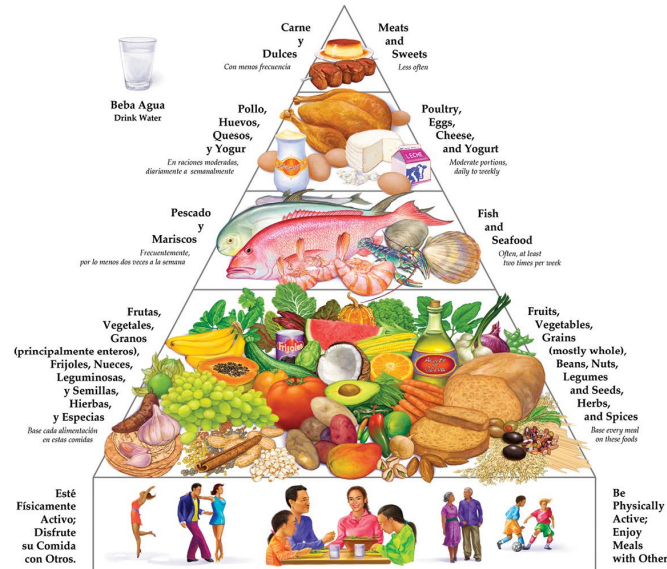


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ITS & COURSES



### Asian Diet Pyramid

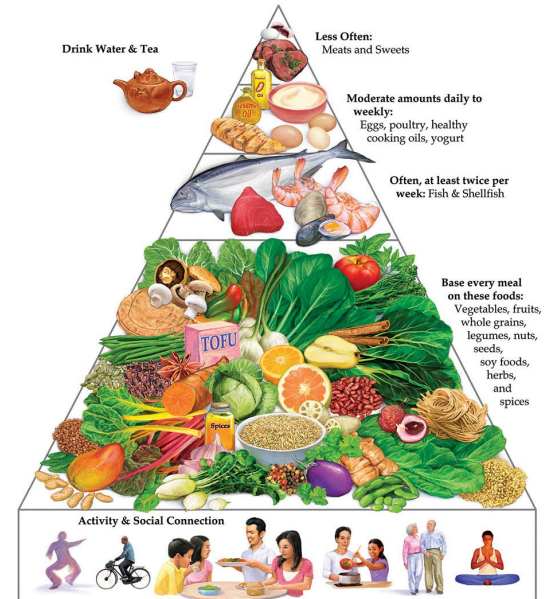


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INCLUDING  
77 RECIPES!

NATIONAL BESTSELLER

# EAT, DRINK, AND BE HEALTHY

The Harvard Medical School  
Guide to Healthy Eating

UPDATED AND EXPANDED

WALTER C. WILLETT, MD, DRPH, WITH PATRICK J. SKERRETT

CO-DEVELOPED WITH THE HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH

## Resources

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- OldWays: Cultural Food Traditions
  - <https://oldwayspt.org/>
- Harvard T.H. Chan School of Public Health, Nutrition Source
  - <https://www.hsph.harvard.edu/nutritionsource/>
- Goldring Center for Culinary Medicine, Culinary Medicine Certification Program
  - <https://www.healthmeetsfood.com/>
- Mediterranean Diet as a UNESCO Intangible Cultural Heritage of Humanity
  - <https://ich.unesco.org/en/RL/mediterranean-diet-00884>
- Apps of Interest
  - FoodSwitch: has a camera feature that allows you to find healthy alternatives within a category in the grocery store by scanning a bar code. Created by a Northwestern University cardiologist
  - PixFood: take a picture of something in your pantry and it will provide recipes for you!



## To Summarize...

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- Lifespan and caloric availability have increased pretty substantially over relatively short amount of time.
- Nutrition science is challenging, producing uncertainty for patients and providers alike.
- Solid evidence to support nutritional patterns rather than supplementation of nutrients.
  - Mediterranean Dietary Patterns (MIND, DASH) appear to have a positive impact on brain aging and pathology.
- Resources exist for you and your patients.

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