
Lifestyle Medicine: Longevity, Healthspan and Ikigai

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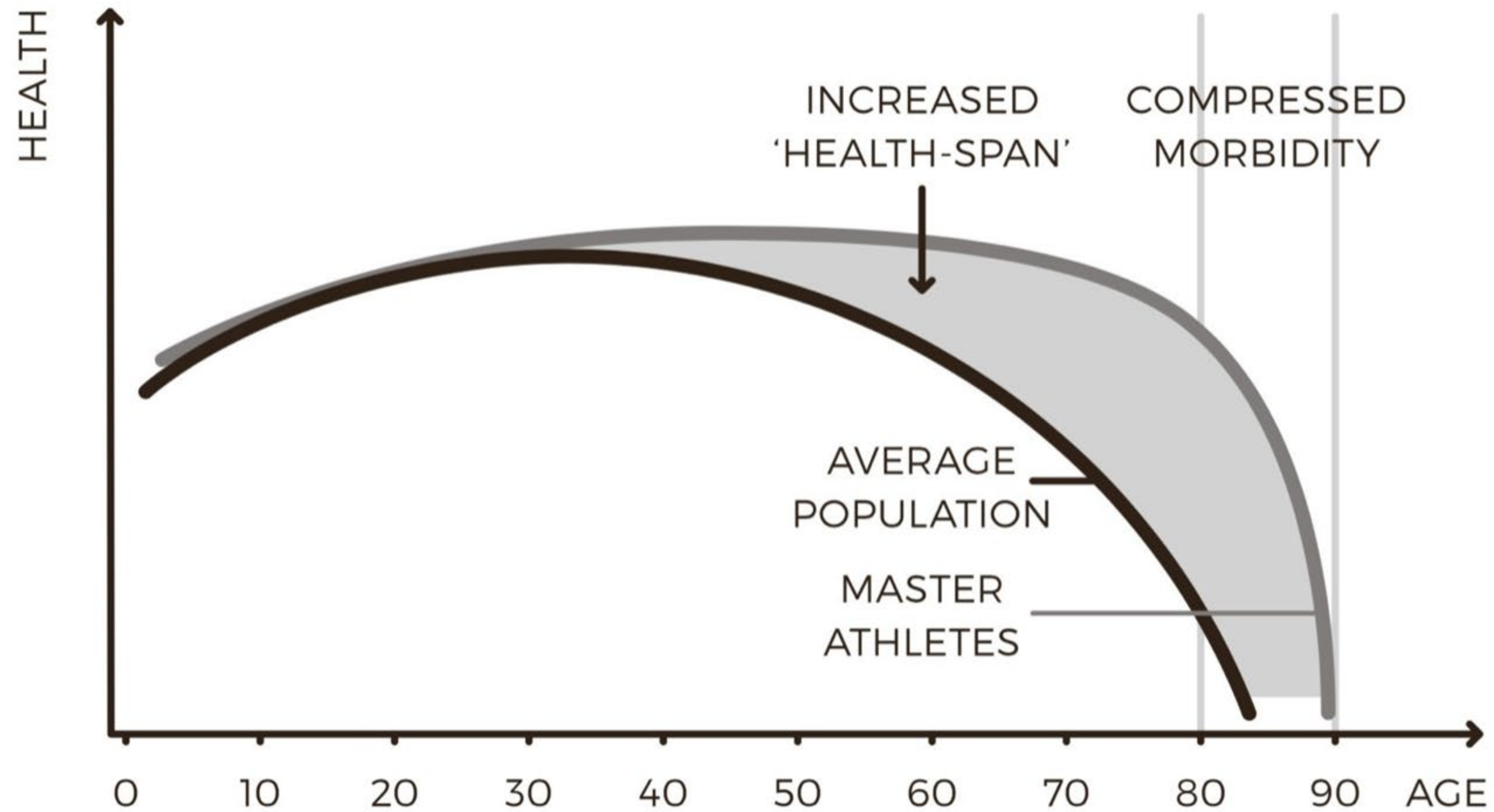
“Your health isn’t
everything, but
without your
health,
everything is
nothing.”

- a wise man



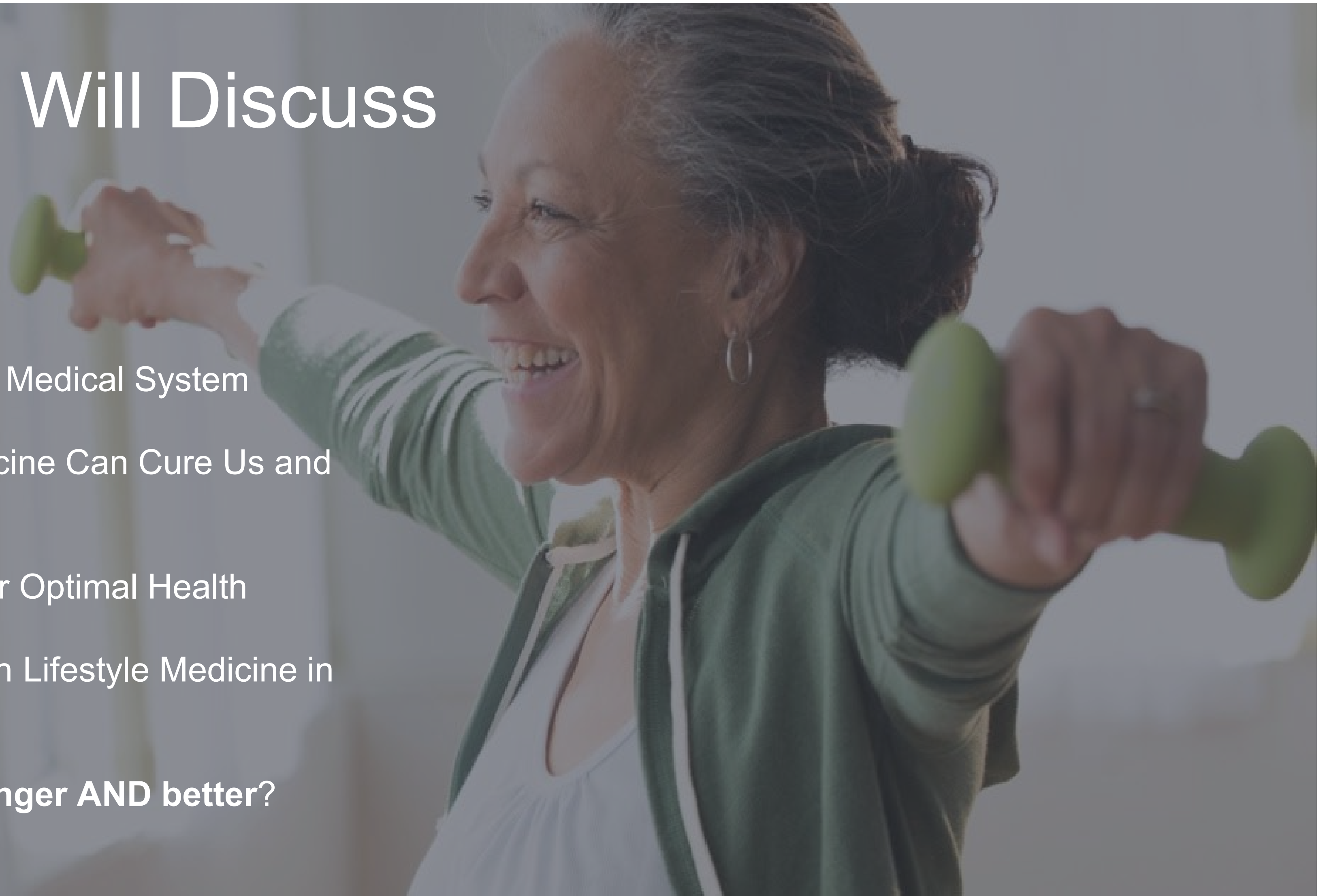


Healthspan vs Lifespan



What We Will Discuss Today:

- Our Failing Current Medical System
- How Lifestyle Medicine Can Cure Us and the System
- Optimal Nutrition for Optimal Health
- Our Experience with Lifestyle Medicine in Asheville
- How can we live **longer AND better?**



Leading Causes of Death in the US 2017

- Heart disease: 633,842
- Cancer: 595,930
- Chronic lower respiratory diseases: 155,041
- Accidents (unintentional injuries): 146,571
- Stroke (cerebrovascular diseases): 140,323
- Alzheimer's disease: 110,561
- Diabetes: 79,535
- Influenza and pneumonia: 57,062
- Nephritis, nephrotic syndrome, and nephrosis: 49,959
- Intentional self-harm (suicide): 44,193

*CDC Vital statistics 2016

Actual Causes of Death

- Tobacco 435,000
- Poor diet and physical inactivity 400,000
- Alcohol consumption 85,000
- Microbial agents 75,000
- Toxic agents 55,000
- Motor vehicle accidents 43,000
- Firearms 29,000

NOTE: 80% of all deaths are caused by our lifestyles

*Mokdad, Actual causes of Death in the U.S. 2000 and 2004

Heart Disease ... Less Than 100 Years Ago

“You can expect one heart attack per year in an average hospital in an average sized town.”

Prevalence of Coronary Heart Disease in North America,
1928

Medical Textbook by Sir William Osler, MD

Today, the number of heart attacks

2018 Mission data:

*625 in the US is 4,000 per day (289% increase from 2013)

*1633 PCI cases =4.5/day



Heart Disease Today ... Pills and Procedures

Pill Nation: The Rise of Rx Drug Use

The total number of prescriptions filled by all Americans, including adults and children, has increased by 85 percent over two decades, while the total U.S. population has increased by only 21 percent.

180,000* serious or fatal adverse drug
reactions reported to the FDA, making drugs
a significant
% of US deaths



Source: Quintiles IMS.
© 2017 Consumer Reports. All Rights Reserved.

Heart Disease Today ...

- Bypass Surgery
 - 400,000/year
 - Subsets of patients for whom this operation is associated with improved mortality versus medical therapy or stenting
 - 37-46% of vein grafts failed (75% narrowing) within 12 to 18 months

NEJM 2009, 361 (3) 235

- Angioplasties & Stents
 - 1,000,000/year
 - Most useful for symptom relief-not for mortality benefit

This simply does not make sense...



WHOLE HEALTH - TREATMENT



ACUTE - SEVERE

*Foreign, Invasive
Costly*

SURGERY

PRESCRIPTION



"Natural"
therapies that
restore healthy
physiology.

PHYSIOLOGY

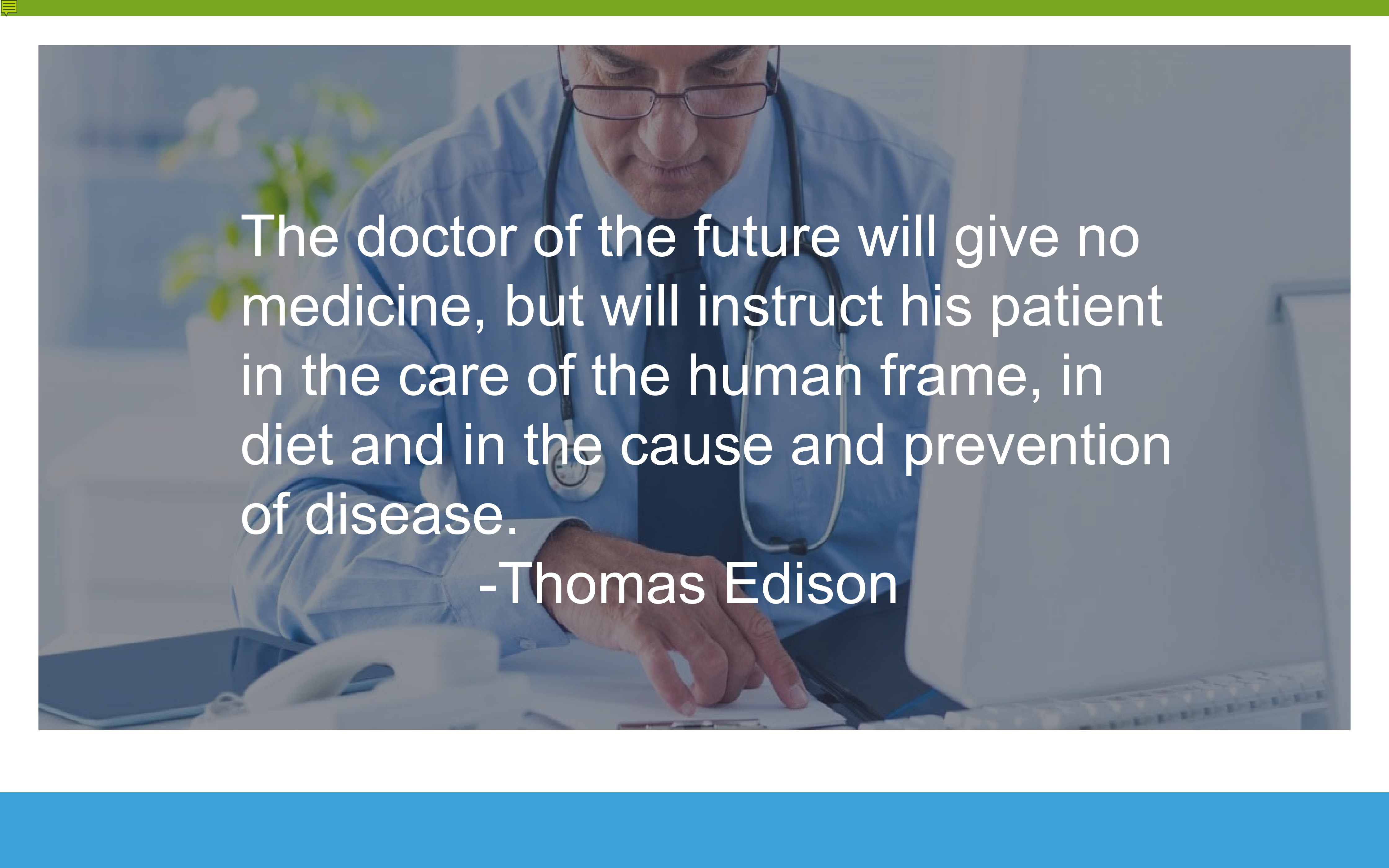


The cause and cure of
most disease - nutrition,
exercise, sleep, stress,
relationships, purpose, etc.

LIFESTYLE

CHRONIC

*Natural
Inexpensive*

A photograph of a male doctor with glasses and a stethoscope, wearing a light blue lab coat over a dark tie and shirt. He is looking down at a desk, with his hand near a computer keyboard. A computer monitor is visible on the right. The background is slightly blurred, showing a potted plant and office shelves. The image has a semi-transparent blue overlay.

The doctor of the future will give no medicine, but will instruct his patient in the care of the human frame, in diet and in the cause and prevention of disease.

-Thomas Edison

Lifestyle: The Cause and the Cure for Today's Medical Dilemma



Lifestyle Medicine Definition

Lifestyle medicine is the **evidence based** practice of helping individuals and families adopt and sustain **(natural) healthy behaviors** that affect health and quality of life...



Lifestyle Interventions



LIFESTYLE MEDICINE FOCUSES ON 6 AREAS TO IMPROVE HEALTH



Data for Lifestyle Efficacy

Circulation 4/30/2018 Li et al.

- Data from NHS+ HPFS (>122,000 pts over 34 yrs)
- 5 lifestyle factors:
 - Never smoking
 - BMI 18.5-24.9
 - >30 min/D moderate-vigorous activity
 - <Moderate ETOH intake
 - High dietary quality (top 40%)



Data for Lifestyle Efficacy

Circulation 4/30/2018 Li et al.

- Hazard ratios for all 5 factors vs 0
- All cause mortality 0.26
- Cancer mortality 0.35
- CV mortality 0.18
- Additional life expectancy at age 50:
 - women 14 years
 - men 12.2 years



Health

Low-

• Mar

TH
PA

THE HIDDEN DANGERS IN "HEALTHY"
FOODS THAT CAUSE DISEASE
AND WEIGHT GAIN

STEVEN R. GUNDRY

Dr. Wymant offers a 10-day KETO diet
that will improve your health and weight

THE BLOOD SUGAR SOLUTION

LOOK
INSIDE

LOOK INSIDE

Dr. Wymant offers a 10-day KETO diet
that will improve your health and weight



FOX
NEWS
channel

SCIENTISTS DECIDE RED MEAT ISN'T SO BAD AFTER ALL

+ MEDICAL EMERGENCY

an K. Smith, M.D.

LOP

The Blood Sugar Solution

ane Sanfilippo, BS, NC

OVER
20
EASY
RECIPES



“Eat food, not too much, mostly plants.”

-Michael Pollan

Public Health Nutr. 2012 October ; 15(10): 1909–1916. doi:10.1017/S1368980011003454.

Vegetarian diets and blood pressure among white subjects: results from the Adventist Health Study-2 (AHS-2)

Betty J Pettersen^{1,†}, Ramtin Anousheh¹, Jing Fan¹, Karen Jaceldo-Siegl², and Gary E Fraser^{1,*}

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² Department of Nutrition, School of Public Health, Loma Linda University, Loma Linda, CA, USA

Abstract

Objective—Previous work studying vegetarians has often found that they have lower blood pressure (BP). Reasons may include their lower BMI and higher intake levels of fruit and vegetables. Here we seek to extend this evidence in a geographically diverse population containing vegans, lacto-ovo vegetarians and omnivores.



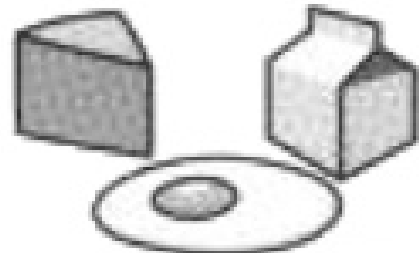
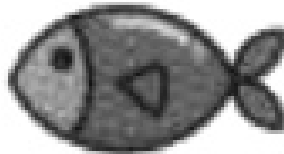
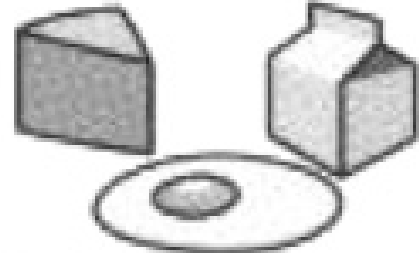


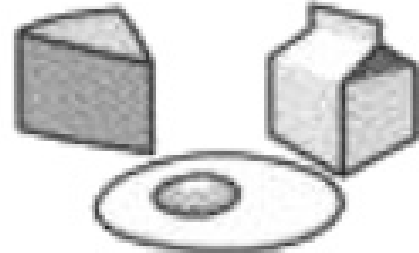

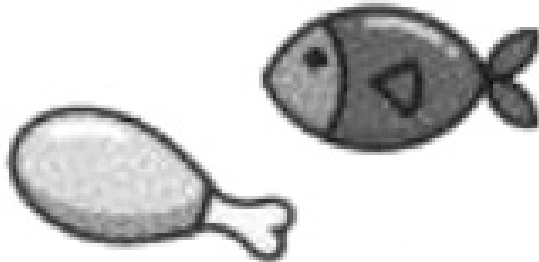
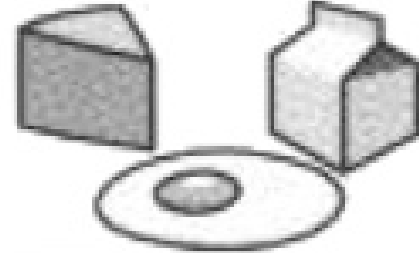
	%	BEEF	POULTRY/FISH	DAIRY/EGGS
VEGAN	4.3	NONE	NONE	NONE
LACTO-OVO	34.0	NONE	NONE	
PESCO-VEGE	9.7	NONE		
SEMI-VEGE	8.3			
NON-VEGE	43.7			

TABLE 1
Mean BMI (in kg/m²) and the prevalence of diabetes and hypertension in different types of vegetarians compared with nonvegetarians in California Seventh-day Adventists: preliminary analyses adjusted for age, sex, and race¹

Diet group	BMI ²	Diabetes ³	Hypertension ³
Nonvegetarian	28.26 (28.22, 28.30)	1.00	1.00
Semivegetarian	27.00 (26.96, 27.04)	0.72 (0.65, 0.79)	0.77 (0.72, 0.82)
Pescovegetarian	25.73 (25.69, 25.77)	0.49 (0.44, 0.55)	0.62 (0.59, 0.66)
Lactoovo-vegetarian	25.48 (25.44, 25.52)	0.39 (0.36, 0.42)	0.45 (0.44, 0.47)
Vegan	23.13 (23.09, 23.16)	0.22 (0.18, 0.28)	0.25 (0.22, 0.28)
<i>P</i> ⁴	0.0001	0.0001	0.0001

¹ *n* = 89,224.

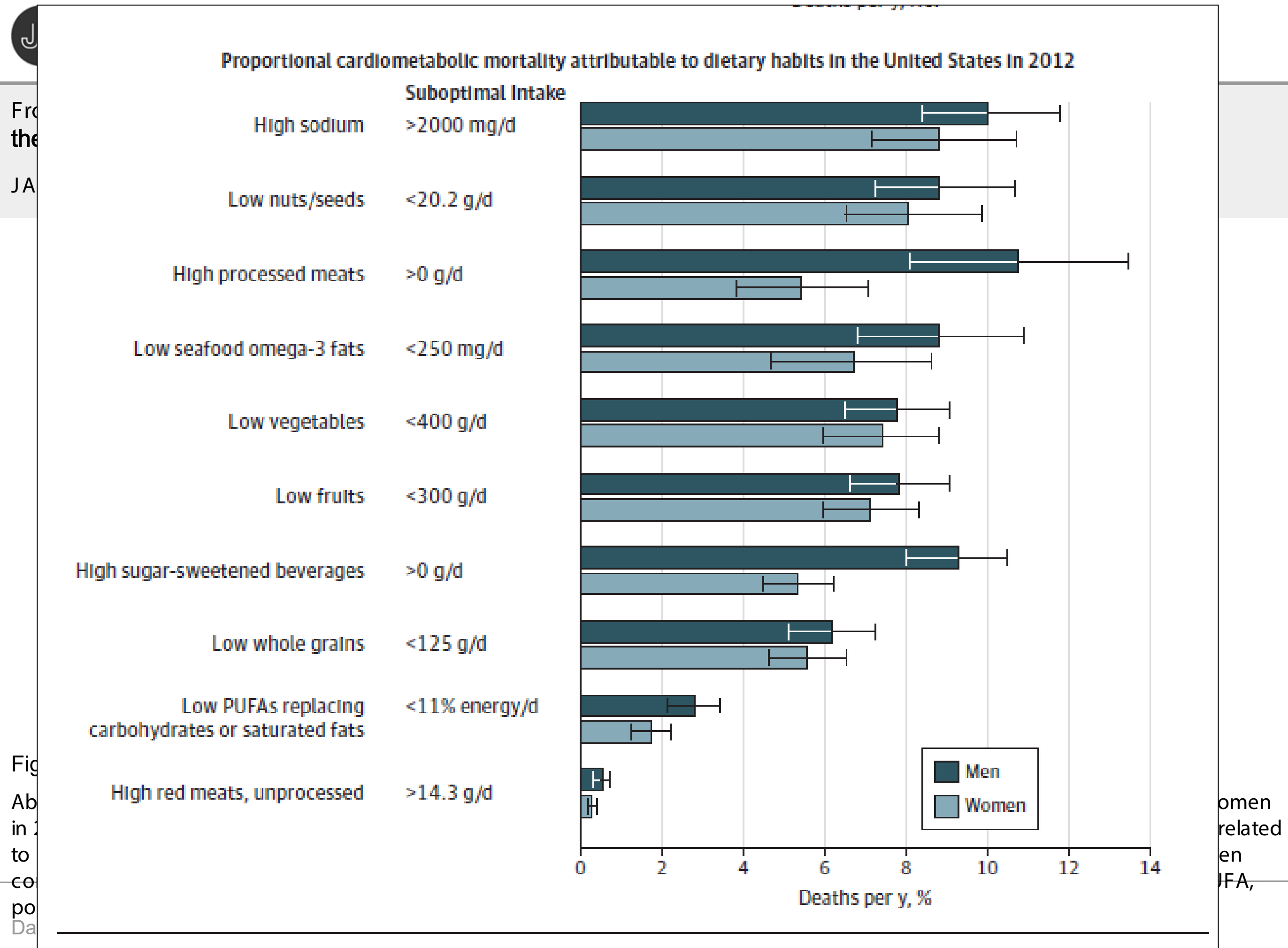
From: **Vegetarian Dietary Patterns and Mortality in Adventist Health Study 2**

JAMA Intern Med. 2013;():1-8. doi:10.1001/jamainternmed.2013.6473

Table 1. Comparison of Vegetarian With Nonvegetarian Dietary Patterns With Respect to All-Cause and Cause-Specific Mortality From a Cox Proportional Hazards Regression Model Among Participants in the Adventist Health Study 2, 2002-2009

Characteristic	All-Cause	Ischemic Heart Disease	Cardiovascular Disease
All (N = 73 308), No. of deaths ^{a,b}	2560	372	987
Vegetarian	0.88 (0.80-0.97)	0.81 (0.64-1.02)	0.87 (0.75-1.01)
Nonvegetarian	1 [Reference]	1 [Reference]	1 [Reference]
Men (n = 25 105), No. of deaths ^a	1031	169	390
Vegetarian	0.82 (0.72-0.94)	0.71 (0.51-1.00)	0.71 (0.57-0.90)
Nonvegetarian	1 [Reference]	1 [Reference]	1 [Reference]

Figure Legend:



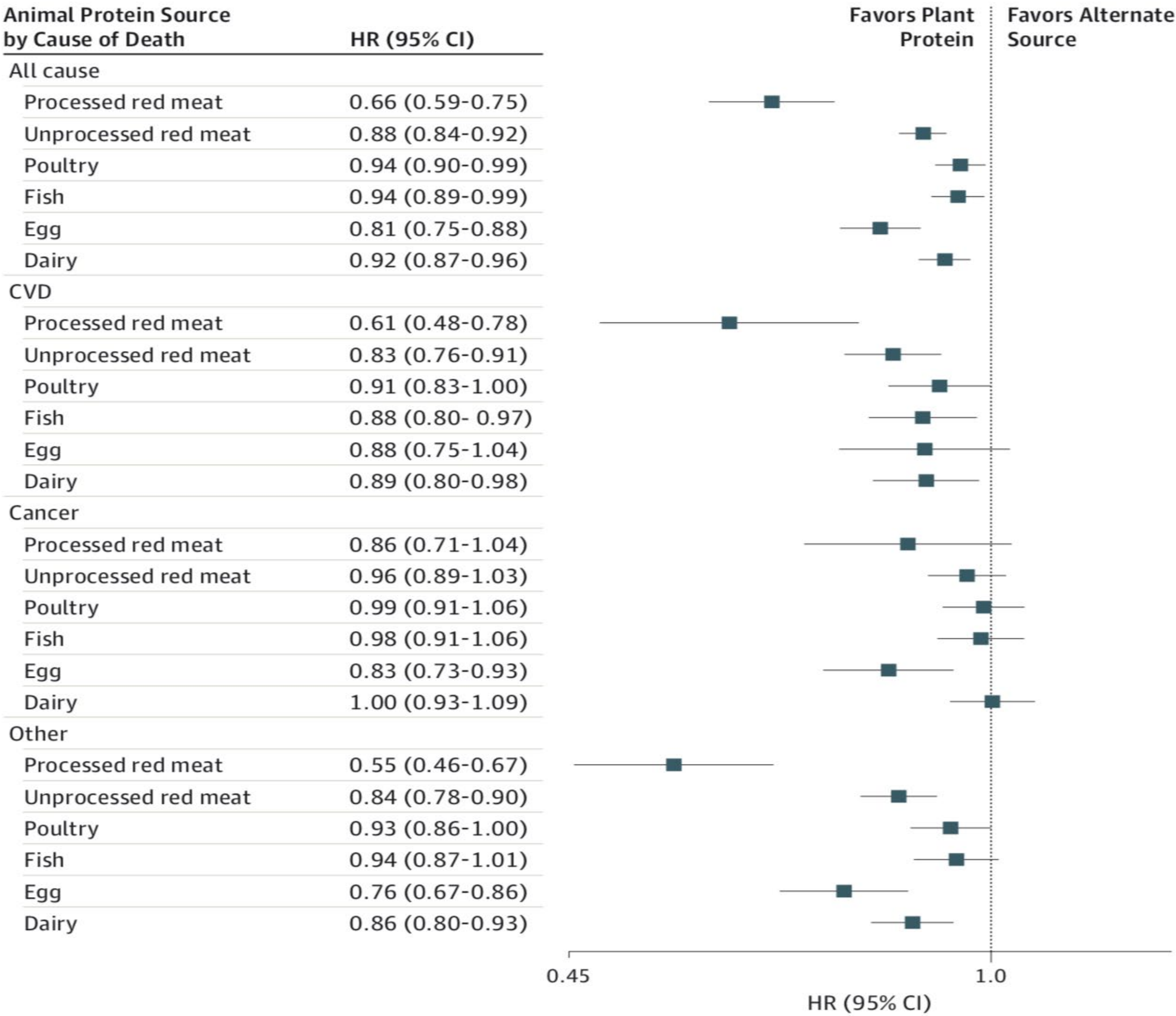
Association of Animal and Plant Protein Intake With All-Cause and Cause-Specific Mortality

Mingyang Song, MD, ScD; Teresa T. Fung, ScD; Frank B. Hu, MD, PhD; Walter C. Willett, MD, DrPH; Valter D. Longo, PhD; Andrew T. Chan, MD, MPH; Edward L. Giovannucci, MD, ScD

IMPORTANCE Defining what represents a macronutritionally balanced diet remains an open question and a high priority in nutrition research. Although the amount of protein may have specific effects, from a broader dietary perspective, the choice of protein sources will inevitably influence other components of diet and may be a critical determinant for the health outcome.

OBJECTIVE To examine the associations of animal and plant protein intake with the risk for mortality.

Figure. Risk for Mortality Associated With Replacement of 3% Energy From Various Animal Protein Sources With Plant Protein



Source of Protein

CONCLUSIONS AND RELEVANCE High animal protein intake was positively associated with mortality and high plant protein intake was inversely associated with mortality, especially among individuals with at least 1 lifestyle risk factor. Substitution of plant protein for animal protein, especially that from processed red meat, was associated with lower mortality, suggesting the importance of protein source.

Healthful and Unhealthful Plant-Based Diets and the Risk of Coronary Heart Disease in U.S. Adults

Ambika Satija, ScD,^a Shilpa N. Bhupathiraju, PhD,^{a,b} Donna Spiegelman, ScD,^{a,b,c,d,e}
Stephanie E. Chiuve, ScD,^{a,f} JoAnn E. Manson, MD, DrPH,^{c,g,h} Walter Willett, MD, DrPH,^{a,b,c}
Kathryn

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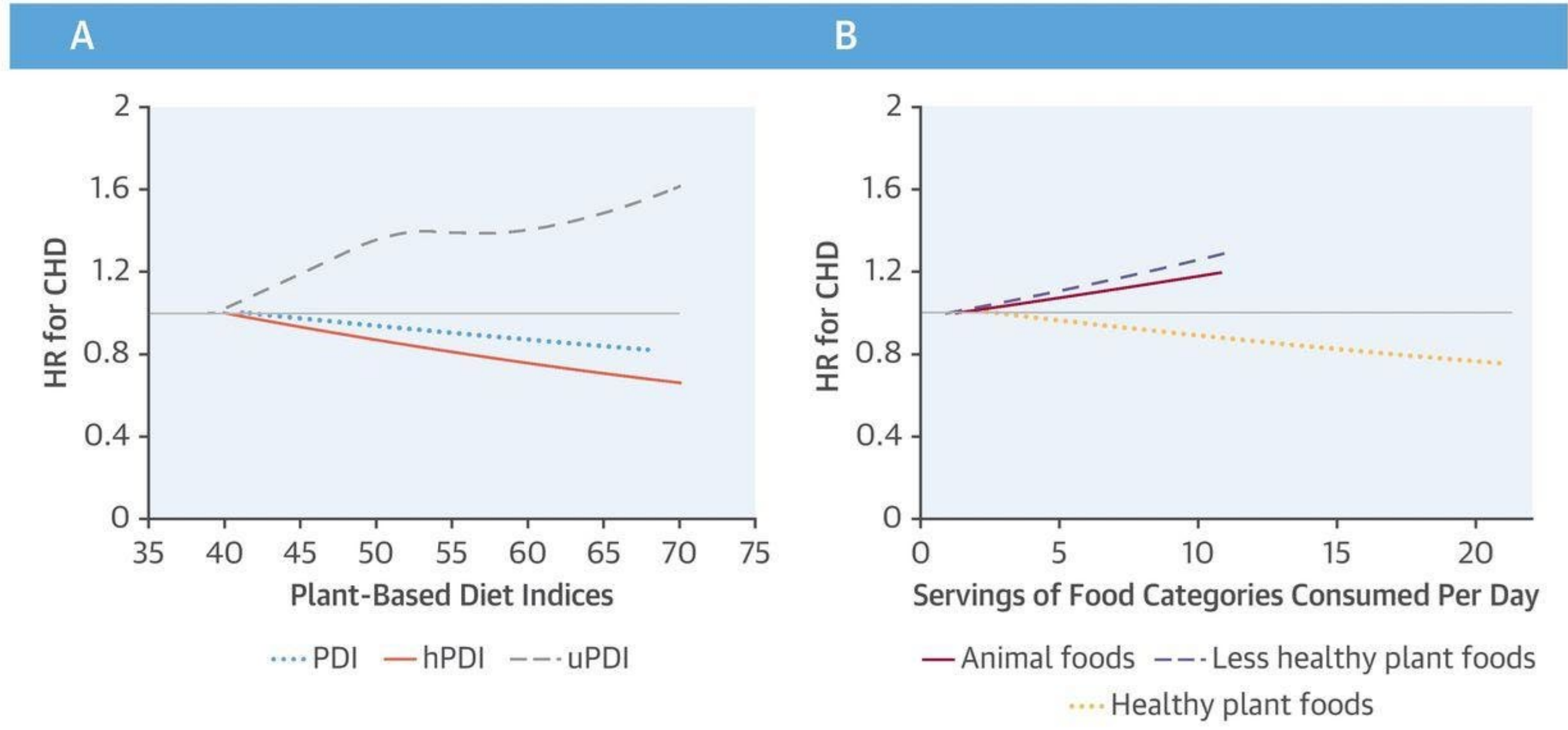
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CENTRAL ILLUSTRATION: Dose-Response Relationship of Plant-Based Diet Indices and Animal, Healthy Plant, and Less Healthy Plant Foods With CHD Incidence



Satija, A. et al. J Am Coll Cardiol. 2017;70(4):411-22.

Dr. Ornish's Program for Reversing Heart Disease™



ornish
reversal program™

Ornish Lifestyle Medicine™

Over the course of 18, four-hour sessions, we help participants optimize four areas of their lives:



Nutrition:

What they eat

Exercise:

How active they are

Stress Management:

How they respond to stress

Community:

How much love & support they have

Proven Regression

Experimental group (Ornish participants) had more regression after 5 years than after 1 year.

91% decrease in angina

vs
165% increase

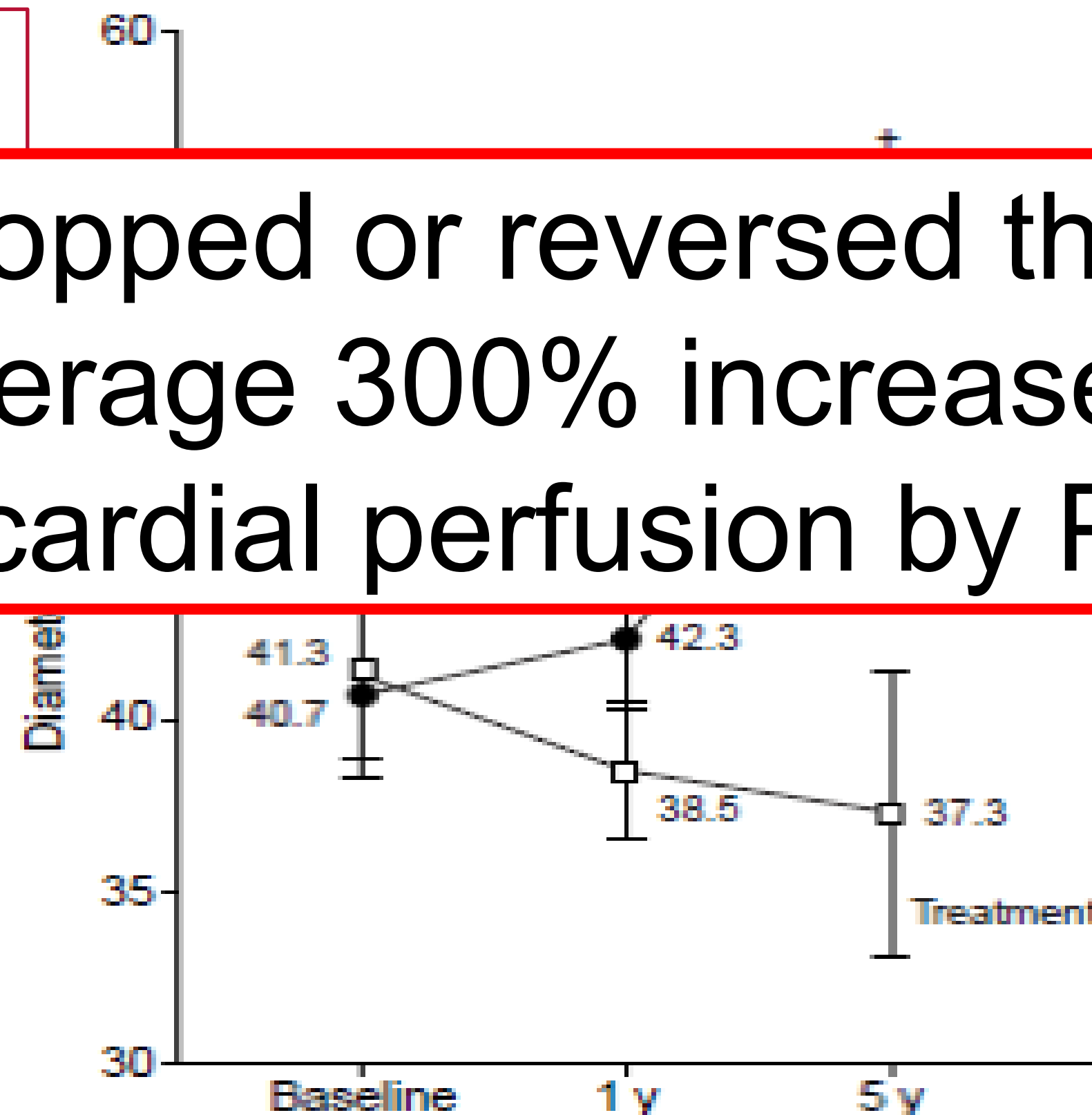
5y: 2.5 x increase
event rate
in control group

20% LDL reduction
in both groups
60% on statins vs 0%

**99% stopped or reversed their CHD
with average 300% increase
in myocardial perfusion by PET scan**

10% relative
improvement in the
up.

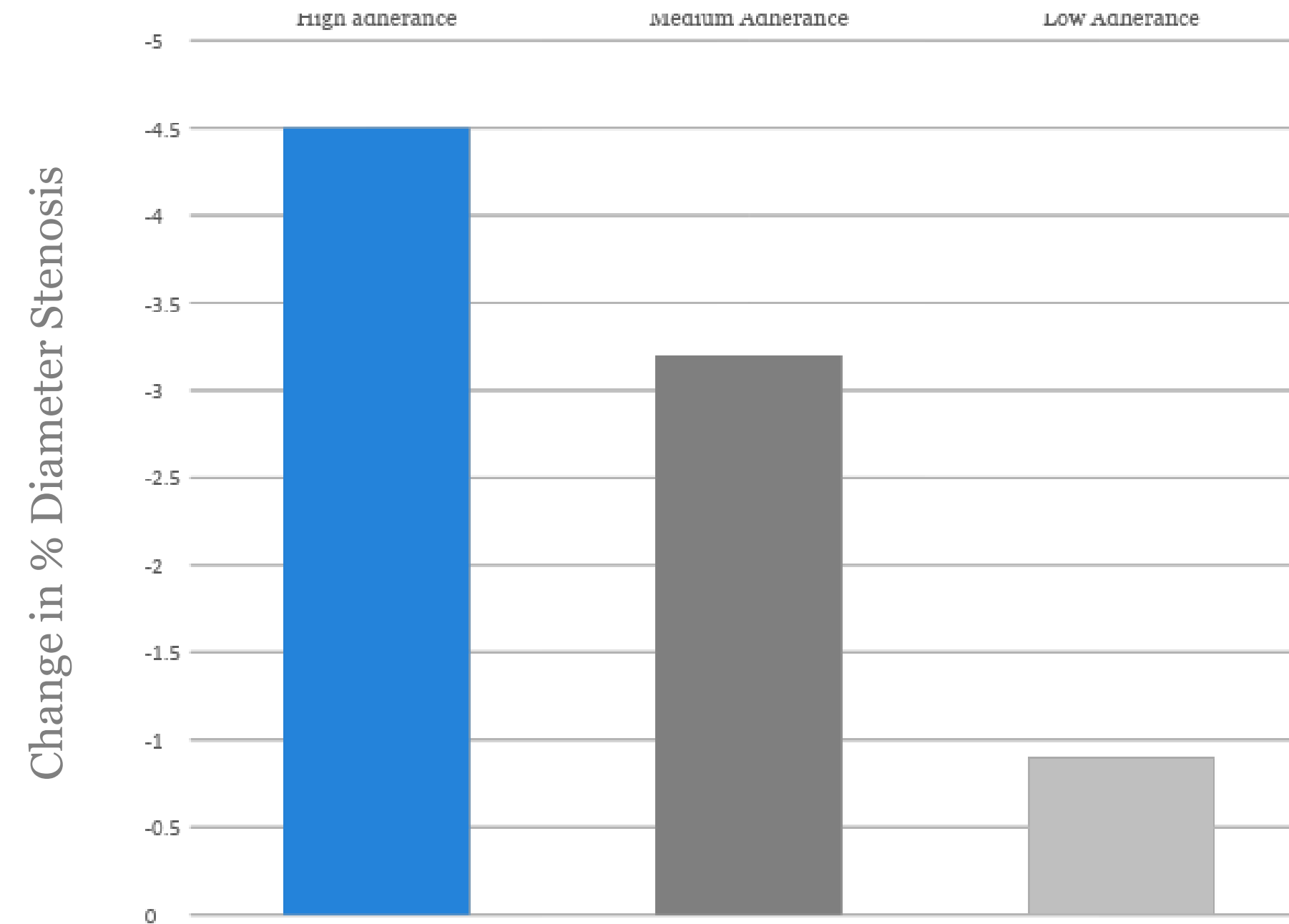
**7.9% relative
improvement in the
Ornish group.**



Ornish D, Scherwitz LW, Billings JH, et al. Intensive lifestyle changes for reversal of coronary heart disease. *JAMA*. 1998;280:2001-2007.

The more adherence the more change

The more closely patients adhered to the lifestyle program, the more improvement was measured in coronary heart stenosis at any age.



Ornish D, Scherwitz LW, Billings JH, et al. Intensive lifestyle changes for reversal of coronary heart disease. *JAMA*. 1998;280:2001-2007.

Ornish Lifestyle Medicine

National Outcomes Q1 2019

	Baseline	9 weeks	Change
Weight Loss	199.7	189.2	-5.2%
BMI	31.5	29.9	5.2%
Total Cholesterol	167.3	141.7	-15.3%
LDL Cholesterol	91.0	72.1	-20.7%
HDL Cholesterol	48.0	43.9	-8.5%
Triglycerides	149.0	132.5	-11.0%
Systolic Blood Pressure	129.2	121.9	-5.7%
Diastolic Blood Pressure	75.4	70.7	-6.3%
HbA1c	6.6	6.2	-6.3%
Depression Score (CESD)	11.4	5.6	-49.4%
Exercise Capacity (Mets)	3.7	5.5	47.6%

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.

Data is based off participants thru Q1 2019 quarterly report. N-6783 participants.

Note: In addition to these results, many participants reduced or discontinued their medications by their physician.



ornish
reversal program

- 2018 Prevention Recommendations – an overall package



wcrf.org/cancer-prevention-recommendations

- Eat a diet rich in wholegrains, vegetables, fruit and beans



RECOMMENDATION

Eat a diet rich in wholegrains, vegetables, fruit and beans

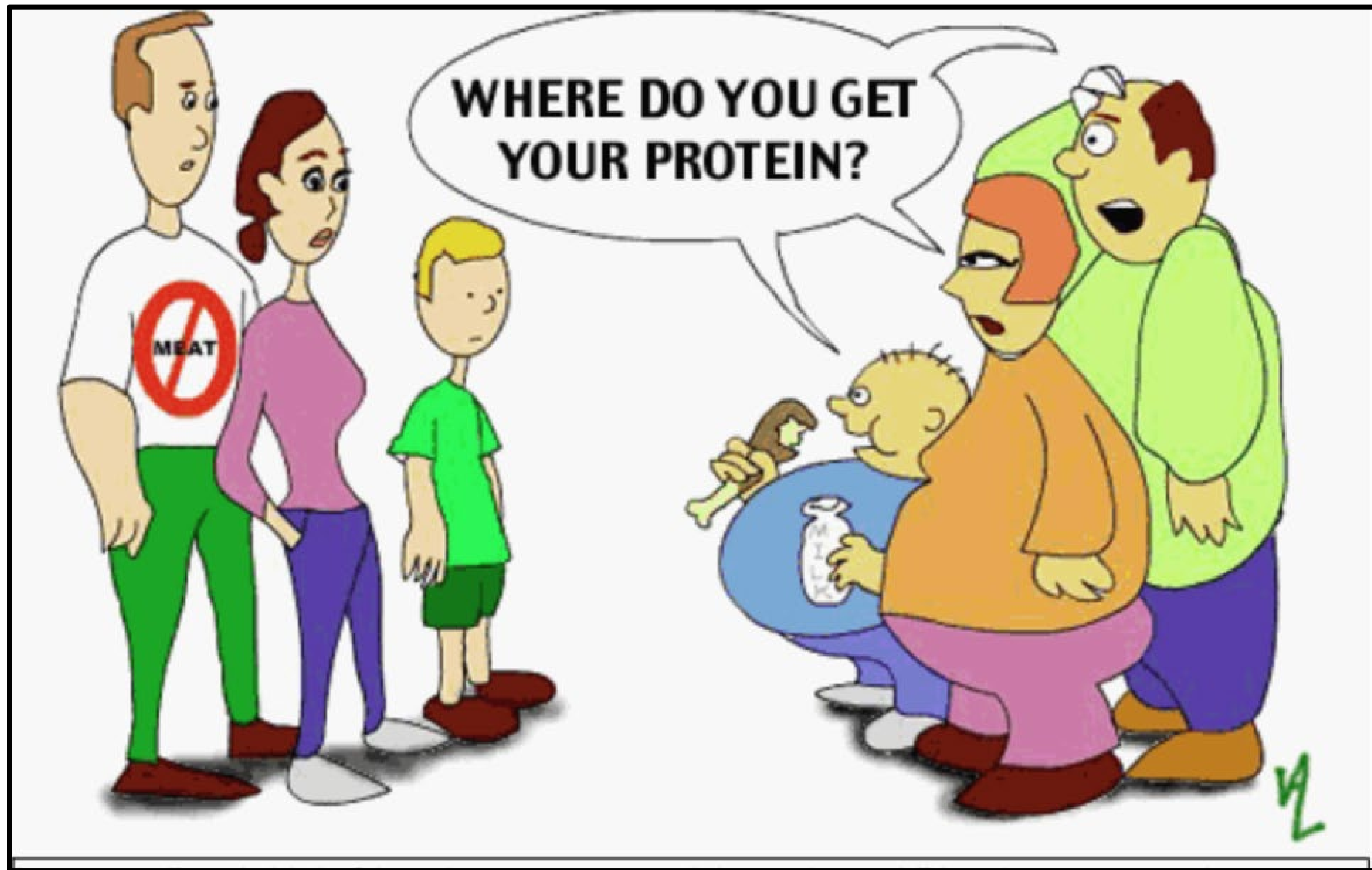
Make wholegrains, vegetables, fruit, and pulses (legumes) such as beans and lentils a major part of your usual daily diet

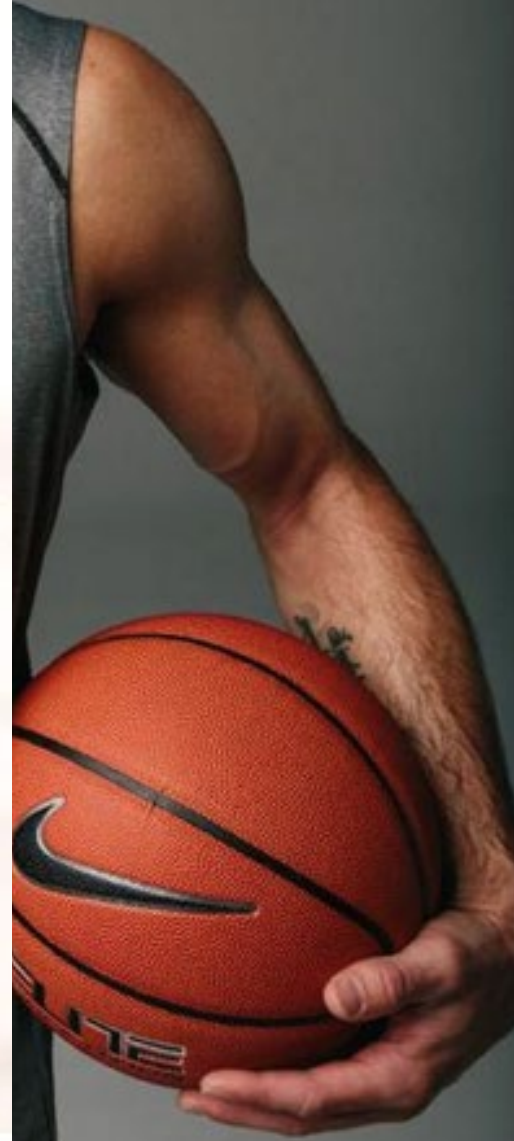
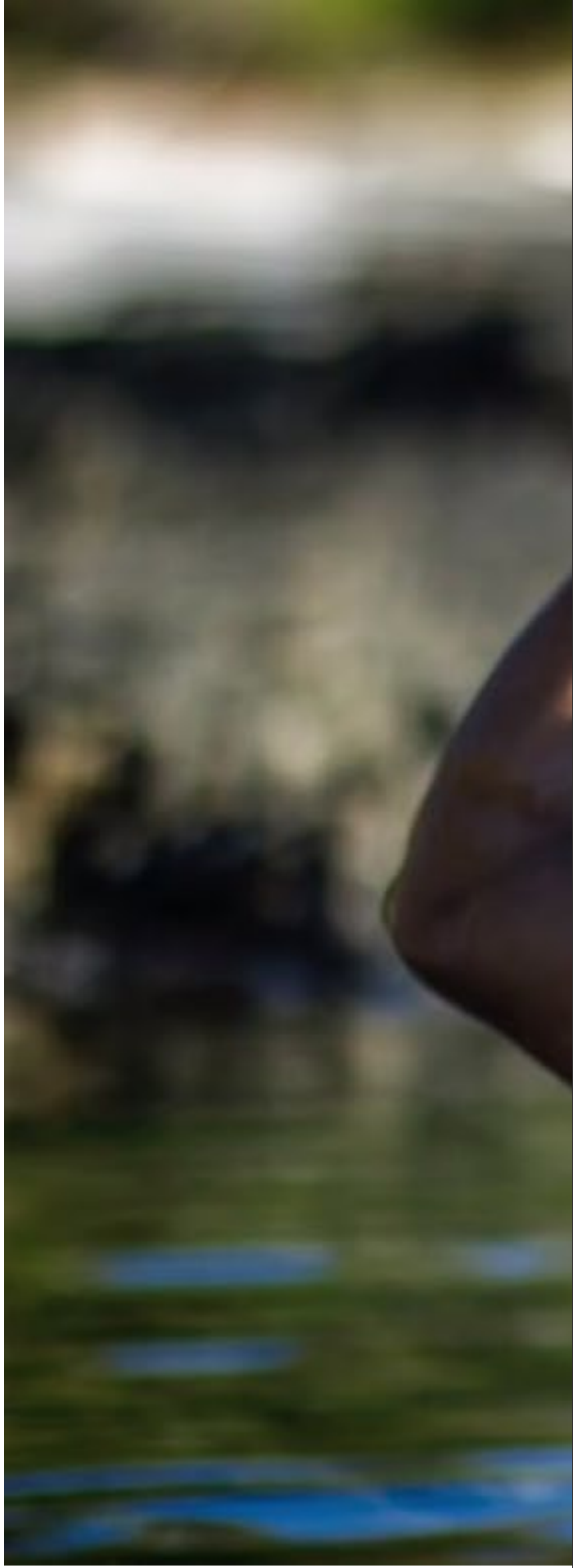
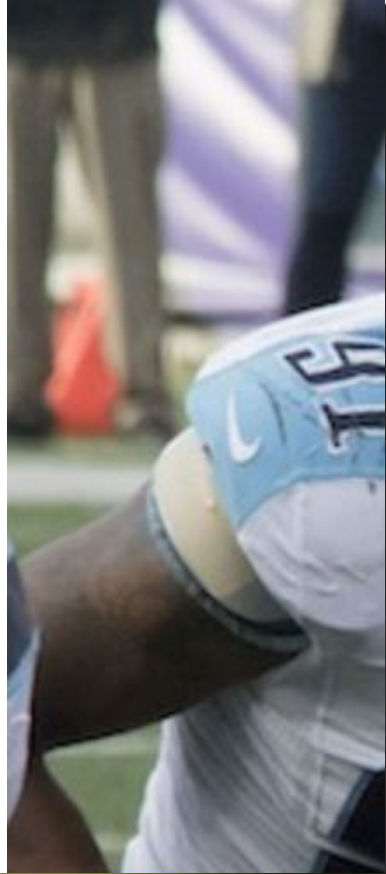
- GOAL** Consume a diet that provides at least 30 grams per day of fibre¹ from food sources
- GOAL** Include in most meals foods containing wholegrains, non-starchy vegetables, fruit and pulses (legumes) such as beans and lentils
- GOAL** Eat a diet high in all types of plant foods including at least five portions or servings (at least 400 grams or 15 ounces in total) of a variety of non-starchy vegetables and fruit every day
- GOAL** If you eat starchy roots and tubers as staple foods, eat non-starchy vegetables, fruit and pulses (legumes) regularly too if possible

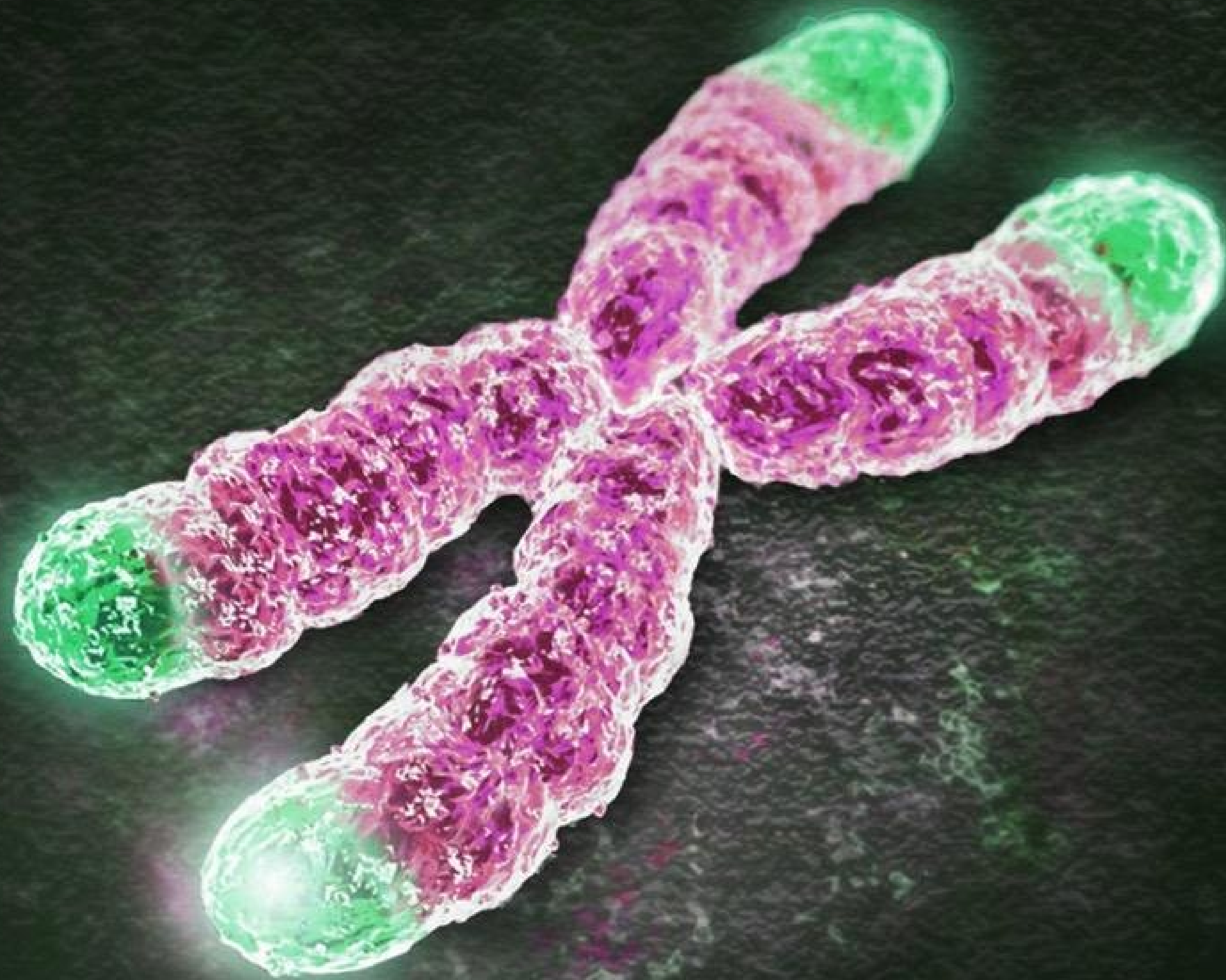
¹ Measured by the AOAC method.

© World Cancer Research Fund International dietandcancerreport.org

[wcrf.org/cancer - prevention - recommendations](http://wcrf.org/cancer-prevention-recommendations)

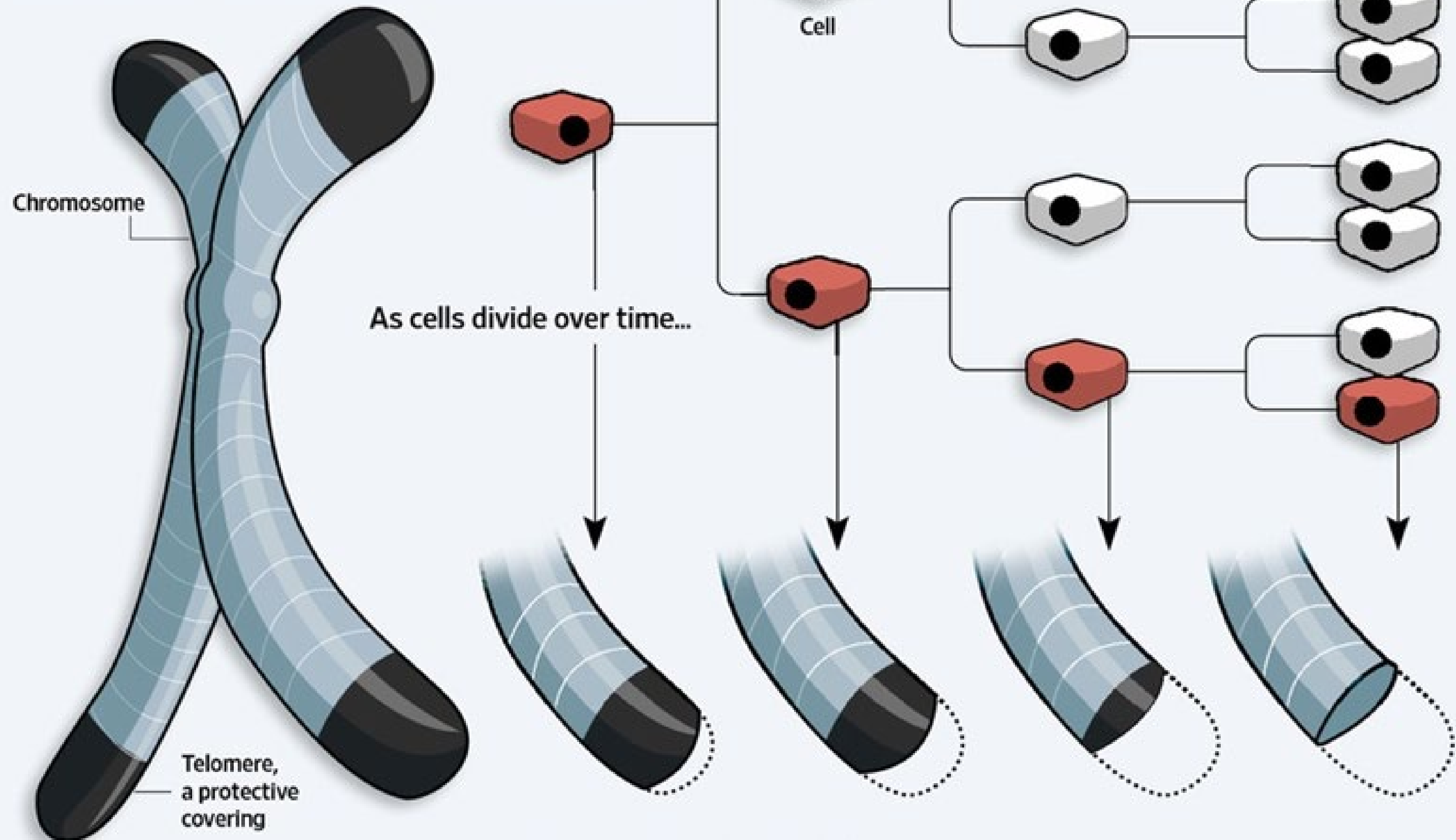






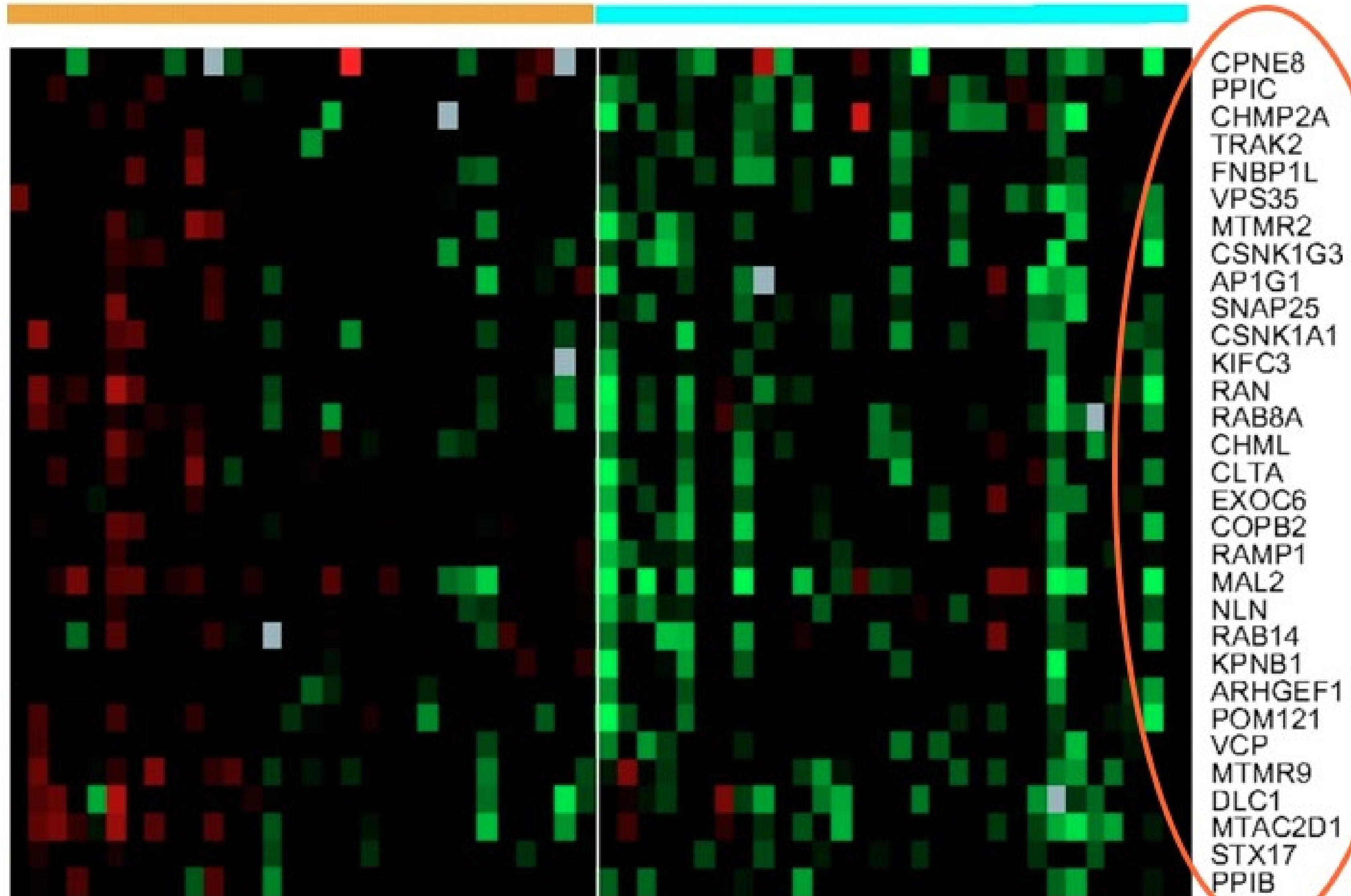
What We Lose With Age

As we grow older, telomeres at the end of our chromosomes shrink. New research suggests major depression also is linked to shorter telomeres, a sign of 'accelerated aging.'

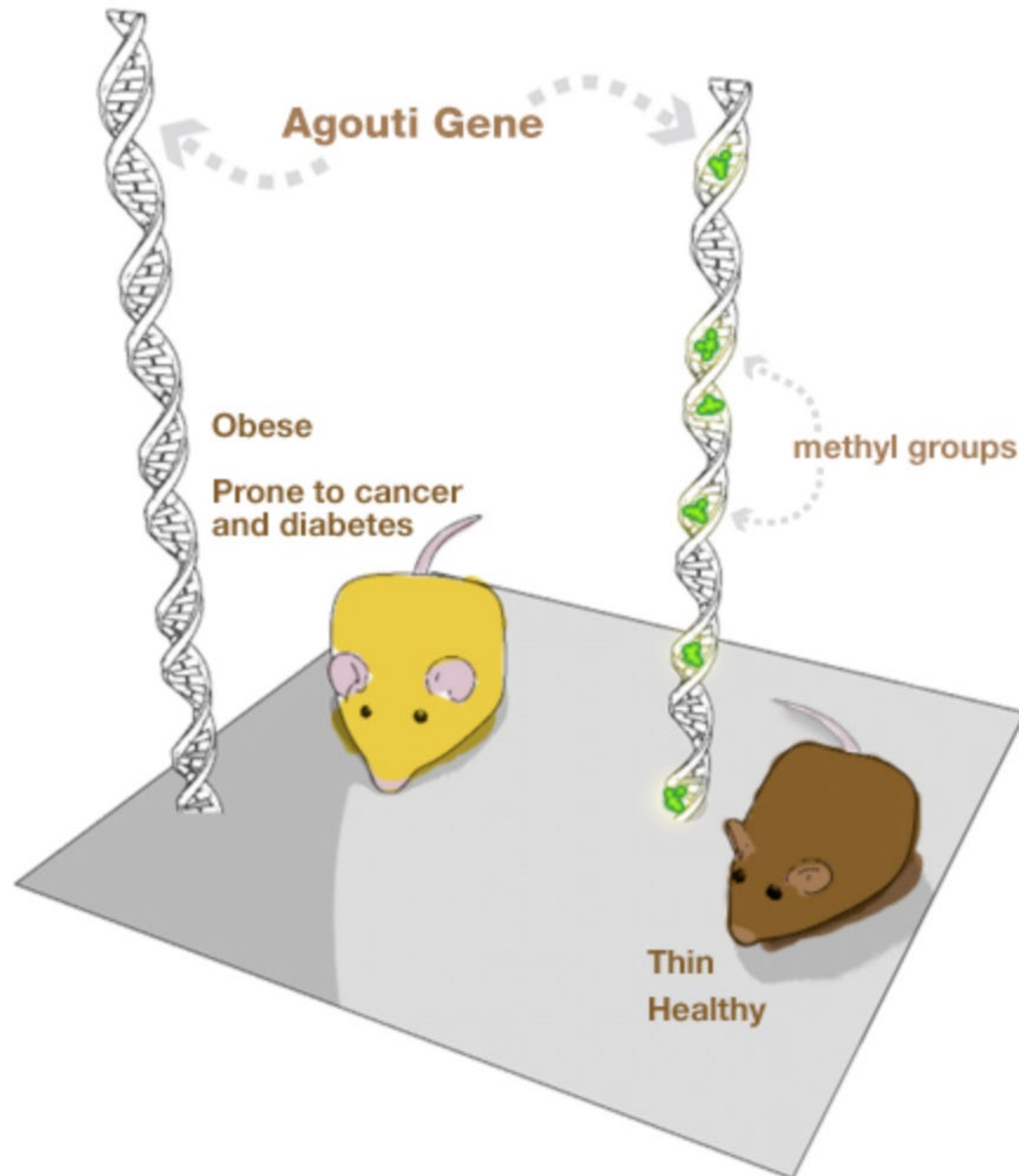


Pre-intervention

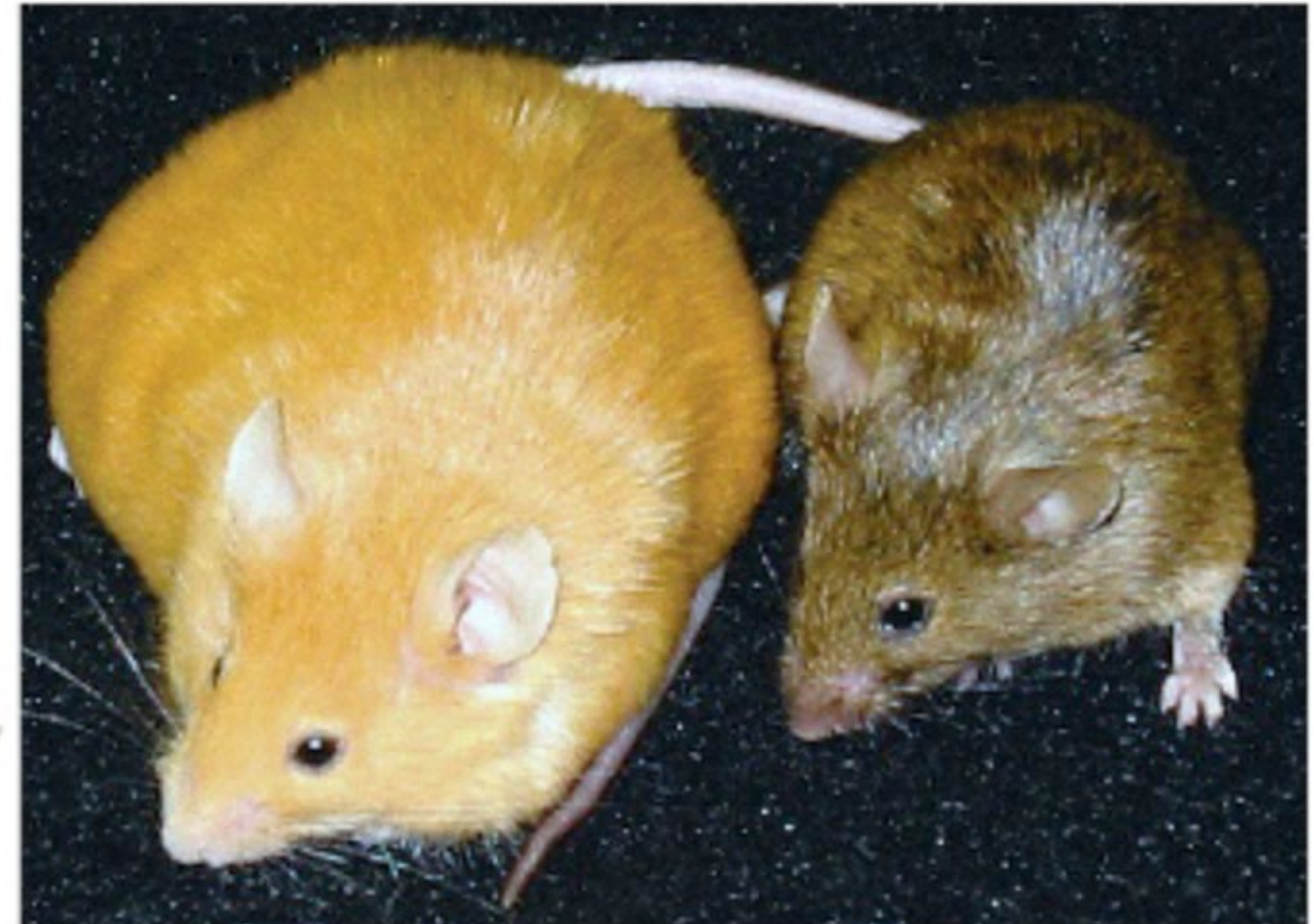
Post-intervention



EPIGENETICS



These Two Mice are Genetically Identical and the Same Age



While pregnant, both of their mothers were fed Bisphenol A (BPA) but **DIFFERENT DIETS**:

The mother of this mouse received a **normal mouse diet**

The mother of this mouse received a diet **supplemented** with choline, folic acid, betaine and vitamin B12

POWER 9[®]

Nine healthy lifestyle habits shared by people who've lived the longest.



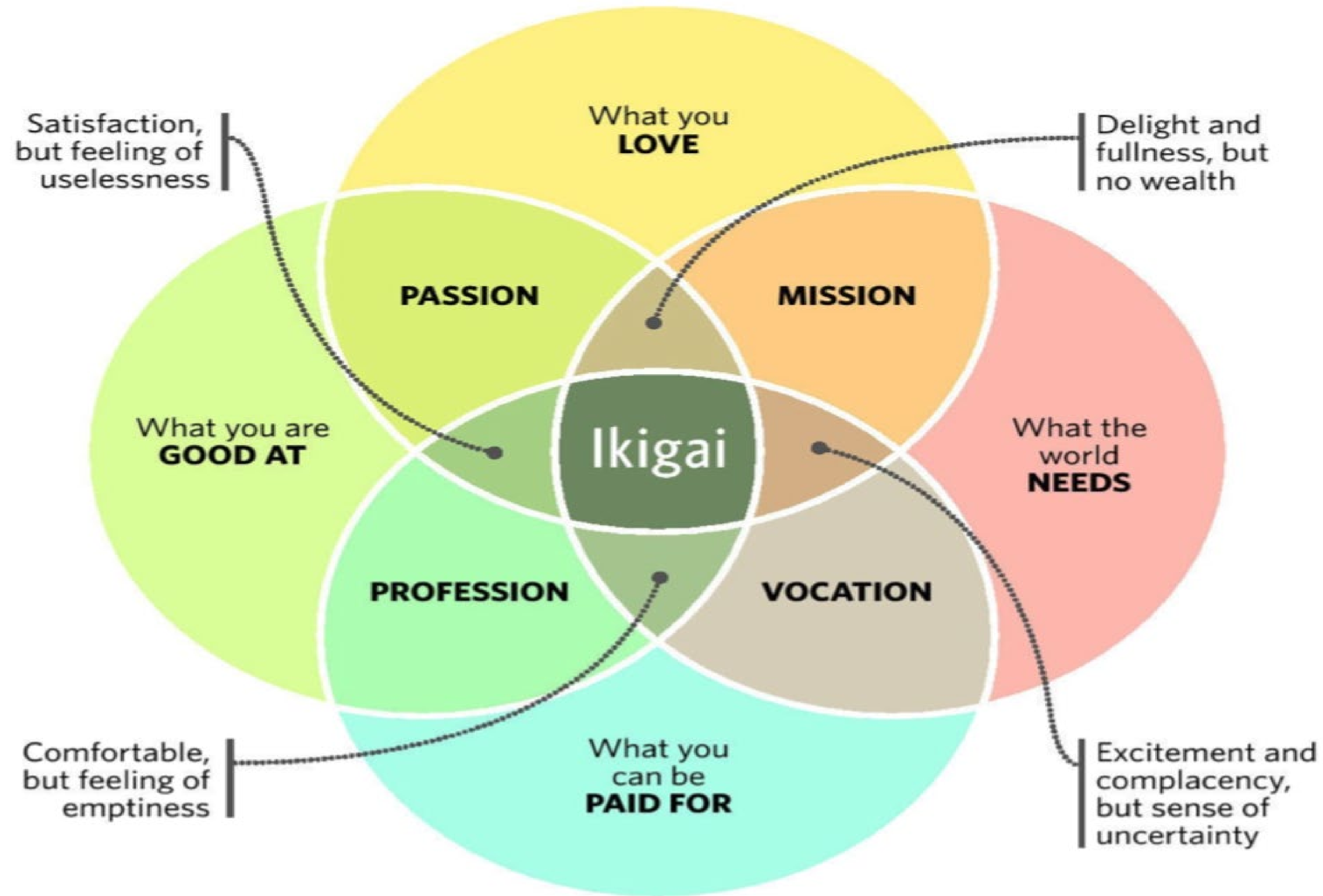
How we can create our own “Blue Zones” The 9 keys to long life.

- Move naturally
- 80% rule
- Plant slant
- Wine at 5
- Know your purpose



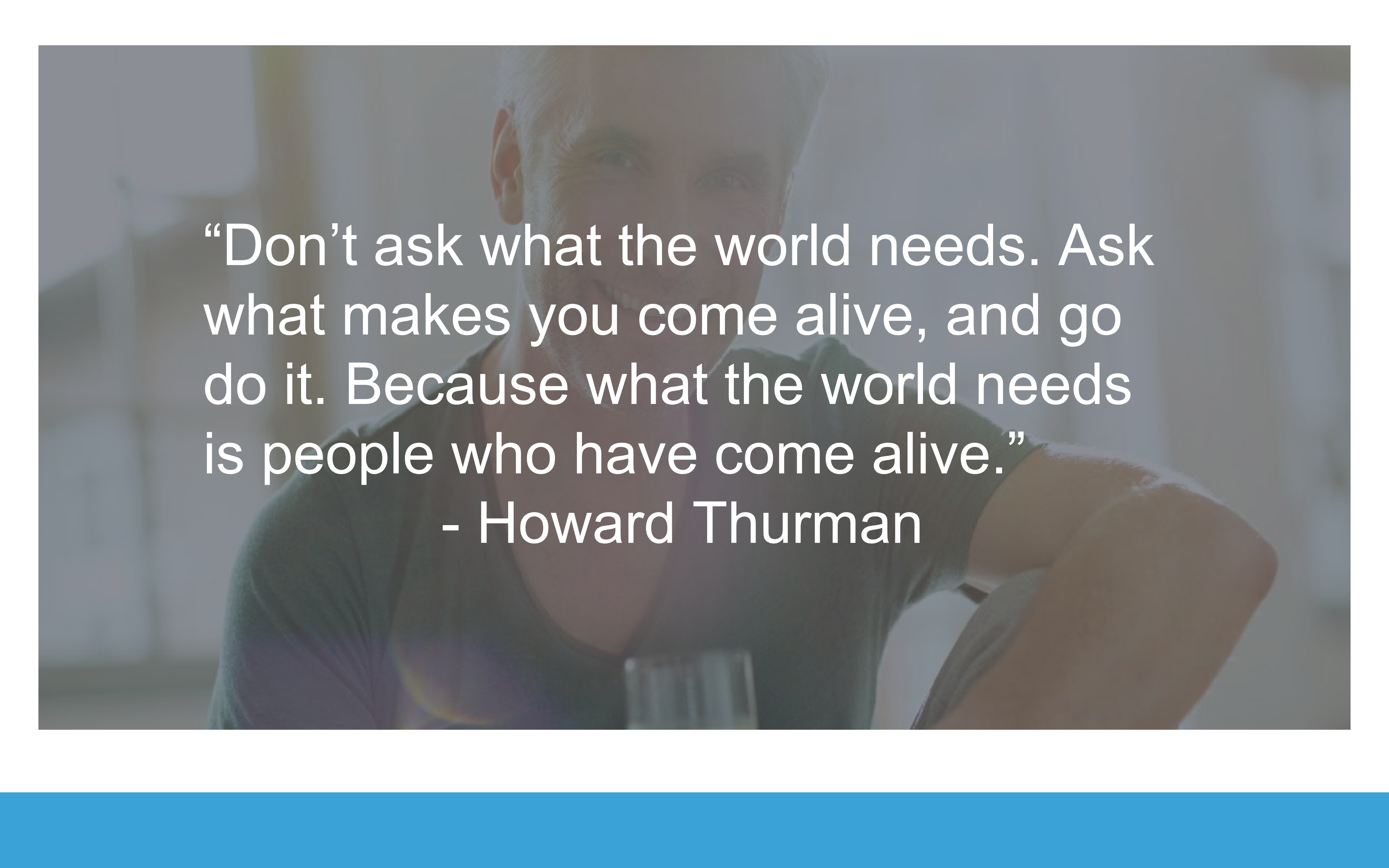
Ikigai

A JAPANESE CONCEPT MEANING "A REASON FOR BEING"



SOURCE: dreamstime

TORONTO STAR GRAPHIC

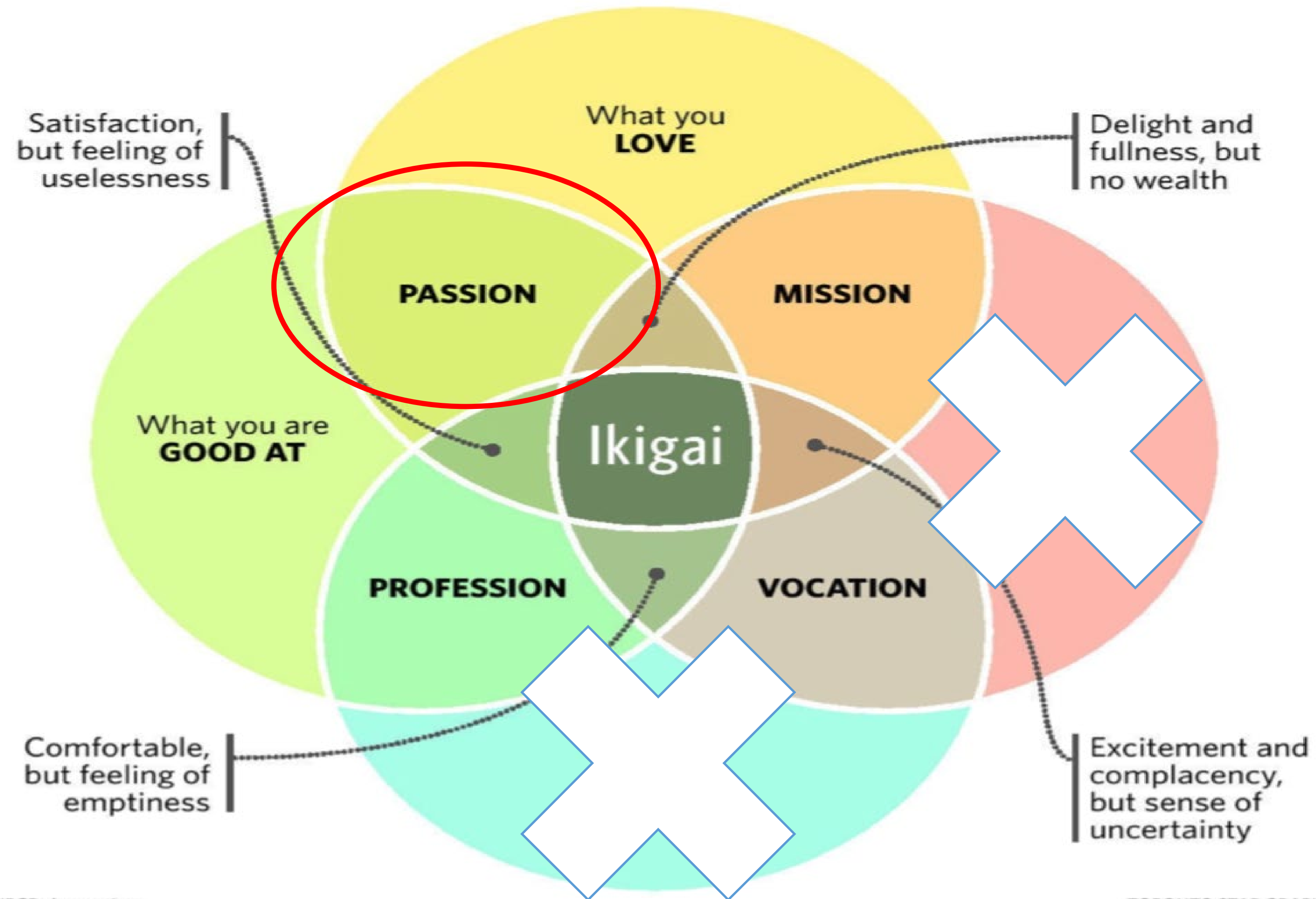


“Don’t ask what the world needs. Ask what makes you come alive, and go do it. Because what the world needs is people who have come alive.”

- Howard Thurman

Ikigai

A JAPANESE CONCEPT MEANING "A REASON FOR BEING"



SOURCE: dreamstime

TORONTO STAR GRAPHIC

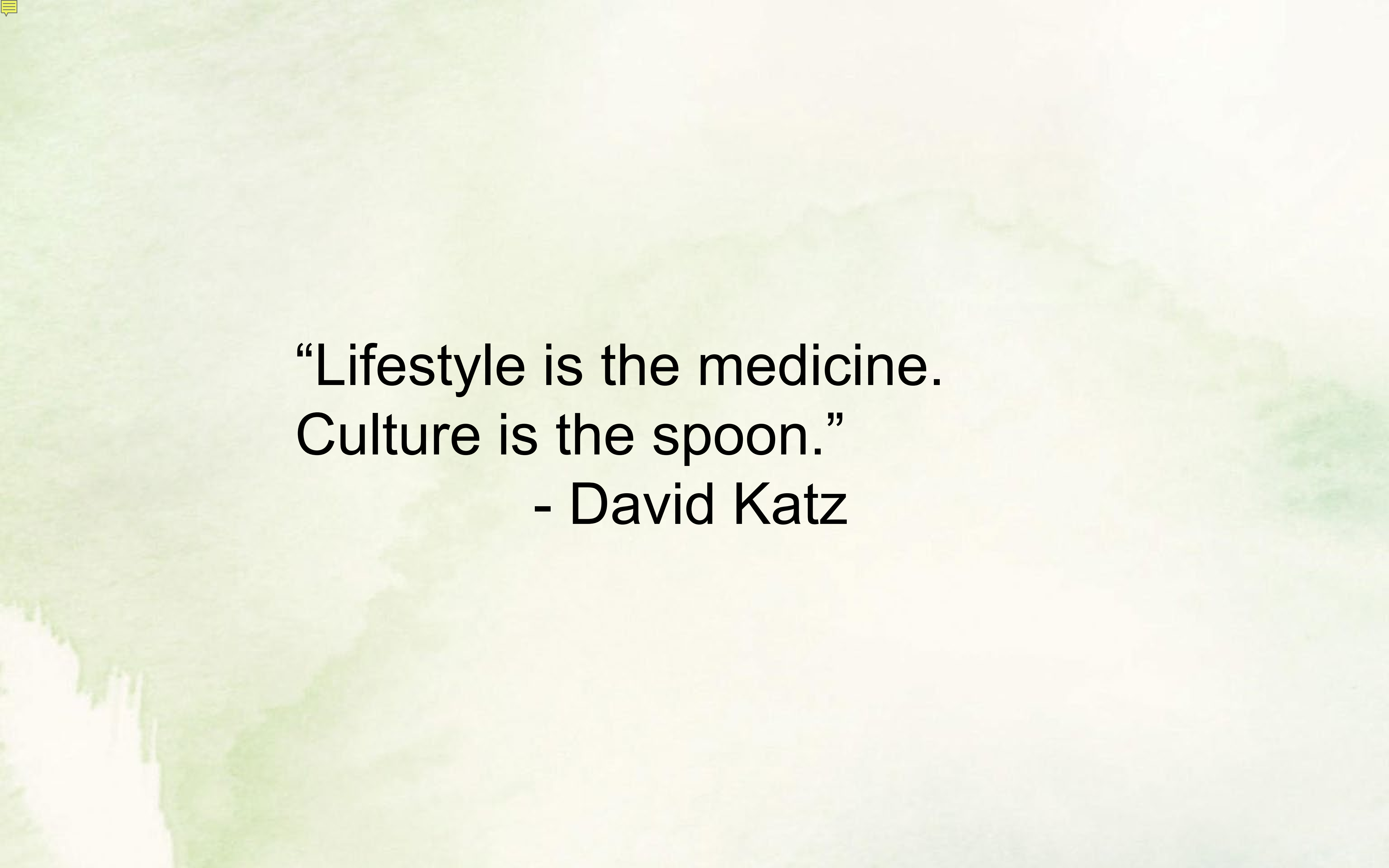
How we can create our own “Blue Zones” The 9 keys to long life.

- Down shift
- Belong
- Family first
- Right tribe

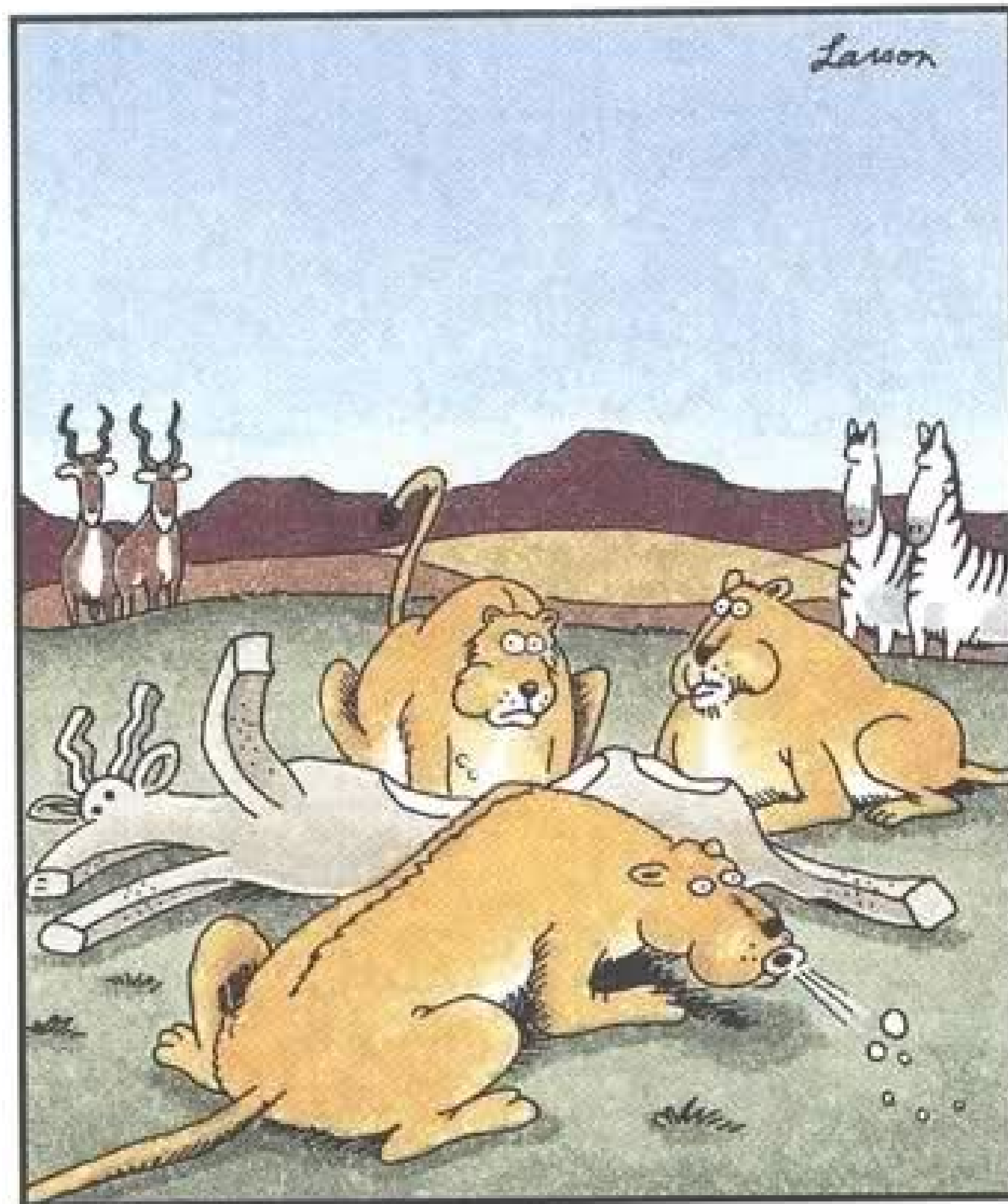


Summary

- Chronic diseases are not the cause of our healthcare crisis in our world. Our lifestyle choices are!
 - We can in fact nurture nature. Our genes are not our destiny.
 - This is a gradual process, any changes we make to be healthier will benefit us. Small incremental lifestyle changes will bring big results if given time (and significant changes can be seen in weeks to months).
-



“Lifestyle is the medicine.
Culture is the spoon.”
- David Katz



In sudden disgust, the three lionesses realized they had killed a tofudebeest—one of the Serengeti's obnoxious health antelopes.