

Three bright green apples are arranged in a cluster. One apple is in the foreground, slightly to the right, and two are behind it, one to the left and one to the right. The apples are glossy and have short brown stems.

# The Year in Plants 2023: Latest Science Reinforces the Plant-Based Lifestyle

**Andrew M. Freeman, MD, FACC** [@HeartCureDoc](#)  
National Jewish Health  
Denver, CO

[Andrew@DocAndrew.com](mailto:Andrew@DocAndrew.com)

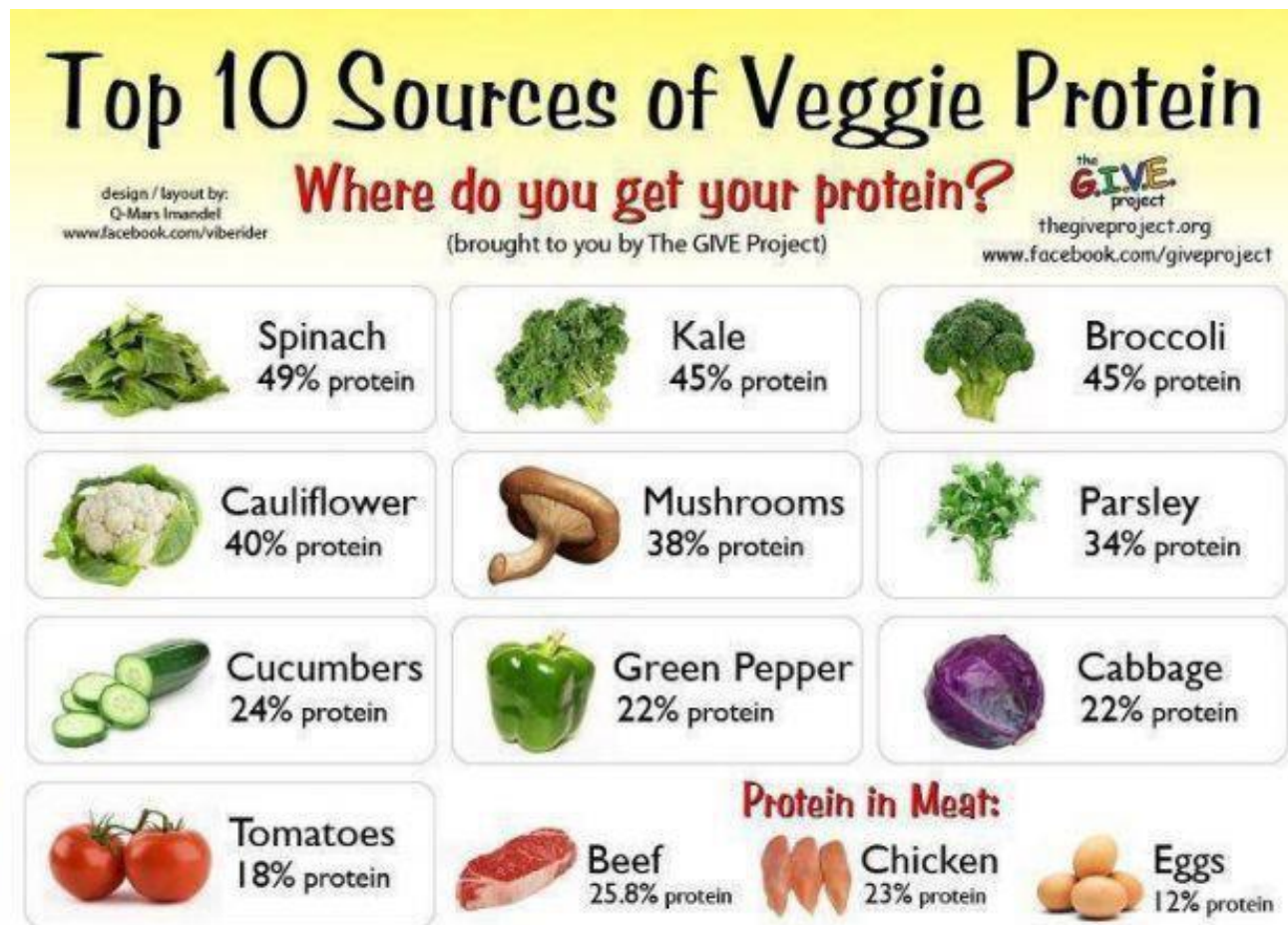
# Notice

- There are many well-done randomized trials showing the efficacy of plant-based diets in improving health outcomes.
- There are some studies that are observational, and do not show cause, but show significant relationships.



# Getting Enough Protein?

- Yes, yes, yes!



# We've Got a Lot to Cover

- Get that coffee!
- 468,629 participants (age, 40-69 years) without known heart disease, identified from the UK Biobank (2006-2010)
- Followed 11 years
- (0.5 – 3 cups/day) light-to-moderate coffee consumers vs non-consumers had a lower risk of
  - **12% less all-cause mortality (0.88; 0.83 to 0.92;  $P<0.001$ )**
  - **17% less CV mortality (0.83; 0.74 to 0.94;  $P=0.006$ )**
  - **21% less incident stroke (0.79; 0.63 to 0.99;  $P=0.037$ )**
- Both light-to-moderate and high coffee consuming categories were associated with dose-dependent increased left and right ventricular end-diastolic, end-systolic and stroke volumes, and greater left ventricular mass.



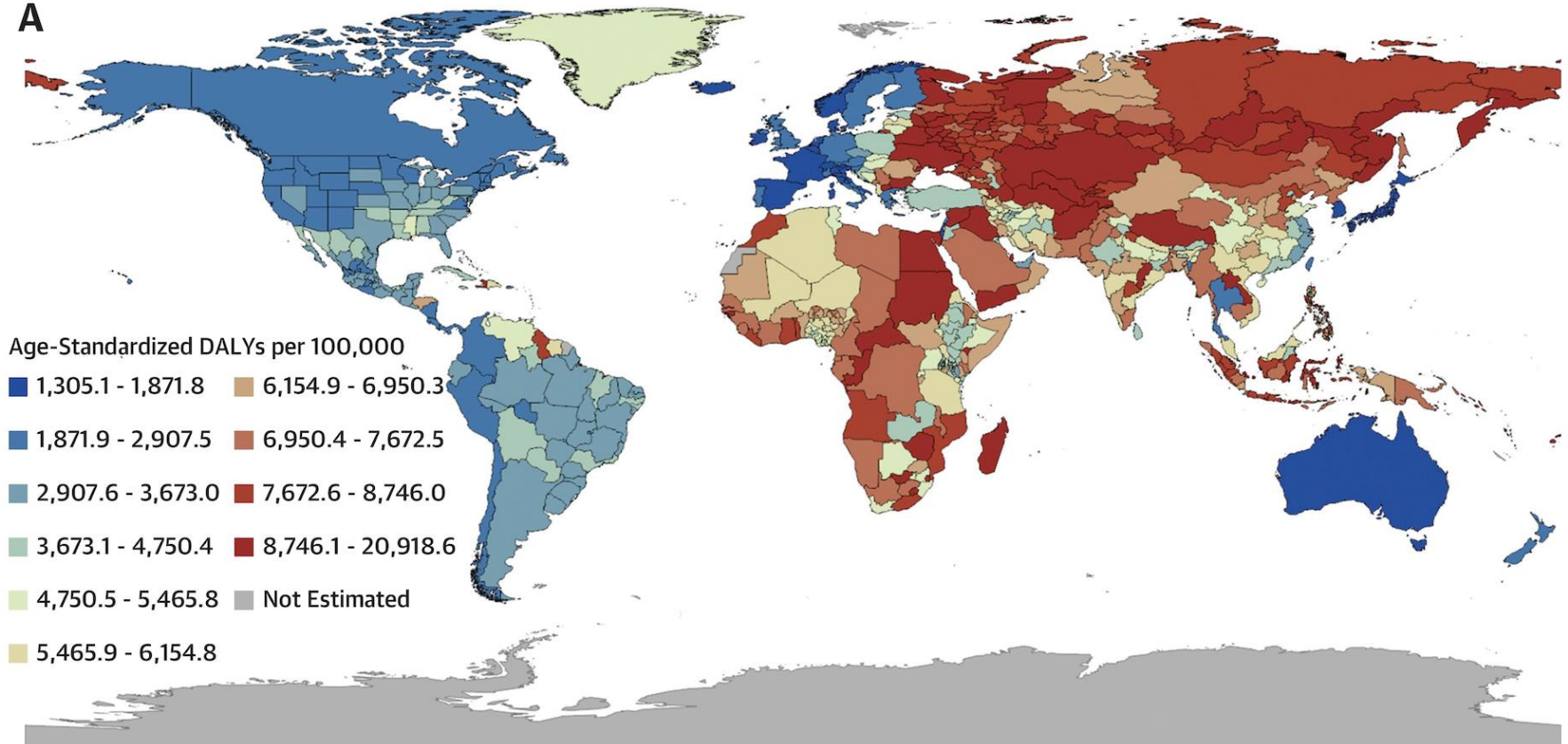
Simon J, Fung K, Raisi-Estabragh Z, Aung N, Khanji MY, Kolossváry M, Merkely B, Munroe PB, Harvey NC, Piechnik SK, Neubauer S, Petersen SE, Maurovich-Horvat P. Light to moderate coffee consumption is associated with lower risk of death: a UK Biobank study. Eur J Prev Cardiol. 2024 Jan 20 [Epub ahead of print]. doi: 10.1093/eurjpc/zwac008. PMID: 35048949.



# Stats as of 2022

## **CENTRAL ILLUSTRATION:** Global Burden of Cardiovascular Diseases and Risks

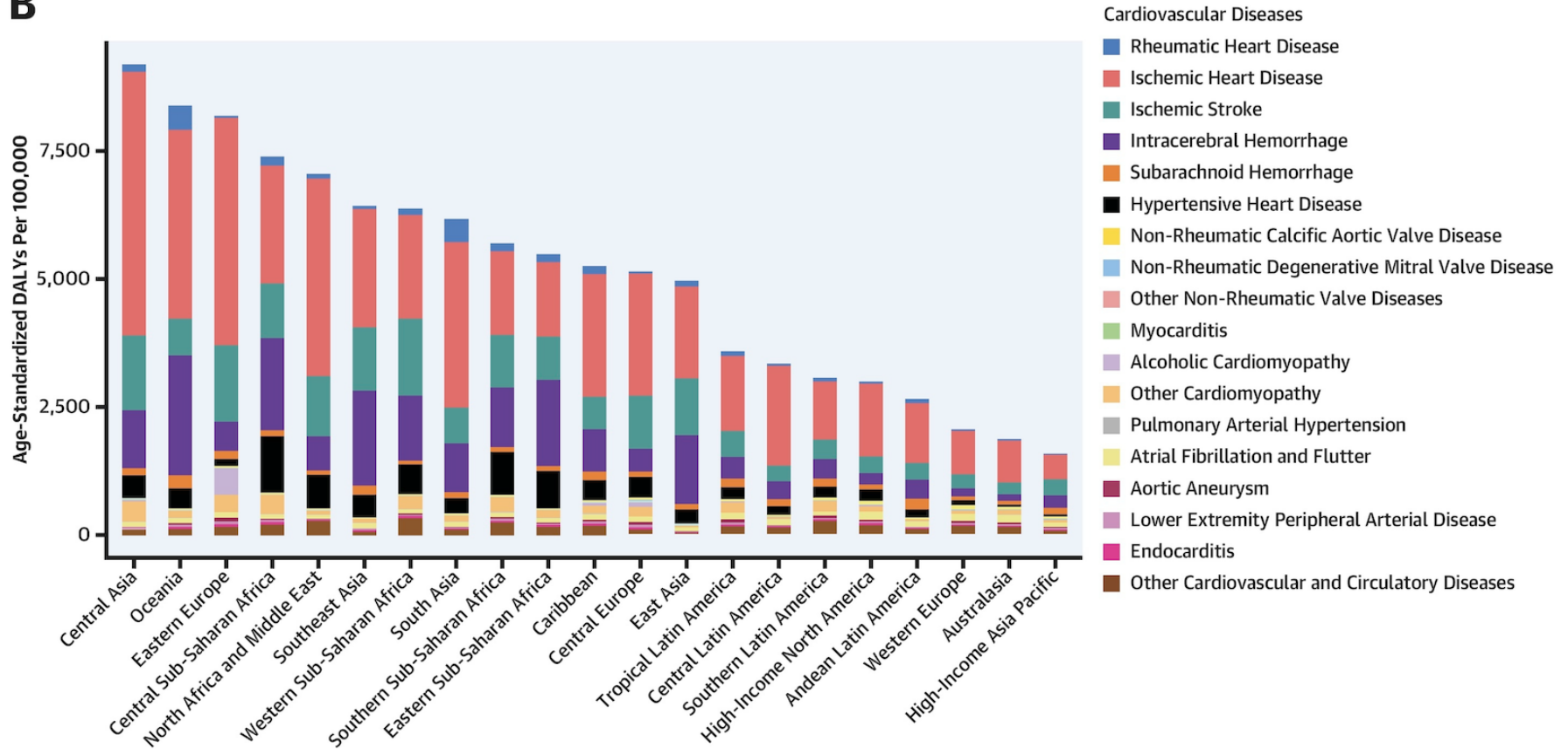
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Vaduganathan M, et al. J Am Coll Cardiol. 2022;80(25):2361-2371.

# Stats as of 2022

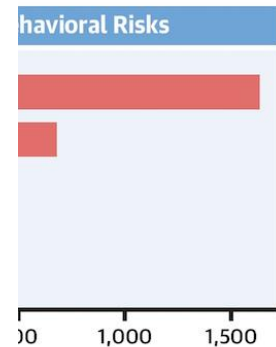
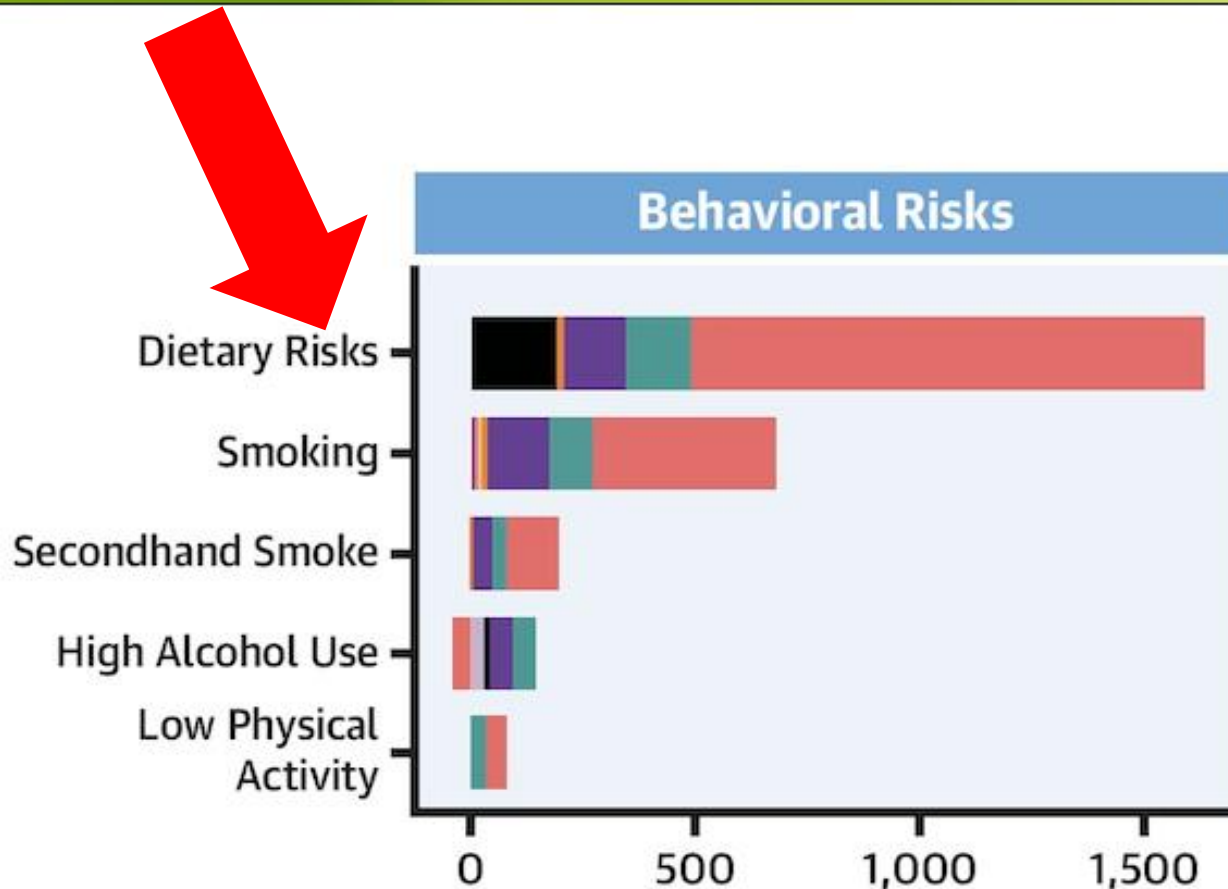
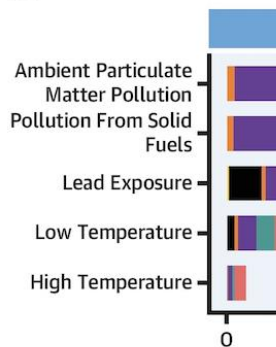
**B**



Vaduganathan M, et al. J Am Coll Cardiol. 2022;80(25):2361-2371.

# Stats as of 2022

C



Vaduganathan M, et al. J Am Coll Cardiol. 2022;80(25):2361-2371.

# Stats Continued

**Table 2**

**Global Ranking of Attributable Burden of Cardiovascular Diseases Due to Selected Modifiable Risk Factors**

Rank	Cause of Death	Number of Deaths in 2021 (95% UI)	Number of DALYs (95% UI)
1	High systolic blood pressure	10,800,000 (9,150,000-12,100,000)	209,000,000 (172,000,000-236,000,000)
2	Dietary risks	6,580,000 (2,270,000-9,520,000)	142,000,000 (45,300,000-200,000,000)
3	High low-density lipoprotein cholesterol	3,810,000 (2,170,000-5,420,000)	86,300,000 (54,100,000-115,000,000)
4	Ambient particulate matter pollution	3,130,000 (2,310,000-3,930,000)	62,500,000 (45,700,000-78,400,000)
5	Smoking	2,370,000 (498,000-4,410,000)	59,600,000 (13,100,000-107,000,000)

**Vaduganathan M, et al. J Am Coll Cardiol. 2022;80(25):2361-2371.**



# More!



Based on the primary AHA score, the proportion of US older adults with a poor diet quality significantly increased from 50.9% to 60.9%, the proportion with an intermediate diet quality significantly decreased from 48.6% to 38.7%, and the proportion with ideal diet quality remained consistently low (0.4% in both 2001-2002 and 2017-2018)

old age.

**OBJECTIVE** To characterize trends in overall dietary quality and key food components and nutrients among older US adults by age, sex, race and ethnicity, marital status, educational level, and income.

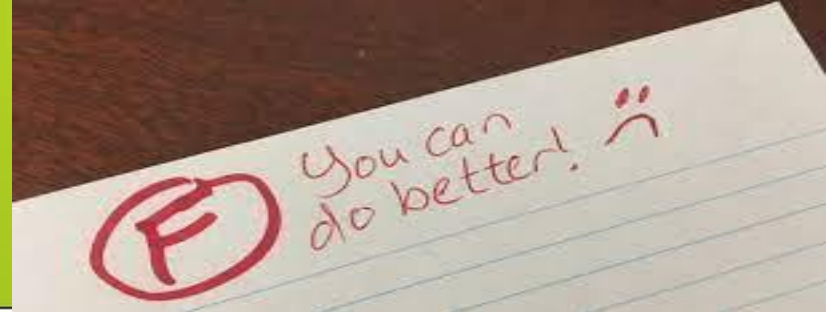
**DESIGN, SETTING, AND PARTICIPANTS** This serial cross-sectional study used 24-hour dietary recall data from 10 837 adults aged 65 years or older in 9 National Health and Nutrition Examination Survey cycles (2001-2002 to 2017-2018). Statistical analysis was conducted from June 1 to October 1, 2021.

**EXPOSURES** Calendar year and sociodemographic subgroups.

**MAIN OUTCOMES AND MEASURES** Survey-weighted, energy-adjusted mean diet scores and

**Findings** In this cross-sectional study of 10 837 adults aged 65 years or older in the National Health and Nutrition Examination Survey, the mean primary American Heart Association score had a significant 8% decrease. The proportion of older US adults with poor diet quality significantly increased from 51% to 61%, and the proportion with intermediate diet quality significantly decreased from 49% to 39%; the proportion of older US adults with ideal diet quality

# How Poorly Did We Do?



- Only 1 in 5 Americans have cardiovascular health that can be considered optimal.
- Based on AHA's Life's Essential 8 checklist
- Study examined > 23,000 adults & children
- Examined factors including physical activity, diet, nicotine exposure, sleep, BMI, blood pressure and blood lipids + glucose.



Lloyd-Jones DM, Ning H, Labarthe D, Brewer L, Sharma G, Rosamond W, Foraker RE, Black T, Grandner MA, Allen NB, Anderson C, Lavretsky H, Perak AM. Status of Cardiovascular Health in US Adults and Children Using the American Heart Association's New "Life's Essential 8" Metrics: Prevalence Estimates From the National Health and Nutrition Examination Survey (NHANES), 2013 Through 2018. *Circulation*. 2022 Sep 13;146(11):822-835. doi: 10.1161/CIRCULATIONAHA.122.060911. Epub 2022 Jun 29. Erratum in: *Circulation*. 2022 Nov 15;146(20):e298. PMID: 35766033.

# Maybe Another Report Card Would Help?

- In 2017-2018, **only 6.8%** (95% CI: 5.4%-8.1%) of U.S. adults had optimal cardiometabolic health, declining from 1999-2000 ( $P$  trend = 0.02).
- The largest declines were for adiposity (optimal levels: from 33.8% to 24.0%; poor levels: 47.7% to 61.9%) = **We're getting fatter**
- + Glucose control worsened (optimal levels: 59.4% to 36.9%; poor levels: 8.6% to 13.7%) ( $P$  trend <0.001 for each).



O'Hearn M, Lauren B, Wong J, et al. Trends and Disparities in Cardiometabolic Health Among U.S. Adults, 1999-2018. *J Am Coll Cardiol*. 2022 Jul, 80 (2) 138–151. <https://doi.org/10.1016/j.jacc.2022.04.046>

# More Stats to Get The Year Rolling

## What is added by this report?

In 2019, 12.3% and 10.0% of surveyed adults met fruit and vegetable intake recommendations, respectively. Meeting fruit intake recommendations was highest among Hispanic adults (16.4%) and lowest among males (10.1%). Meeting vegetable intake recommendations was highest among adults aged  $\geq 51$  years (12.5%) and lowest among adults with low income (6.8%).



Lee SH, Moore LV, Park S, Harris DM, Blanck HM. Adults Meeting Fruit and Vegetable Intake Recommendations — United States, 2019. MMWR Morb Mortal Wkly Rep 2022;71:1–9.  
DOI: <http://dx.doi.org/10.15585/mmwr.mm7101a1external> icon.



# Finally Getting to the Guidelines

## ■ Nutritional status

A robust data set with good quality evidence suggests a lower-fat, whole-food, plant-forward diet can reduce and even prevent morbidity in ASCVD. As such, major CV professional societies have published recommendations in this space, and patients are encouraged to follow these recommendations.<sup>44,60</sup>

The short form *Mini-Nutritional Assessment* tool can be used to identify patients who are at risk of or in the early stages of malnutrition before changes in weight or serum protein levels occur.<sup>61</sup> Patients with HF or physical/cognitive impairments represent a subset of those with ASCVD at particular risk for malnutrition.

<https://www.jacc.org/doi/epdf/10.1016/j.jacc.2022.08.754>

2022 ACC Expert Consensus Decision  
Pathway for Integrating  
Atherosclerotic Cardiovascular  
Disease and Multimorbidity  
Treatment: A Framework for  
Pragmatic, Patient-Centered Care  
[jacc.org](https://www.jacc.org)



# An Example of Sickness Taking Over Our Finances

- *Health Affairs* survey
- Shows 1.2 million Americans hit “catastrophic spending” = 14.1% of Americans
- = Spending more than 40% of their family income on insulin

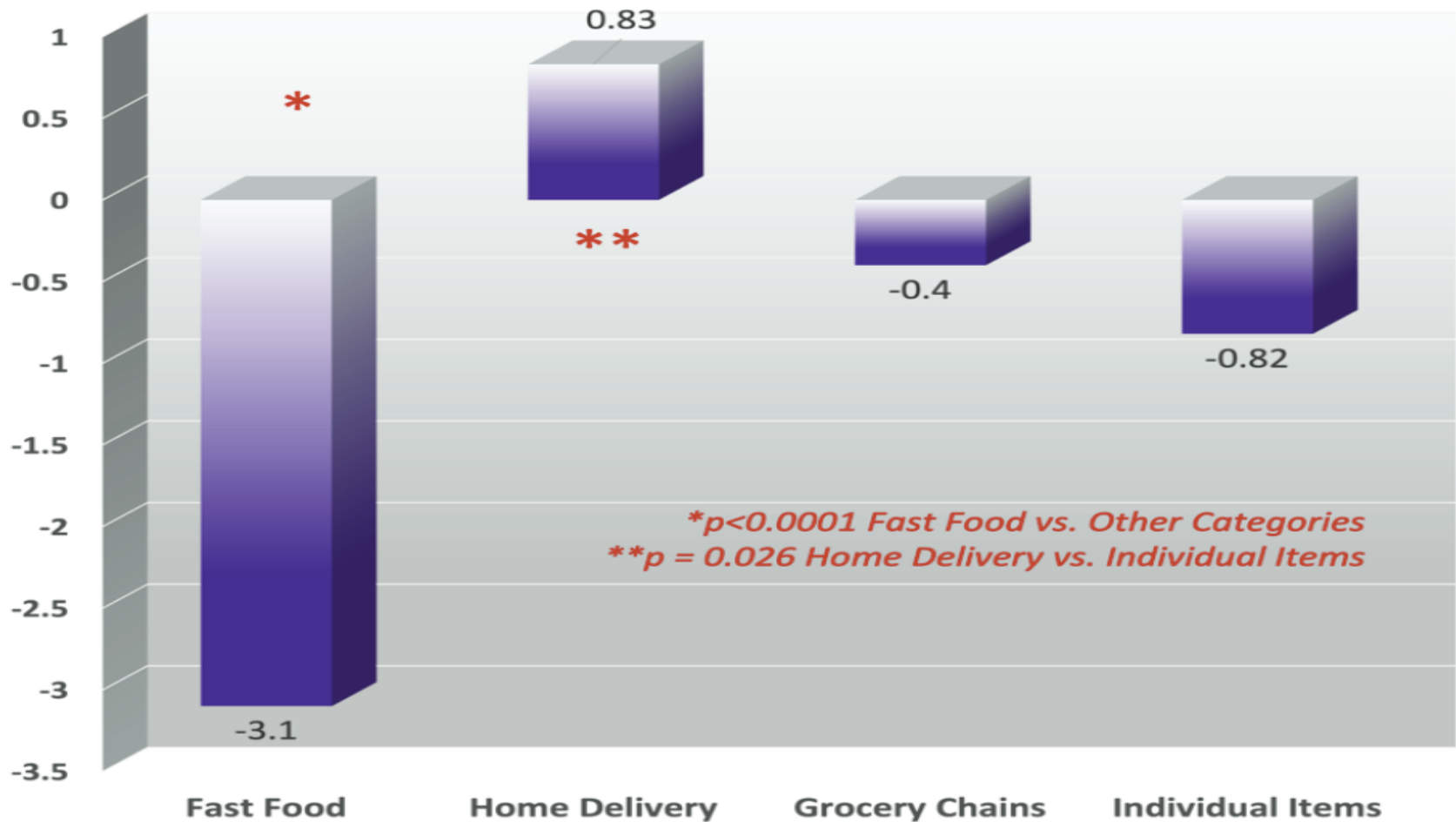


Bakkila BF, Basu S, Lipska KJ. Catastrophic Spending On Insulin In The United States, 2017-18. *Health Aff (Millwood)*. 2022 Jul;41(7):1053-1060. doi: 10.1377/hlthaff.2021.01788. PMID: 35787081.



**If you're  
waiting  
for a sign  
to go vegan,  
this is it.**

# Brainwashing?



**Figure 2: Distribution of Mean Health Diet index in Television Commercials**



# Vegan or Med?

- 62 overweight participants
- Each participant followed both a low-fat, plant-based diet and a Mediterranean diet for 16 weeks followed by a four-week washout period
- **The vegan diet was associated with more weight loss (6kg) than the Mediterranean group.**
- Authors suggest better weight loss from increased fiber intake and changes to gut microbiota.



Kahleova H, Rembert E, Alwarith J, et al. Weight loss is associated with changes in gut microbiome: a randomized, cross-over trial comparing a Mediterranean and a low-fat vegan diet in overweight adults. *J Obes Weight Loss Ther.* 2021;11(5):1-8. doi: 10.4172/2165-7904.1000443

# If Med, How About Green-Med

- 294 participants
- 1 of 3 diets: healthy dietary guidelines (HDG), Mediterranean diet (MED), or green-MED diet, all combined with physical activity (PA).
- Both MED diets were similarly hypocaloric and included 28 g/day walnuts. The green-MED group further consumed green tea (3-4 cups/day) and a *Wolffia globosa* (Mankai) plant green shake.
- After 18 months of moderate and similar weight loss among the MED groups
- **Fasting Grhelin increased by 1.3%, 5.4%, and 10.5% in HDG, MED, and green-MED groups, respectively ( $P = 0.03$  for green-MED vs HDG)**
- **Grhelin elevation may reflect insulin sensitivity recovery and visceral fat regression**



Gal Tsaban, Anat Yaskolka Meir, Hila Zelicha, Ehud Rinott, Alon Kaplan, Aryeh Shalev, Amos Katz, Dov Brikner, Matthias Blüher, Uta Ceglarek, Michael Stumvoll, Meir J Stampfer, Iris Shai, Diet-induced Fasting Ghrelin Elevation Reflects the Recovery of Insulin Sensitivity and Visceral Adiposity Regression, *The Journal of Clinical Endocrinology & Metabolism*, Volume 107, Issue 2, February 2022. Pages 336–345. <https://doi.org/10.1210/clinem/dgab681>

# Speaking of Blood Pressure

- 140 participants with treatment-resistant hypertension
- Compared blood pressure and cardiovascular disease biomarkers
- 50% received 4 months of lifestyle modification classes on healthy diets, weight management, and exercise
- Control group attended a *single* counseling session.
- **Those in the lifestyle modification classes lowered their systolic blood pressure (12.5 point vs 7.1 point reduction systolic; 24 hour mean drop was 7 vs 0 mmHg reduction!)**
- Results comparable to antihypertensive medications and suggest diet and lifestyle as effective means for treatment and prevention of hypertension.



Blumenthal JA, Hinderliter AL, Smith PJ, et al. Effects of lifestyle modification on patients with resistant hypertension. Results of the TRIUMPH Randomized Clinical Trial. *Circulation*. Published online September 27, 2021. doi: 10.1161/CIRCULATIONAHA.121.055329



# So How Are We Doing?

- Survey of 123 cardiologists
- **Almost all (71%) referred ONLY 10% or fewer patients to dietitians.**
- Most of those surveyed thought patients' lack of motivation or interest in nutrition was the largest challenge to lifestyle changes despite research to the contrary.
- A positive? 59% of cardiologists believed nutrition interventions improve health outcomes as much if not more so than pharmaceuticals.



Devries S, Aggarwal M, Allen K, Kris-Etherton P, Theriot P, Freeman AM. Assessment of the low referral rate of cardiologists to dietitians/nutritionists. *Int J Dis Rev Prev.* 2021;3(2):1-8. doi:10.22230/ijdrp.2022v4n1a303



# We Need to Push Harder

- “A sustained change from a typical Western diet to the optimal diet from age 20 years **would increase life expectancy by more than a decade for women from the United States (10.7 [95% UI 8.4 to 12.3] years) and men (13.0 [95% UI 9.4 to 14.3] years).**”
- An optimal diet had substantially higher intake than a typical diet of whole grains, legumes, fish, fruits, vegetables, and included a handful of nuts, while reducing red and processed meats, sugar-sweetened beverages, and refined grains.



Fadnes LT, Økland JM, Haaland ØA, Johansson KA (2022) Correction: Estimating impact of food choices on life expectancy: A modeling study. PLOS Medicine 19(3): e1003962. <https://doi.org/10.1371/journal.pmed.1003962>

# Mental Well-Being

- 8,000 students from the Norfolk Children and Young People Health and Well-being Survey
- Higher intakes of fruits and vegetables (5/day) improved well-being scores (nearly 4 units higher) more than those who ate the least (0/day).
- Similar improvements in students who ate breakfast and lunch when compared to those who did not eat breakfast or lunch or consumed only energy drinks.



Hayhoe R, Rechel B, Clark AB, Gummerson C, Louise Smith SJ, Welch AA. Cross-sectional associations of schoolchildren's fruit and vegetable consumption, and meal choices, with their mental well-being: a cross-sectional study. *BMJ Nutr Prev Health*. 2021;e000205:1-16. doi: 10.1136/bmjnp-2020-000205

# Sucralose = Hungry?



- 74 people drank 300 mL of fluid - beverages sweetened with table sugar, sucralose, or water, which served as a control.
- After 2 hours, brain MRIs showed increased activity in craving brain areas in women and people who were obese had drinks containing sucralose, compared with drinks containing real sugar.
- Decreased the level of hormones related to satiety, and that women who drank sucralose-containing beverages tended to eat more at the snack buffet than men.
- **Women and people with obesity experienced an increase in appetite and food cravings after drinking sucralose-containing beverages!**



Yunker AG, Alves JM, Luo S, et al. Obesity and Sex-Related Associations With Differential Effects of Sucralose vs Sucrose on Appetite and Reward Processing: A Randomized Crossover Trial. *JAMA Netw Open*.2021;4(9):e2126313. doi:10.1001/jamanetworkopen.2021.26313

# Cut that salt!



- The New York Times reported that amid “an epidemic of diet-related illnesses,” the FDA released novel guidance “aimed at reducing the amount of salt that Americans consume at restaurants, school cafeterias and food trucks, or when they are eating packaged and prepared foods at home.”
- “Seek to reduce the average daily sodium intake by 12% over the next 2.5 years by encouraging food manufacturers, restaurants and food service companies to scale back their use of salt.”



<https://www.fda.gov/media/98264/download>

<https://www.nytimes.com/2021/10/13/health/fda-salt-food.html>



# Plant-Based Diets and HTN

- 265 participants from China with HTN
- After 7 day run-in, randomized to continue with the control diet or the cuisine-based Chinese heart-healthy diet for another 28 days
- SBP/DBP drops were  $-10.0$  (95% CI,  $-12.1$  to  $-7.9$ ) mm Hg and  $-3.8$  (95% CI,  $-5.0$  to  $-2.5$ ) mm Hg
- Authors conclude this approach is effective and cost effective



Wang Y, Feng L, Zeng G, et al. Effects of cuisine-based Chinese heart-healthy diet in lowering blood pressure among adults in China: multicenter, single-blind, randomized, parallel controlled feeding trial. *Circulation*. 2022;146:1-13.  
doi:10.1161/CIRCULATIONAHA.122.059045

# Milk and Cancer, Again!

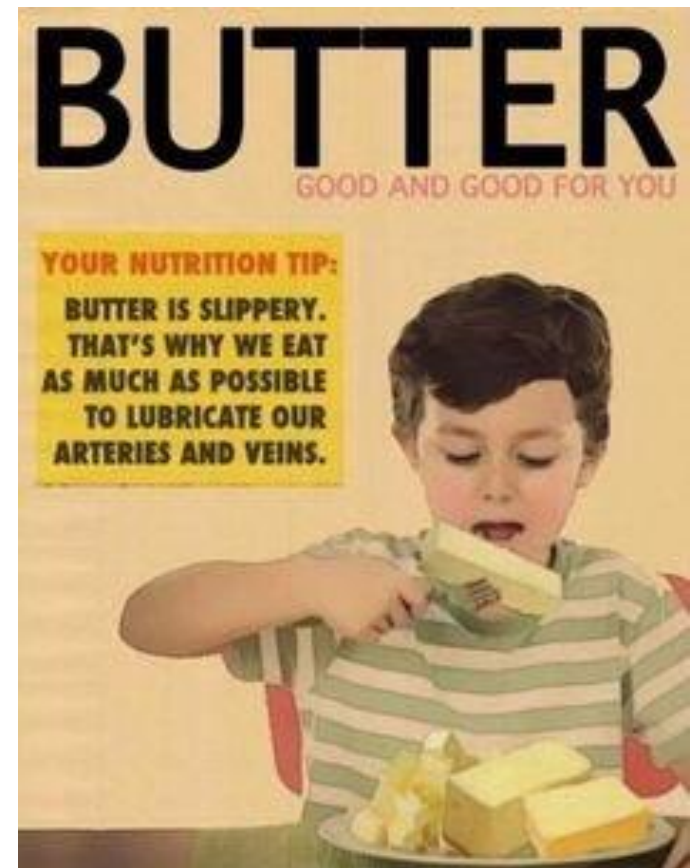
- More than 26,000 participants in the Japan Collaborative Cohort study
- Those who consumed the most milk (and yogurt) had a **37% higher** risk for developing prostate cancer than those who consumed less milk



Mikami K, Ozasa K, Miki T, et al. Dairy products and the risk of developing prostate cancer: A large-scale cohort study (JACC Study) in Japan. *Cancer Med.* Published online October 4, 2021. doi: 10.1002/cam4.4233

# Dairy and CVD

- 1929 patients (80% men, mean age 62 years) with stable angina pectoris from the Western Norway B-vitamin Intervention Trial
- Higher intakes of total dairy
  - 14% more strokes
  - 6% more CVD
- And for Butter = 10% more heart attacks



Anthea Van Parys, Jostein Sæle, Nathalie G Puaschitz, Åslaug Matre Anfinssen, Therese Karlsson, Thomas Olsen, Teresa R Haugsgjerd, Kathrine J Vinknes, Kirsten B Holven, Jutta Dierkes, Ottar K Nygård, Vegard Lysne, The association between dairy intake and risk of cardiovascular disease and mortality in patients with stable angina pectoris, *European Journal of Preventive Cardiology*, 2022;, zwac217, <https://doi.org/10.1093/euripc/zwac217>

# Dairy & Cancer (Again)

- More than half a million participants in China followed 11 years
- Every 50 grams (~1/4 cup) of milk/dairy per day:
  - Overall cancer 7% higher
  - Liver cancer 12% higher
  - Female breast 17% higher



Kakkoura MG, Du H, Guo Y, et al. Dairy consumption and risks of total and site-specific cancers in Chinese adults: an 11-year prospective study of 0.5 million people. *BMC Med.* 2022;20(1):134-147. doi:10.1186/s12916-022-02330-3

# Prostate and Plants

- Synthesis of 32 publications with 5 interventional and 11 observational studies
- Interventional studies showed generally favorable results of lifestyle modifications incorporating a plant-based diet with prostate cancer outcomes as well as improvements in nutrition and general health.
- Observational studies demonstrated either a lower risk of prostate cancer or no significant change



Gupta N, Taylor J, Borin J, et al. Systematic review of the impact of a plant-based diet on prostate cancer incidence and outcomes. *J Urol*. Published online May 1, 2022.  
doi:10.1097/JU.0000000000002518.04



# Prostate and Plants II

- Adventist Health Study-2, researchers looked at data from 28,737 men
- Men at the 90% of daily dairy intake had **27% higher prostate cancer risk** compared to 10%
- When compared to 0 intake; **62% higher prostate cancer risk**



Orlich MJ, Mashchak AD, Jaceldo-Siegl K, Utt JT, Knutsen SF, Sveen LE, Fraser GE. Dairy foods, calcium intakes, and risk of incident prostate cancer in the Adventist Health Study-2. Am J Clin Nutr. 2022 Aug 4;116(2):314-324. doi: 10.1093/ajcn/nqac093. PMID: 35672028; PMCID: PMC9348981.

# Nuts!

- 3,449 breast cancer survivors from the Shanghai Breast Cancer Survival Study; followed for 8 years
- Those who ate more nuts improved their overall survival (by 5% or more) and disease-free survival rates (by 8% or more) when compared to those who consumed lower amounts of nuts.



Wang C, Gu K, Wang F, et al. Nut consumption in association with overall mortality and recurrence/disease-specific mortality among long-term breast cancer survivors. *Int J Cancer*.

Published online October 19, 2021. doi: 10.1002/ijc.33824

# Bad News for Alcohol

- WHO report
- Consumption of alcohol is one of the most significant risk factors for breast cancer that can be modified and causes 7% of all new breast cancer diagnoses in Europe
- >10% of alcohol-attributable cancer cases in the European region arise from drinking just one bottle of beer (500 ml) or two small glasses of wine (100 ml each) every day.
- For breast cancer, this is even higher, with 1 in 4 alcohol-attributable breast cancer cases in the region being caused by this amount.



<https://www.who.int/europe/news/item/20-10-2021-alcohol-is-one-of-the-biggest-risk-factors-for-breast-cancer>



**Table. Evidence-Based Dietary Guidance to Promote Cardiovascular Health**

1. Adjust energy intake and expenditure to achieve and maintain a healthy body weight
2. Eat plenty of fruits and vegetables, choose a wide variety
3. Choose foods made mostly with whole grains rather than refined grains
4. Choose healthy sources of protein
a. mostly protein from plants (legumes and nuts)
b. fish and seafood
c. low-fat or fat-free dairy products instead of full-fat dairy products
d. if meat or poultry are desired, choose lean cuts and avoid processed forms
5. Use liquid plant oils rather than tropical oils (coconut, palm, and palm kernel), animal fats (eg, butter and lard), and partially hydrogenated fats
6. Choose minimally processed foods instead of ultra-processed foods*
7. Minimize intake of beverages and foods with added sugars
8. Choose and prepare foods with little or no salt
9. If you do not drink alcohol, do not start; if you choose to drink alcohol, limit intake
10. Adhere to this guidance regardless of where food is prepared or consumed

\*There is no commonly accepted definition for ultra-processed foods, and some healthy foods may exist within the ultra-processed food category.

**AHA SCIENTIFIC**

## 2021 Diet Cardiovascular From the

Alice H. Lichtenstein, D  
Maya Vadiveloo, PhD, R  
Casey M. Rebholz, PhD  
Linda Van Horn, PhD, R  
Lifestyle and Cardiomet  
Radiology and Intervent



ment

, FAHA;  
FAHA;  
ociation Council on  
on Cardiovascular



# Eat Plants, Take Less Meds

- 328 participants, aged 60 years or older
- A vegan diet reduces the number of pills by 58% compared to non-vegetarian (IRR=.42 [95% CI: .25-.70]), even after adjusting for covariates



Dos Santos H, Gaio J, Durisic A, Beeson WL, Alabadi A. The Polypharma Study: Association Between Diet and Amount of Prescription Drugs Among Seniors. *American Journal of Lifestyle Medicine*. 2021;0(0). doi:[10.1177/15598276211048812](https://doi.org/10.1177/15598276211048812)

If your doctor prescribes you  
medication without first asking  
about ...

- your diet
- your sleep
- your exercise routine
- your water consumption
- whether you have any structural  
issues &
- the stress in your life

Then you don't have a doctor, you  
have a drug dealer

# Cut That Risk, Fast!

- 459 adults aged 22 to 75 years without CVD
- 8 week DASH or Fruit/Veggie diet intervention
- DASH and F/V diets changed 10-year ASCVD risk by  $-10.3\%$  (95% confidence interval [CI]  $-14.4$  to  $-5.9$ ) and  $-9.9\%$  (95% CI  $-14.0$  to  $-5.5$ ) respectively
- **~ 10% drop in 8 weeks!**



Jeong SY, Wee CC, Kovell LC, Plante TB, Miller ER 3rd, Appel LJ, Mukamal KJ, Juraschek SP. Effects of Diet on 10-Year Atherosclerotic Cardiovascular Disease Risk (from the DASH Trial). Am J Cardiol. 2023 Jan 15;187:10-17. doi: 10.1016/j.amjcard.2022.10.019. Epub 2022 Nov 29. PMID: 36459731.

# Eat Animal Fat = Stroke?

- 27 years of data from more than 117,000 from the Nurses' Health Study and the Health Professionals Follow-Up Study.
- **Highest quintile of non-dairy animal fat intake were 16% more likely to experience a stroke.**
- **Eating the most vegetable fat and the most polyunsaturated fat = 12% less stroke**



Wang F, Baden MY, Rexrode KM, Hu FB. RF160 - Dietary Fat Intake and the Risk of Stroke: Results from Two Prospective Cohort Studies. Abstract presented at: American Heart Association's Scientific Sessions 2021; November 13-15, 2021; virtual meeting.

# It's the TMAO?



“

**The understanding of most clinicians and nutritionist does not include this important fact: red meat kills and processed red meat kills faster.**

Kim Allan Williams Sr



Wang M, Wang Z, Lee Y, et al. Dietary meat, trimethylamine n-oxide-related metabolites, and incident cardiovascular disease among older adults: the Cardiovascular Health Study. *Arterioscler Thromb Vasc Biol*. Published online August 1, 2022. doi:10.1161/ATVBAHA.121.316533.



# Ahhh Coffee

- 2,583 pregnant people
- Low and moderate caffeinated beverage intake early in second trimester within current guidelines of less than 200 mg per day
- Lower risk for gestational diabetes, lower glucose levels at screening, and more favorable cardiometabolic profile compared with no consumption.
- Caffeine was not associated with gestational hypertension or preeclampsia.



Hinkle SN, Gleason JL, Yisahak SF, et al. Assessment of Caffeine Consumption and Maternal Cardiometabolic Pregnancy Complications. *JAMA Netw Open*. 2021;4(11):e2133401. doi:10.1001/jamanetworkopen.2021.33401

# More Coffee!

- 382,535 individuals without known cardiovascular disease
- 2-3 cups of coffee a day was associated with the greatest benefit, translating to a **10%-15% lower risk of developing coronary heart disease, heart failure, arrhythmias, or dying for any reason**



Chieng D, Canovas R, Segan L, et al. EFFECTS OF HABITUAL COFFEE CONSUMPTION ON INCIDENT CARDIOVASCULAR DISEASE, ARRHYTHMIA, AND MORTALITY: FINDINGS FROM UK BIOBANK. *J Am Coll Cardiol.* 2022 Mar, 79 (9\_Supplement) 1455. [https://doi.org/10.1016/S0735-1097\(22\)02446-9](https://doi.org/10.1016/S0735-1097(22)02446-9)


# More Coffee 2!

- 34,279 individuals who had some form of cardiovascular disease at baseline
- Consuming **any** amount of coffee was not associated with a higher risk of arrhythmias, including atrial fibrillation (AFib) or atrial flutter.
- Of the 24,111 people included in the analysis who had an arrhythmia at baseline, drinking coffee was associated with **a lower risk of death and people with AFib who drank one cup of coffee a day were nearly 20% less likely to die than non-coffee drinkers.**



# More Coffee 3!

- 171,616 participants (mean age, 55.6 years [SD, 7.9]) without cardiovascular disease (CVD) or cancer at baseline from UK Biobank
- Consumers of various amounts of unsweetened coffee had lower risks for all-cause mortality after adjustment for lifestyle, sociodemographic, and clinical factors
- **Sweet spot = 2.5-4.5 cups/day = 29% less mortality**
- Even with sugar (regular), a max of 28% less mortality (at 2.5-3.5 cups/day) was noted



Liu D, Li ZH, Shen D, Zhang PD, Song WQ, Zhang WT, Huang QM, Chen PL, Zhang XR, Mao C. Association of Sugar-Sweetened, Artificially Sweetened, and Unsweetened Coffee Consumption With All-Cause and Cause-Specific Mortality : A Large Prospective Cohort Study. Ann Intern Med. 2022 Jul;175(7):909-917. doi: 10.7326/M21-2977. Epub 2022 May 31. PMID: 35635846.



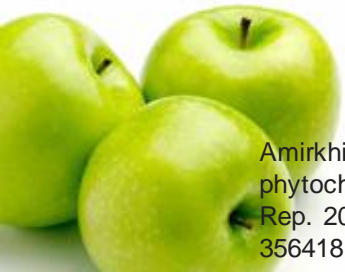
# Watch the Sweeteners!

- 102,865 adults from the French population-based cohort NutriNet-Santé (2009–2021) were included (followed ~7.8 years)
- Compared to non-consumers, higher consumers of artificial sweeteners (i.e., above the median) had higher risk of overall cancer = 13% More Cancer
- Aspartame = 15% More Cancer
- Acesulfame-K = 13% More



# Arthritis

- 124 cases aged 20-60 years diagnosed with bilateral primary knee OA
- 65% lower odds of having knee arthritis in those who ate the most plant-based, even after adjustment for confounders including BMI



Amirkhizi F, Ghoreishy SM, Hamed-Shahraki S, Asghari S. Higher dietary phytochemical index is associated with lower odds of knee osteoarthritis. Sci Rep. 2022 May 31;12(1):9059. doi: 10.1038/s41598-022-13019-1. PMID: 35641816; PMCID: PMC9156685.

# Arthritis Pain

- 44 patients with RA
- Vegan diet vs placebo + no diet change and then switched with 4 week washout
- Disease Activity Score-28 (DAS28) decreased from 4.5 to 2.5 ( $P < .001$ ) in the Diet phase
- The mean number of swollen joints decreased from 7.0 to 3.3 in the Diet phase ( $P = .03$ )



Barnard ND, Levin S, Crosby L, Flores R, Holubkov R, Kahleova H. A Randomized, Crossover Trial of a Nutritional Intervention for Rheumatoid Arthritis. American Journal of Lifestyle Medicine. 2022;0(0). doi:10.1177/15598276221081819

# Best Time to Sleep?

- Going to sleep between 10:00 and 11:00 pm is associated with a lower risk of developing heart disease compared to earlier or later bedtimes
- 88,026 individuals in the UK Biobank recruited between 2006 and 2010, followed for 5.7 years
- 25% higher risk of cardiovascular disease with a sleep onset at midnight or later, a 12% greater risk for 11:00 to 11:59 pm, and a 24% raised risk for falling asleep before 10:00 pm.



Nikbakhtian S, Reed AB, Obika BD, et al. Accelerometer-derived sleep onset timing and cardiovascular disease incidence: a UK Biobank cohort study. Eur Heart J Digit Health. 2021. doi:10.1093/ehjdh/ztab088.

Link will go live on publication: <https://academic.oup.com/ehjdh/article-lookup/doi/10.1093/ehjdh/ztab088>



# A Dedicated CV Prevention Clinic

- 239 patients (enrolled in CV prevention clinic vs intervention/general clinic)
- Prevention group counseled on lifestyle
- Greater weight loss at 6 months (1.7 kg less vs a gain of 0.1 kg)
- Greater LDL loss -24.8 (vs -7) mg/dL



Elzeneini M, George J, Ashraf H, Xu K, Petersen J, Anderson RD, Handberg EM, Pepine CJ, Aggarwal M. Impact of a preventive cardiology clinic focusing on lifestyle and nutrition counseling: A pilot analysis. American Heart Journal Plus: Cardiology Research and Practice. 2021 Jun 1;6:100032.



# Less Death

- 22,421 participants from the Malmö Diet and Cancer cohort
- Those with the highest adherence to the Lancet diet, which included high intakes of fruits, vegetables, legumes, and whole grains and limited intakes of animal products and saturated fats
- **Cancer = 24% less mortality**
- **Heart Disease = 32% less mortality**
- **All Causes = 25% less mortality**



Stubbendorff A, Sonestedt E, Ramne S, Drake I, Hallström E, Ericson U. Development of an EAT-Lancet index and its relation to mortality in a Swedish population. Am J Clin Nutr. 2022 Mar 4;115(3):705-716. doi: 10.1093/ajcn/nqab369. PMID: 34791011; PMCID: PMC8895215.



# Avocado Trial



- 45 overweight or obese participants with baseline LDL-C in the 25th to 90<sup>th</sup> percentile – randomized control trial
- 3 cholesterol-lowering diets (6% to 7% SFA) were fed (5 weeks each):
  - a lower-fat diet (LF: 24% fat)
  - 2 moderate-fat diets (34% fat) the avocado diet (AV) included one fresh Hass avocado (136 g) per day
  - and a moderate-fat diet (MF) mainly used high oleic acid oils to match the fatty acid content of one avocado
- AV diet = 13.5mg/dL drop (also only diet to drop particle number and small dense LDL)
- MF = 8.3, and LF = 7.4 mg/dL drop



Wang L, Bordi PL, Fleming JA, Hill AM, Kris-Etherton PM. Effect of a moderate fat diet with and without avocados on lipoprotein particle number, size and subclasses in overweight and obese adults: a randomized, controlled trial. J Am Heart Assoc. 2015 Jan 7;4(1):e001355. doi: 10.1161/JAHA.114.001355. PMID: 25567051; PMCID: PMC4330060.

# Just a Spoonful?

- The Nurses' Health Study (1990-2018; n = 60,582 women) and the Health Professionals Follow-up Study (1990-2018; n = 31,801 men).
- Followed 28 years
- A diet that includes approximately half a tablespoon of olive oil daily may cut risk for CV death and all-cause death by 19%
- Replacing 10 g/d of margarine, butter, mayonnaise, and dairy fat with the equivalent amount of olive oil was associated with 8%-34% lower risk of total and cause-specific mortality



Guasch-Ferré M, Li Y, Willett W, et al. Consumption of Olive Oil and Risk of Total and Cause-Specific Mortality Among U.S. Adults. *J Am Coll Cardiol.* 2022 Jan, 79 (2) 101–112. <https://doi.org/10.1016/j.jacc.2021.10.041>

# COVID Be Gone!

- New commentary on benefits of a plant-based diet for COVID-19
- One showed a healthy plant-based diet was associated with a 9% lower risk of COVID-19 infection and a 41% lower risk of severe COVID-19.
- Another found that health care workers following a plant-based diet who had substantial exposure to COVID-19 patients had a 73% lower risk of moderate-to-severe COVID-19.
- Another looked at Okinawa, Japan, which has seen low COVID-19 mortality rates, attributable to plant-based diets many follow there.



Kahleova, H., Barnard, N.D. Can a plant-based diet help mitigate Covid-19?. *Eur J Clin Nutr* **76**, 911–912 (2022).  
<https://doi.org/10.1038/s41430-022-01082-w>

# Bad News for Eggs, Again

- A prospective analysis of 27 078 men in the ATBC Study (Alpha-Tocopherol, Beta-Carotene Cancer Prevention)
- For each additional 300 mg cholesterol intake per day there was:
  - 10% higher overall mortality
  - 13% CVD-related mortality
- For each additional 50-g egg consumed daily:
  - 6% higher overall mortality
  - 9% higher CVD mortality



Zhao B, Gan L, Graubard BI, Männistö S, Albanes D, Huang J. Associations of dietary cholesterol, serum cholesterol, and egg consumption with overall and cause-specific mortality, and systematic review and updated meta-analysis. *Circulation*. Published online April 1, 2022. doi:10.1161/CIRCULATIONAHA.121.057642

# Diabetes

- Measured plasma metabolites from 10,684 participants from Nurses' Health Study, Nurses' Health Study II and Health Professionals Follow-up Study
- Metabolite profile scores of plant-based diet index PDI (HR per 1 SD higher = 0.81 [95% CI 0.75, 0.88])
- Healthy PDI (HR per 1 SD higher = 0.77 [95% CI 0.71, 0.84])
- Both showed an inverse association with incident type 2 diabetes, stronger with healthier diet



Wang F, Baden MY, Guasch-Ferré M, et al. Plasma metabolite profiles related to plant-based diets and the risk of type 2 diabetes. *Diabetologia*. Published online April 8, 2022. doi:10.1007/s00125-022-05692-8



# Protect Your Mind



- Long-term prospective from the Three-City Cohort, which consists of sample sets from different geographic regions (Bordeaux, n = 418; Dijon, n = 424)
- Cognitive decline is evaluated through Mini-Mental State Examination, Benton Visual Retention Test, Isaac's Set Test, Trail-Making Test part A, and Trail-Making Test part B.
- **A protective association is found between metabolites derived from cocoa, coffee, mushrooms, red wine, the microbial metabolism of polyphenol-rich foods, and cognitive decline**
- **A hurtful association with unhealthy dietary components, such as artificial sweeteners and alcohol.**



González-Domínguez R, Castellano-Escuder P, Carmona F, Lefèvre-Arbogast S, Low DY, Du Preez A, Ruigrok SR, Manach C, Urpi-Sarda M, Korosi A, Lucassen PJ, Aigner L, Pallàs M, Thuret S, Samieri C, Sánchez-Pla A, Andres-Lacueva C. Food and Microbiota Metabolites Associate with Cognitive Decline in Older Subjects: A 12-Year Prospective Study. *Mol Nutr Food Res*. 2021 Dec;65(23):e2100606. doi: 10.1002/mnfr.202100606. Epub 2021 Oct 28. PMID: 34661340.

# Dementia

- Analysis of dietary patterns for 5,710 participants under the age of 60 from the Tzu Chi Vegetarian Study (TCVS)
- Vegetarians were associated with reduced risk of clinically overt dementia (33% less) compared with nonvegetarians (hazard ratio = 0.671, confidence interval: 0.452-0.996,  $p < 0.05$ ) even after adjustments.



Tsai JH, Huang CF, Lin MN, Chang CE, Chang CC, Lin CL. Taiwanese vegetarians are associated with lower dementia risk: a prospective cohort study. *Nutrients*. Published online January 28, 2022.

# More on Dementia

- Circulatory Risk in Communities Study, involving 3739 Japanese individuals aged 40–64 years at the dietary surveys (1985–99)
- 19.7-year follow-up, a total of 670 cases of disabling dementia developed
- 26% less dementia for those consuming the most fiber



Kazumasa Yamagishi, Koutatsu Maruyama, Ai Ikeda, Masanori Nagao, Hiroyuki Noda, Mitsumasa Umesawa, Mina Hayama-Terada, Isao Muraki, Chika Okada, Mari Tanaka, Rie Kishida, Tomomi Kihara, Tetsuya Ohira, Hironori Imano, Eric J. Brunner, Tomoko Sankai, Takeo Okada, Takeshi Tanigawa, Akihiko Kitamura, Masahiko Kiyama & Hiroyasu Iso (2022) Dietary fiber intake and risk of incident disabling dementia: the Circulatory Risk in Communities Study, Nutritional Neuroscience, DOI: [10.1080/1028415X.2022.2027592](https://doi.org/10.1080/1028415X.2022.2027592)

# Alzheimer's

- 4,932 participants from the Framingham Heart Study
- High blood sugar levels measured in middle age were associated with **14.5% increased risk** of dementia decades later



Zhang X, Tong T, Chang A, Ang TFA, Tao Q, Auerbach S, Devine S, Qiu WQ, Mez J, Massaro J, Lunetta KL, Au R, Farrer LA. Midlife lipid and glucose levels are associated with Alzheimer's disease. *Alzheimers Dement*. 2022 Mar 23. doi: 10.1002/alz.12641. Epub ahead of print. PMID: 35319157.

# Eat Those Berries!

- 575 deceased participants (age at death =  $91.3 \pm 6.1$  years; 70% females) from the Rush Memory and Aging Project
- Calorie-adjusted pelargonidin intake was modeled in quartiles and berry intake as continuous (servings/week).
- More pelargonidin and specifically strawberries reduced amyloid-Beta load and phosphorylated tau tangles (associated with Alzheimer's Dis)

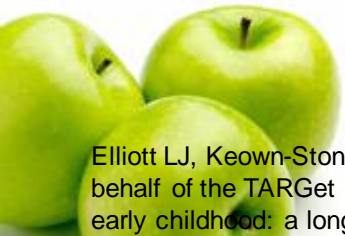


Agarwal P, Holland TM, James BD, Cherian LJ, Aggarwal NT, Leurgans SE, Bennett DA, Schneider JA. Pelargonidin and Berry Intake Association with Alzheimer's Disease Neuropathology: A Community-Based Study. J Alzheimers Dis. 2022;88(2):653-661. doi: 10.3233/JAD-215600. PMID: 35694918.



# Kids: Veggies are Safe!

- 8907 children from 6 months to 8 years old, including 248 vegetarian at baseline
- “Evidence of clinically meaningful differences in growth or biochemical measures of nutrition for children with vegetarian diet **was not** found.”



Elliott LJ, Keown-Stoneman CDG, Birken CS, Jenkins DJA, Borkhoff CM, Maguire JL; on behalf of the TARGET KIDS! COLLABORATION. Vegetarian diet, growth, and nutrition in early childhood: a longitudinal cohort study. *Pediatrics*. 2022;e2021052598-e2021052610. doi:10.1542/peds.2021-052598

# Vegan Diets Really Work

- 11 trials with 796 participants
- When compared with control diets, vegan diets:
  - reduced body weight (-4.1 kg, 95% confidence interval (CI) -5.9 to -2.4,  $p < 0.001$ )
  - body mass index (BMI) (-1.38 kg/m<sup>2</sup>, 95% CI -1.96 to -0.80,  $p < 0.001$ )
  - A1c (-0.18% points, 95% CI -0.29 to -0.07,  $p = 0.002$ )
  - total cholesterol (-0.30 mmol/L, 95% CI -0.52 to -0.08,  $p = 0.007$ )
  - low-density lipoprotein cholesterol (-0.24 mmol/L, 95% CI -0.40 to -0.07,  $p = 0.005$ )



Termansen AD, Clemmensen KKB, Thomsen JM, Nørgaard O, Díaz LJ, Torekov SS, Quist JS, Faerch K. Effects of vegan diets on cardiometabolic health: A systematic review and meta-analysis of randomized controlled trials. *Obes Rev.* 2022 Sep;23(9):e13462. doi: 10.1111/obr.13462. Epub 2022 Jun 7. PMID: 35672940; PMCID: PMC9540559.



# Cancer is... Fishy?

- 491,367 participants' data from the NIH-AARP Diet and Health Study
- Followed > 15 years
- When comparing highest to lowest total fish intake, tuna intake, and non-fried fish intake
  - 22% higher melanoma
  - 28% higher melanoma in-situ



Li Y, Liao LM, Sinha R, Zheng T, Vance TM, Qureshi AA, Cho E. Fish intake and risk of melanoma in the NIH-AARP diet and health study. *Cancer Causes Control*. 2022 Jul;33(7):921-928. doi: 10.1007/s10552-022-01588-5. Epub 2022 Jun 9. PMID: 35676377.

# DM2 Remission

- Diet as a primary intervention for T2D is most effective in **achieving** remission when emphasizing whole, plant-based foods
- A low-fat, whole food, plant-based diet can often **sustain** remission of T2D.
- **HARM:** A very low-carbohydrate diet can be associated with significant adverse events and cardiovascular risk that make this diet inadvisable for long-term remission of T2D.
- Lifestyle change interventions should be prioritized and **reimbursed at higher rates** compared with current fee-for-service models that favor pharmacotherapy and limit time spent by providers to counsel patients meaningfully on adopting healthy dietary choices, implementing regular physical activity, etc.

Micaela C. Karlsen, PhD, MSPH  17

**Objective:** The objective of this Expert Consensus Statement is to assist clinicians in achieving remission of type 2 diabetes (T2D) in adults using diet as a primary intervention. Evidence-informed statements agreed upon by a multi-disciplinary panel of expert healthcare professionals were used.

# DM2 & Veggies

- 3042 healthy adults living in Athens Greece
- 1485 followed for 10 years
- 4+ servings/day of vegetables = **58% lower risk** of developing T2DM (HR = 0.42; 95% CI = 0.29-0.61)
- Greater in women = **71% lower risk** (HR = 0.29; 95% CI = 0.16-0.53)



Kosti RI, Tsiampalis T, Kouvari M, Chrysohoou C, Georgousopoulou E, Pitsavos CS, Panagiotakos DB. The association of specific types of vegetables consumption with 10-year type II diabetes risk: Findings from the ATTICA cohort study. J Hum Nutr Diet. 2022 Jun 30. doi: 10.1111/jhn.13056. Epub ahead of print. PMID: 35770418.



# Diet & Pre-Eclampsia

- 8507 women of which 848 developed preeclampsia.
- 47% were Black, 28% were Hispanic, and the remaining were White/Other.
- Greatest adherence with Med diet was associated with lower preeclampsia odds by **22%**(HR 0.78; 95% CI, 0.64-0.96).
- For Black women **26% less** (HR 0.74 95% CI, 0.76-0.96).



Minhas AS, Hong X, Wang G, Rhee DK, Liu T, Zhang M, Michos ED, Wang X, Mueller NT. Mediterranean-Style Diet and Risk of Preeclampsia by Race in the Boston Birth Cohort. J Am Heart Assoc. 2022 May 3;11(9):e022589. doi: 10.1161/JAHA.121.022589. Epub 2022 Apr 20. PMID: 35441523; PMCID: PMC9238615.

# Colon Cancer

- 52,695 participants in the Black Women's Health Study
- **33% increased risk** for late-onset colorectal cancer for every 100 grams (3.5 ounces) of unprocessed red meat intake per day.



Yiannakou I, Barber LE, Li S, Adams-Campbell LL, Palmer JR, Rosenberg L, Petrick JL. A Prospective Analysis of Red and Processed Meat Intake in Relation to Colorectal Cancer in the Black Women's Health Study. J Nutr. 2022 May 5;152(5):1254-1262. doi: 10.1093/jn/nxab419. PMID: 34910194; PMCID: PMC9071344.



# Ultraprocessed Foods and Colon Cancer

- Men (n= 46 341) from the Health Professionals Follow-up Study (1986-2014) and women (n=159 907) from the Nurses' Health Study (1986-2014; n=67 425) and the Nurses' Health Study II (1991-2015; n=92 482)
- Highest fifth of consumption = 29% higher risk of colorectal cancer
- Remained significant after adjustment for BMI and nutritional quality of the diet



Wang L, Du M, Wang K, Khandpur N, Rossato S L, Drouin-Chartier J et al. Association of ultra-processed food consumption with colorectal cancer risk among men and women: results from three prospective US cohort studies *BMJ* 2022; 378 :e068921 doi:10.1136/bmj-2021-068921

# Really?

## "MY DOCTOR SAID I NEED TO EAT MEAT"

*According to repeated nationwide surveys,*

### More Doctors Smoke **CAMELS** than any other cigarette!

Doctors in every  
branch of medicine

You'll enjoy Camels for the same reasons  
so many doctors enjoy them. Camels have  
rich, cool taste, pack after pack, and





# Environment

- **Widespread Adoption of Plant-Based Diets Required for Net Zero Greenhouse Gas Emissions by 2050**
- Diet choices account for 26% of greenhouse gas emissions
- Meat consumption in America and Europe would need to drop by 79% and 68%, respectively, to reach international emission goals.
- Authors call for removing subsidies on livestock, for example, while increasing affordability of healthful, plant-based foods.



Marteau TM, Chater N, Garnett EE. Changing behaviour for net zero 2050. *BMJ*.2021;375:n2293. doi: 10.1136/bmj.n2293t



# Yikes!

THE  TIMES

Today's sections ▾

Past six days

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Times Radio

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ENVIRONMENT

## Humans wipe out 70% of animals in 50 years

Adam Vaughan, Environment Editor |  
Kieran Gair

Thursday October 13 2022, 12.01am  
BST, The Times



The survival of jaguars in the Amazon and sharks in the Red Sea is threatened  
GETTY IMAGES

Humans have wiped out almost 70 per cent of animal populations in almost half a century, conservationists have found.

[https://www.thetimes.co.uk/article/humans-wipe-out-70-of-animals-in-50-years-6c3zch83j?utm\\_medium=Social&utm\\_source=Twitter#Echobox=1665654119](https://www.thetimes.co.uk/article/humans-wipe-out-70-of-animals-in-50-years-6c3zch83j?utm_medium=Social&utm_source=Twitter#Echobox=1665654119)

# NY Times

This is the second in a series of three videos we are releasing this month that explore some of the harms of the global food system and the urgent need to address them. The first, published last week, examined how the powerful American agriculture lobby has fended off environmental regulation, despite the harm done by the sector.

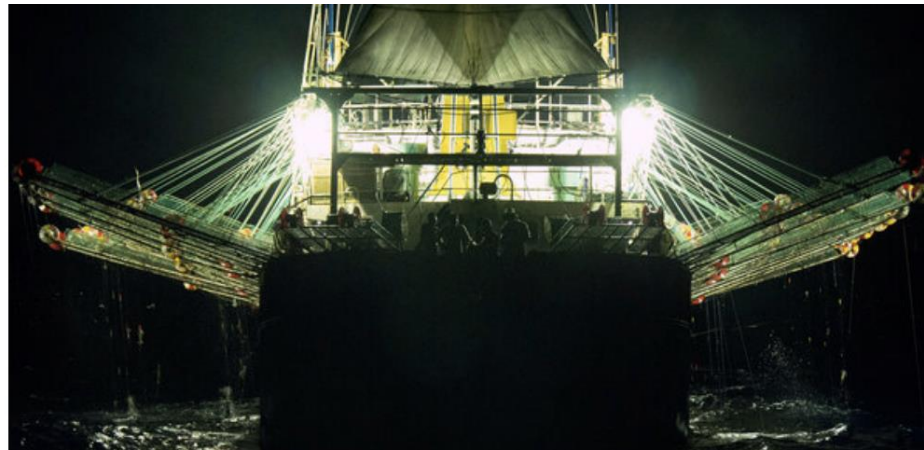
[https://www.nytimes.com/2022/02/10/opinion/factory-farming-chicken.html?campaign\\_id=190&emc=edit\\_ufr\\_20220217&instance\\_id=53484&nl=updates-from-the-newsroom&regi\\_id=158631699&segment\\_id=83065&te=1&user\\_id=41f408b70f187573ff3f520bc3d83aa7](https://www.nytimes.com/2022/02/10/opinion/factory-farming-chicken.html?campaign_id=190&emc=edit_ufr_20220217&instance_id=53484&nl=updates-from-the-newsroom&regi_id=158631699&segment_id=83065&te=1&user_id=41f408b70f187573ff3f520bc3d83aa7)

# Scary

The New York Times  
**The Morning**

September 27, 2022


China's fishing expansion is part of a much larger story, of course. As the world's most populous country, and one with an economy that has grown rapidly in recent decades, China has a growing global footprint — economically, diplomatically and militarily. It needs so much fish to feed a middle class that has become vastly larger over the past generation.



<https://www.nytimes.com/2022/09/27/briefing/china-fishing-galapagos.html>

# Yoga for Syncope

- 55-patient study with recurrent vasovagal syncope
- Randomized to receive either a specialized yoga training program in addition to current guideline-based therapy (intervention arm, group 1) or current guideline-based therapy alone (control arm, group 2).
- Syncopal or presyncopal events at 12 months was  $0.7 \pm 0.7$  in the intervention arm compared to  $2.52 \pm 1.93$  in the control arm ( $P < 0.01$ ). Almost 4 times less!
- In the yoga group, 13 (43.3%) patients remained free of events versus 4 (16.0%) patients in the control arm ( $P = 0.02$ )



Sharma G, Ramakumar V, Sharique M, et al. Effect of Yoga on Clinical Outcomes and Quality of Life in Patients With Vasovagal Syncope (LIVE-Yoga). *J Am Coll Cardiol EP*. 2022 Feb, 8 (2) 141–149. <https://doi.org/10.1016/j.jacep.2021.09.007>



# Don't Forget the Exercise

- 50,359 adult Biobank participants with physical activity data
- Those with significant exercise reduced CV events, but effect was **greater** for those with anxiety or depression (almost 25% less)



Zureigat H, Abohashem S, Grewal S, et al. CARDIOVASCULAR BENEFIT OF EXERCISE IS GREATER IN THOSE WITH ANXIETY AND DEPRESSION. *J Am Coll Cardiol*. 2022 Mar, 79 (9\_Supplement) 1436. [https://doi.org/10.1016/S0735-1097\(22\)02427-5](https://doi.org/10.1016/S0735-1097(22)02427-5)



# Walking, More!

MOVE

The New York Times

PLAY THE CROSSWORD

In a new study, which looks at activity tracker data from 78,500 people, walking at a brisk pace for about 30 minutes a day led to a reduced risk of heart disease, cancer, dementia and death, compared with walking a similar number of steps but at a slower pace. These results were recently published in two papers in the journals [JAMA Internal Medicine](#) and [JAMA Neurology](#).

9,800 steps a day offered the highest level of protection.



# Walking Data

- UK Biobank data for 78 500 individuals (mean age, 61 years)
- followed for a median of 7 years
- More steps
  - 8% less all cause death
  - 10% less CVD death
  - 11% less cancer death



del Pozo Cruz B, Ahmadi MN, Lee I, Stamatakis E. Prospective Associations of Daily Step Counts and Intensity With Cancer and Cardiovascular Disease Incidence and Mortality and All-Cause Mortality. *JAMA Intern Med.*2022;182(11):1139–1148. doi:10.1001/jamainternmed.2022.4000

# Spirituality

- A review of 47 articles
- Author conclusions: “The literature suggests not only can spirituality improve QOL for the patient, it can help support caregivers and potentially help HF patients from needing to be readmitted to the hospital”



# Mindfulness and A1c

- 28 article analysis
- Any mindful practice dropped A1c by almost 1 point (0.84%)
- Yoga did the best at 1%



Fatimata Sanogo, Keren Xu, Victoria K. Cortessis, Marc J. Weigensberg, and Richard M. Watanabe. Mind- and Body-Based Interventions Improve Glycemic Control in Patients with Type 2 Diabetes: A Systematic Review and Meta-Analysis. Journal of Integrative and Complementary Medicine. ahead of print <http://doi.org/10.1089/jicm.2022.0586>

# More Good News?

The  
Economist

≡ Menu

Weekly edition

🔍 Search ▾

United States | The best medicine

More hospitals are starting to feed their patients better food. Intermountain, a non-profit group based in Utah that runs 32 hospitals across the Mountain West, has since 2019 served freshly made meals to patients. Chefs in proper kitchens now source local ingredients to serve in cafeterias. Doctors are consulted to meet patients' dietary needs. Christopher Delissio, the head chef at Intermountain,



<https://www.economist.com/united-states/2022/09/08/american-hospital-food-is-fast-improving>





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City Health Leaders  
Embrace Single Largest  
Training Rollout in Specialty  
Anywhere in World —  
Giving Practitioners New  
Tools to Combat Chronic  
Disease and Health  
Disparities

Initiative is in Addition to  
Training and Clinical  
Expansion Underway at  
NYC Health + Hospitals

## Mayor Adams, American College of Lifestyle Medicine Announce \$44 Million to Offer Lifestyle Medicine Foundational Training to Every NYC Health Care Practitioner

# Food as Medicine, Really

**TuftsNow**

Medically Tailored Meals Could Save U.S. Nearly \$13.6 Billion Per Year

 FOLLOW

FOOD & NUTRITION

## Medically Tailored Meals Could Save U.S. Nearly \$13.6 Billion Per Year

Tufts researchers estimate that alongside cost savings, expanding programs that prepare nutritionally customized meals for patients with serious illnesses could help avoid 1.6 million hospitalizations annually



<https://now.tufts.edu/2022/10/17/medically-tailored-meals-could-save-us-nearly-136-billion-year>

# A Moral Imperative!

A societal shift toward more whole-food plant-based patterns of eating stands to provide significant health benefits and ethical advantages, and the medical profession has a duty to advocate accordingly. Although it remains important for individuals to make better food choices to promote their own health, personal responsibility is predicated on sound advice and on resource equity, including the availability of healthy options. Nutrition equity is a moral imperative and should be a top priority in the promotion of public health.

Articles

whole-food plant-based nutrition can reverse them. Factory farming of animals also contributes to climate change, antibiotic resistance, and the spread of infectious diseases. Finally, the current allocation of nutritional resources in the United States is unjust. A societal shift toward more whole-food plant-based patterns of eating stands to provide significant health benefits and ethical advantages, and the medical profession has a duty to advocate accordingly. Although it remains important for individuals to make better food choices to promote their own health, personal responsibility is predicated on sound advice and on resource equity, including the availability of healthy options. Nutrition equity is a moral imperative and should be a


Display a menu

Hull SC, Charles J, Caplan AL. Are We What We Eat? The Moral Imperative of the Medical Profession to Promote Plant-Based Nutrition. Am J Cardiol. 2023 Feb 1;188:15-21. doi: 10.1016/j.amjcard.2022.10.006. Epub 2022 Nov 28. PMID: 36446227.

**Pills and  
Surgery**

**Lifestyle  
Change**



 @antitechh



229.4K



# SCL Health – Saint Joseph: Q1 2023\*

In addition to these results, many participants reduced or discontinued medications to lower BP, lipids, and blood sugar with approval of their physicians.

These improvements would have been even greater if medications were unchanged.

43% reduction in reported angina\*\*

	Baseline	9 weeks	Change
Weight Loss	195.1	188.2	-3.5%
BMI	29.9	28.8	-3.6%
Total Cholesterol	158.3	132.8	-16.1%
LDL Cholesterol	84.2	62.3	-26.1%
HDL Cholesterol	46.7	43.8	-6.2%
Triglycerides	154.9	137.4	-11.3%
Systolic Blood Pressure	124.9	120.3	-3.6%
Diastolic Blood Pressure	75.4	70.9	-6.0%
HbA1c	6.8	6.3	-6.7%
Depression Score (CESD)	13.1	7.1	-45.7%
Exercise Capacity (Mets)	3.1	4.7	+50.5%

\* Data is based off completion thru Q1 2023 quarterly report, N = 255 participants \*\* N = 37.





# Ornish Lifestyle Medicine – National Outcomes: Q1 2023\*

In addition to these results, many participants reduced or discontinued medications to lower BP, lipids, and blood sugar with approval of their physicians.

These improvements would have been even greater if medications were unchanged.

72% reduction in reported angina\*\*

	Baseline	9 weeks	Change
Weight Loss	199.1	189.9	-4.6%
BMI	31.3	29.8	-4.6%
Total Cholesterol	163.7	138.9	-15.1%
LDL Cholesterol	89.4	70.6	-21.0%
HDL Cholesterol	47.7	44.3	-7.2%
Triglycerides	143.7	126.8	-11.7%
Systolic Blood Pressure	127.3	121.5	-4.5%
Diastolic Blood Pressure	74.0	70.0	-5.4%
HbA1c	6.6	6.2	-6.0%
Depression Score (CESD)	11.1	5.8	-48.1%
Exercise Capacity (Mets)	3.7	5.4	+44.9%

\*Data is based off completion thru Q1 2023 quarterly report; N = 13,427 participants having pre- and post-program data . \*\* N = 2157



# Success

Low fat, 100% whole grain, minimally processed, whole food, plant-based diet



# Geniuses Agree...

“Nothing will benefit human health and increase our chances of survival for life on Earth as much as the evolution to a vegetarian diet.” – Albert Einstein





## Denver, CO: Metro Area

Walk Locations

Why Walk?

FAQs

Simple walking improves your health. Just 30 minutes of walking a day can reduce your risk of heart disease, improve blood pressure and blood sugar, elevate mood, and reduce risk of osteoporosis, cancer, and diabetes. Join your doctors on a monthly walk to improve your health, learn about important health topics, and meet new friends interested in improving their health with you. You'll get to spend time with your physicians, get to know them, and ask medical questions in an informal, relaxed, and fun way!

### Lead Physicians:

[Dr. Andrew Freeman](#)

Dr. Grace Alfonsi

Dr. Lindsay Regehr

### Upcoming Walks:

[www.njhealth.org/walkwithadoc](http://www.njhealth.org/walkwithadoc)

Visit our Meetup page:



Join us! It's open to anyone – we'll look for you at our next Walk with a Doc event!

# Transitioning to Plant-Based Eating Virtual Support Group: Explore Health from your Food!

Make an Appointment

Patient Education

Find Faculty

## Details

The Transitioning to Plant-Based Eating Support Group provides education and support to those wishing to eat more plant-based. Whether you need to adopt this lifestyle due to health conditions such as high blood pressure, high cholesterol, osteoporosis, being overweight, etc., or you want to eat plant-based for other reasons, this group can help. Interact with experts who can help you get on a path that is sustainable, creates healthy change and handles challenges that may arise. Be with people who share your interest and who want to hear about your successes and help with roadblocks.



All are welcome for these FREE events!

### For more information, please contact:

Kelly LeGros Strickler, MS

[legros.strickler@gmail.com](mailto:legros.strickler@gmail.com)

**2021 Schedule:** Meets the 3rd Saturday each month starting Jan 21st, 2023, 10:00 a.m. - 11:30 a.m.

**Zoom Meeting Information:** Please contact Kelly LeGros Strickler, MS, at [legros.strickler@gmail.com](mailto:legros.strickler@gmail.com)

**Dates:** Meets the 3rd Saturday of every month, 10:00 a.m. - 11:30 a.m.

**Class Days:** Saturday



# Lifestyle Medicine & Food As Medicine ESSENTIALS Course Bundle



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# Convinced?

- Forks Over Knives
- The China Study
- The Starch Solution
- Diet for a New America
- Planeat
- Eating You Alive
- What the Health
- Earthlings

