Disclosure/s

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All planners and faculty for this activity have indicated that they do not have any financial relationships with ineligible companies.

Faculty and/or Panelist(s): H. Robert Silverstein, MD

1) 80% healthcare costs = preventable chronic conditions

2) YOU are able to help patients CURE HBP, high cholesterol, & diabetes

3) 1/2 of minorities have cardiovascular disease

4) 37% of diabetics: remission on a whole foods diet

5) food is not just food - it is chemical information

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6) 16 studies: increased ANIMAL PROTEIN increases DM

7) 1974 American Journal of Epidemiology, Cass documented absence of hypertension in vegans

8) heart disease: leading cause of death since 1918; noncommunicable diseases now 70% of deaths; 1907 NYT: increased protein causes cancer; Blue Zone Okinawa has a 10% protein intake

9) EPIC study: animal protein: commonest cause of weight gain – CHICKEN #1 cause

10) major problem dietarily: is constant nutrient abundance

11) linoleic H+: pork, eggs, seed-safflower-soy oils increases triple (-) breast cancer

12) 75% of food intake is ultraprocessed

13) Vegan vs Mediterranean diet: 57% reduction greenhouse gas – 55% reduction in energy demand – improved weight, insulin sensitivity, & cholesterol

14) leptin = satisfied/don't eat, ghrelin = hunger/eat

15) 50% that meet the criteria for statin treatment have a coronary calcium score = 0

16) 75% of coronary events occur in patients with a coronary calcium score > 100

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17) 47% of acute myocardial infarctions: first troponin is negative

18) CRP > 2 increases C-V risk 50%: highest risk CRP > 2 + Lp (a) > 60

19) accept reality with humility: you may not reach joy, but you will leave depression & anxiety

20) YOU CAN reduce the complexity and cost of healthcare

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The Simultaneous Prevention of Multiple Diseases (**heart disease** , cancer etc.)

H. Robert Silverstein, MD, FACC William Spear

HOW?!
WHY?!

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Prevention of Multiple Diseases Simultaneously

Preventive Medicine Center

H. Robert Silverstein MD, FACC
Medical Director, Preventive Medicine Center
www.thepmc.org

86 year-old asymptomatic male, coronary calcium score 63, former 2 ppd smoker

- Age 30: Cholesterol 225, HDL 40, triglycerides 225 (average AMI = those numbers then)
- Age 40: Cholesterol 130, triglycerides 80 after change of diet, exercise, & body fat
- Mother & father both had coronary bypass grafting, 1 brother coronary stent, 1 brother hypertension leading to dialysis
- Blood pressure 110/70, A1c 5.7, BUN 20, creatinine 1.2, uric acid 5.5, Lp (a) 15, normal physical & EKG

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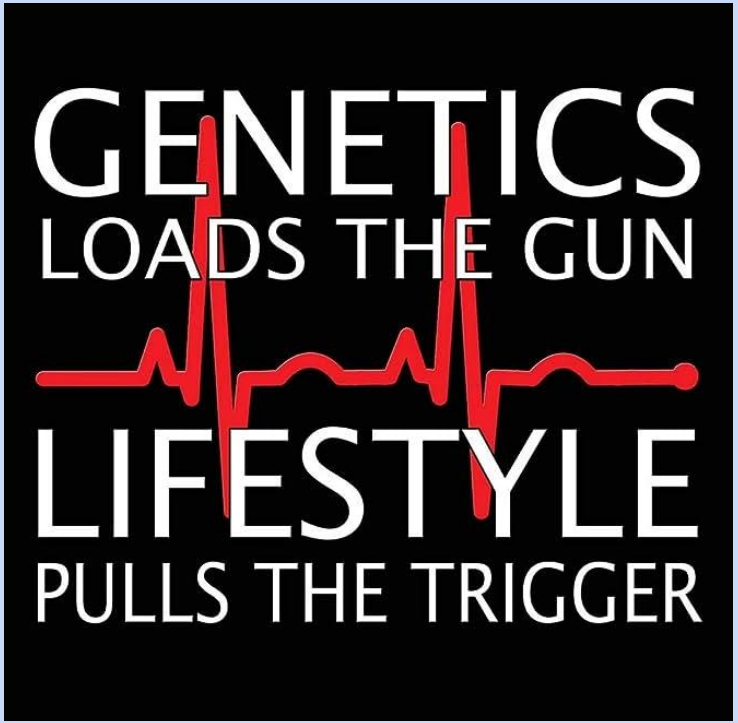
How much sunbathing should an albino do?

Genes are predisposition, not destiny



Diet & Prevention of CVD & Ca: JACC: CardioOncology 8/27/25

S C Hull

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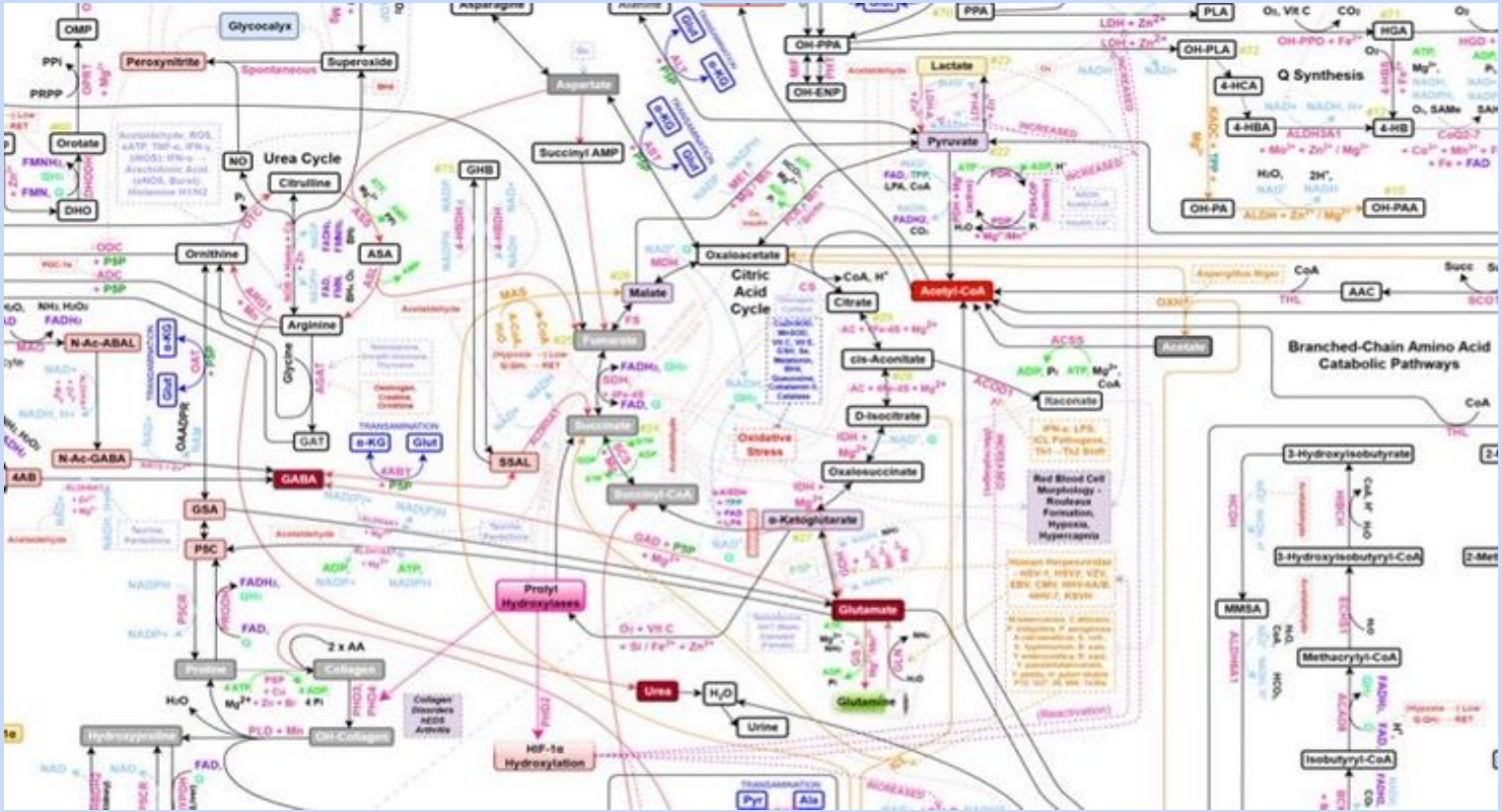
Not for discussion today



THE CAUSE OF THE CAUSES!

5 Basic Activities/Errors: WHY

- **Breathing**: smoke, dust, fumes
- **Drinking**: 4/week alcohol, 1-2 coffee
- **Eating**: G-V-B fns vs 400,000 CABGs

  "And you will eat and be sated"—Deuteronomy 8:10.
- **Exercise**: clear lines of demarcation, CLOD/D

  You can never be ...
- **Unrealistic Expectations**

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"More and more people do not feel the need to control themselves ... Excess permissiveness … Dopamine hijacking"

When GLP-1s end: there is the return of "ravenous hunger and the resurgence of food noise," old cues & responses/habits

It is often medically accurate that habits are actually addictions

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' ... Unfortunately pills and surgery are easier for short term results which pleases physicians and patients. Everybody wants a quick fix rather than take the hard road of risk reduction. It also gives patients and physicians the absolution that they're looking for. "It's not our fault!!" '

Richard V. Daly, III

To get people to substantially change their lifestyles is daunting. How to change the medical culture to address this is just as difficult.

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Preventable if not CURABLE: paying for the disaster rather than investing in its prevention

- Stop diseases before they can't be stopped:
- Genes interact with choices -> "made to happen"
- 95% ASCVD, DM, HBP, lipid disorders: empathy
- It wasn't done to you: Sandpaper 2:1 K Volpp UPenn

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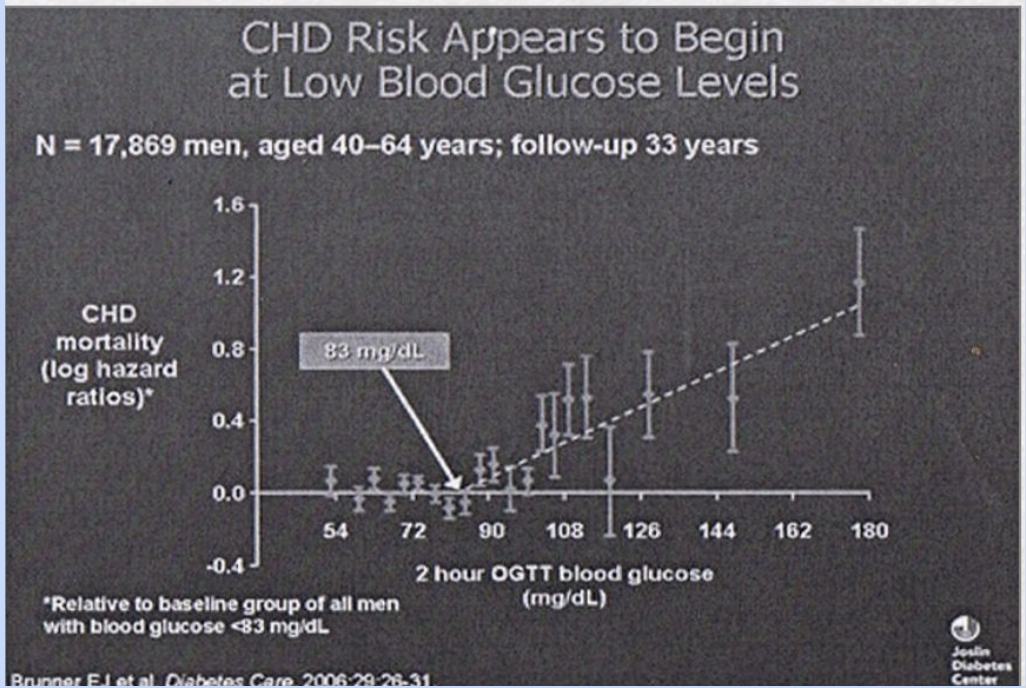
Risk Regression to Zero!!

Fasting 95

1 hour 155



There are numbers where diseases don't occur!!

Glucose -Coronary Risk

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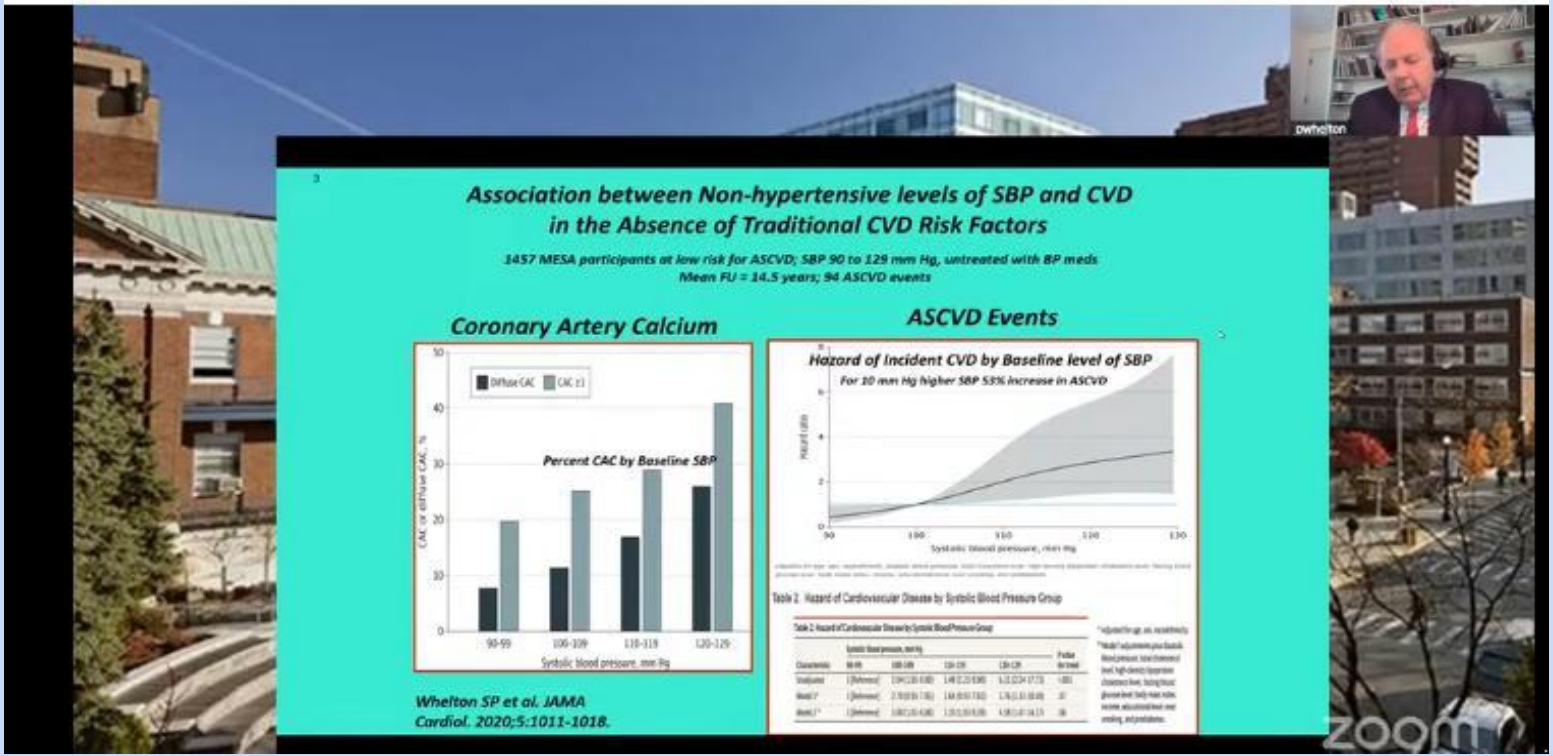

Paul Whelton, MD

Disease Prevention Goal Numbers:

www.th

90	1. Non-HDL Cholesterol	11. Lp (a)	15	21. Food Mantra
100	2. Triglycerides	12. Homocysteine	7	22. Overweight: cooked vegetables
4.4-6.2	3. A1C diabetes test	13. Uric acid	5.5	23. Eat out of a bowl
155-83	4. Blood sugar	14. BUN	12-14	24. Healthiest: vegan
1.0	5. Cardiac HS CRP	15. Magnesium	2.1+	25. Aerobic Interval Training
110-115/60-70	6. Blood pressure	16. Potassium	4.1	26. Quit smoking
	7. < 12% Sodium	17. 25 Hydroxy D3	50-66	27. Limit alcohol: 4 or less
1.0	8. PSA	18. 11-27% body fat	15-20%	28. REALITY
3.5	9. TSH	19. Keep a food diary		29. Omron wrist BP cuff
12-14	10. Hemoglobin	20. G-V-B		30. Avoid wheat, dairy, soy

Mammogram
Cologuard

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Disease Prevention - Lab and Clinical Targets
AI Help (www.thepmc.org)

1. Non-HDL Cholesterol – **90**
2. Triglycerides – **100**
3. A1C diabetes test – **4.4–6.2**
4. Blood sugar – **155–83**
5. Cardiac HS CRP – **1.0**
6. Blood pressure – **110–115 / 60–70**
7. **<12%** Sodium
8. PSA – **1.0**
9. TSH – **3.5**
10. Hemoglobin – **12–14**
11. Lp (a) – **15**
12. Homocysteine – **7**
13. Uric acid – **5.5**
14. BUN – **12–14**
15. Magnesium – **2.1+**
16. Potassium – **4.1**
17. 25 Hydroxy D3 – **50–66**
18. within 11–27% Body fat – **15–20%**

1/3 of AMI's are in currently recognized lowest risk group

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Disease Prevention - Lifestyle & Behavioral Goals (www.thepmc.org)

📒 Keep a food diary
⚖️ G-V-B
🧘 Food Mantra
🥦 Overweight: cooked vegetables
🥣 Eat out of a bowl
🥗 Healthiest: vegan
🏃 Aerobic Interval Training
🚭 Quit smoking

🍷 Limit alcohol: 4 or less
🌍 Reality
🕒 Omron wrist BP cuff
🚫🥛🌾 Avoid wheat, dairy, soy

Additional Recommended Screenings:
- Mammogram
- Cologuard

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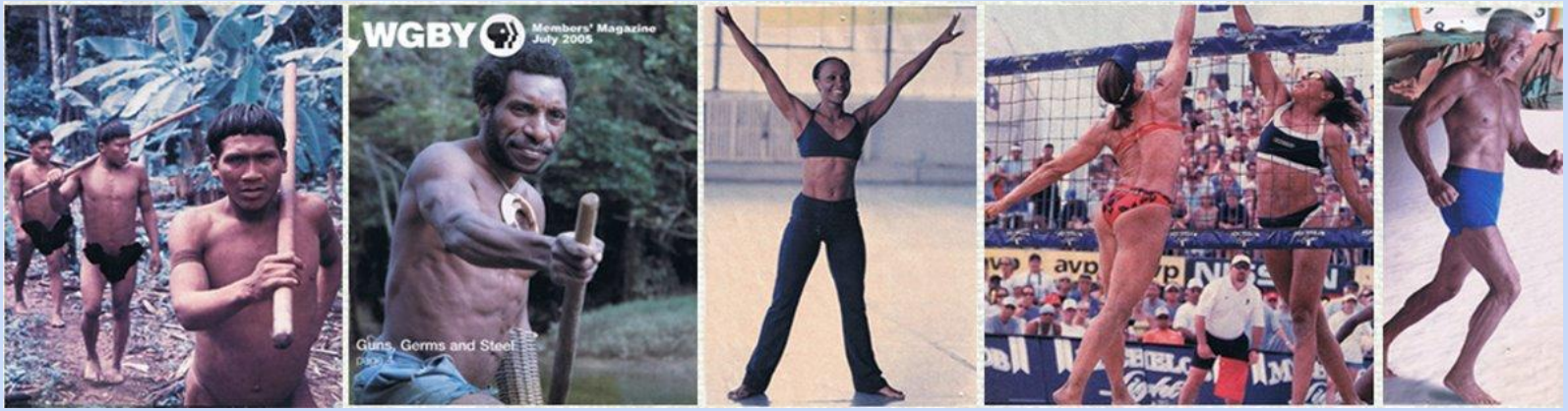
Pre-technological societies: total c**holesterol** : **90-130** mg/dL



- No…

Framingham Heart Study: CAD risk ceases below 150 mg/dL

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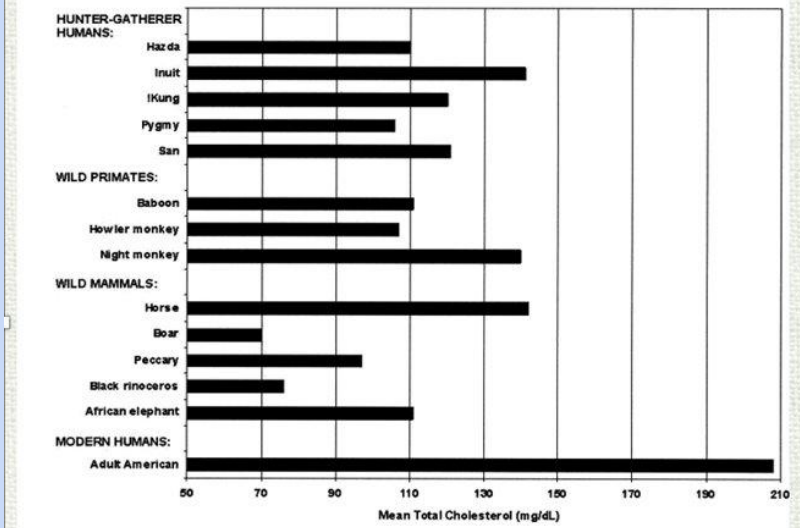
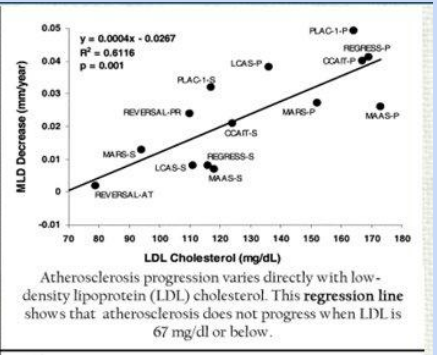
Optimal **non-HDL** level cholesterol: CVD Risk

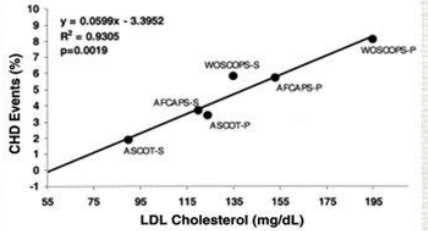
Stay with me



Total cholesterol levels for hunter-gatherers, wild primates, and wild mammals: range from 70-140 mg/dl (corresponding to low-density lipoprotein levels of about 35 to 70 mg/dl



Atherosclerosis progression varies directly with low-density lipoprotein (LDL) cholesterol. This **regression line** shows that atherosclerosis does not progress when LDL is 67 mg/dl or below.



Coronary heart disease (CHD) event rates in primary prevention trials are directly proportional to the on-treatment LDL cholesterol. The event rate approaches ZERO at an LDL level of 57 mg/dl.

Risk Regression to Zero

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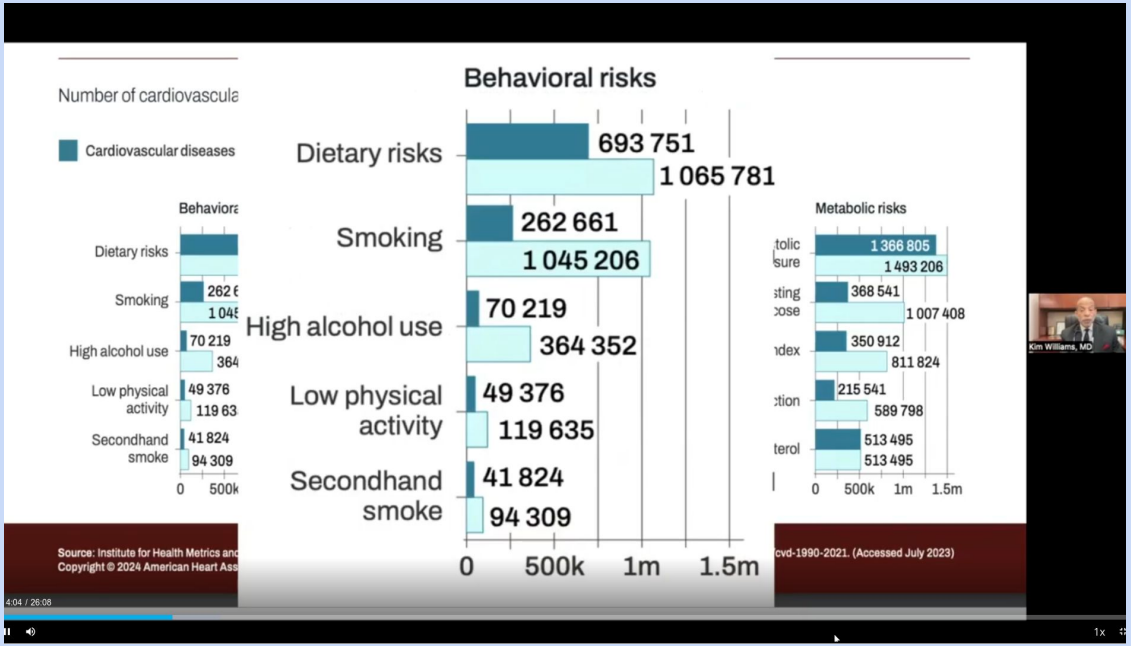
GHANA:
lowest % body fat,
80+% whole carbohydrate food:
lowest cholesterol, saturated fat, calorie,
inflammation

Nature Medicine 4/3/25
G Temba

Garth Davis, Methodist Hospital VuMedi 3/22/22

Global Effect C-V Risk Lifetime Estimates

Global Cardiovascular Risk Consortium NEJM 3/30/25



Lancet 12/2025 Organic E. Kesse-Guyot

Kim Williams, MD, FACC
Past President Amer Coll Cardiol "Spectacular"

The Microbiome and Cancer : E Fernandez et al JAMA 5/12/25

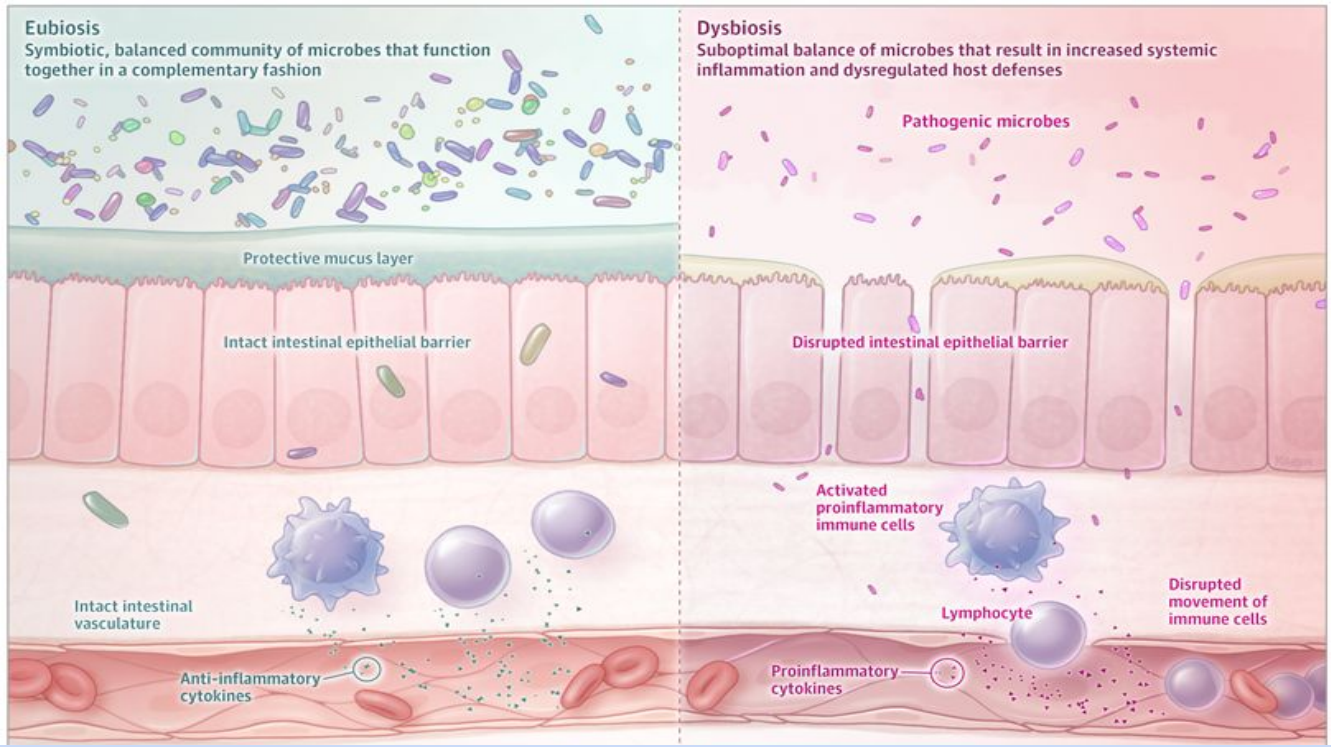
F Asnicar
Nature 2025

Barrier

Anti-inflam

Host defense

Not inhibit
Ca Rx



Path microbe

Low diversity

Barrier

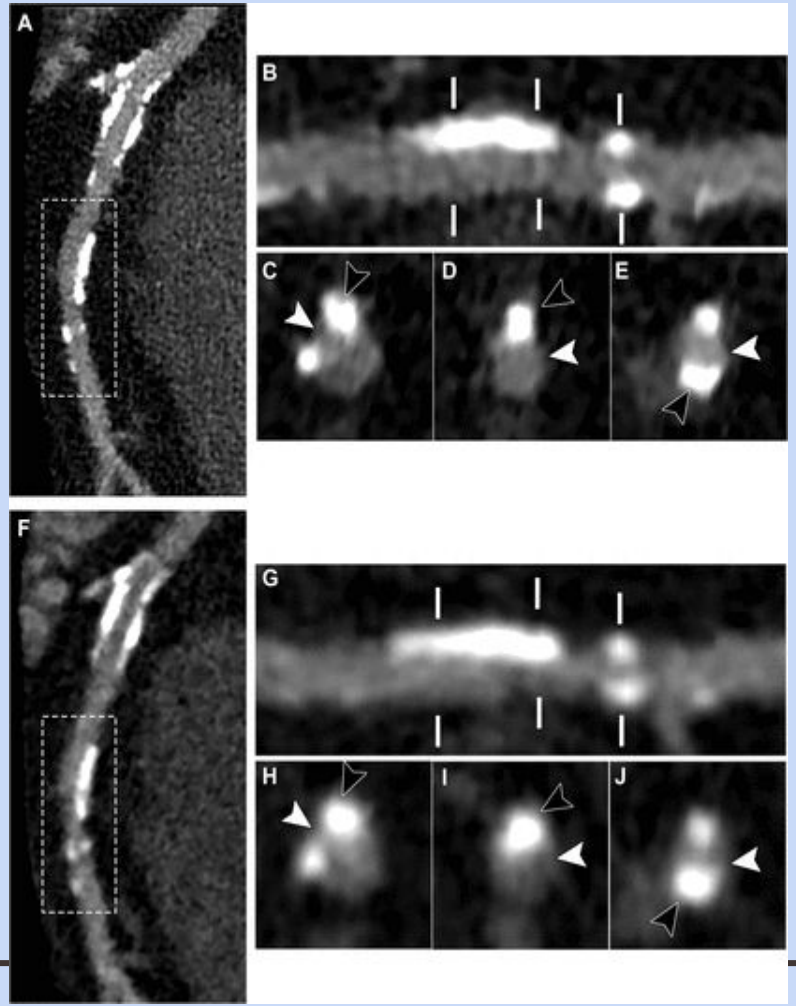
Pro-inflam

Impaired
host defense

Impaired
Ca Rx

Sometimes, the most powerful effects of diet do not come from what we consume directly, but from what our microbes quietly create on our behalf.

Photon counting CCT vs standard CCT



Circ C-V I 2025
P C Revaiah

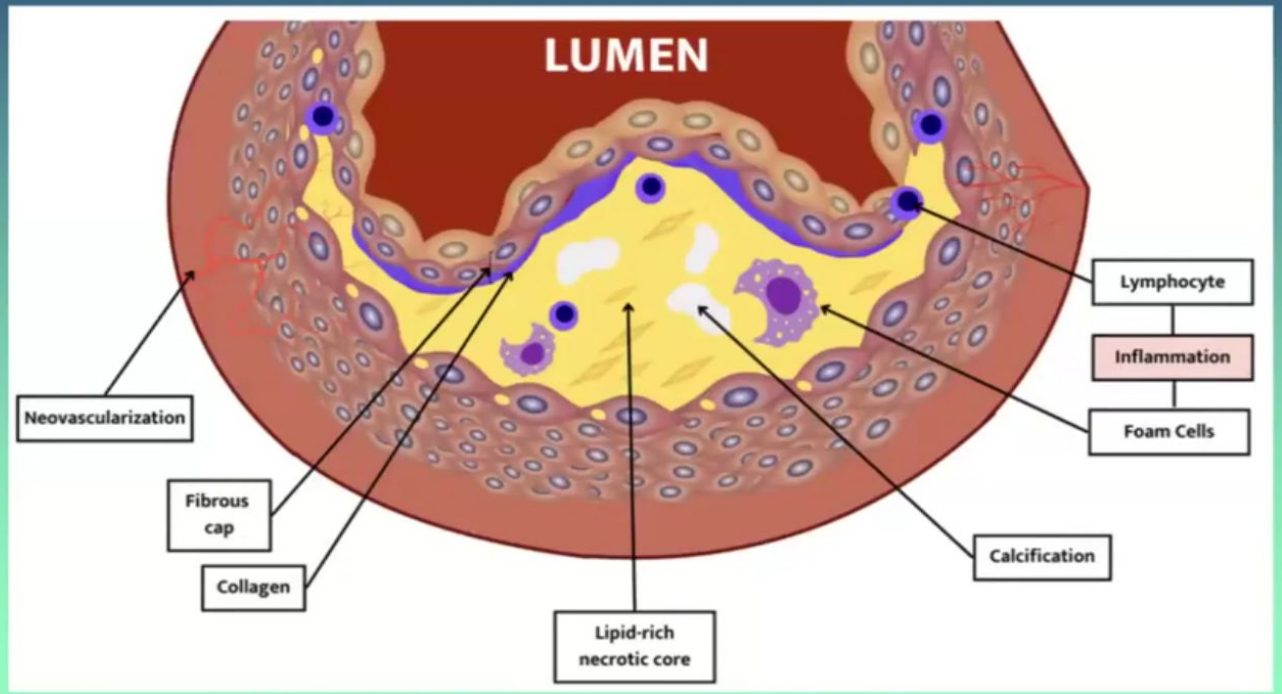
ASCVD

Activated Monocytes

Oxidized Lipids

Glycated proteins

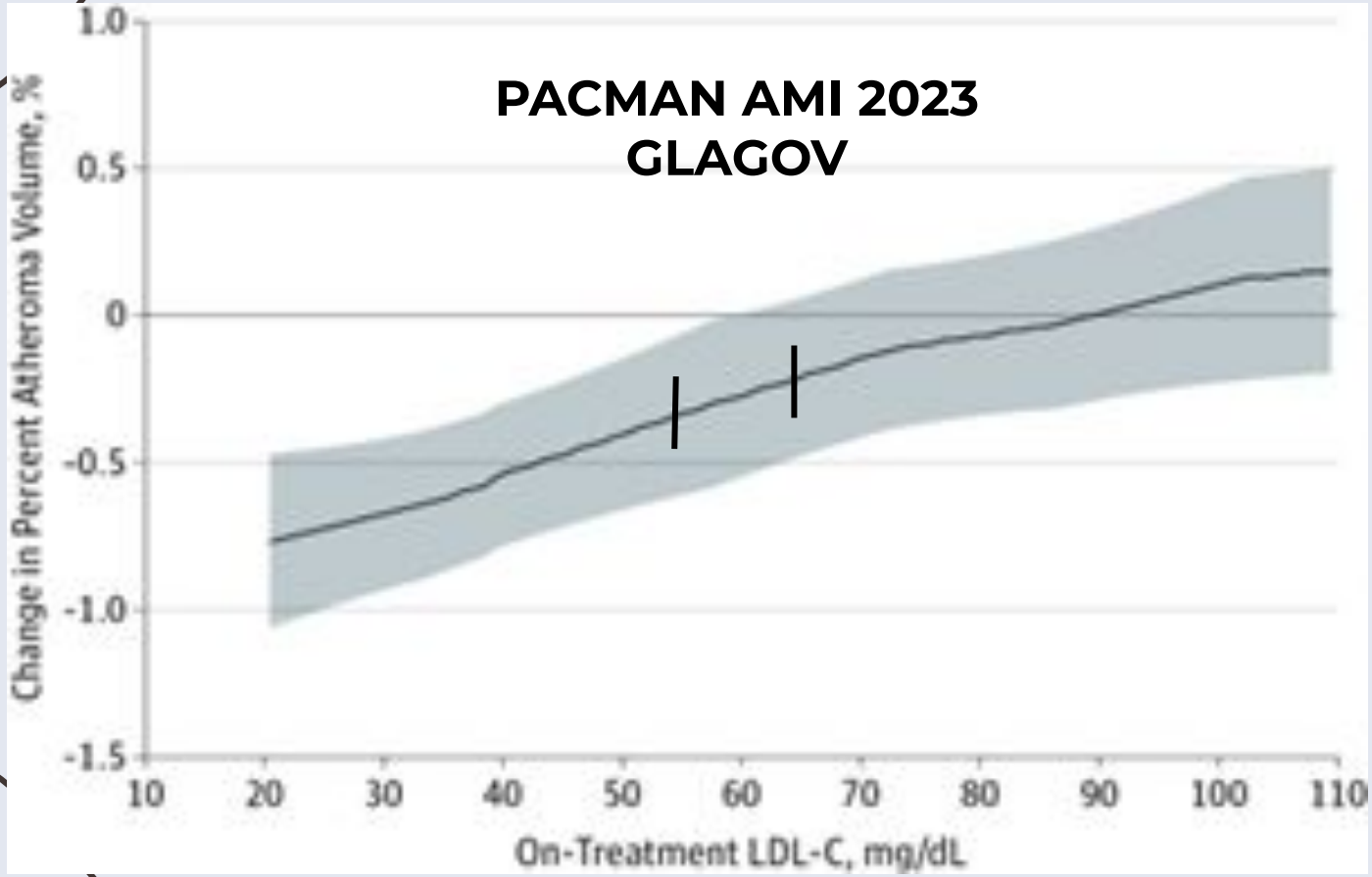
Vulnerable Plaque



J. Clin. Med. 2024, 13, 363

TMAO. heme iron, saturated fat

1/3 of MI's are in lowest risk group



OCT
NIR Spect
US
1% -> 20% MACE

The Law of Mass Action

What's your problem?
Here is your prescription or you need surgery.

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2025 American College of Cardiology Annual session:

EAT-Lancet & Planetary Health Diet

76,000 UK, US, & China studied for HBP, insulin resistance, overweight:

plant -based: **GVBfns** , tea & coffee vs **animal** -based foods: refined grains, potatoes, & sugar-sweetened beverages.

20% lower death from ANY cause, CVD or Ca. Animal-based diet 32% increased death risk ANY cause, CVD or Ca.

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Food is not just fuel, it is chemical information:

<u>Dietary fiber-rich CHO: LV structure & function: CARDIA Eur Heart J. 7/8/25 – Yi S Y et al</u>

Higher CHO-fiber: favorable echo LV structure & function: 0, 7, & 20 years

Lower LV mass, better global longitudinal strain, higher LVEF, lower E/e′ ratio

Smaller LA volume, less cardiac remodeling at year 30.

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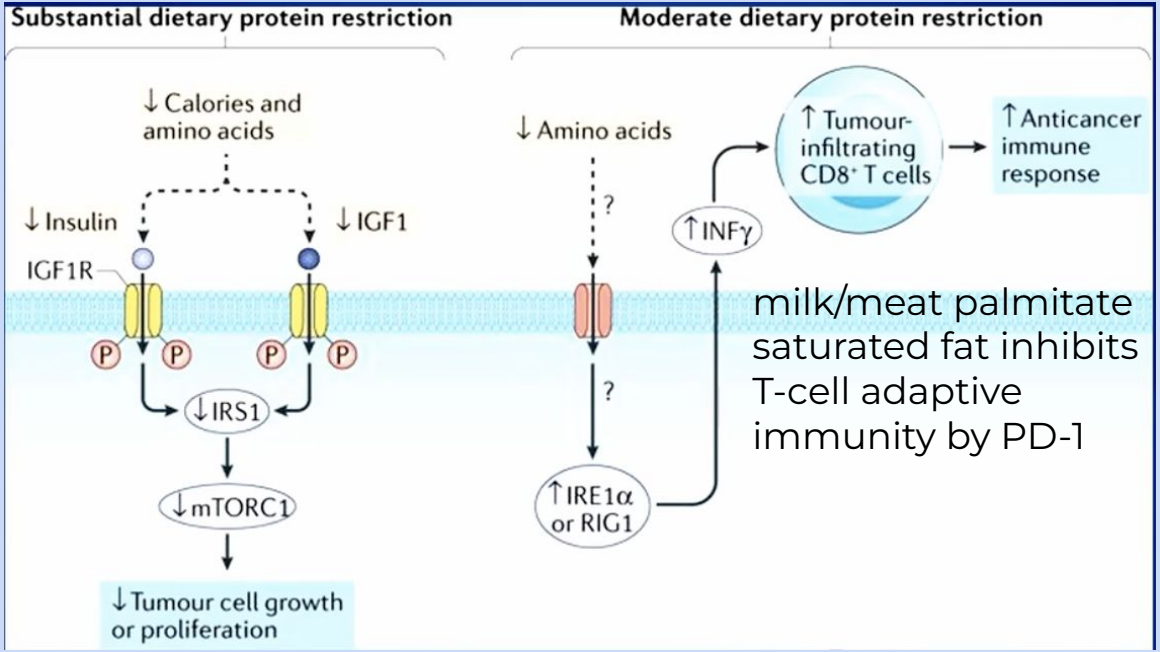
Food Effects

mTOR/disease increased by BCAA:leucine vs glycine
AMPK:health

nlrp3 & nrf2



AMPK: Housekeeping & DNA repair

mTOR: Growth & Aging pathway

Garth Davis, Methodist Hospital VuMedi 3/22/22

mTOR vs AMPK metabolic switches

mTOR: fetal development, BUT in adults = STUCK on growth & cell proliferation

- Activated by food intake/branched-chain amino acids (BCAA: animal protein leucine)
- LVH & vascular thickening, cancer, insulin resistance, lipid deposits, AZD/increased tau & amyloid

AMPK: master genetic survival switch of every cell & organ

- Activates cell CLEANING & recycling: autophagy
- Prevent accumulation of toxic cellular components that would cause inflammation & lead to frailty & death
- REPAIR damaged DNA strand breaks due to excess oxidant production

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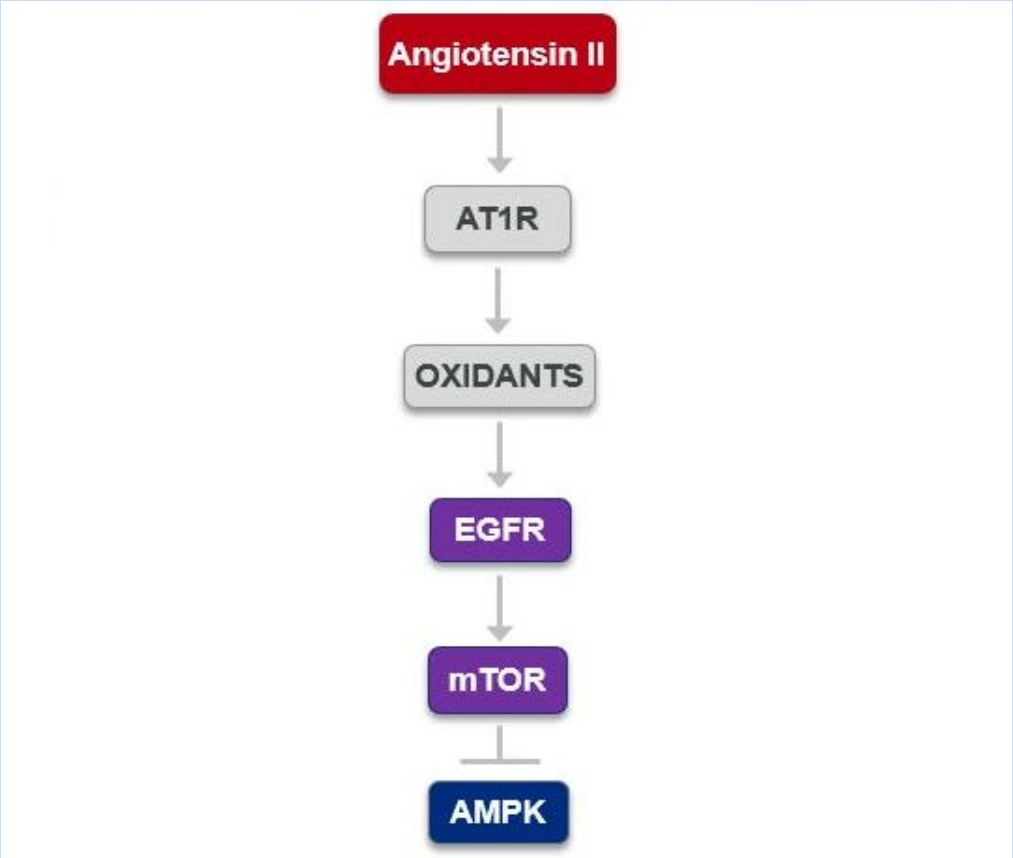
Abdominal Fat

Food Effects (also)

Aldosterone

HMG CoA Reductase

"biochemical flame thrower"



The Adipokine Hypothesis of CHF

JACC 9/14/25
M. Packer
10.1016/j.jacc.2025.06.055

William Bestermann, MD

Abdominal fat: largest gland in the body

No longer see muscles meet muscles (CLOD/D).
(Overweight & obesity: not a BMI, waist:hip ratio)
Excess angiotensin, aldosterone, chemerin, adiponectin, …
Hypertension, cause vascular disease
FIBROSIS (HFpef), scar formation
Produce interleukin-6 driving inflammation/hsCRP
Reduce insulin production/cause metabolic syndrome

60 Different conditions

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Body weight effects: COVID

Labratory values in women, by weight and presence of NWO syndrome

	Normal Weight	NWO	Overweight
BMI, kg/m²	19	23	28
Fat mass, %	23	35	43
Lipids, mg/dl			
LDL-C	107.2	103.8	116.0
HDL-C	69.1	68.2	70.2
Triglycerides	66.3	86.1	111.5
Total cholesterol	178.4	187.9	218.1
cytokines			
TNF-a	20.1	42.8	56.4
IL-6	5.9	11.4	13.7
IL-1a	14.8	26.9	29.8
IL-1b	5.0	15.0	19.0

Normal-Weight Obesity: New Syndrome Tied to CVD Risk

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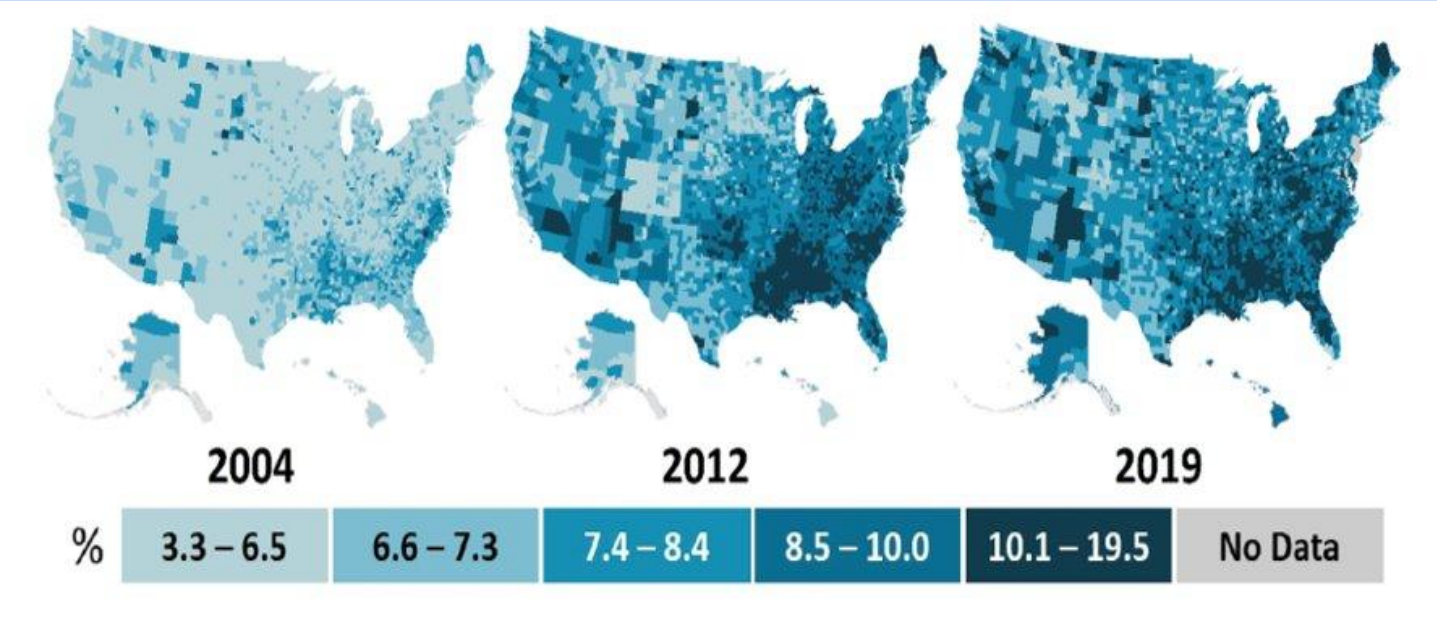
Prevalence of diabetes



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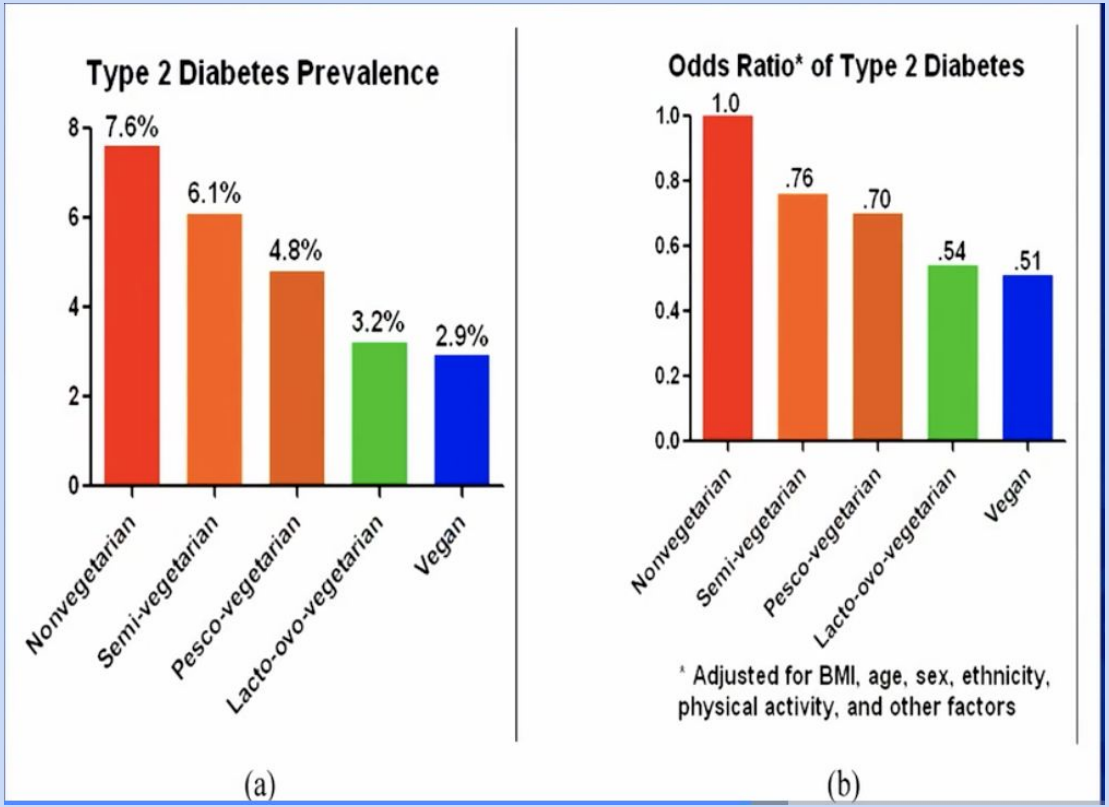
Diets leading to diabetes



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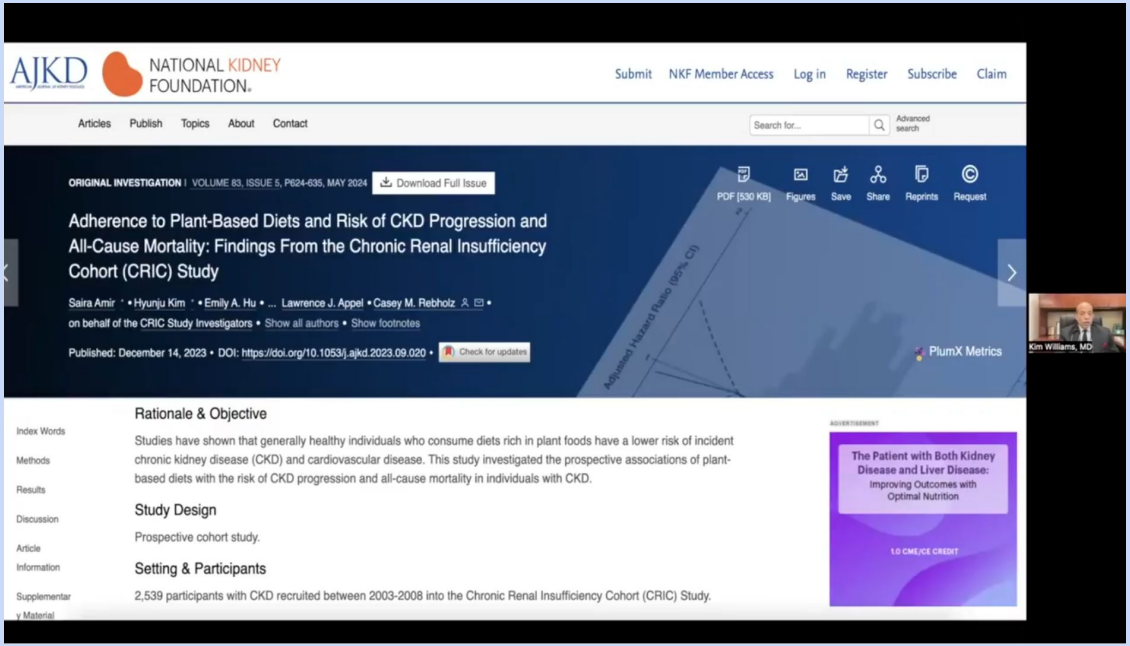
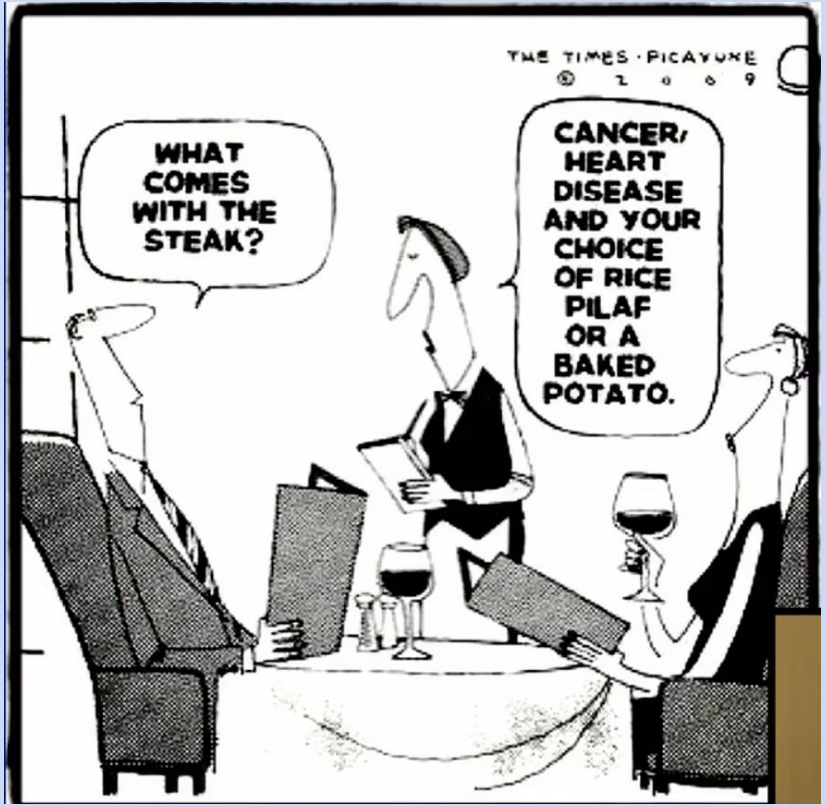
Plant-Based Diets Reduces Kidney Disease

AJKD
National
Kidney
Foundation



Kim Williams, MD, FACC
Past President Amer Coll Cardiol



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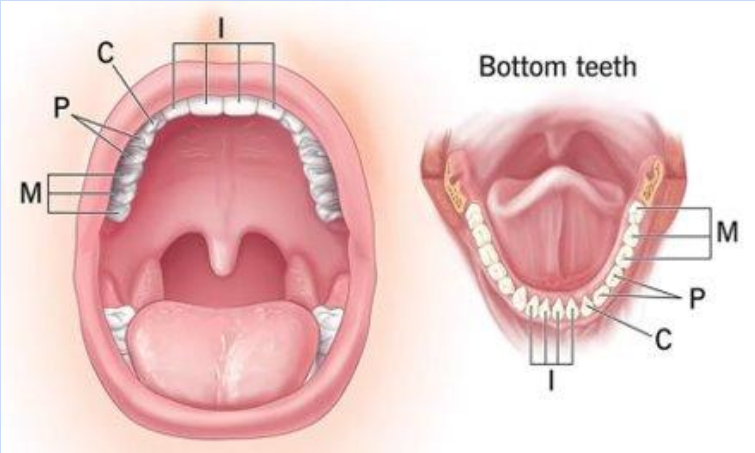
Carnivore/omnivore vs. Herbivore

4 poorly developed canines of 32: = 8:1 *optional* animal protein



CARNIVORE/OMNIVORE
safely digest RAW ROTTEN MEAT

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Gladiator Diet: 99% vegan !!

- **BARLEY** Men
- Lentil-barley soups
- The word **burly** comes from barley

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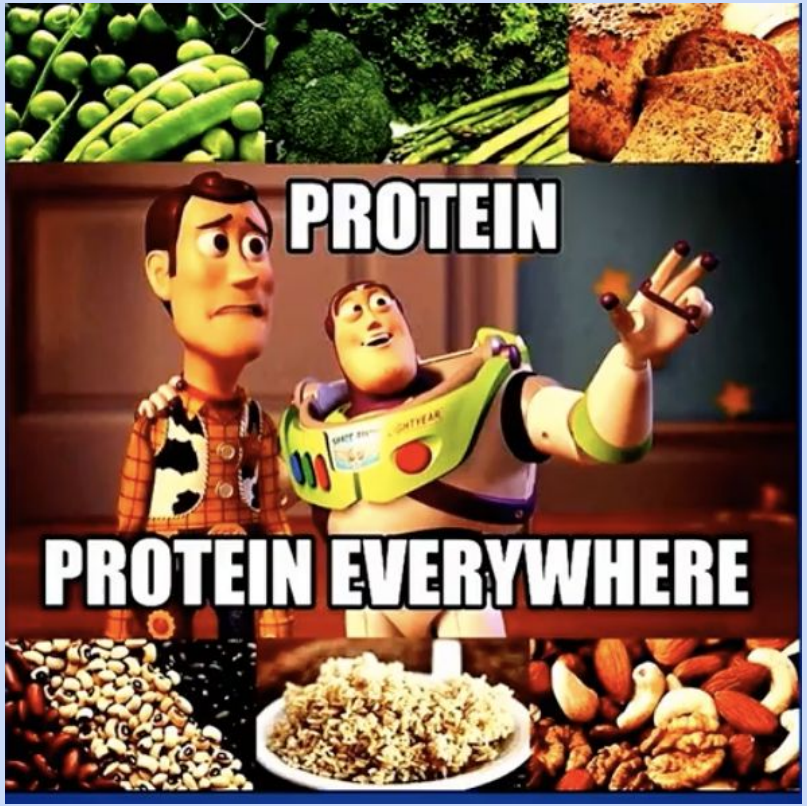

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Asia Pacific J Clin Nutr 2004;13 (2):217-220

Original Article

Legumes: the most important dietary predictor of survival in older people of different ethnicities

Irene Darmadi-Blackberry MB, PhD[1], Mark L Wahlqvist AO, MD[2], Antigone Kouris-Blazos PhD[2], Bertil Steen MD, PhD[3], Widjaja Lukito MD, PhD[4], Yoshimitsu Horie PhD[5] and Kazuyo Horie BSc[6]

[1]*Public Health Division, National Ageing Research Institute, Melbourne, Australia*
[2]*Asia Pacific Health & Nutrition Centre, Monash Asia Institute, Monash University, Australia*
[3]*Department of Geriatric Medicine, Goteborg University, Goteborg, Sweden*
[4]*SEAMEO TROPMED, University of Indonesia, Jakarta, Indonesia*
[5]*School of Humanities and Social Sciences, Nagoya City University, Nagoya, Japan*
[6]*Faculty of Home Economics, Aichi Gakusen, Okazaki, Japan*

To identify protective dietary predictors amongst long-lived elderly people (*N*=785), the *"Food Habits in Later*

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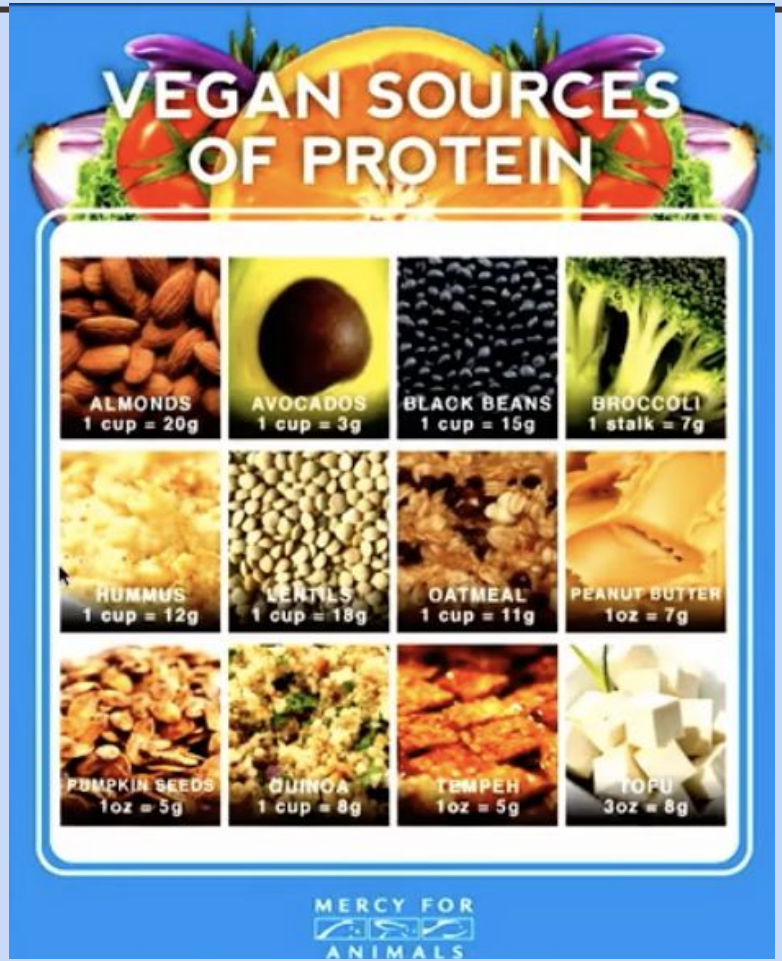

Sandpaper: motivation

Kevin Volpp U Penn
2:1 stick vs carrot

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G-V-B: Grains Vegetables Beans fns

- Foods exactly as they grow in the **field**
- Hulled barley, brown rice, millet, quinoa, oat groats
- Green tea, fermented foods, sea vegetables

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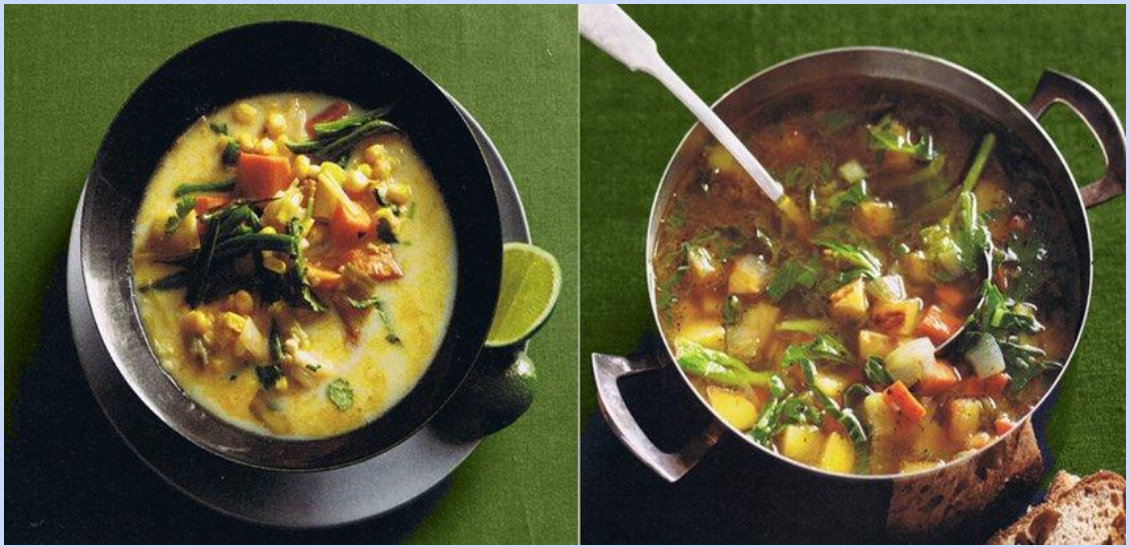
G-V-B fns: Grains Vegetables Beans

Don’t waste time calculating …

Males: 56 g/day

Females: 46 g/day

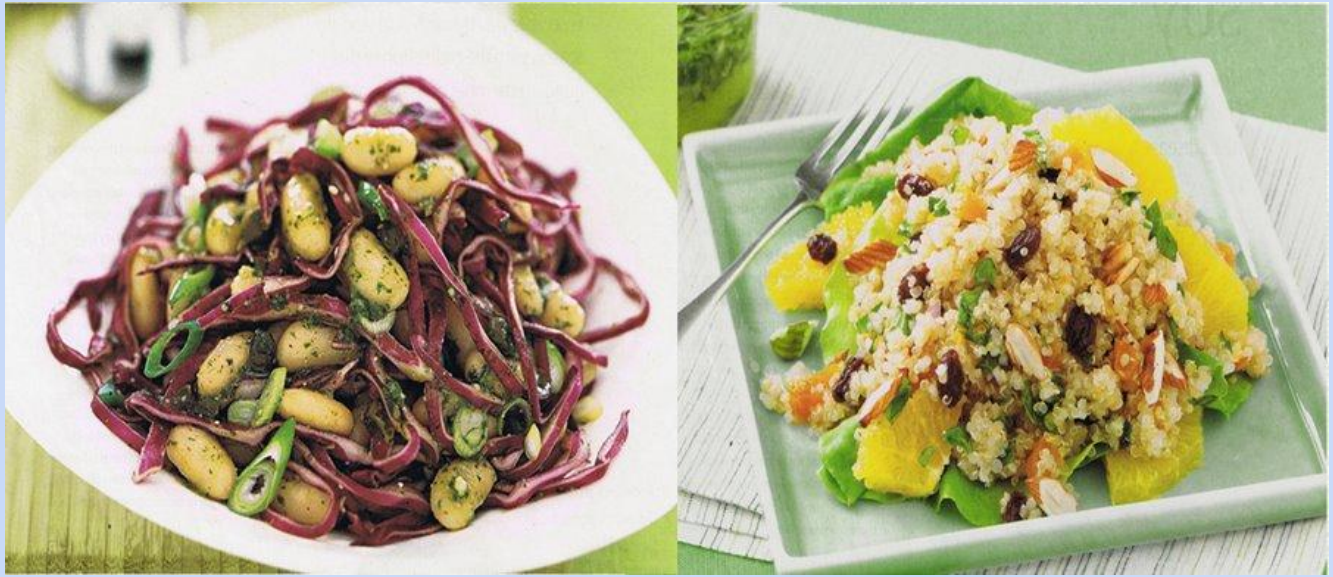
US = 100 g/D



6X - more energy

7X - more land

G-V-B: Grains Vegetables Beans



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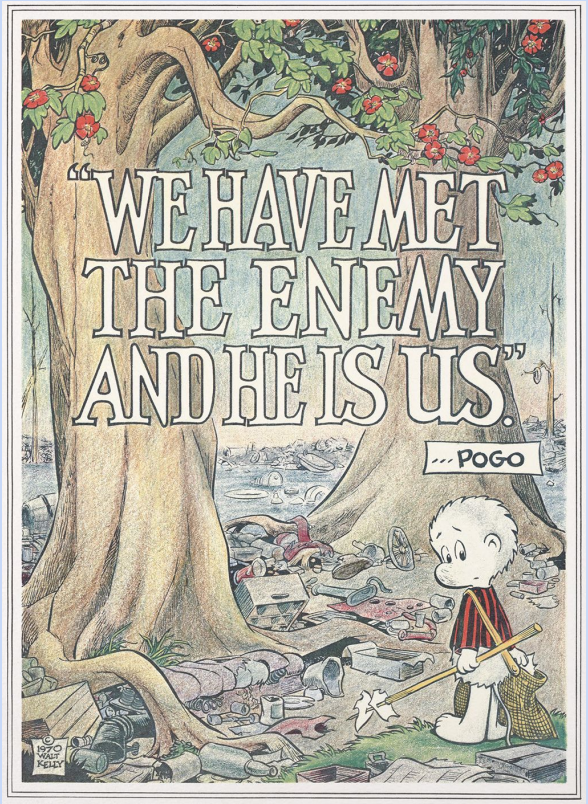
We do it to ourselves – or not

Paying for the disaster rather than investing in its prevention



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Doctors guess at every step and the best doctors have the best guessing rate

It is not a case of don't confuse me with the facts, but the best clinical insights exceeds so-called knowledge by at least 1 step

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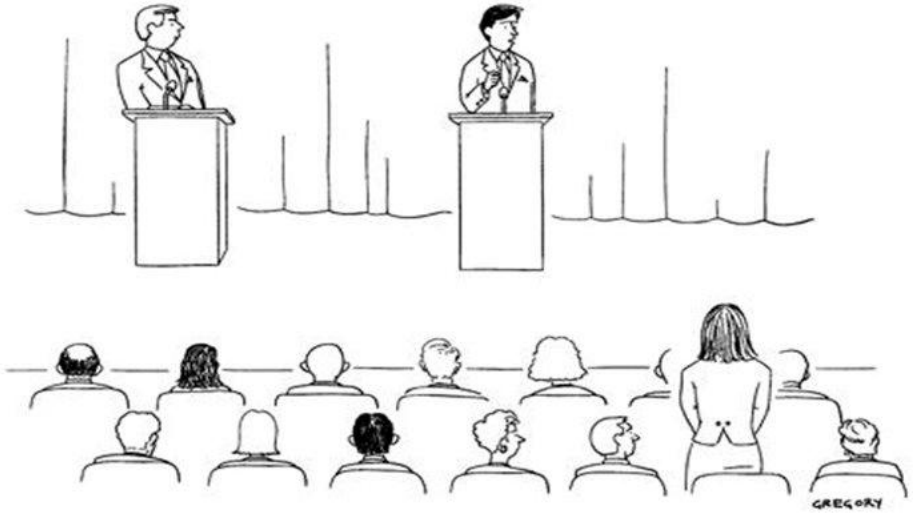

"That's an excellent prescreened question, but before I give you my stock answer I'd like to try to disarm everyone with a carefully rehearsed joke."

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Sir Winston Churchill
by Ivor Roberts-Jones
Circa 1971

"My dear friends, this is your hour." These were Winston Churchill's words as he spoke on the evening of the Allied victory in Europe, and so ended the Second World War. This important bronze masterfully captures the undeniable strength and indomitable character of one of the greatest leaders of the modern world.

Preventive Medicine Center
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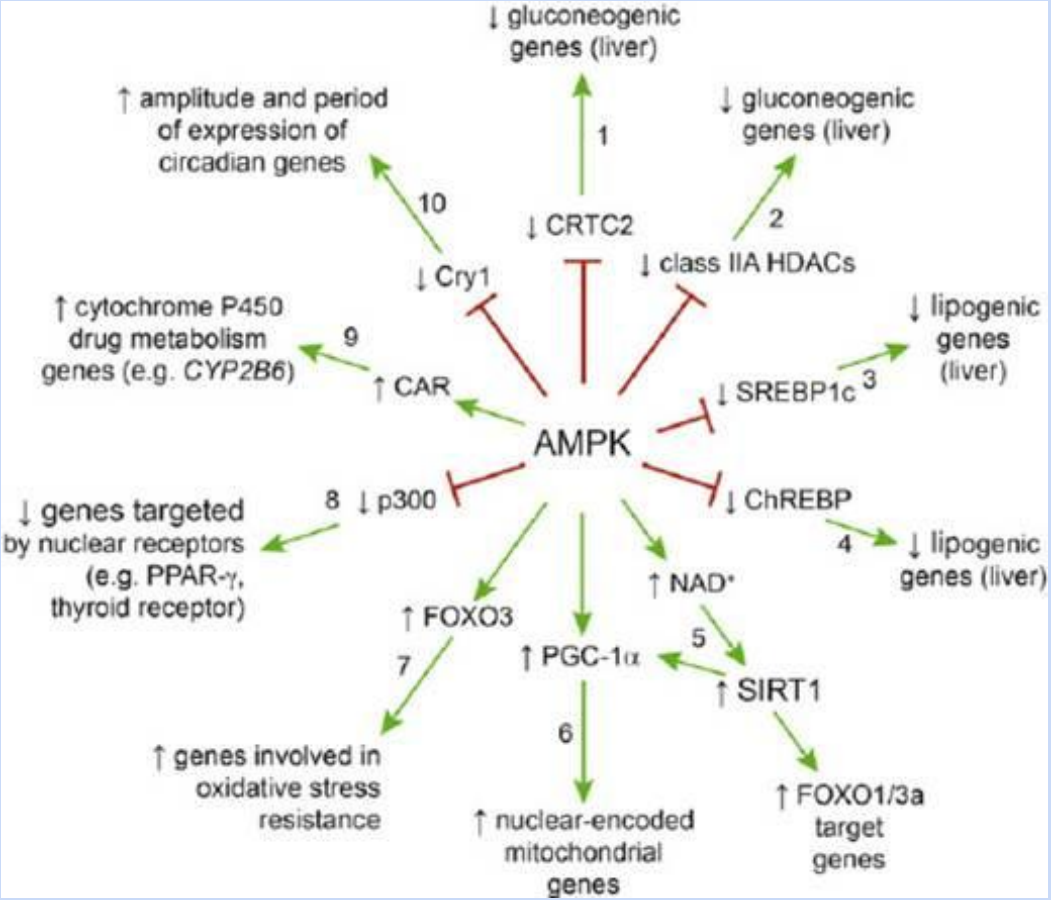

William Bestermann, MD

Disease Prevention Goal Numbers: www.thepmc.org

90	1. Non-HDL Cholesterol	11. Lp (a)	15	21. Food Mantra
100	2. Triglycerides	12. Homocysteine	7	22. Overweight: cooked vegetables
4.4-6.2	3. AIC diabetes test	13. Uric acid	5.5	23. Eat out of a bowl
155-83	4. Blood sugar	14. BUN	12-14	24. Healthiest: vegan
1.0	5. Cardiac HS CRP	15. Magnesium	2.1+	25. Aerobic Interval Training
110-115/60-70	6. Blood pressure	16. Potassium	4.1	26. Quit smoking
	7. < 12% Sodium	17. 25 Hydroxy D3	50-66	27. Limit alcohol: 4 or less
1.0	8. PSA	18. 11-27% body fat		28. REALITY
3.5	9. TSH	19. Keep a food diary		29. Omron wrist BP cuff
12-14	10. Hemoglobin	20. G-V-B		30. Avoid wheat, dairy, soy

1,000,000 ASCVD events

600,000 mortalities

Mammogram
Cologuard

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Joint Accreditation Direct Accreditation Statement

"In support of improving patient care, Trinity Health is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team."

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Medical Grand Rounds

Date: 05/01/2025 Event ID#: 74886

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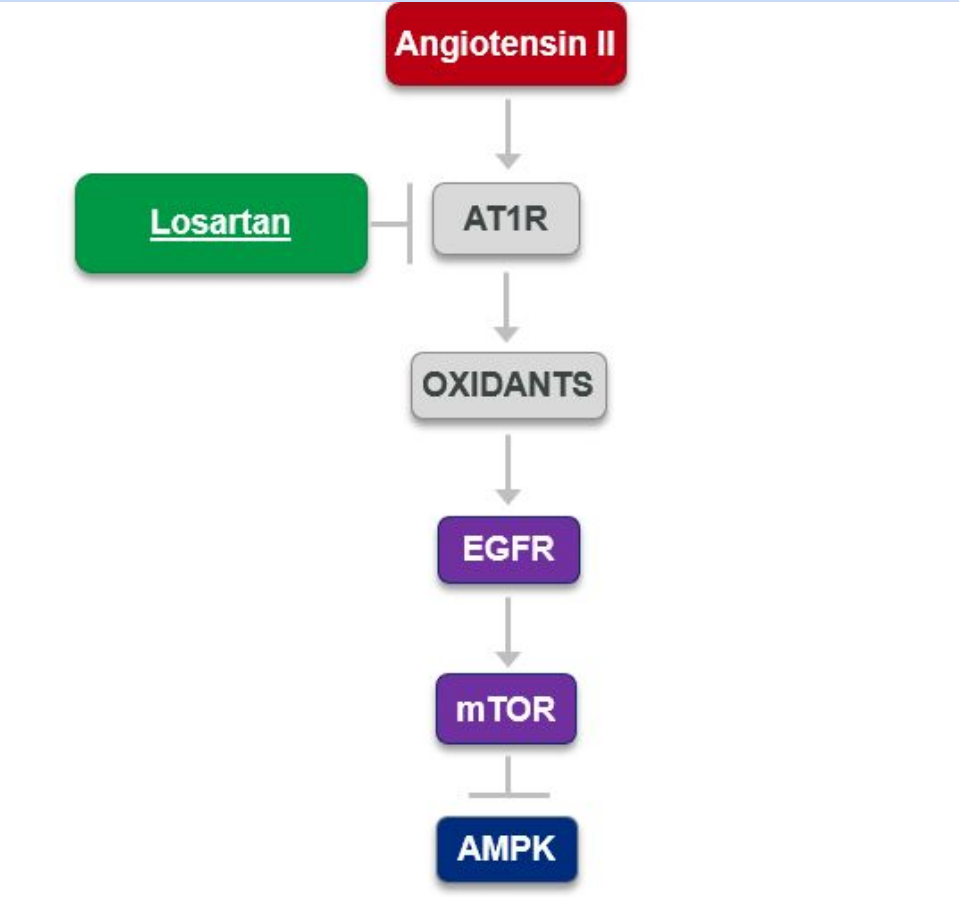

William Bestermann, MD

Choices result in freedom from disease and costs

Abolition of Symptomatic Coronary Artery Disease

Lancet 1990 AJC 2003

Honesty
Protection, not perfection

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www.thepmc.org

The best clinical insights
exceed so-called knowledge
by at least one step

Doctors guess at every step,
the best doctors
have the best guessing rate

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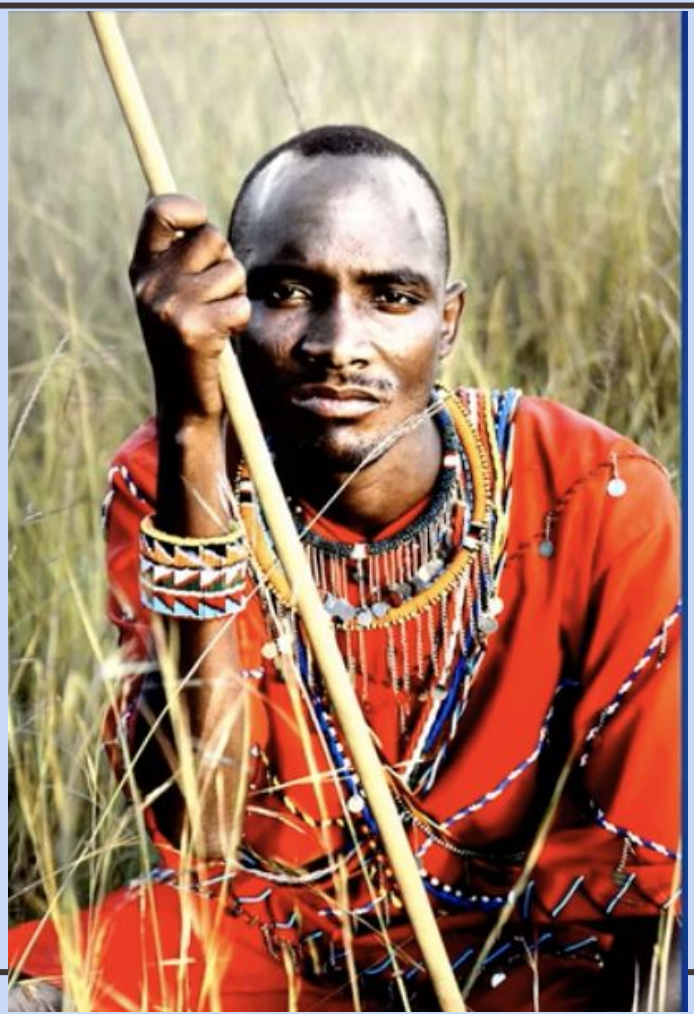
Masai: high milk, blood, meat intake -> ASCVD



Hunters not gatherers

Garth Davis, Methodist Hospital VuMedi 3/22/22

The Seven-Countries Study

1957
Increasing animal protein intake -> rise in cholesterol

Cholesterol Levels in The Seven-Countries Study

Japan and Velika Krsna (Yugoslavia)	156
Dalmatia (Yugoslavia)	186
Montegiorgio (Italy)	196
Corfu (Greece)	198
Slavonia (Yugoslavia)	198
Crevalcore (Italy)	200
Crete (Greece)	203
Zrenjanin (Yugoslavia)	208
Zutphen (Netherlands)	230
U.S. Railroad Workers	237
West Finland	253
East Finland	264

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Another powerful economic tool

WRIST!

JCH 2008

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Vegetarian or vegan diets

CARTaGENE

It’s not your genes, it’s the diet angering the genes

Kim Williams, MD, FACC
Past President Amer Coll Cardiol

Improved risk on more vegetarian Mediterranean diet

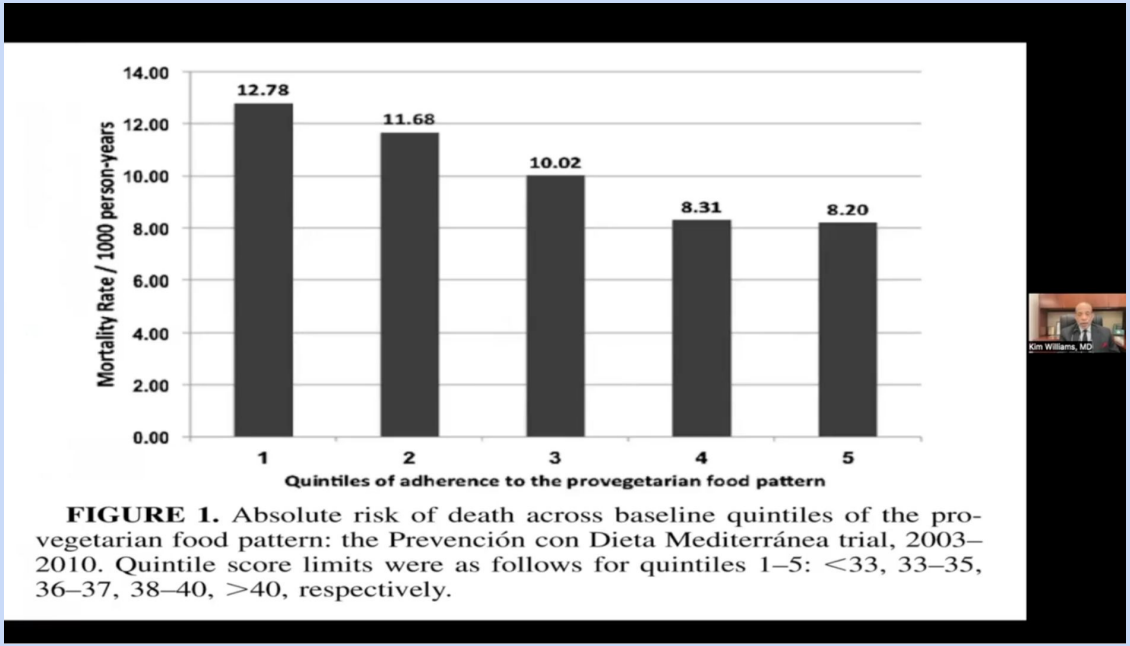
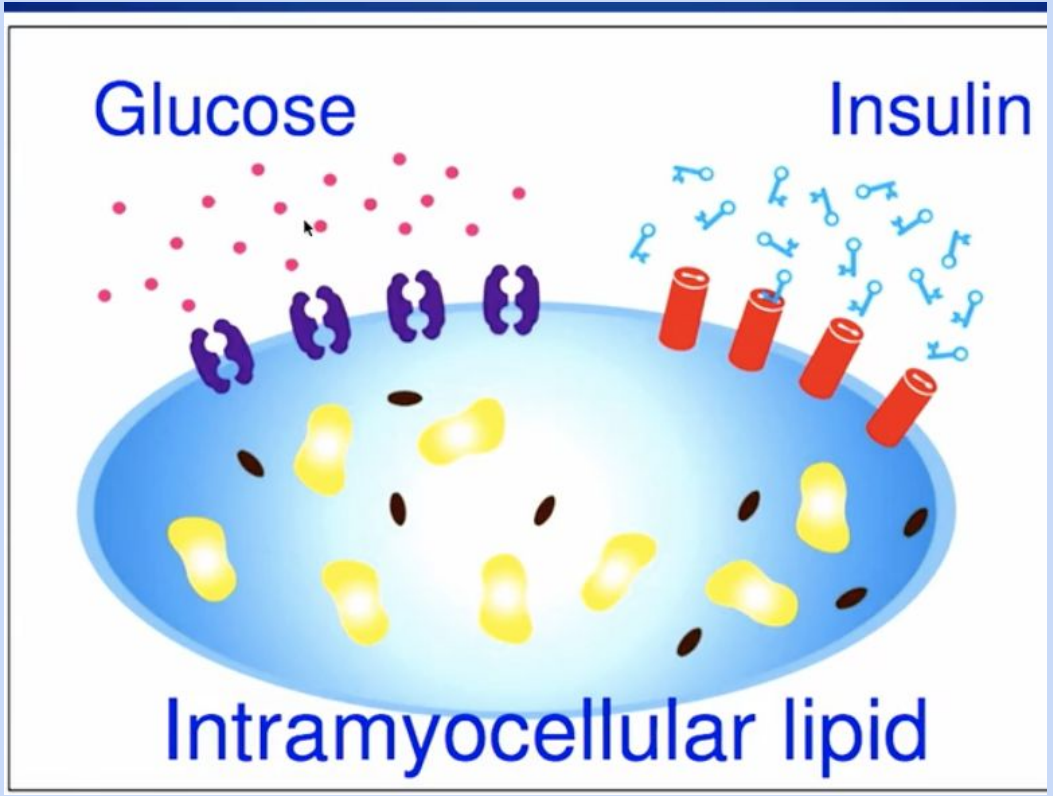


FIGURE 1. Absolute risk of death across baseline quintiles of the provegetarian food pattern: the Prevención con Dieta Mediterránea trial, 2003–2010. Quintile score limits were as follows for quintiles 1–5: <33, 33–35, 36–37, 38–40, >40, respectively.

Kim Williams, MD, FACC
Past President Amer Coll Cardiol

Saturated fat (meat/cheese) reduces glut-4 receptors -> insulin resistance



Food is not just food

It is chemical information

Garth Davis, Methodist Hospital VuMedi 3/22/22

Distill simplicity from complexity

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