Longitudinal Studies

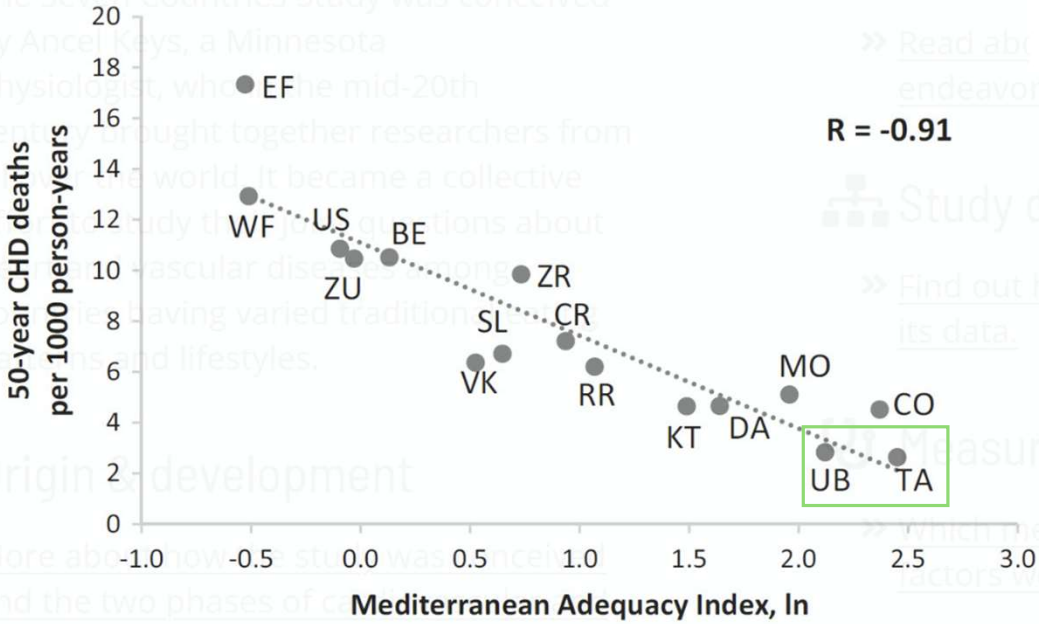
Seven Countries Study

The Seven Countries Study effectively documented the variations in CHD risk related to diet and culture and demonstrated that the major risk factors are universal.

Comparative Study > Eur J Clin Nutr. 2018 Aug;72(8):1103-1110.
doi: 10.1038/s41430-018-0183-1. Epub 2018 May 17.

Comparative ecologic relationships of saturated fat, sucrose, food groups, and a Mediterranean food pattern score to 50-year coronary heart disease mortality rates among 16 cohorts of the Seven Countries Study

Daan Kromhout [1 2 3], Alessandro Menotti [4], Adalberta Alberti-Fidanza [5], Paolo Emilio Puddu [6], Peter Hollman [2], Anthony Kafatos [7], Hanna Tolonen [8], Hisashi Adachi [9], David R Jacobs Jr [3]



Relationship of the Mediterranean Adequacy Index at baseline with 50-year CHD death rates. BE Belgrade, Serbia, CO Corfu, Greece, CR Crevalcore, Italy, DA Dalmatia, Croatia, EF East Finland, KT Crete, Greece, MO Montegiorgio, Italy, RR Rome railroad, Italy, SL Slavonia, Croatia, TA Tanushimaru, Japan, UB Ushibuka, Japan, US US railroad, VK Velika Krsna, Serbia, WF West Finland, ZR Zrenjanin, Serbia, ZU Zutphen, the Netherlands

https://www.sevencountriesstudy.com/average-mediterranean-adequacy-index-mai-and-50-year-coronary-heart-disease-mortality-rates-in-16-cohorts/

Longitudinal Studies

RESEARCH ARTICLE

Estimating impact of food choices on life expectancy: A modeling study

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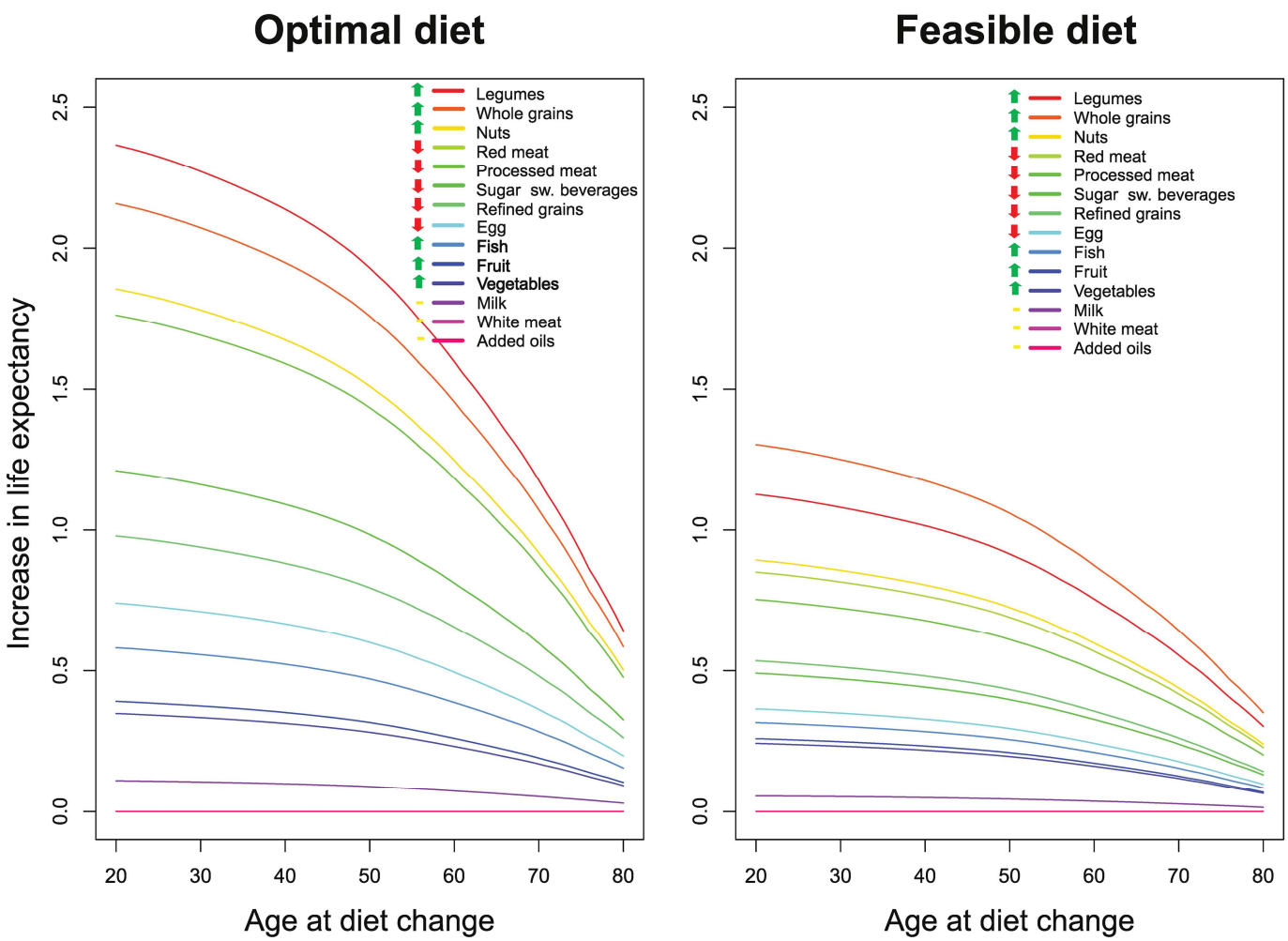
Abstract

Background

Interpreting and utilizing the findings of nutritional research can be challenging to clinicians, policy makers, and even researchers. To make better decisions about diet, innovative methods that integrate best evidence are needed. We have developed a decision support model that predicts how dietary choices affect life expectancy (LE).

Fig 3. Expected increase in LE for optimizing different food groups with diet changes initiating from various ages between 20 and 80 years of age (left plot). Right plot presents similar estimates with a feasible approach* diet (time to full effect: 10 years). *For the optimal diet and feasibility approach diet, the following intakes were used: 225 g and 137.5 g whole grains (fresh weight), 400 g and 325 g vegetables, 400 g and/ 300 g fruits, 25 g and 12.5 g nuts, 200 g and/ 100 g legumes, 200 g and 100 g fish, 25 g and 37.5 g eggs, 200 g and 250 g milk/dairy, 50 g and 100 g refined grains, 0 g and 50 g red meat, 0 g and 25 g processed meat, 50 g and 62.5 g white meat, 0 g and 250 g sugar-sweetened beverages, and 25 g and 25 g added plant oils. Note that lines for LE for red and processed meat changes are overlapping and similarly also for white meat and added oils. LE, life expectancy.



Longitudinal Studies

Nurses' Health Study

Health Professionals Follow-Up Study

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nature medicine

Article

https://doi.org/10.1038/s41591-025-03570-5

Optimal dietary patterns for healthy aging

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Check for updates

Anne-Julie Tessier[1,2,3,4], Fenglei Wang[1], Andres Ardisson Korat[5,6], A. Heather Eliassen[1,7,8], Jorge Chavarro[1,7,8], Francine Grodstein[9], Jun Li[1,10], Liming Liang[7,11], Walter C. Willett[1,7,8], Qi Sun[1,7,8], Meir J. Stampfer[1,7,8], Frank B. Hu[1,7,8] & Marta Guasch-Ferré[1,12,13]

As the global population ages, it is critical to identify diets that, beyond preventing noncommunicable diseases, optimally promote healthy aging. Here, using longitudinal questionnaire data from the Nurses' Health Study (1986–2016) and the Health Professionals Follow-Up Study (1986–2016), we examined the association of long-term adherence to eight dietary patterns and ultraprocessed food consumption with healthy aging, as assessed according to measures of cognitive, physical and mental health, as well as living to 70 years of age free of chronic diseases. After up to 30 years of follow-up, 9,771 (9.3%) of 105,015 participants (66% women, mean age = 53 years (s.d. = 8)) achieved healthy aging. For each dietary pattern, higher adherence was associated with greater odds of healthy aging and its domains. The odds ratios for the highest quintile versus the lowest ranged from 1.45 (95% confidence interval (CI) = 1.35–1.57; healthful plant-based diet) to 1.86 (95% CI = 1.71–2.01; Alternative Healthy Eating Index). When the age threshold for healthy aging was shifted to 75 years, the Alternative Healthy Eating Index diet showed the strongest association with healthy aging, with an odds ratio of 2.24 (95% CI = 2.01–2.50). Higher intakes of fruits, vegetables, whole grains, unsaturated fats, nuts, legumes and low-fat dairy products were linked to greater odds of healthy aging, whereas higher intakes of trans fats, sodium, sugary beverages and red or processed meats (or both) were inversely associated. Our findings suggest that dietary patterns rich in plant-based foods, with moderate inclusion of healthy animal-based foods, may enhance overall healthy aging, guiding future dietary guidelines.

Article

https://doi.org/10.1038/s41591-025-03570-5

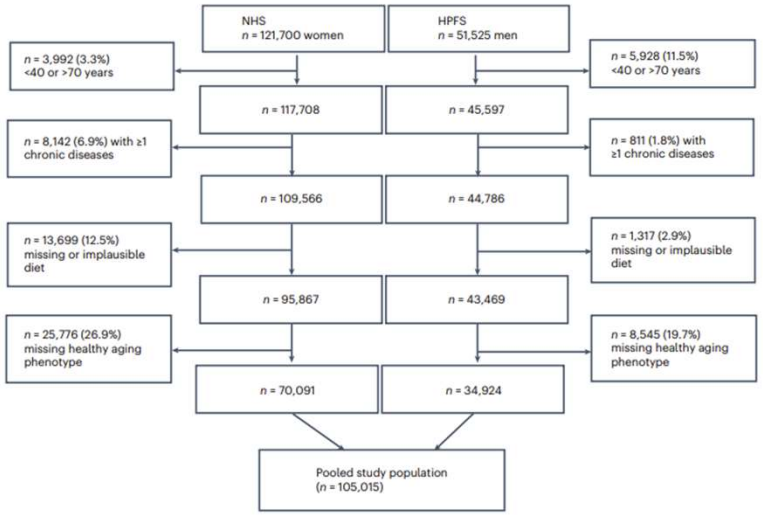


Fig. 1 | Flow diagram of the study participants. This flow diagram shows the initial sample sizes in the NHS and HPFS followed by the sequential application of exclusion criteria for each cohort. The final study population includes a total of 105,015 participants.

Longitudinal Studies

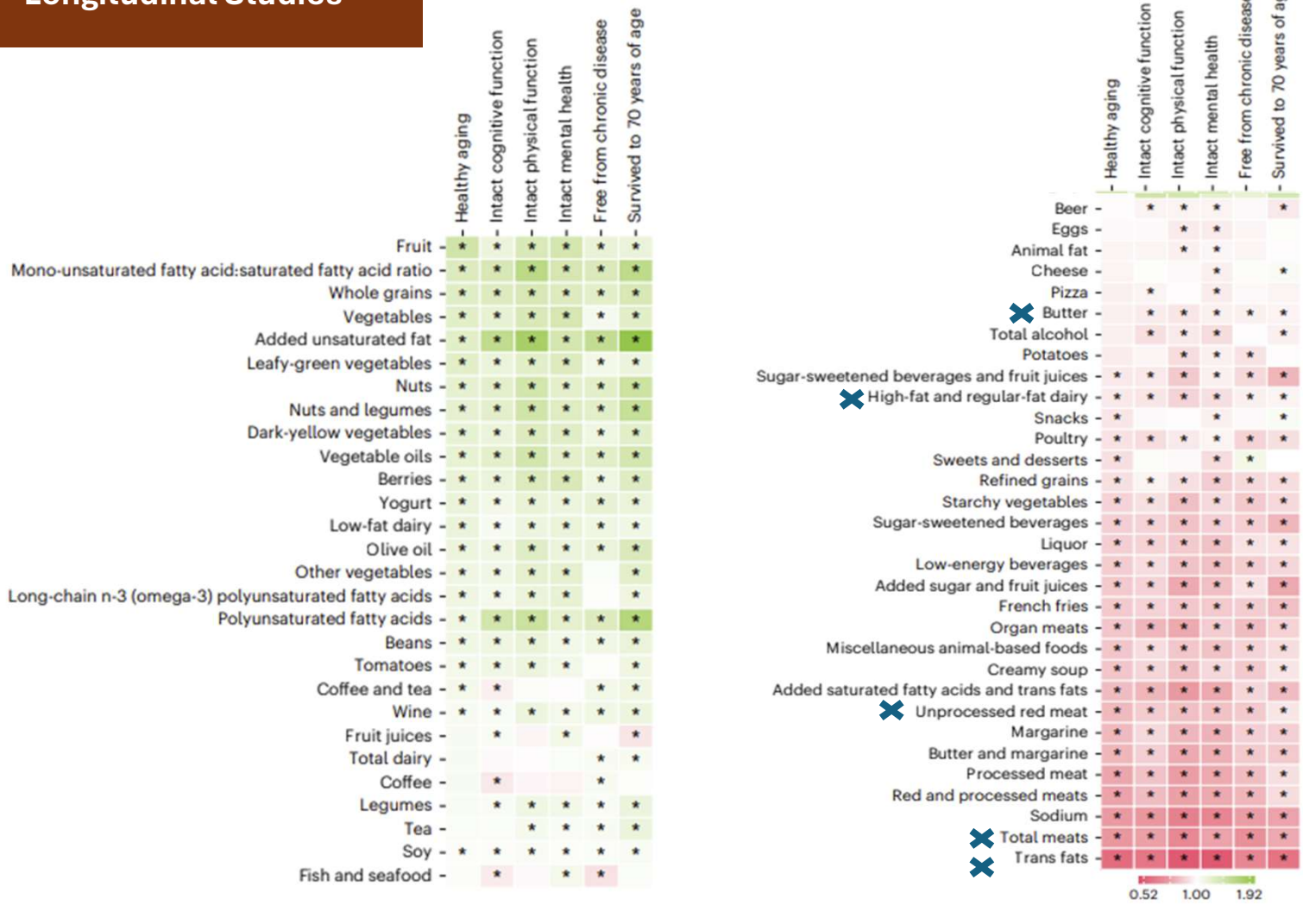
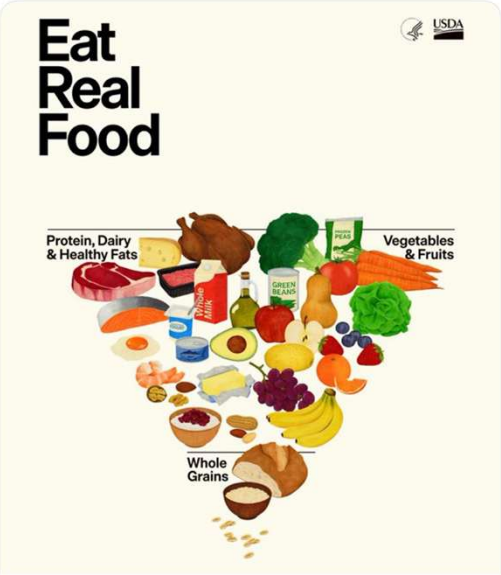


Fig. 4 | Multivariable-adjusted associations between dietary factors and healthy aging and its domains in the main pooled dataset (n = 105,015). Each heatmap square represent the OR comparing the 90th to the 10th percentile for each of the dietary factors. Logistic regressions were used to estimate ORs and were adjusted for age at baseline (1986), cohort (sex), BMI (kg m^{-2}), ancestry (European, Asian, African-American, Other), smoking status (never, former, current smoker: 1–14 cigarettes per day, 15–24 cigarettes per day and ≥25 cigarettes per day), alcohol intake (g per day), physical activity (MET-h week^{-1}), multivitamin use ever (yes/no), family history of myocardial infarction (yes/no), family history of type 2 diabetes, family history of cancer, family history of dementia (yes/no), postmenopausal status (yes/no) and menopausal hormone use (no, past, or current hormone use; women only), SES at baseline, marital status (yes/no), living alone ever (yes/no) and history of depression (yes/no) in the pooled cohorts. ORs greater than 1.0 are denoted in green; ORs below 1.0 are denoted in pink; a darker color indicates a stronger association. *Two-sided P values corrected for multiple comparisons using a false discovery rate (FDR) < 0.05.

My thoughts



What I love about the Eat Real Food Pyramid

- Eat Real Food.
- Encourage vegetables, fruits and wholegrains.

What I would like to modify about the Eat Real Food Pyramid.

- Protein Sources
  - Animal protein: lean meat and less red meat.
  - Plant protein: More lentils, beans, nuts and seeds.
- Dairy
  - In moderation, low-fat options.
  - Not too sure about full-fat dairy.
- Healthy Fat
  - Not convinced about the ‘natural healthy fat’; aka Saturated Fat.
  - Low-fat cooking methods.
  - Choose high-polyphenol cooking oil and use less oil.