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PEOPLE, PURPOSE AND PARTNERSHIPS: *A MISSION-ALIGNED RESEARCH JOURNEY IN FAMILY MEDICINE*

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Why People?

At our most basic level, we depend on communities of people — doing our best to live healthy lives within the **social and structural conditions** we are given.

NCSP Fellowship Projects

1. Masters Thesis - Exploring Self-Employment and Cardiovascular Disease Risk among Hispanic Women (*publication accepted, Ethnicity and Disease)*

2. Successfully Training Primary Care Physicians for Urban Underserved Communities (*publication accepted, Journal of American Board of Family Medicine)*

3. Attributes of Trustworthy Care: Insights from Black Sexual Minority Males (*data analysis in progress)*

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1. Autonomy/flexibility in work schedule may help reduce CVD risk among Hispanic women
2. Medical school curriculum that fosters missions of pre-med students can contribute to graduates' practicing in underserved areas at medical school graduation
3. Trust is a provider and system responsibility, especially for vulnerable communities

PURPOSE

Promoting lifestyle medicine to combat chronic disease in marginalized populations by minimizing chronic inflammation

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Personal Mission Statement

C-Reactive protein measure of inflammation, comparing white men to specific gender & ethnic groups

VARIABLES	CRP
Black	1.89***
	(0.17)
Hispanic, US born	1.76***
	(0.26)
Hispanic, Foreign-born	1.07
	(0.14)
Female	1.48***
	(0.11)
Age	0.99*

Source: Davidson-Turner K, Farina MP, Hayward MD. Racial/Ethnic differences in inflammation levels among older adults 56+: an examination of sociodemographic differences across inflammation measure. *Biodemography Soc Biol.* 2024;69(2):75-89.

MAJOR INFLUENCES ON INFLAMMATION INCLUDE…

Socioeconomic Factors: Poverty and limited access to resources are strongly linked to higher inflammation. For Black men, roughly **12.3%** of the CRP disparity is attributed to socioeconomic status.

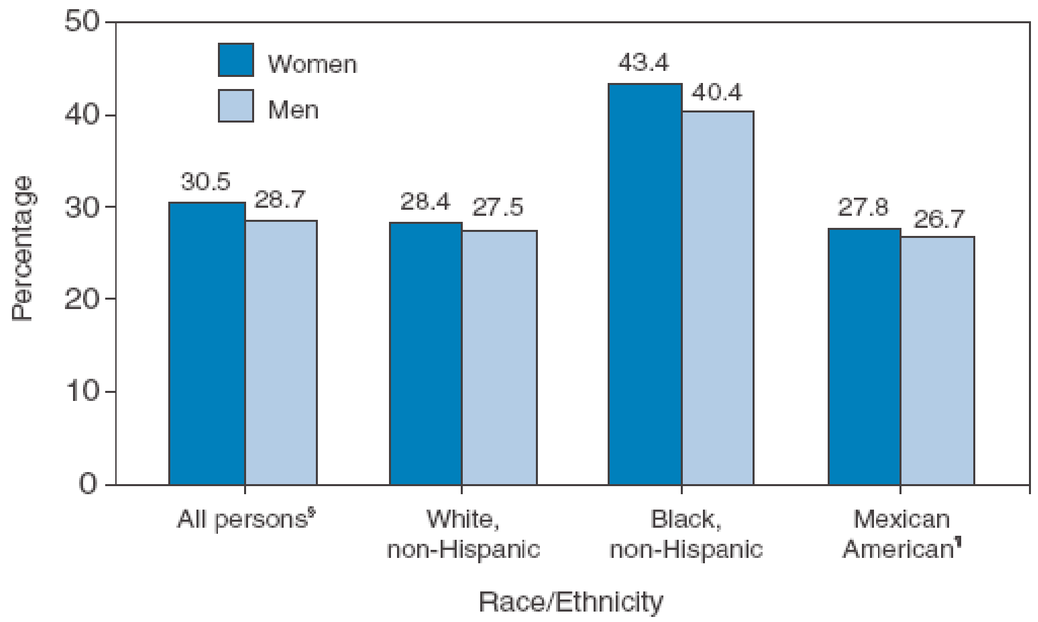
Lifestyle & Behavior: Diet and physical inactivity are major mediators. Differences in diet quality, specifically the consumption of pro-inflammatory vs. anti-inflammatory foods, account for a substantial portion of the racial gap.

Physiological Factors: Body Mass Index (BMI) and high-risk health conditions (e.g., hypertension, diabetes) significantly influence CRP. In Black women, racial differences in CRP are primarily attributed to physiological factors, accounting for up to **40%** of the gap.

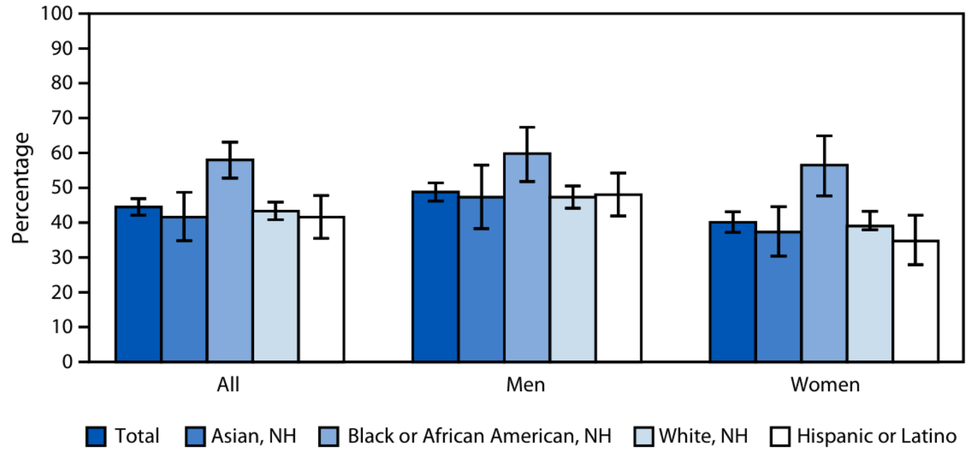
Sources: Hemade A, Hallit S. Racial disparities in systemic inflammation: The mediating role of diet and physical activity in α-1-acid glycoprotein levels in the US population. *Medicine.* 2025;104(38):10.
& Davidson-Turner K, Farina MP, Hayward MD. Racial/Ethnic differences in inflammation levels among older adults 56+: an examination of sociodemographic differences across inflammation measure. *Biodemography Soc Biol.* 2024;69(2):75-89.

Inflammation is a major contributor to hypertension risk

Percentage* of Persons Aged ≥20 Years with Hypertension,† by Race/Ethnicity — United States, 1999–2002



Age-Adjusted Percentage* of Adults Aged ≥18 Years with Hypertension,† by Sex and Race and Ethnicity — United States, August 2021–August 2023



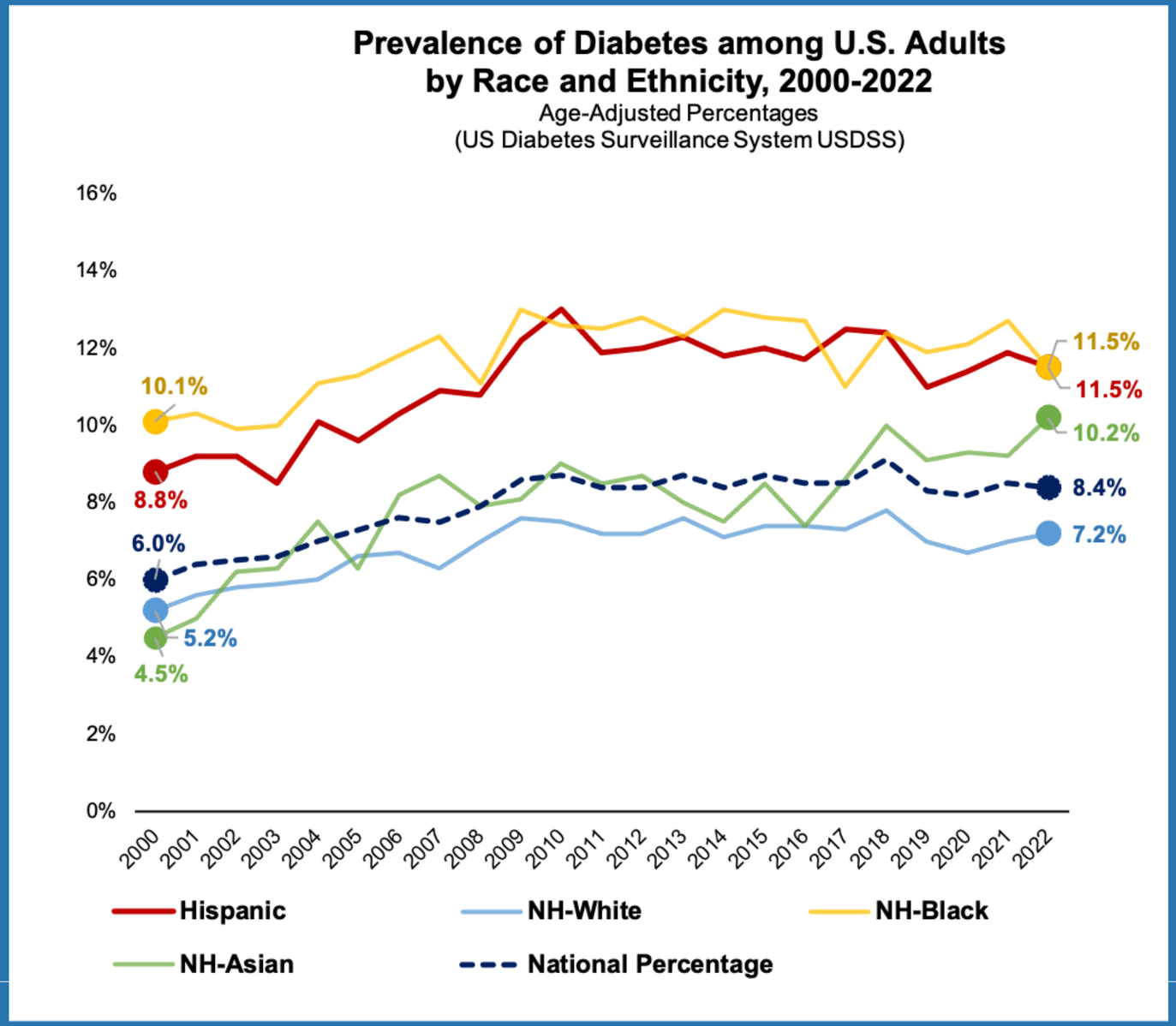
Abbreviation: NH = non-Hispanic.

* Age-adjusted percentages are based on the 2000 U.S. Census Bureau standard population, using age groups 18–39, 40–59, and ≥60 years, with 95% CIs indicated by error bars.

† Hypertension is defined as systolic blood pressure ≥130 mm Hg or diastolic blood pressure ≥80 mm Hg, or currently taking medication to lower blood pressure.

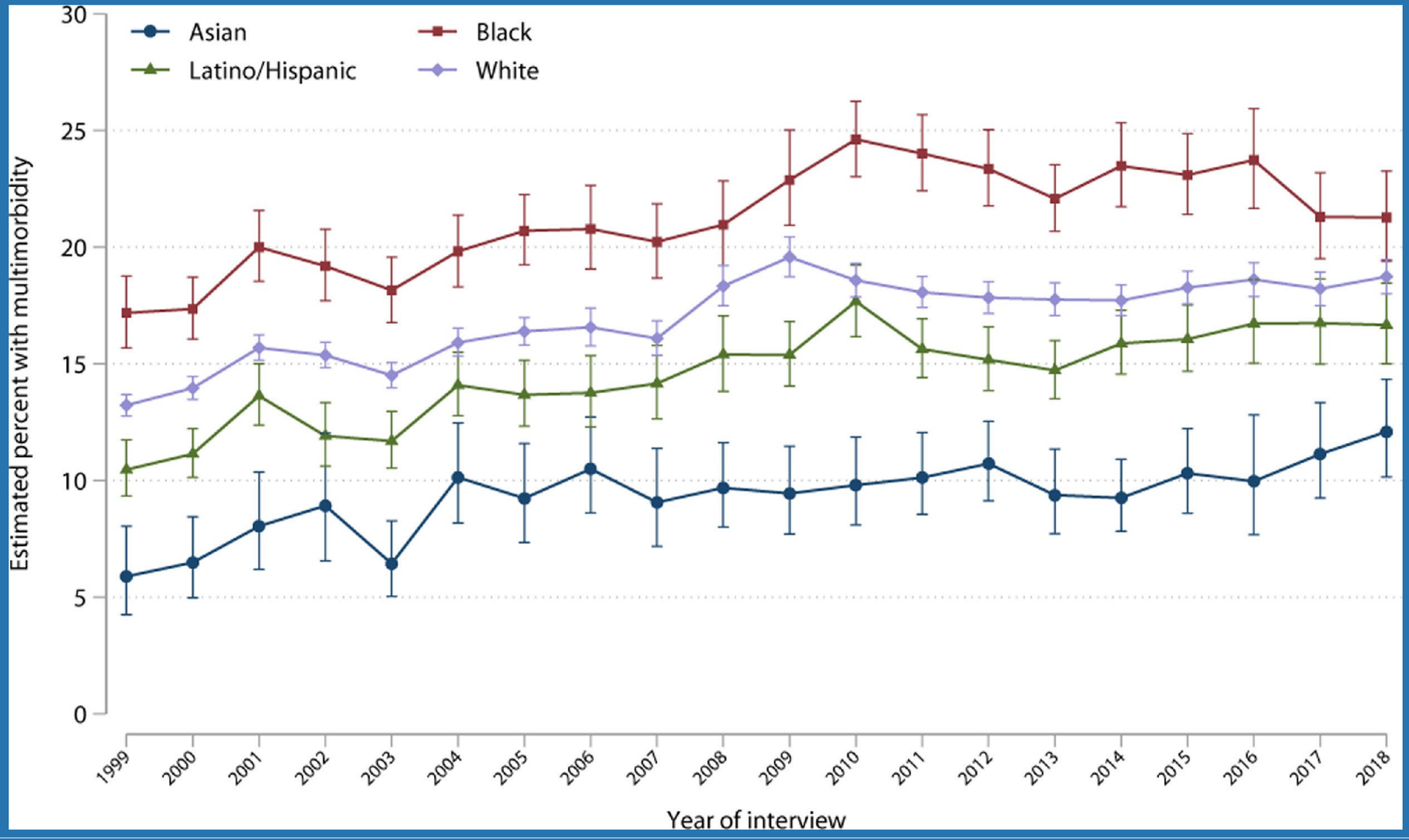
Source: Sun SD, Fu JM, Yang JF, Zhao L, Zhao BY, Zhou YB. Correlation analysis of systemic immune inflammation index with the occurrence and clinical outcomes of hypertension: a systematic review and meta-analysis. *Front Cardiovasc Med.* 2025;12:11.

Inflammation is a major contributor to risk of type 2 diabetes



Source: Pellegrini V, La Grotta R, Carreras F, et al. Inflammatory Trajectory of Type 2 Diabetes: Novel Opportunities for Early and Late Treatment. *Cells.* 2024;13(19):21.

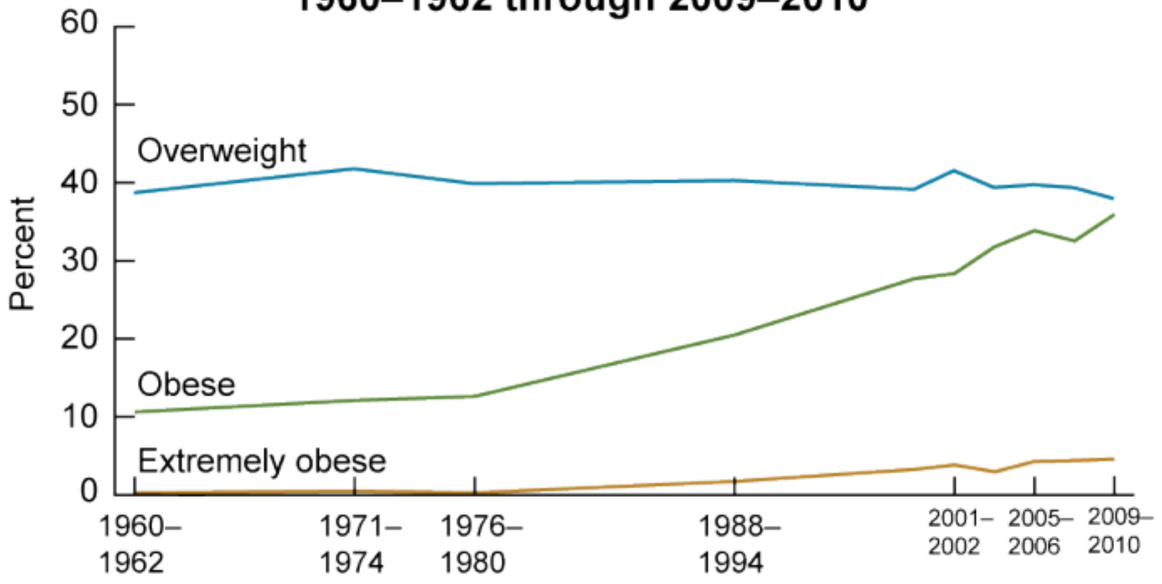
Inflammation is a major contributor to mulitmorbidity in the U.S.



Source: Zazzara MB, Triolo F, Biscetti L, et al. Biomarkers of multimorbidity: A systematic review. *Ageing Res Rev.* 2025;112:11.

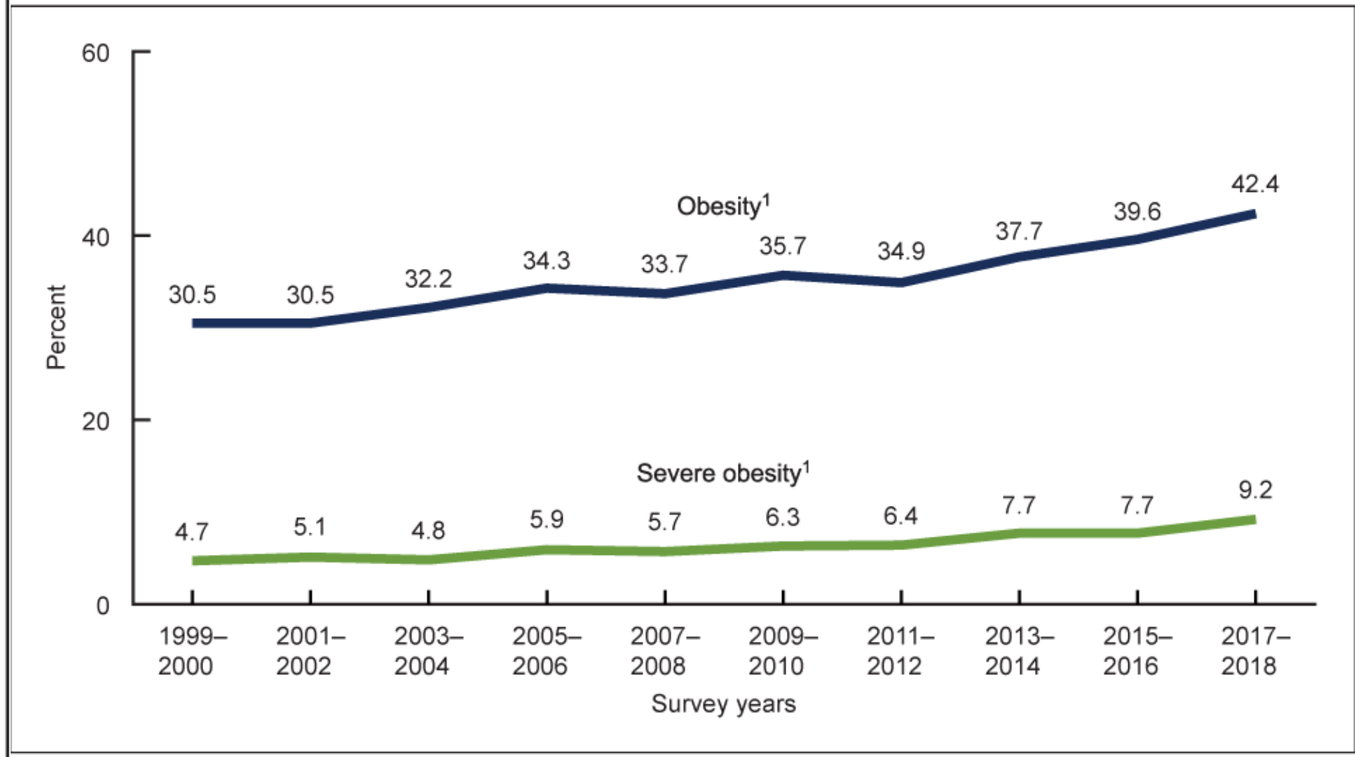
U.S. adult obesity prevalence has increased from 11% in 1960 to 40.2% in 2022-2023

Figure 1. Trends in overweight, obesity, and extreme obesity among men aged 20–74 years: United States, 1960–1962 through 2009–2010



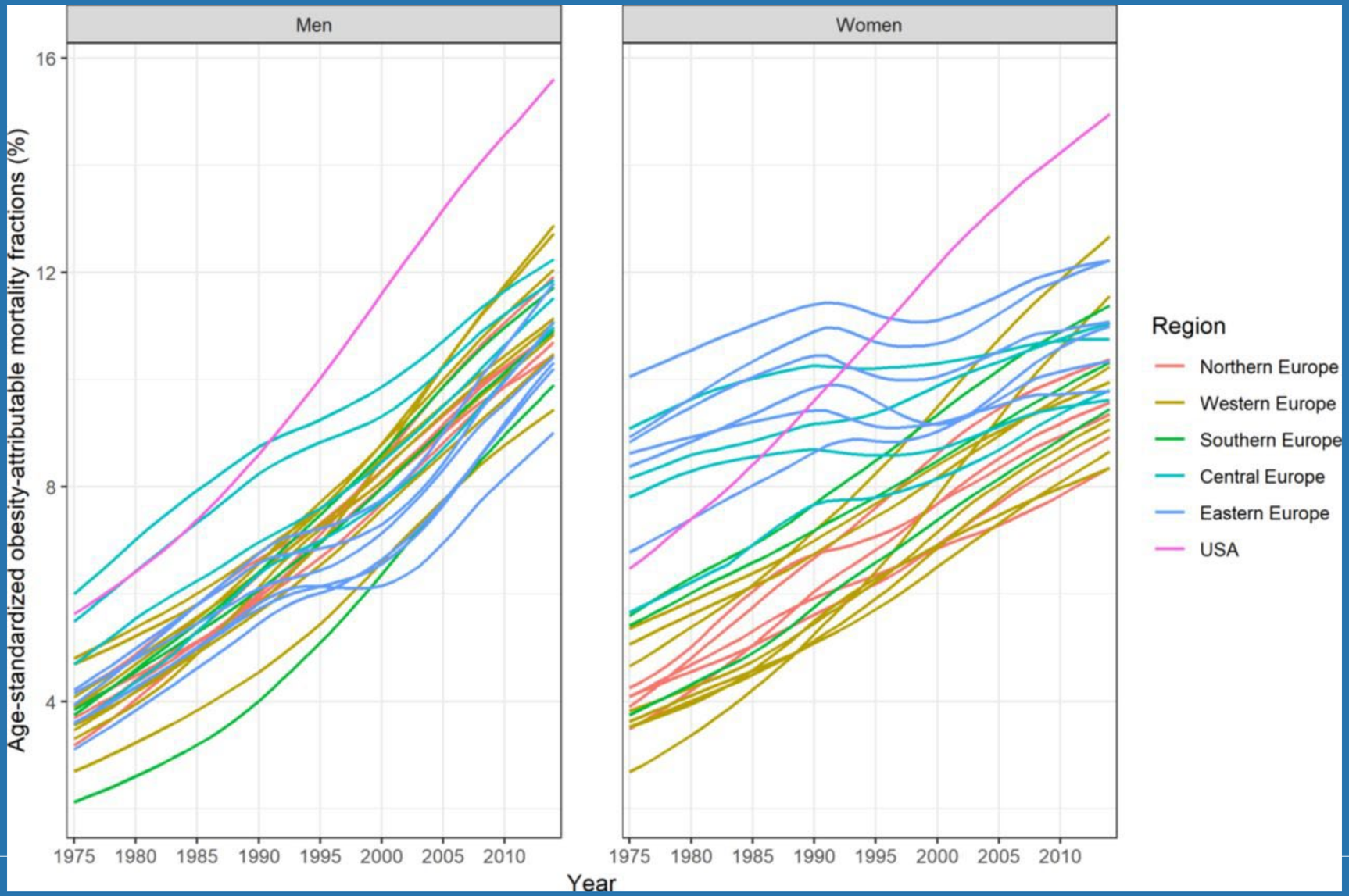
NOTES: Age adjusted by the direct method to the 2000 U.S. Census population using age groups 20–39, 40–59, and 60–74. Overweight is a body mass index (BMI) of 25 kg/m^2 or greater but less than 30 kg/m^2; obesity is a BMI greater than or equal to 30 kg/m^2; and extreme obesity is a BMI greater than or equal to 40 kg/m^2.
SOURCES: CDC/NCHS, National Health Examination Survey I 1960–1962; National Health and Nutrition Examination Survey (NHANES) I 1971–1974; NHANES II 1976–1980; NHANES III 1988–1994; NHANES 1999–2000, 2001–2002, 2003–2004, 2005–2006, 2007–2008, and 2009–2010.

Figure 4. Trends in age-adjusted obesity and severe obesity prevalence among adults aged 20 and over: United States, 1999–2000 through 2017–2018

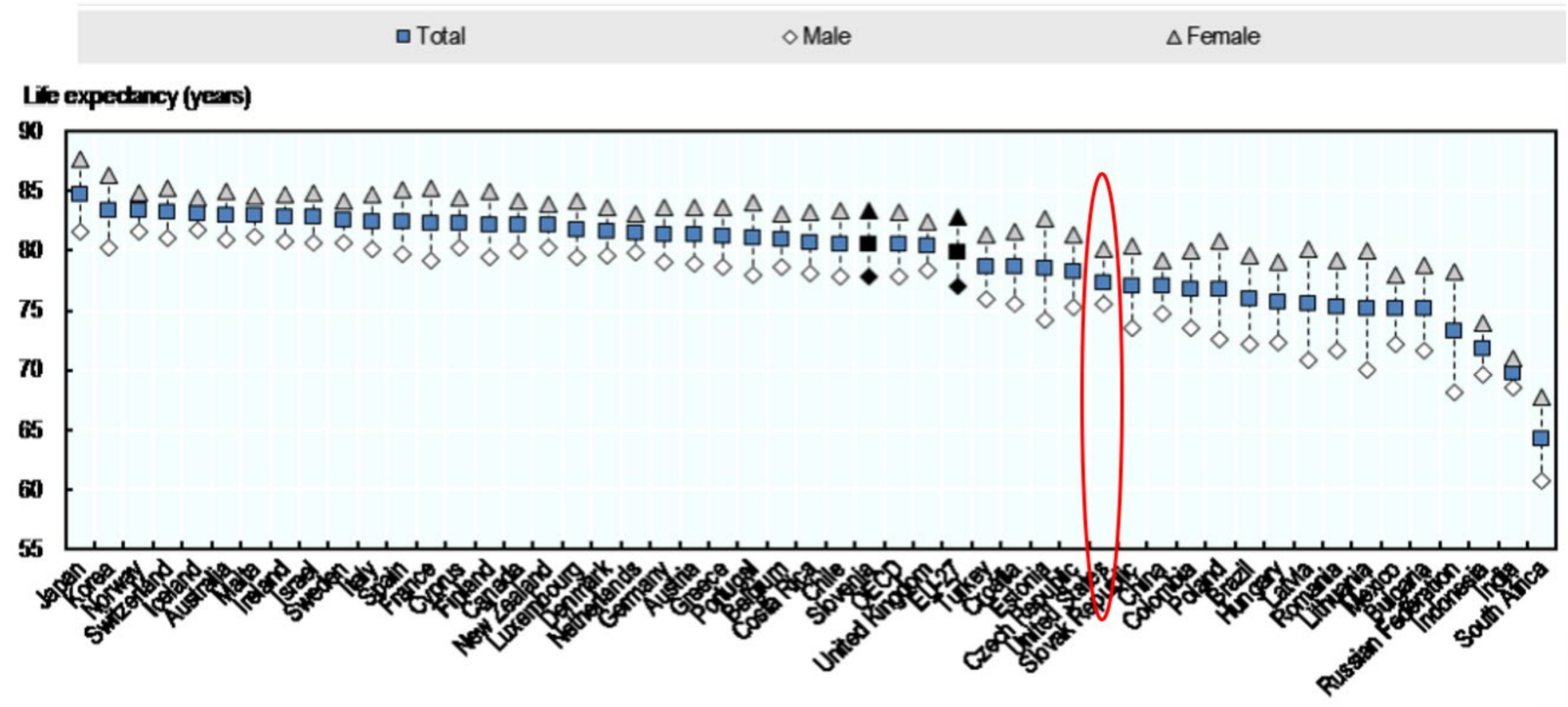


[1]Significant linear trend.
NOTES: Estimates were age adjusted by the direct method to the 2000 U.S. Census population using the age groups 20–39, 40–59, and 60 and over. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db360_tables-508.pdf#4.
SOURCE: NCHS, National Health and Nutrition Examination Survey, 1999–2018.

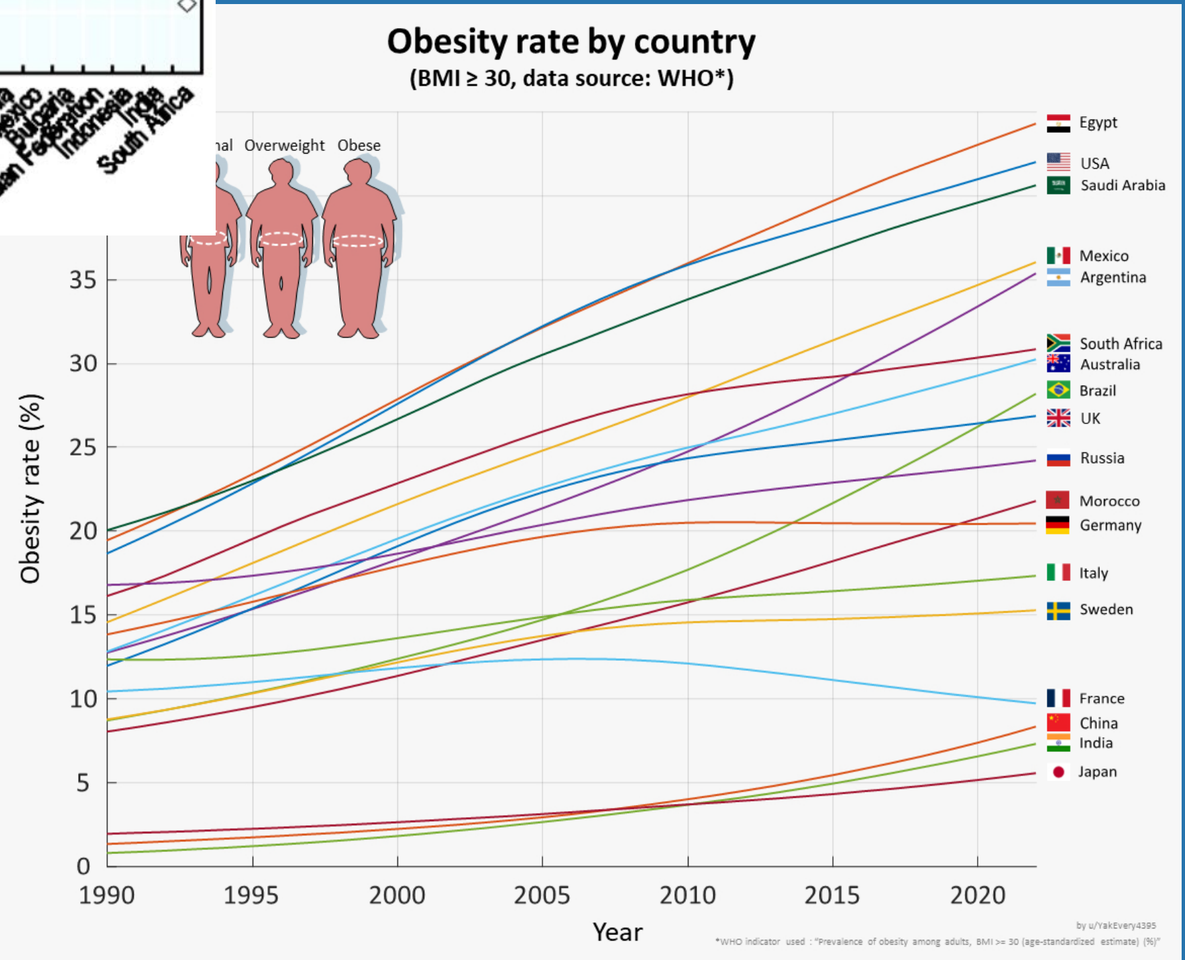
Obesity has a significant impact on mortality



Vidra N, Trias-Llimós S, Janssen F
Impact of obesity on life expectancy among different European countries: secondary analysis of population-level data over the 1975–2012 period
BMJ Open 2019;**9:**e028086. doi: 10.1136/bmjopen-2018-028086



In 1960, the U.S. was #3 in life expectancy 1.5 years more than Japan) but in 2020 it was #36, 6 years less than Japan in part because the U.S. increased its obesity prevalence more than Japan.



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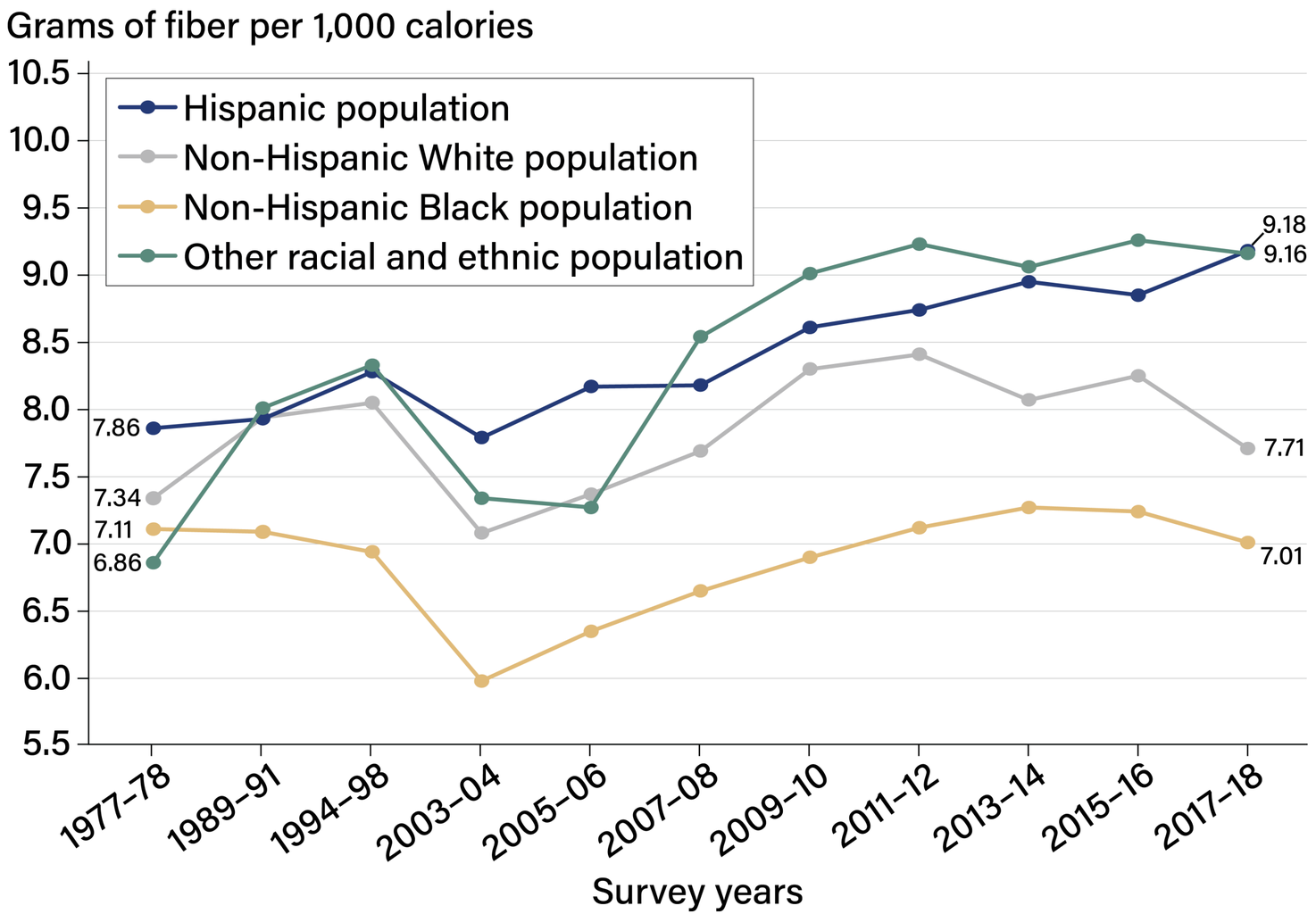
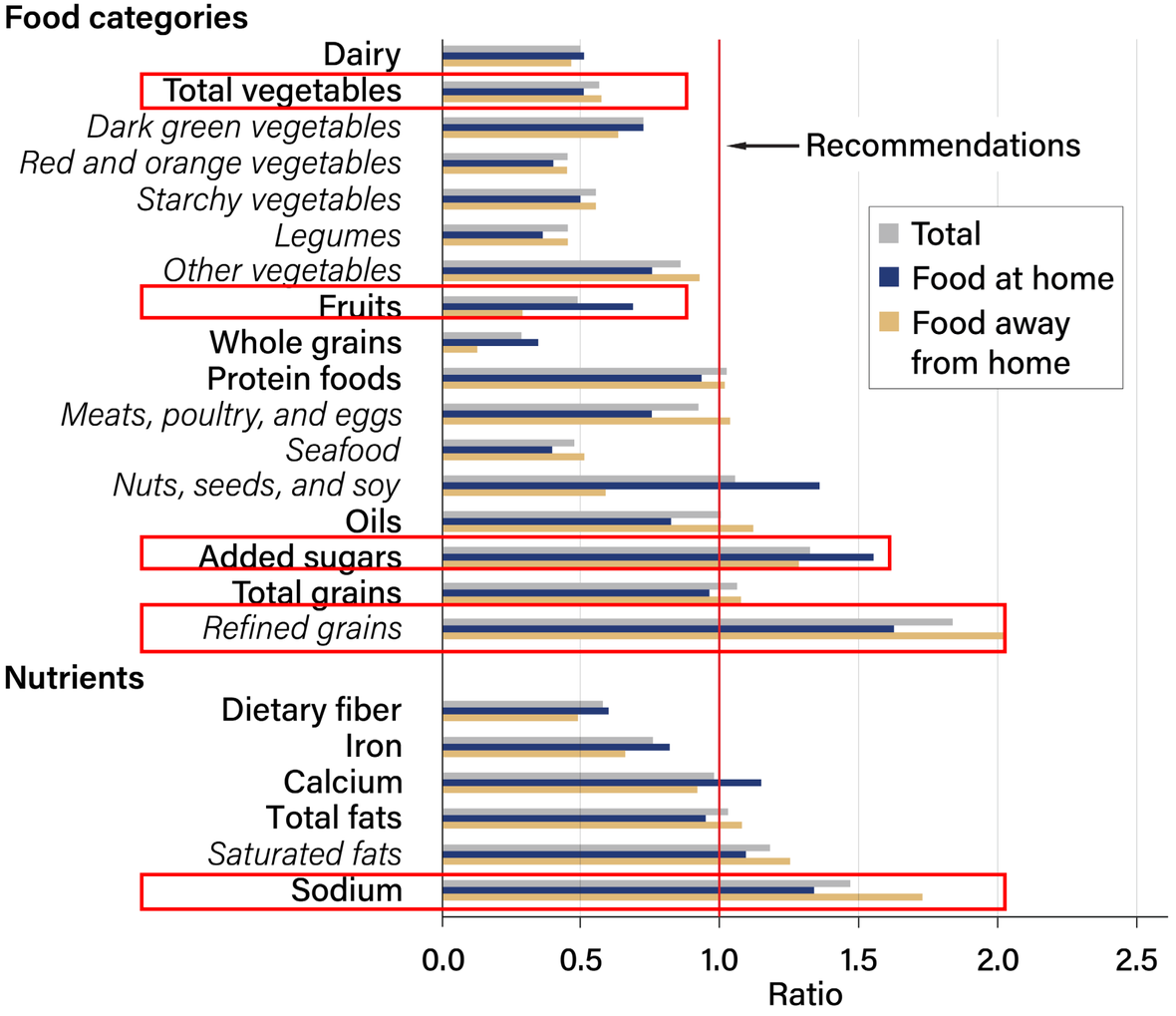
Poor Dietary Quality Contributes Obesity

Gaps in dietary fiber density across race and ethnicity have widened over time



Source: USDA, Economic Research Service using data from USDA, Agricultural Research Service (ARS), 1977–1978 Nationwide Food Consumption Survey; ARS, 1989–1991, 1994–1996, and 1998 Continuing Survey of Food Intakes by Individuals; and ARS and U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2003–2018 What We Eat in America, National Health and Nutrition Examination Survey.

Dietary quality differs from Federal recommendations for most nutrients and food groups examined

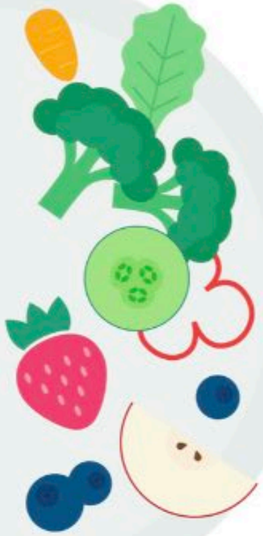


Note: The **ratio** is the actual consumption densities calculated from comparing survey data with the Federal recommended densities for a diet of 2,000 calories. Density is the amount of food consumed per 1,000 calories.

Source: USDA, Economic Research Service using data from USDA, Agricultural Research Service and U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2017–2018 What We Eat in America, National Health and Nutrition Examination Survey. Dietary benchmarks based on Dietary Guidelines for Americans, 2020–2025.

9 out of 10 Americans[1]

Do Not Meet Fruit & Vegetable Recommendations[2]



Overall Fruit & Vegetable Eating Occasions Have Declined By 10%

(since 2004)

People Are Eating Veggies Just Once A Day

7.5 Times/Week

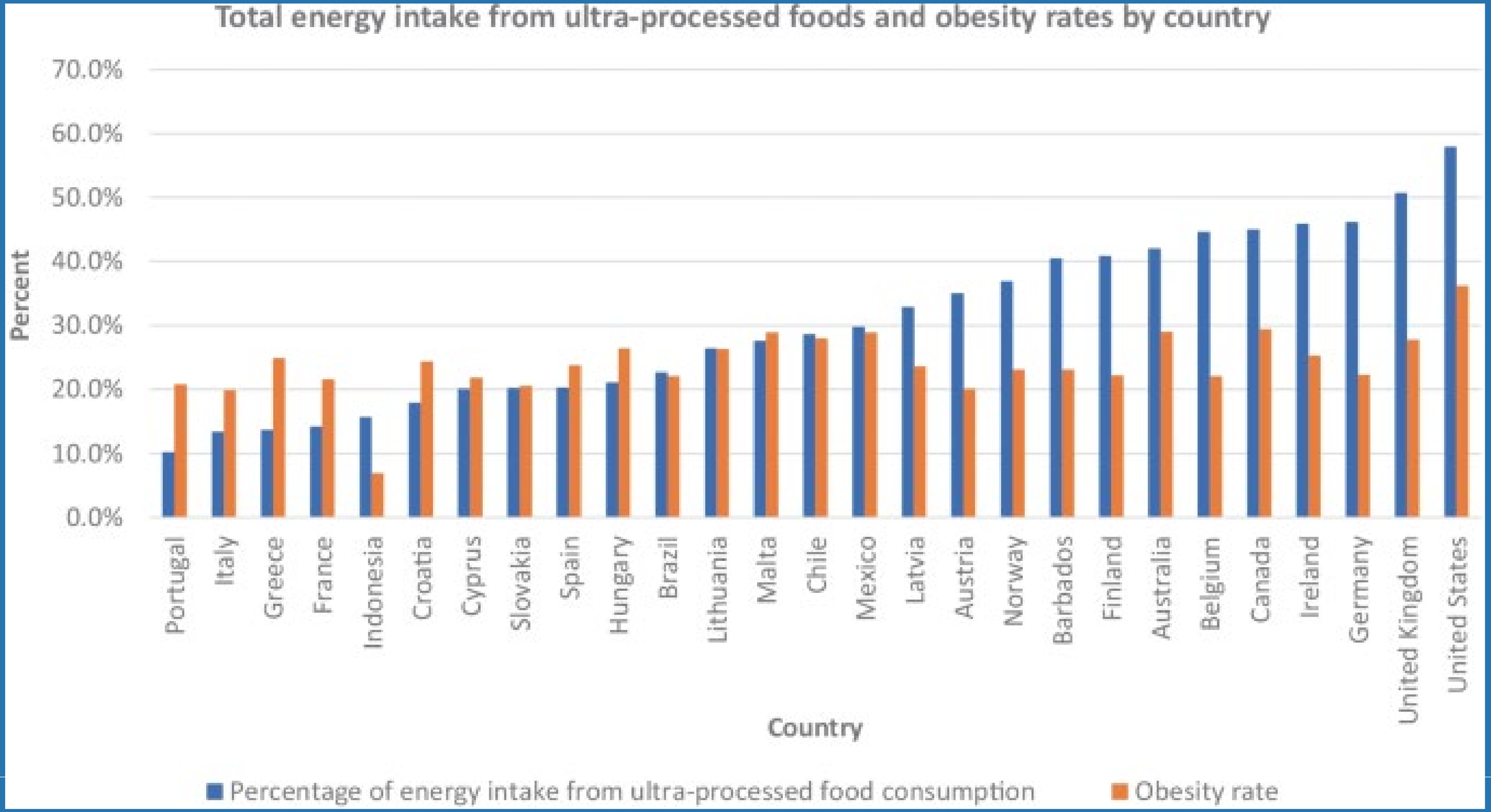
Americans Eat Fruits Even Less Often

5.8 Times/Week

This Decline Is Driven By Drops In Vegetable & Juice Eating Occasions

16% Vegetables

15% Juice


Total energy intake from ultra-processed foods and obesity rates by country
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Percent
Portugal
Italy
Greece
France
Indonesia
Croatia
Cyprus
Slovakia
Spain
Hungary
Brazil
Lithuania
Malta
Chile
Mexico
Latvia
Austria
Norway
Barbados
Finland
Australia
Belgium
Canada
Ireland
Germany
United Kingdom
United States
Country
Percentage of energy intake from ultra-processed food consumption
Obesity rate

Ultra-processed food environment > 50% of kcal from ultra-processed foods

Diet high in ultra-processed foods
- *Hyperpalatable nutrient combinations*
- *High energy density and soft texture*
- Poor nutrient profile; low protein and fibre content
- Degraded food matrix and acellular nutrients
- Emulsifiers, non-nutritive sweeteners
- Contaminants from processing and packaging

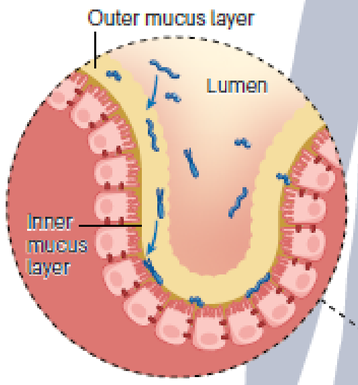
Food reward system
- Disruption of gut–brain signalling of food value
- Inaccurate nutrient sensing
- ↑ Activity in central reward circuits

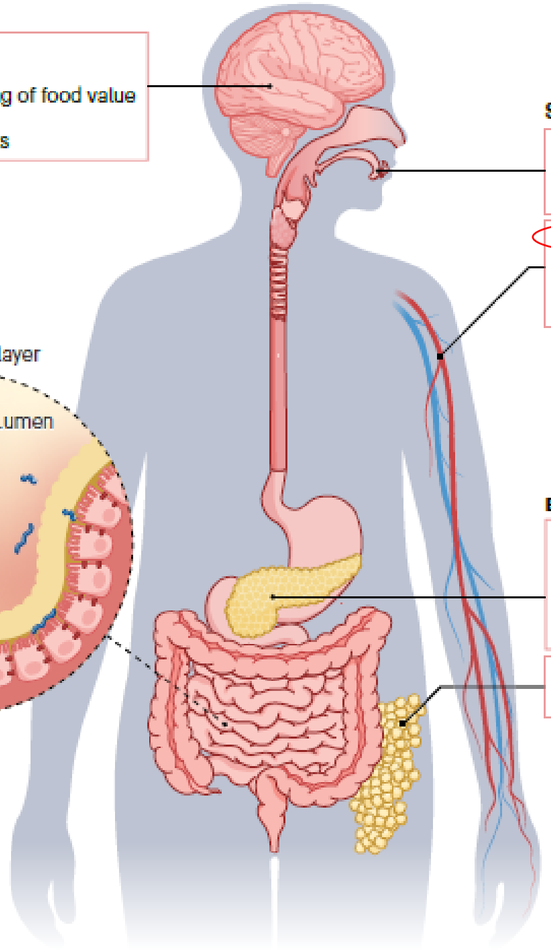
Satiety and appetite regulation
- ↑ *Energy intake*
- ↑ *Energy intake rate*
- ↓ Chewing frequency

- ↓ PYY, GLP1
- ↓ Circulating BCAA
- ↓ Postprandial reduction in blood levels of glucose

Microbiome
- ↑ Bacteria with pro-inflammatory potential
- ↑ Lipopolysaccharide
- ↓ Bacterial diversity
- ↓ SCFA

- ↓ Mucus thickness
- ↑ Intestinal permeability
- ↑ Inflammation
- Microbiota penetration into inner mucus layer





Endocrine pathways
- ↑ Insulin
- ↑ Insulin resistance
- Disruption of gut–brain regulation of glucose metabolism

- ↑ Adipogenesis
- ↑ Lipid accumulation

Obesity

Poor Dietary Quality Contributes to Gut Dysbiosis and Increases Systemic Inflammation

Group 1
Unprocessed or Minimally Processed Foods

Fresh, dry, or frozen vegetables or fruit, grains, legumes, meat, fish, eggs, nuts and seeds.

Processing includes removal of inedible/unwanted parts. Does not add substances to the original food.

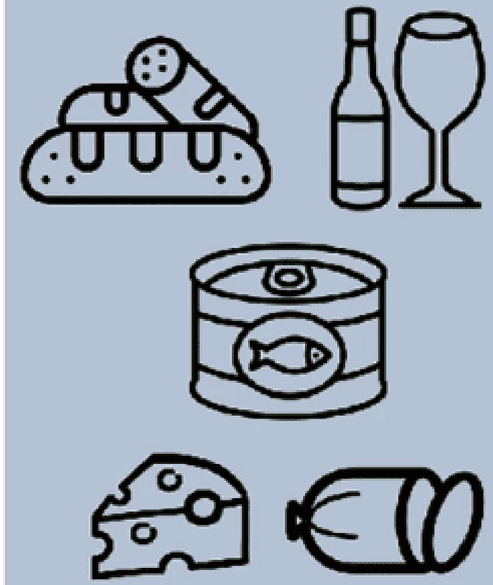
Group 2
Processed Culinary Ingredients

Plant oils (e.g., olive oil, coconut oil), animal fats (e.g., cream, butter, lard), maple syrup, sugar, honey, and salt.

Substances derived from Group 1 foods or from nature by processes including pressing, refining, grinding, milling, and drying.

Group 3
Processed Foods

Canned/pickled vegetables, meat, fish, or fruit, artisanal bread, cheese, salted meats, wine, beer, and cider.



Processing of foods from Group 1 or 2 with the addition of oil, salt, or sugar by means of canning, pickling, smoking, curing, or fermentation.

Group 4
Ultra-Processed Foods

Sugar sweetened beverages, sweet and savory packaged snacks, reconstituted meat products, pre-prepared frozen dishes, canned/instant soups, chicken nuggets, ice cream.

Formulations made from a series of processes including extraction and chemical modification. Includes very little intact Group 1 foods.

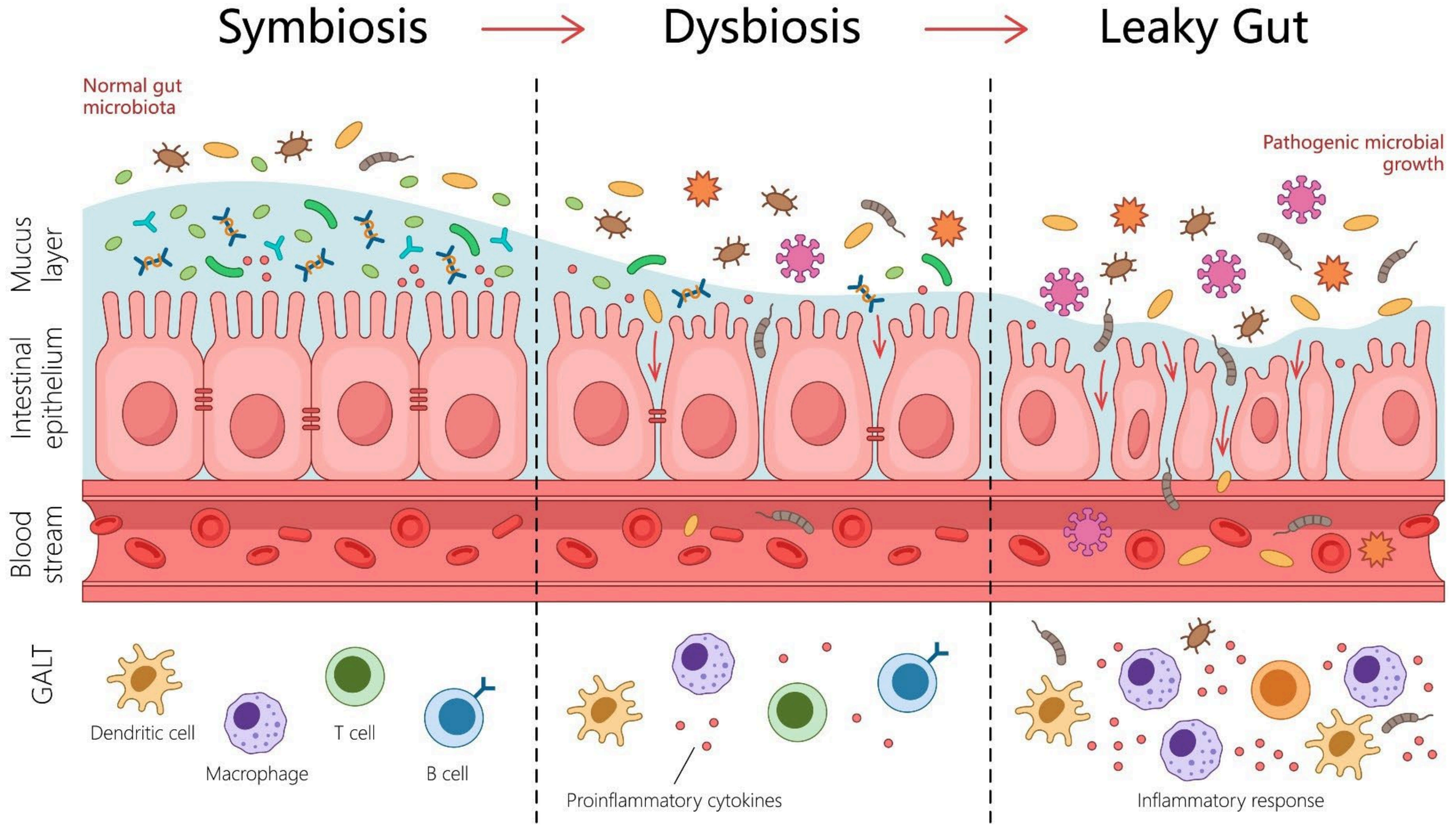
Increasing Level of Processing

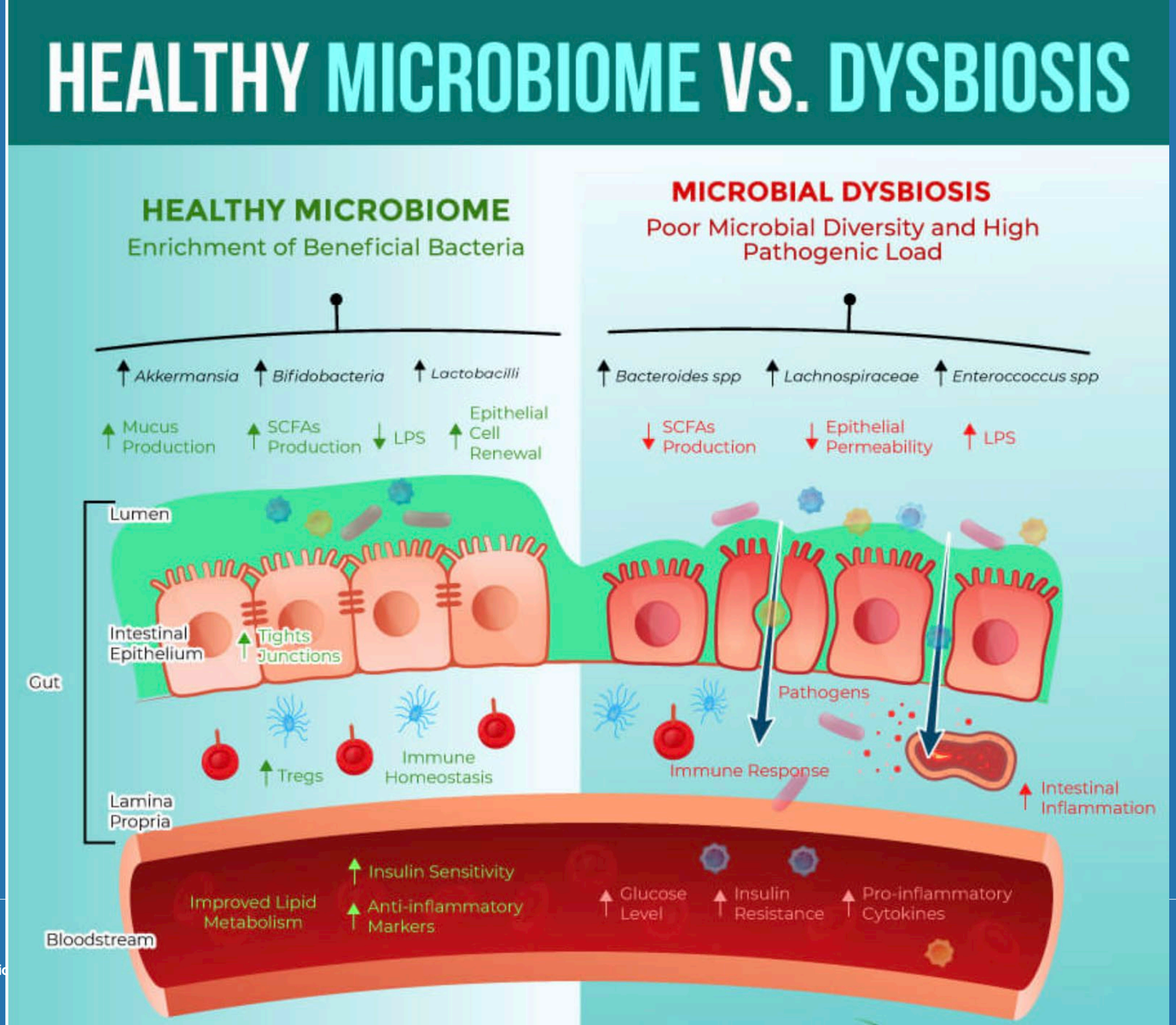
WHAT IS GUT DYSBIOSIS?

Gut dysbiosis is an imbalance of bacteria in your gut. When gut dysbiosis occurs, one or more of these changes occur:

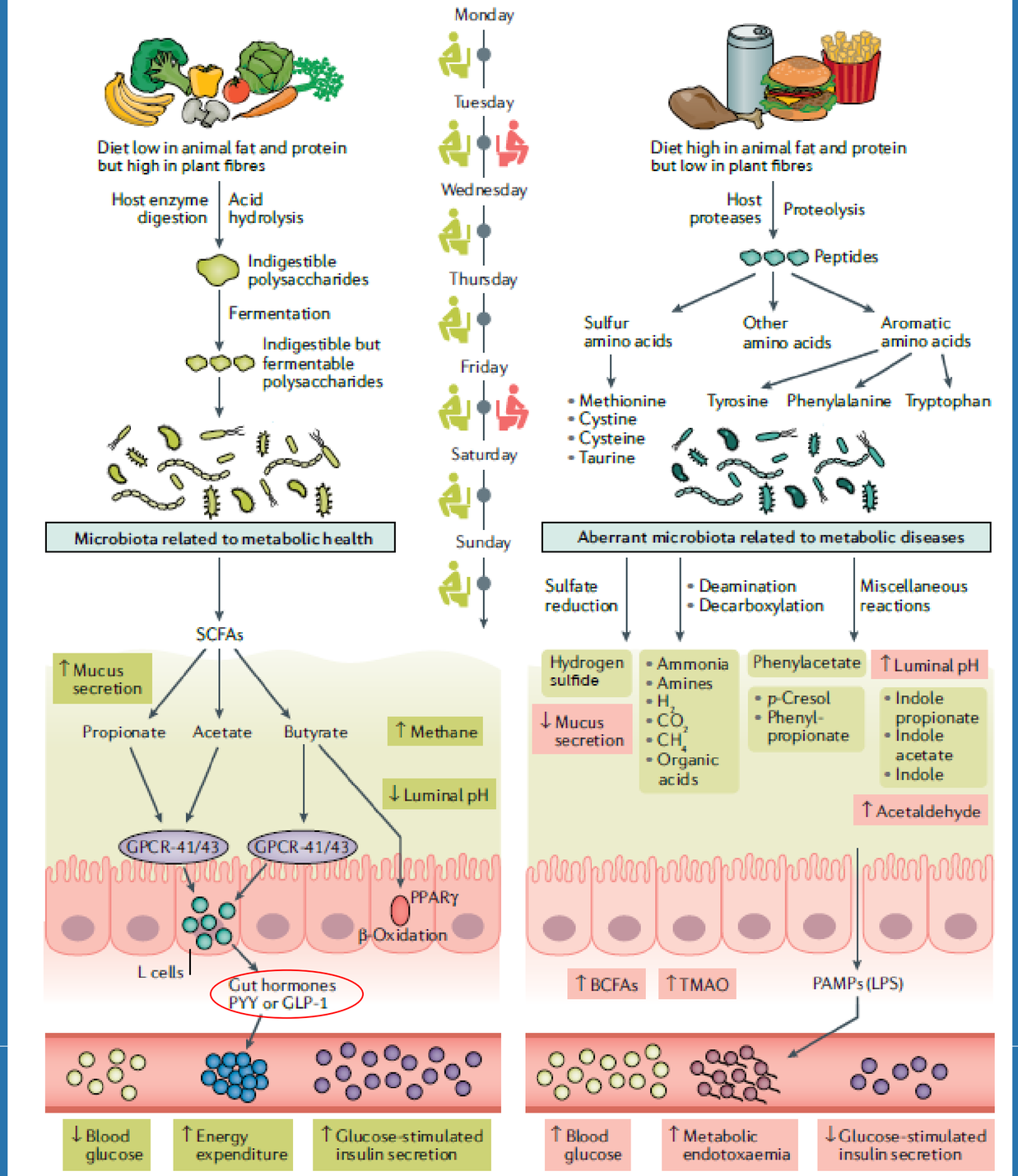
- You lose beneficial bacteria in your gut
- You get potentially harmful bacteria taking over your gut
- You have less diverse bacteria in your gut.

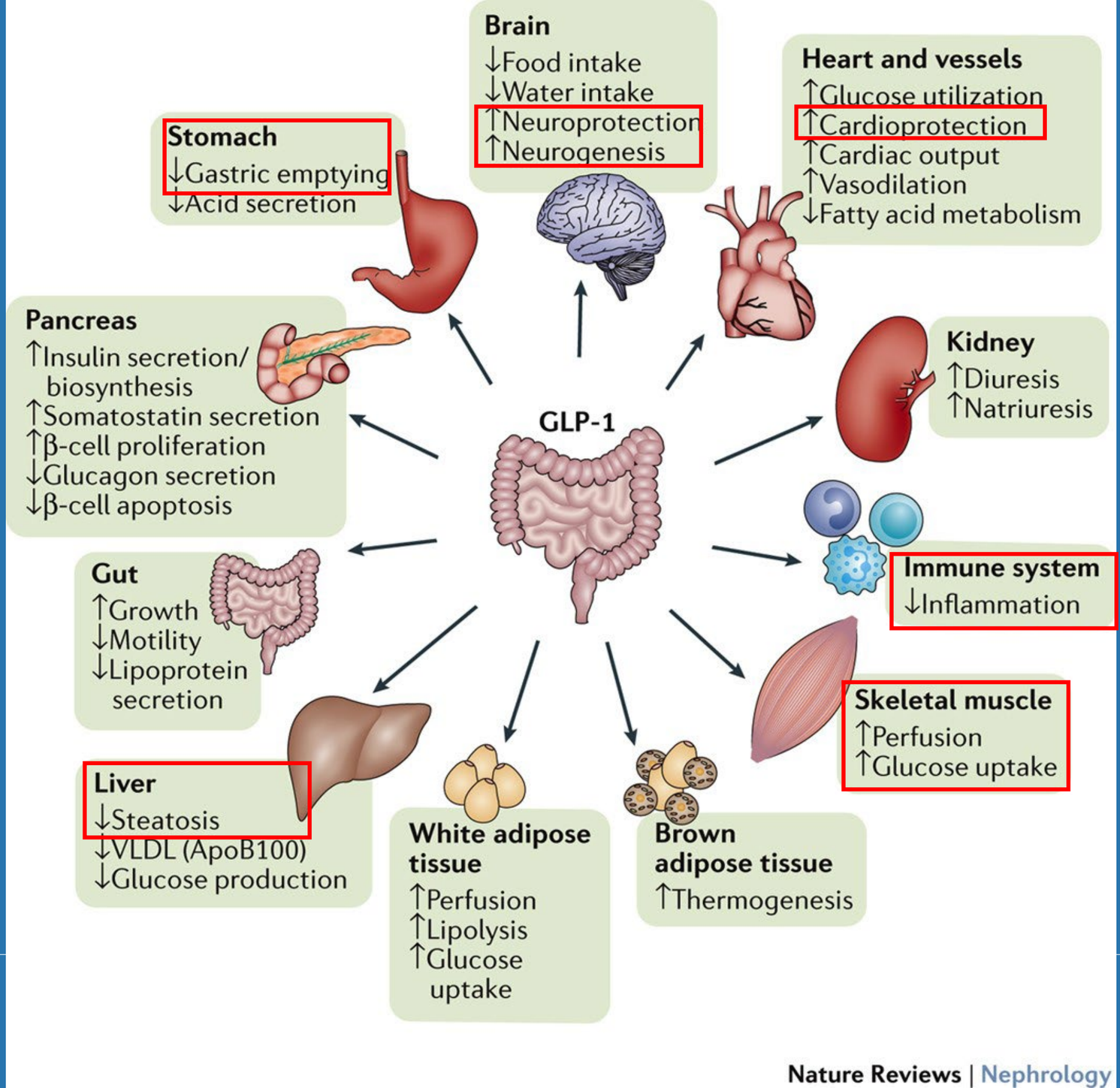
Most of the bacteria in your gut are actually 'good bacteria", meaning that they will not cause you any harm. The rest of the bacteria are called "opportunistic bacteria" meaning they will not cause you any harm as long as they are kept in check by the good bacteria. However, once they over run the good bacteria, they can wreak havoc on your body and cause gut dysbiosis!


Symbiosis
Dysbiosis
Leaky Gut
Normal gut microbiota
Pathogenic microbial growth
Mucus layer
Intestinal epithelium
Blood stream
GALT
Dendritic cell
Macrophage
T cell
B cell
Proinflammatory cytokines
Inflammatory response


HEALTHY MICROBIOME VS. DYSBIOSIS
HEALTHY MICROBIOME
Enrichment of Beneficial Bacteria
Akkermansia
Bifidobacteria
Lactobacilli
Mucus Production
SCFAs Production
LPS
Epithelial Cell Renewal
MICROBIAL DYSBIOSIS
Poor Microbial Diversity and High Pathogenic Load
Bacteroides spp
Lachnospiraceae
Enteroccoccus spp
SCFAs Production
Epithelial Permeability
LPS
Lumen
Intestinal Epithelium
Tights Junctions
Gut
Tregs
Immune Homeostasis
Pathogens
Immune Response
Intestinal Inflammation
Lamina Propria
Bloodstream
Improved Lipid Metabolism
Insulin Sensitivity
Anti-inflammatory Markers
Glucose Level
Insulin Resistance
Pro-inflammatory Cytokines

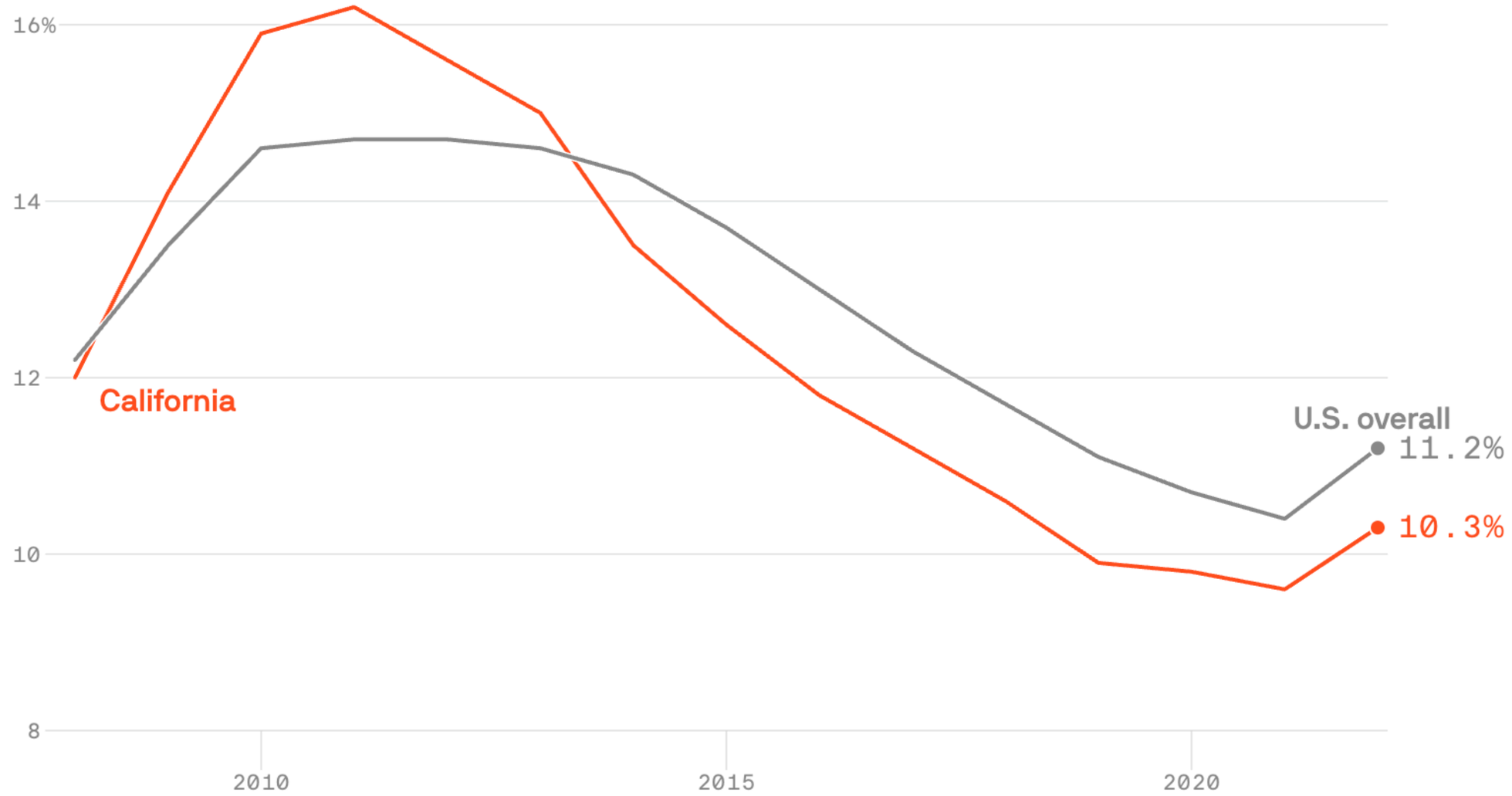
Ultraprocessed foods in excess of 20% of daily calories not only displace gut microbe substrates but also undermine microbial generation of SCFAs by inducing chronic inflammation.


Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Diet low in animal fat and protein but high in plant fibres
Host enzyme digestion
Acid hydrolysis
Indigestible polysaccharides
Fermentation
Indigestible but fermentable polysaccharides
Microbiota related to metabolic health
SCFAs
↑ Mucus secretion
Propionate
Acetate
Butyrate
↑ Methane
↓ Luminal pH
GPCR-41/43
GPCR-41/43
PPARγ
β-Oxidation
L cells
Gut hormones PYY or GLP-1
↓ Blood glucose
↑ Energy expenditure
↑ Glucose-stimulated insulin secretion
Diet high in animal fat and protein but low in plant fibres
Host proteases
Proteolysis
Peptides
Sulfur amino acids
Other amino acids
Aromatic amino acids
• Methionine
• Cystine
• Cysteine
• Taurine
Tyrosine
Phenylalanine
Tryptophan
Aberrant microbiota related to metabolic diseases
Sulfate reduction
• Deamination
• Decarboxylation
Miscellaneous reactions
Hydrogen sulfide
↓ Mucus secretion
• Ammonia
• Amines
• H2
• CO2
• CH4
• Organic acids
Phenylacetate
• p-Cresol
• Phenyl-propionate
↑ Luminal pH
• Indole propionate
• Indole acetate
• Indole
↑ Acetaldehyde
↑ BCFAs
↑ TMAO
PAMPs (LPS)
↑ Blood glucose
↑ Metabolic endotoxaemia
↓ Glucose-stimulated insulin secretion

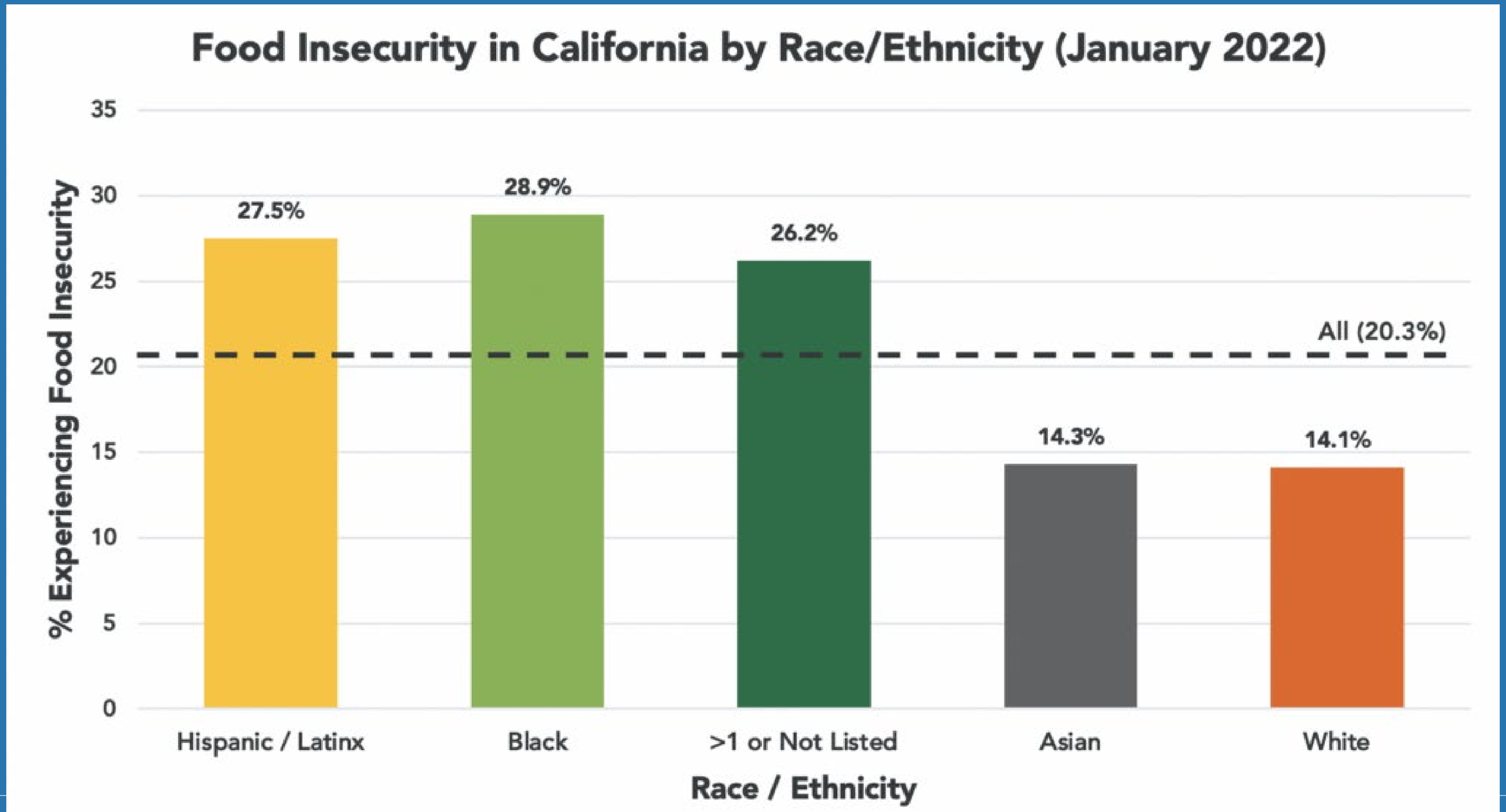

Brain
↓Food intake
↓Water intake
↑Neuroprotection
↑Neurogenesis
Heart and vessels
↑Glucose utilization
↑Cardioprotection
↑Cardiac output
↑Vasodilation
↓Fatty acid metabolism
Stomach
↓Gastric emptying
↓Acid secretion
Pancreas
↑Insulin secretion/ biosynthesis
↑Somatostatin secretion
↑β-cell proliferation
↓Glucagon secretion
↓β-cell apoptosis
GLP-1
Kidney
↑Diuresis
↑Natriuresis
Gut
↑Growth
↓Motility
↓Lipoprotein secretion
Immune system
↓Inflammation
Skeletal muscle
↑Perfusion
↑Glucose uptake
Liver
↓Steatosis
↓VLDL (ApoB100)
↓Glucose production
White adipose tissue
↑Perfusion
↑Lipolysis
↑Glucose uptake
Brown adipose tissue
↑Thermogenesis
Nature Reviews | Nephrology

Share of California households that are food insecure

Three-year rolling average estimate; Annually, 2008-2022

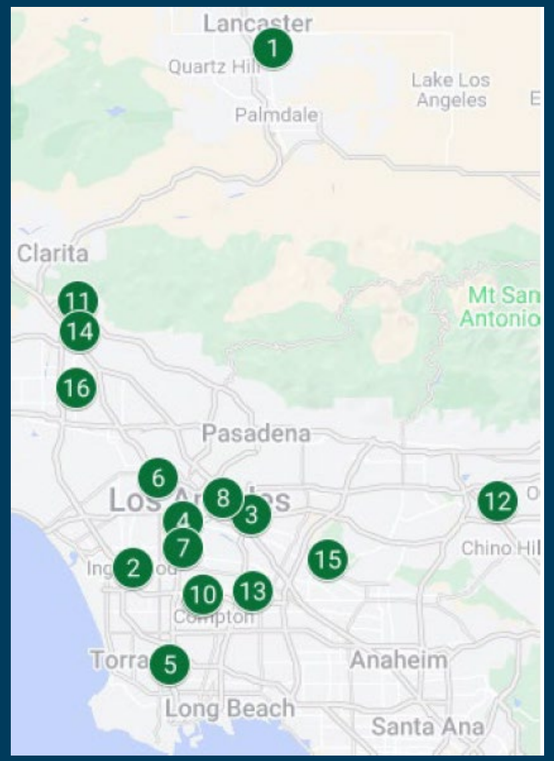


Data: USDA Economic Research Service; Chart: Axios Visuals


Food Insecurity in California by Race/Ethnicity (January 2022)
% Experiencing Food Insecurity
35
30
25
20
15
10
5
0
27.5%
28.9%
26.2%
14.3%
14.1%
All (20.3%)
Hispanic / Latinx
Black
>1 or Not Listed
Asian
White
Race / Ethnicity

PARTNERSHIPS

- Community Based Research
- Food Rx Collaborative Fresh Produce Distributions: “goal of the Collaborative is to reduce diet-related chronic diseases by increasing access to healthy food in healthcare settings.”



Food Rx Community Advisory Board

SURVEY RESULTS (n=497)

PRODUCE DISTRIBUTION ATTENDEE DEMOGRAPHICS

Average Age
57.02 years

Gender

75.1% Female

24.9% Male

Race/Ethnicity

84.8% Hispanic/Latino/a/x

5.3% Black/African American

5.3% White

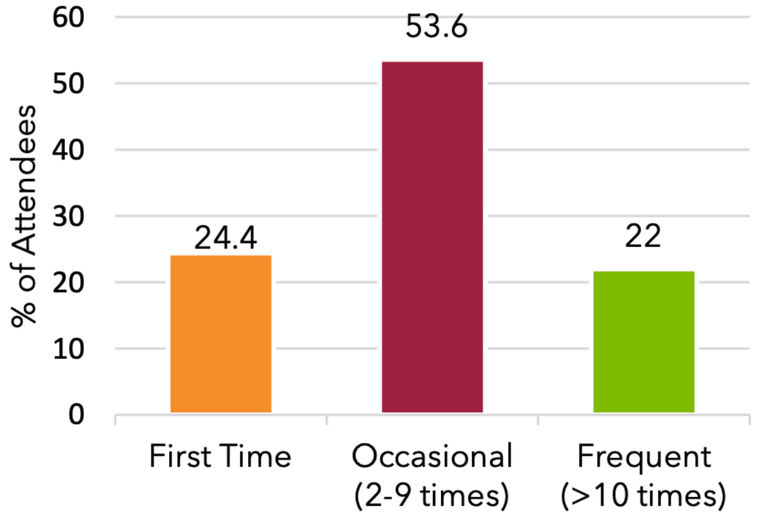
4% Asian

0.4% Multi-racial

0.2% American Indian/Alaska Native

ATTENDEE CHARACTERISTICS

Visit Frequency of Produce Distributions by Attendees

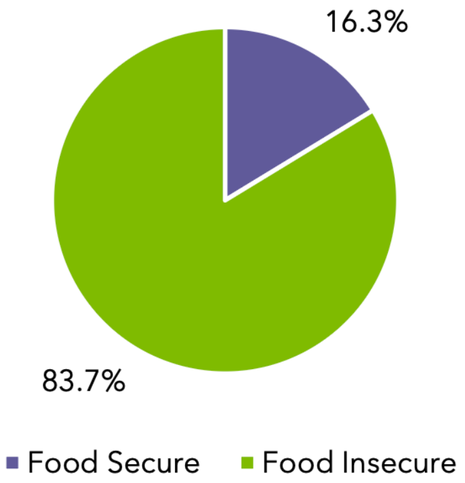


Household Size

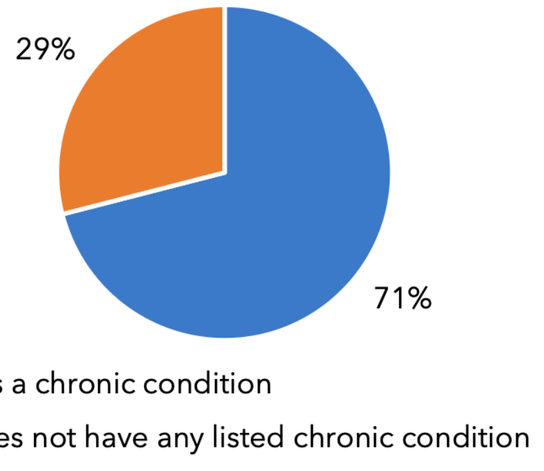
1-2 people	3-4 people	5-6 people	7+ people
23.6%	**38.8%**	**30.7%**	**6.9%**

Are you a patient at this clinic location?

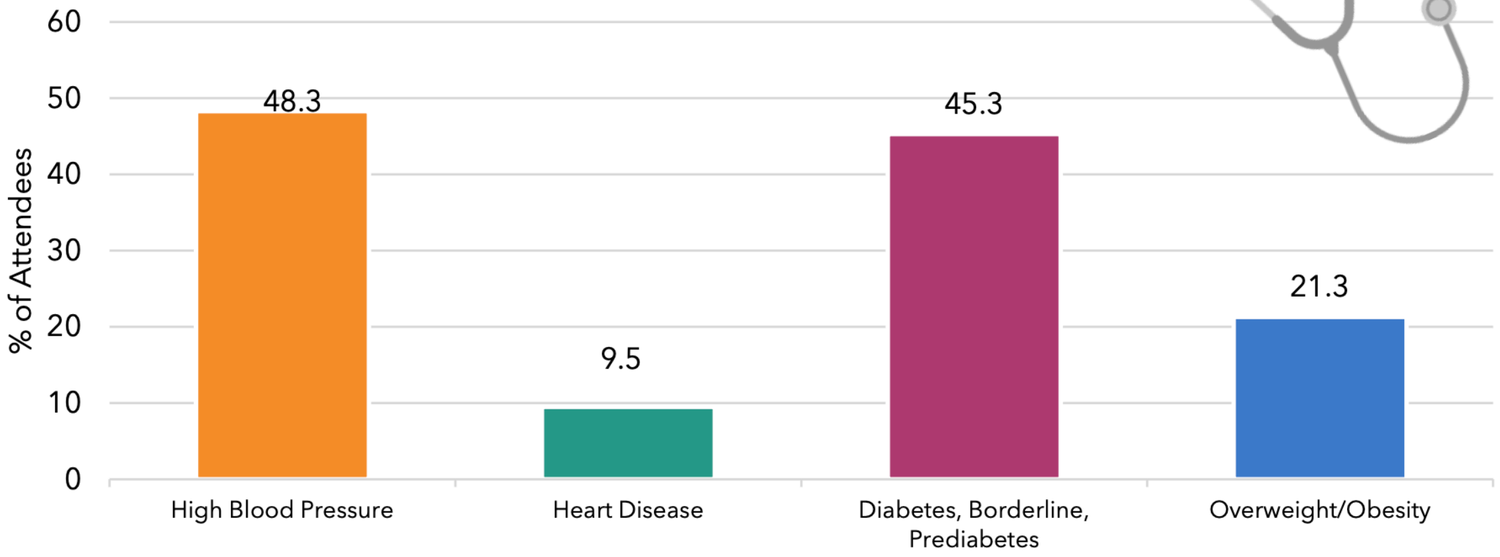
Food Insecurity



Have at Least One Diet-Related Chronic Health Condition

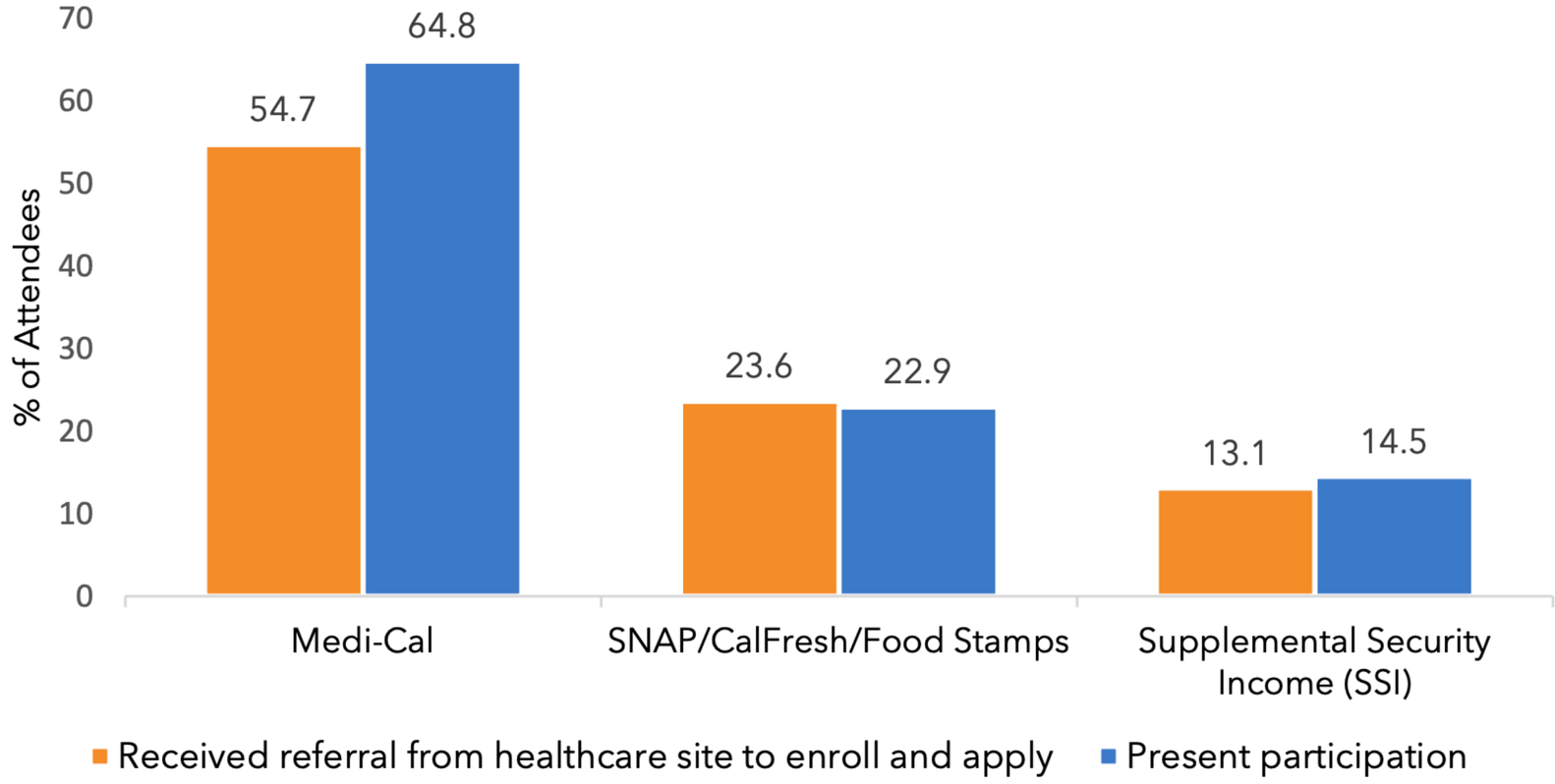


By Type of Diet-Related Chronic Health Conditions



ENROLLMENT IN AND REFERRALS TO ASSISTANCE PROGRAMS

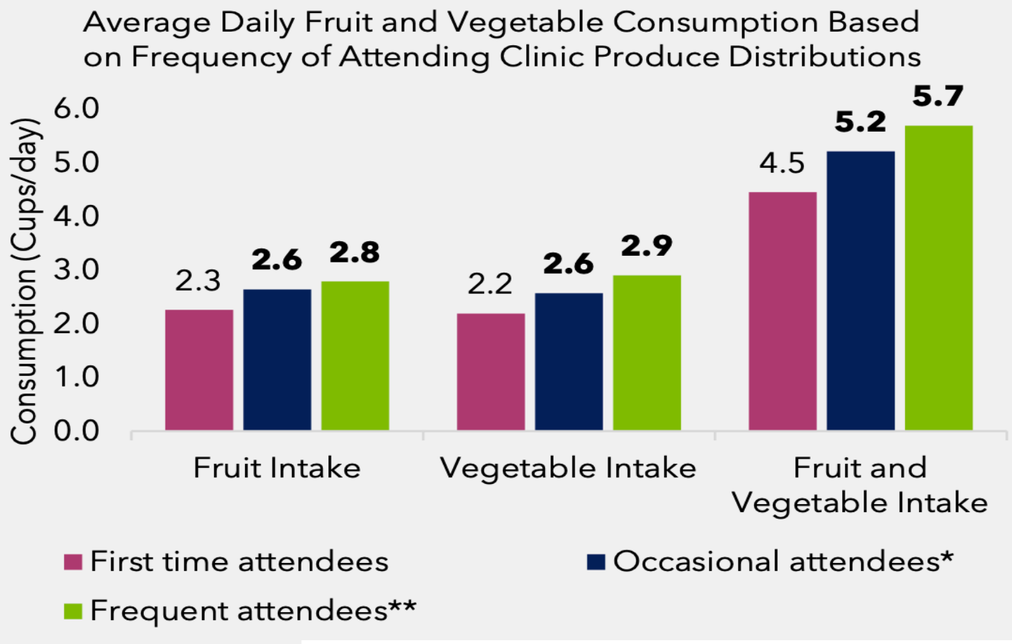
Top three assistance programs that attendees applied to, based on clinic staff referrals, compared to what attendees reported they are enrolled in presently.



Note: Medi-Cal is California's Medicaid program; CalFresh is California's Supplemental Nutrition Assistance Program (SNAP).

OUTCOMES

On average, attendees consumed 2.57 cups of fruits and 2.54 cups of vegetables per day. Those who attended produce distribution events occasionally (2-9 times in the past 12 months) or frequently (ten or more times in the past 12 months) reported a significant increase in fruit, vegetable, and combined fruit and vegetable consumption, compared to first time attendees.



Bold = Statistically sig
* 2-9 times in the last
** ≥10 times in the las

ATTENDEE PERCEPTIONS

Nearly all attendees agreed with the following statements:

1. This produce distribution has foods that are familiar to me, and I know how to prepare them (93.4%)
2. At this produce distribution, the environment makes me feel welcome (98.4%)
3. At this produce distribution, the staff treat me with dignity and respect (97.8%)

86.7% reported eating most or all produce received at events.

Top reasons for not eating all produce:

1. Produce went bad before I could eat them all (4.8%)
2. Didn't know how to cook or include the produce in my meals (4.6%)
3. Received too much (4.2%)

RCMAR CHIME 2025-2026 PILOT AWARD

- Goal: Improve produce distributions to more effectively provide produce to a wide-ranging, safety net population

- Aim 1: Assess and understand variation of diet quality at a FoodRx produce distribution event pilot site amongst older adult participants using two different diet quality assessment tools
- Aim 2: Assess which dietary assessment tool is more effective in predicting BMI
- Aim 3: Assess current success and challenges of FoodRx produce distribution events from perspective of older adults

Methods:

- Aim 1 & 2: Recruit at least 120 older adults from pilot site to complete dietary quality assessments
  - Diet Quality Assessments:
    - Global Diet Quality Questionnaire
    - Mediterranean Diet Scale

- Aim 3: Conduct semi-structured interviews from a random sample of at least 20 adults aged 60+ who have attended multiple (more than 1) LA Food Rx PDP events at our pilot site and have participated in the Aim 1 survey of older adults

MEDITERRANEAN DIET SCORE

Table S4. Quantitative 14-item Score of Compliance with the Mediterranean Diet.

	Foods and frequency of consumption	Criteria for 1 point*
1	Do you use olive oil as main culinary fat?	Yes
2	How much olive oil do you consume in a given day (including oil used for frying, salads, out of house meals, etc.)?	4 or more tablespoons
3	How many vegetable servings do you consume per day? *(1 serving = 200g - consider side dishes as 1/2 serving)*	2 or more *(at least 1 portion raw or as salad)*
4	How many fruit units (including natural fruit juices) do you consume per day?	3 or more
5	How many servings of red meat, hamburger, or meat products (ham, sausage, etc.) do you consume per day? *(1 serving = 100-150 g)*	Less than 1
6	How many servings of butter, margarine, or cream do you consume per day? *(1 serving = 12 g)*	Less than 1
7	How many sweet/carbonated beverages do you drink per day?	Less than 1
8	How much wine do you drink per week?	7 or more glasses
9	How many servings of legumes do you consume per week? *(1 serving = 150 g)*	3 or more
10	How many servings of fish or shellfish do you consume per week? (1 serving: 100-150 g fish, or 4-5 units or 200 g shellfish)	3 or more
11	How many times per week do you consume commercial sweets or pastries (not homemade), such as cakes, cookies, biscuits, or custard?	Less than 3
12	How many servings of nuts (including peanuts) do you consume per week? *(1 serving = 30 g)*	3 or more
13	Do you preferentially consume chicken, turkey or rabbit meat instead of veal, pork, hamburger or sausage?**	Yes
14	How many times per week do you consume vegetables, pasta, rice, or other dishes seasoned with *sofrito* (sauce made with tomato and onion, leek, or garlic, simmered with olive oil)?	2 or more

* 0 points if these criteria are not met.
** 1 point for vegetarians.

GLOBAL DIET QUALITY QUESTIONNAIRE

	Yesterday, did you eat any of the following foods:	(circle answer)
1	Rice, white bread, pasta, wheat tortillas, or gorditas?	YES or NO
2	Corn tortillas, tamales, whole corn, whole grain bread, or oats?	YES or NO
3	Potato or plantain?	YES or NO
4	Beans, refried beans, lentils, peas, garbanzos, or fava beans?	YES or NO
	Yesterday, did you eat any of the following vegetables:	
5	Carrots, pumpkin, or red bell pepper?	YES or NO
6	Spinach, broccoli, chard, watercress, or wild greens (quelites)?	YES or NO
7.1	Tomatoes, green tomato, lettuce, zucchini, or cucumber?	YES or NO
7.2	Nopales, chayote, celery, green beans, or cabbage?	YES or NO
	Yesterday, did you eat any of the following fruits:	
8	Mango, papaya, cantaloupe, or mamey?	YES or NO
9	Orange, mandarin, or grapefruit?	YES or NO
10.1	Banana, apple, pineapple, watermelon, or strawberries?	YES or NO
10.2	Avocado, pear, guava, Mexican plum, grapes, or peaches?	YES or NO
	Yesterday, did you eat any of the following sweets:	
11	Sweet bread, cookies, cakes, donuts, churros, or buñuelos?	YES or NO
12	Candy, chocolates, lollipop, popsicle, ice cream, dulce de leche, or flan?	YES or NO
	Yesterday, did you eat any of the following foods of animal origin:	
13	Eggs?	YES or NO
14	Cheese or requesón?	YES or NO
15	Yogurt?	YES or NO
16	Ham, Hot dogss, chorizo, longaniza, smoked meat, bacon, or bologna?	YES or NO
17	Beef, beef organs, liver, or sheep?	YES or NO
18	Pork?	YES or NO
19	Chicken?	YES or NO
20	Fish, tuna, sardines, shrimp, or seafood?	YES or NO
	Yesterday, did you eat any of the following other foods:	
21	Peanuts, pumpkin seeds, sunflower seeds, or walnuts?	YES or NO
22	Potato chips such as Ruffles, Doritos, Rancheritos, Sabritas, Cheetos, or Takis?	YES or NO
23	Instant soup, or instant noodles such as Maruchan?	YES or NO
24	Fried snacks, chicharrines, French fries, chicharrón, or fried chicken?	YES or NO
	Yesterday, did you have any of the following beverages:	
25	Milk or leche con chocolate?	YES or NO

Component	Description	GDQQ Food Groups Included	Scoring Approach
Global Diet Quality Questionnaire (GDQQ)	A 29-item yes/no questionnaire assessing whether respondents consumed specific food groups during the previous day or night.	Includes 29 food groups covering a range of healthy and limit foods. Respondents are asked whether they consumed any of up to 7 sentinel foods per question, which are the most commonly consumed food items in each food group in each country setting.	Each food group is scored based on “yes” (1) or “no” (0) consumption in the previous 24 hours.
GDR-Healthy Score	Captures consumption of foods aligned with WHO recommendations for fruits, vegetables, whole grains, pulses, nuts/seeds, and dietary fiber.	**Consists of 9 healthy food groups positively associated with meeting WHO recommendations**.	Higher scores indicate better diet quality and higher likelihood of meeting WHO recommendations. Possible range: 0–9.
GDR-Limit Score	Captures consumption of foods negatively associated with diet quality, including those high in free sugar, salt, total and saturated fat, and red or processed meat.	**Consists of 8 limit food groups; the processed meat item is counted twice.**	Higher scores indicate lower diet quality and greater deviation from WHO recommendations. Possible range: 0–9.
GDR Total Score	Composite indicator of overall diet quality combining healthy and limit components.	Based on GDR-Healthy and GDR-Limit food group scoring.	Calculated as GDR-Healthy – GDR-Limit + 9, producing a final score ranging 0–18.

Progress to Date:

- IRB approval
- Community partners established with UCLA as vendor
- Study site solidified and approved
- Gift cards ordered for incentive

Future Steps:

- Site walk through with community partner pending
- Expansion of FoodRx community advisory board (trainees, promotoras, community health workers, health educators, nutritionists, etc)

UC CASCADE 2025-2026 PILOT AWARD

- Our proposed intervention, "*Diet Quality Matters*" is designed for low-income, food insecure adults and incorporates motivational interviewing, uses hands-on meal preparation, and facilitated discussion to teach participants feasible actions to improve long term diet quality.
- Our pilot intervention centers around a community recipe share model with a pre- and post-intervention survey focused on **1) food resource management (FRM) skills**, **2) self-confidence, 3) food insecurity** and **4) includes a U.S.-adapted version of the PREDIMED 14-item Mediterranean diet scale (MDS) along with culturally appropriate Global Dietary Quality Questionnaire (GDQQ)** to assess food quality and long-term cardiovascular disease risk

Diet Quality Matters (DQM) Intervention

- Based on prior study in similar population
- Hoping to add motivational interviewing, diverse community of LA
- Also assessing diet quality in large sample of Food Rx

Pre-survey with motivational interviewing anchor question and Biomarkers (height, weight, blood pressure)

Video on Nutrition Education followed by taste testing and group discussion (x3)

~3 month follow up~

Post-survey and Biomarkers (height, weight, blood pressure)

Planning for verbal informed consent, $15 compensation for each session completion

Community partners and CAB will provide input on actual curriculum/taste testing to be provided

Diet Quality Matters Intervention Menu

- Session 1 - *Three Sisters Salad* https://eatfresh.org/recipe/main-dish-side-dish-salads/three-sisters-salad/
- Session 2 - *Tuna Boats* https://eatfresh.org/recipe/main-dish/tuna-boats/
- Session 3 - *No Cook Chocolate Pudding* https://eatfresh.org/recipe/desserts/no-cook-chocolate-pudding/

Progress to Date:

- IRB approval
- Community partners established with UCLA as vendor

Current Roadblocks:

- Previous study site no longer able to accommodate study*

Future Steps:

- Meeting with community partners to brainstorm new site
- Any new community partners to help fulfill needs at current site?
- FoodRx CAB feedback/advice

Summary

What People-Centered Research Recognizes

Health is shaped by **daily realities**: work, income, identity, trust, and access
People do not experience risk in isolation—**systems create constraints and opportunities**
Lived experience is **evidence**, not anecdote

Why This Matters for Nutrition & Chronic Disease

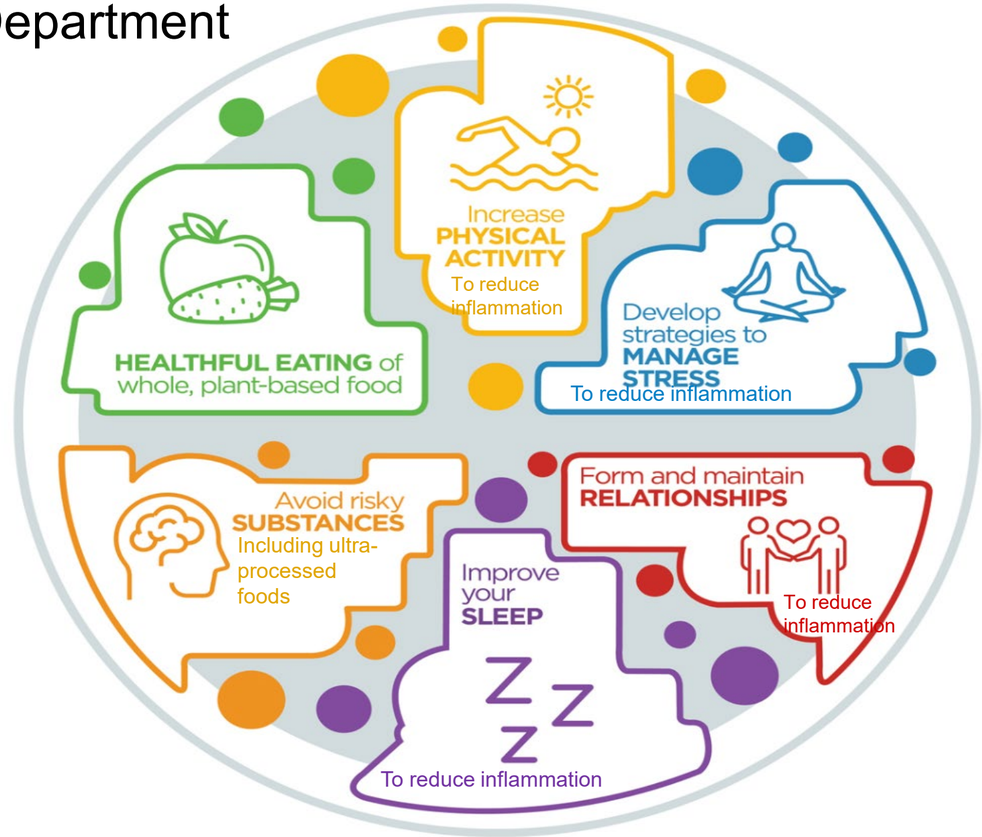
Nutrition behaviors occur within **real-life limits** (time, cost, safety, culture)
Chronic disease risk reflects **structural exposure**, not individual failure
Effective interventions begin by **listening to people first**

Core Principle

Research to improve nutrition-related chronic disease must be centered on people's lived experiences—
because equity starts with first understanding how people actually live.

Acknowledgements

- Bruin Scholar Award Committee
- Gerardo Moreno, MD MS
- William McCarthy, PhD
- Joann Elmore, MD, MPH
- Nina Harawa, PhD
- Daphne Calmes, MD
- Kenechukwu Ojukwu, MD, MPP, MS
- Arleen Brown, MD, PhD
- Alejandra Casillas, MD, MSHS
- Gloria Moon, MSW, MPH
- Fatinah Darwish-Elsherbiny, MPH, RDN
- Julia Caldwell MPH, PhD
- Adrienne Markworth
- Melissa Arvizu, MPH, MBA
- Yelba Castellon-Lopez, MD, MPH
- Food Rx Community Advisory Board
- UCLA RCMAR CHIME
- UC CASCADE
- NCSP Mentors and Fellows
- NRSA Mentors and Fellows
- Alexandria Thomas, MD, MS
- Family and Friends
- UCLA FM Department



THANK YOU

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