

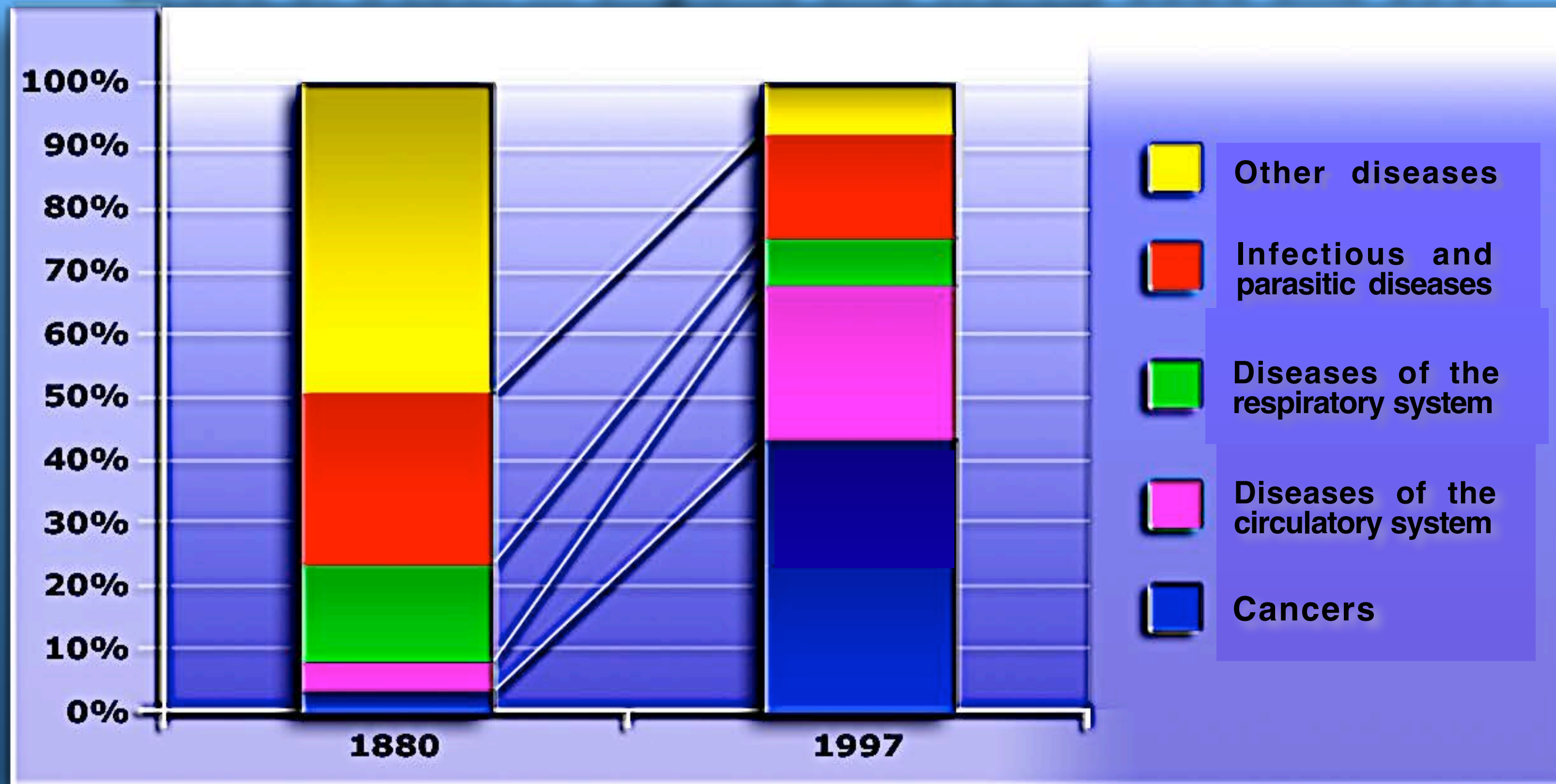


The background features a detailed anatomical illustration of a human torso, showing the ribcage, lungs, and internal organs in a classic medical drawing style. Overlaid on the right side of the torso is a large, detailed illustration of a plant leaf, possibly a banana leaf, with prominent veins. The entire image is framed by a thick red border.

BENEFITS of **PLANT-** **BASED** **DIETS**

“How changing to **Plant-based Diets**
Reduce **Chronic Diseases**, Increase
Lifespan & Decrease **Climate Change**”

Cause of Death in England and Wales, 1880 and 1997

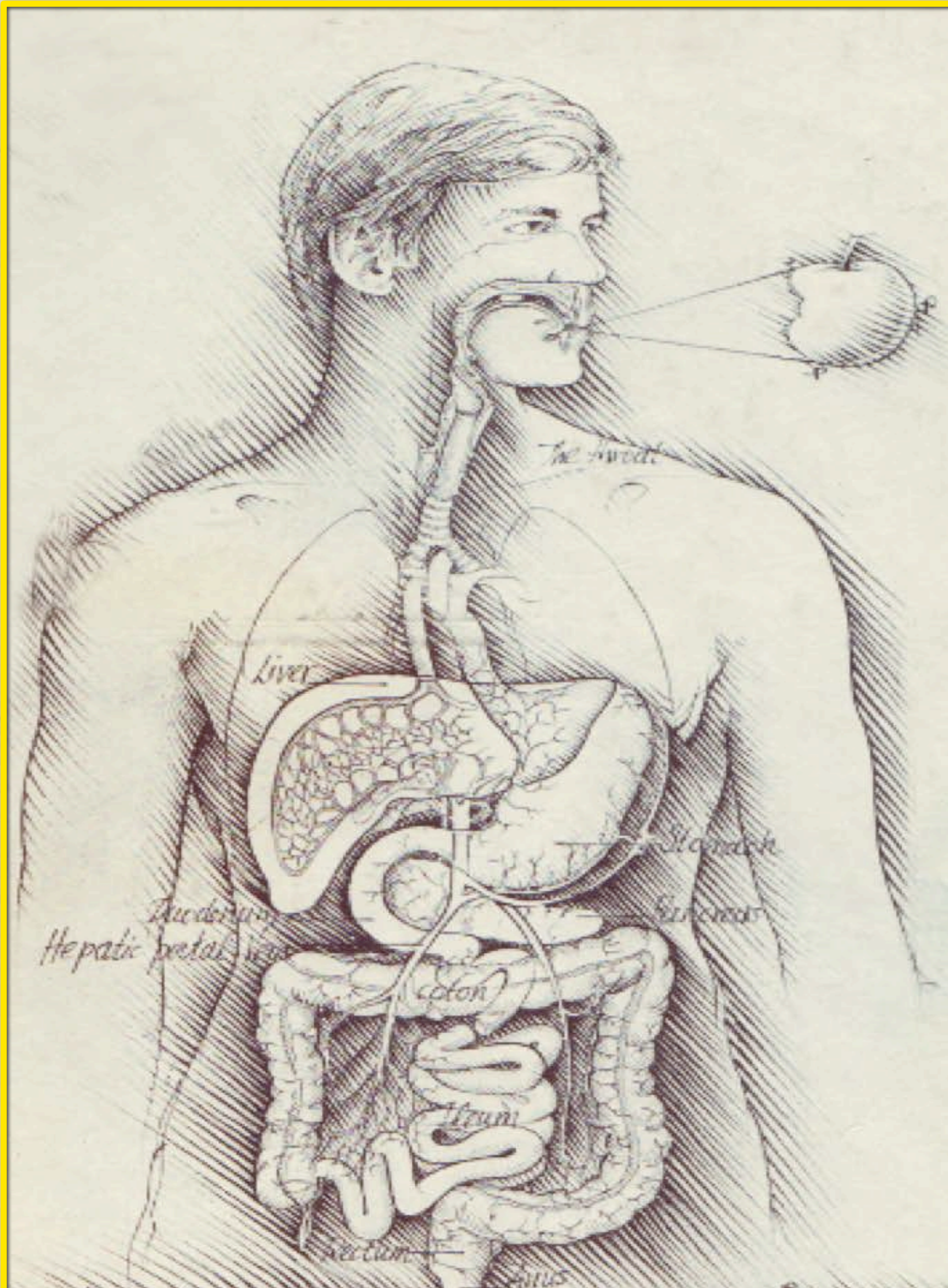


The **major causes** of **disease** and **death** in Western countries are now **chronic diseases** such as **Cardiovascular diseases**, **Strokes**, **Cancers**, **Diabetes**, **Obesity** and **Hypertension**. These diseases are largely due to “**over nutrition**” and arguably, *are best* dealt with by ***preventing*** them rather than by trying to “**cure**” them.

A man with dark hair and glasses is leaning over a desk, focused on reading a large open book. He is wearing a dark sweater over a collared shirt. On the desk, there is a laptop to his left, a dark thermos, and several other papers and books. The background shows a window with a view of a building. The entire image has a light blue tint and a thin orange border.

*“With all thy getting
get understanding”*

Proverbs 4:7



LEADING CAUSES of MORTALITY

This is important because . .

*Experts estimate that up to
80% of the chronic disease
and premature death in this
country could be prevented
by making major changes in
our Diets*

Root Causes of Disease!

**DISEASE RUNS IN
FAMILIES BECAUSE**

→ EATING HABITS ←

**RUN IN
FAMILIES.**

Heart Disease

- Coronary artery disease (CAD) is *the* leading cause of death for Men *and* Women in the U.S.
- As previously noted, the vast majority of coronary artery disease seen in the U.S. *could be avoided by major changes in our diets and lifestyle.*
- American Heart Association estimates *80%* of *Heart Attacks* and *Strokes* could be prevented.
- Over *805,000* Americans have a heart attack *each year* and *over*



“Do you want that with or without Angioplasty”

What is a Heart Attack?

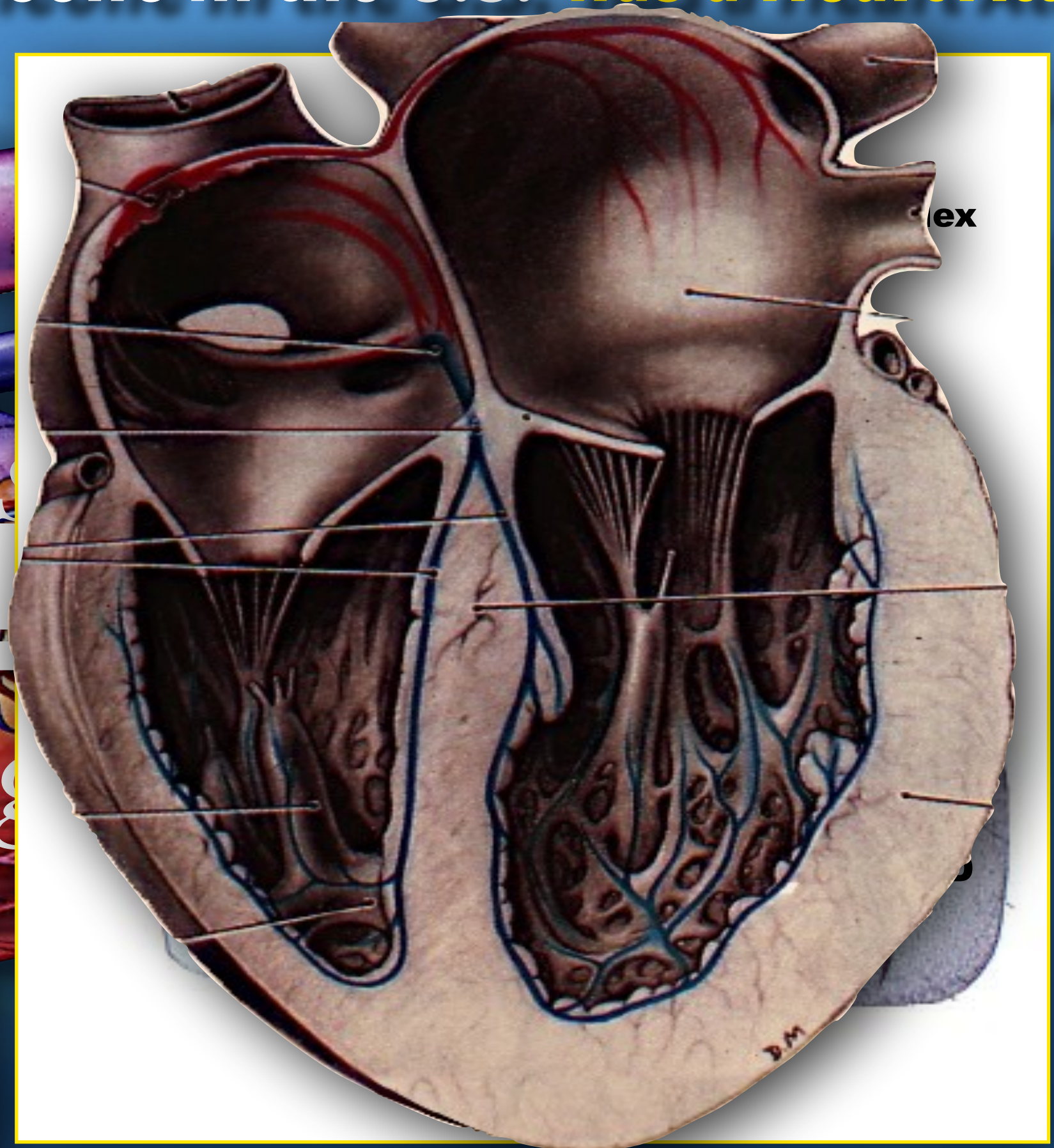
According to the AHA **every 40 seconds** someone in the U.S. **has a Heart Attack!**

- The **Coronary arteries** are the blood vessels supplying **blood** to the **heart itself**

- They are so named because it was felt they resembled a **Crown** "surrounding" the heart

- A **heart attack** occurs when one or more of these vessels becomes **completely blocked**, thereby depriving a **portion** of the heart muscle of its **blood supply**

*Does this mean
with one day risk
attack us like
a rampag*

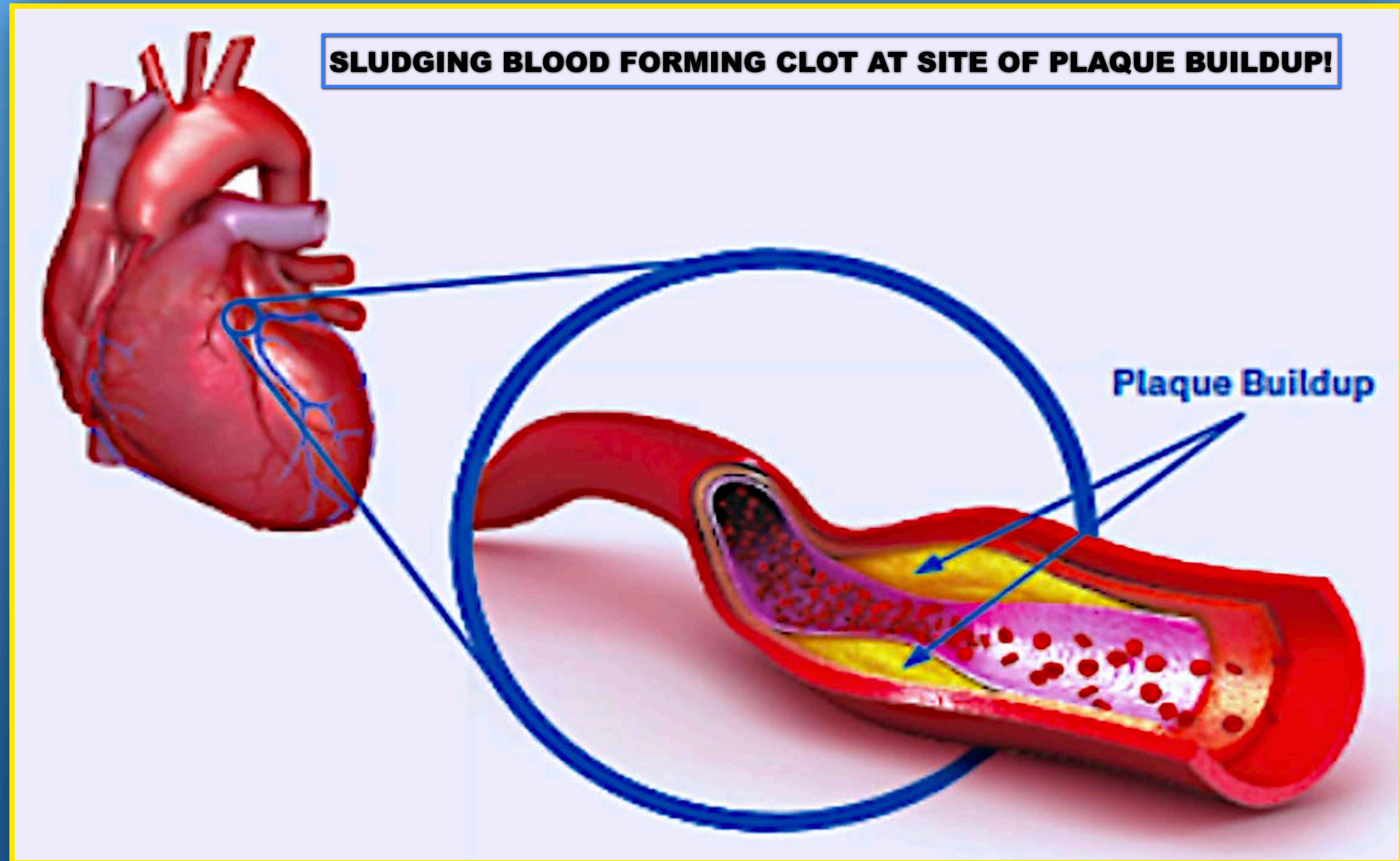


Your Heart at Work!

Each day the heart beats \geq 100,000 times and pumps \approx 2,000 gallons of blood.*

***1 gallon of blood weighs 8.3 lbs x 2000 = 16,600 lbs!**

How the Heart Works: Effect of High-fat Meal on Blood Flow



During **sludging periods**, blood will be **hypercoagulable**, have **lowered** O₂ content, & be **more likely** to form **artery-blocking** clots!

Benefits of a Plant-based Diet for Heart Disease



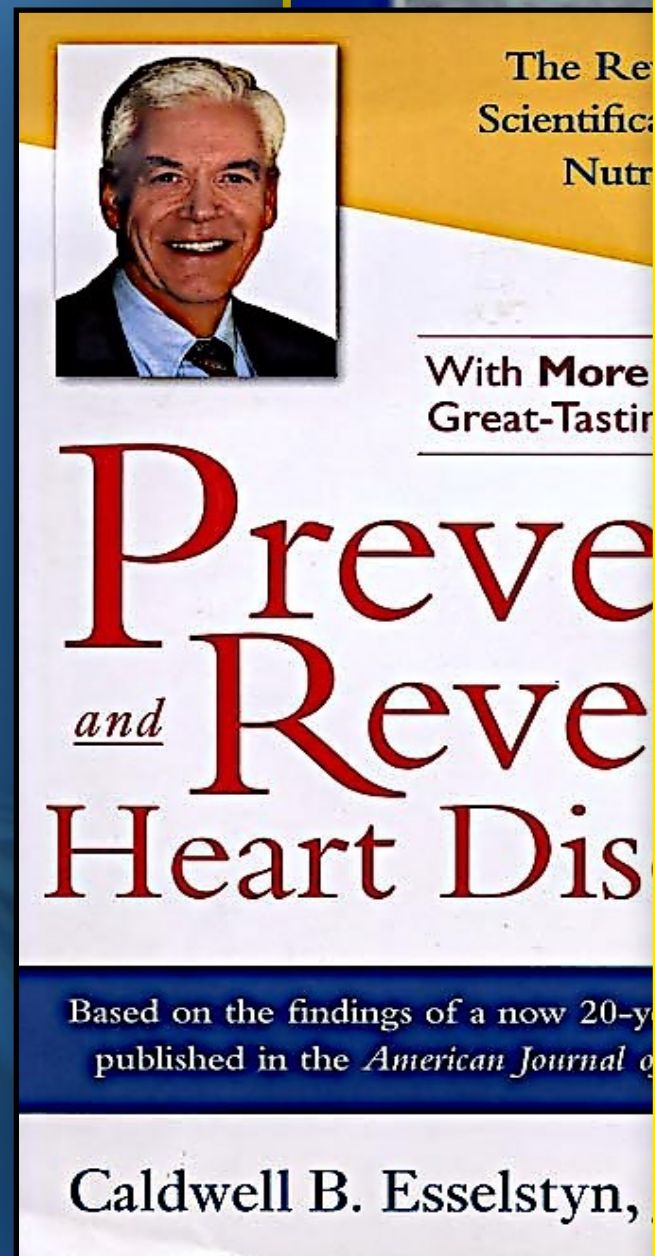
Donald Watson Remembered Lab-grown Meat Vegan Cheese A Culinary Journey To Sicily

ations
much lower
Healthy
by being low
ely high in
polyunsaturated
plant
contain



Vegetarians and **vegans** typically have cardiovascular risk factor profiles **well below** those of omnivorous populations. They usually **live longer** and have **lower** weight, **lower** blood pressure, **lower** levels of homocysteine, and have **cholesterol** levels $\geq 100 - 150$ points **below** individuals who eat meat!

Benefits of a Plant-based Diet for Heart Disease



Joseph Crowe, MD is a CV surgeon at the Cleveland Clinic who began having recurrent CP in April 1996 and had a heart attack in November 1996. He had an emergent cardiac cath and he coded TWICE during the procedure! His cath showed a long, ragged lesion at the end of his distal LAD that could not be stented or bypassed.



Dr. Crowe was initially very depressed, but after talking with Dr. Esselstyn about his plant-based program to reverse heart disease, he decided to give it a try. After 2.5 years on the diet program alone (no medication), a repeat coronary cath showed complete reversal of his LAD lesion!

IT IS POSSIBLE TO REVERSE HEART DISEASE!

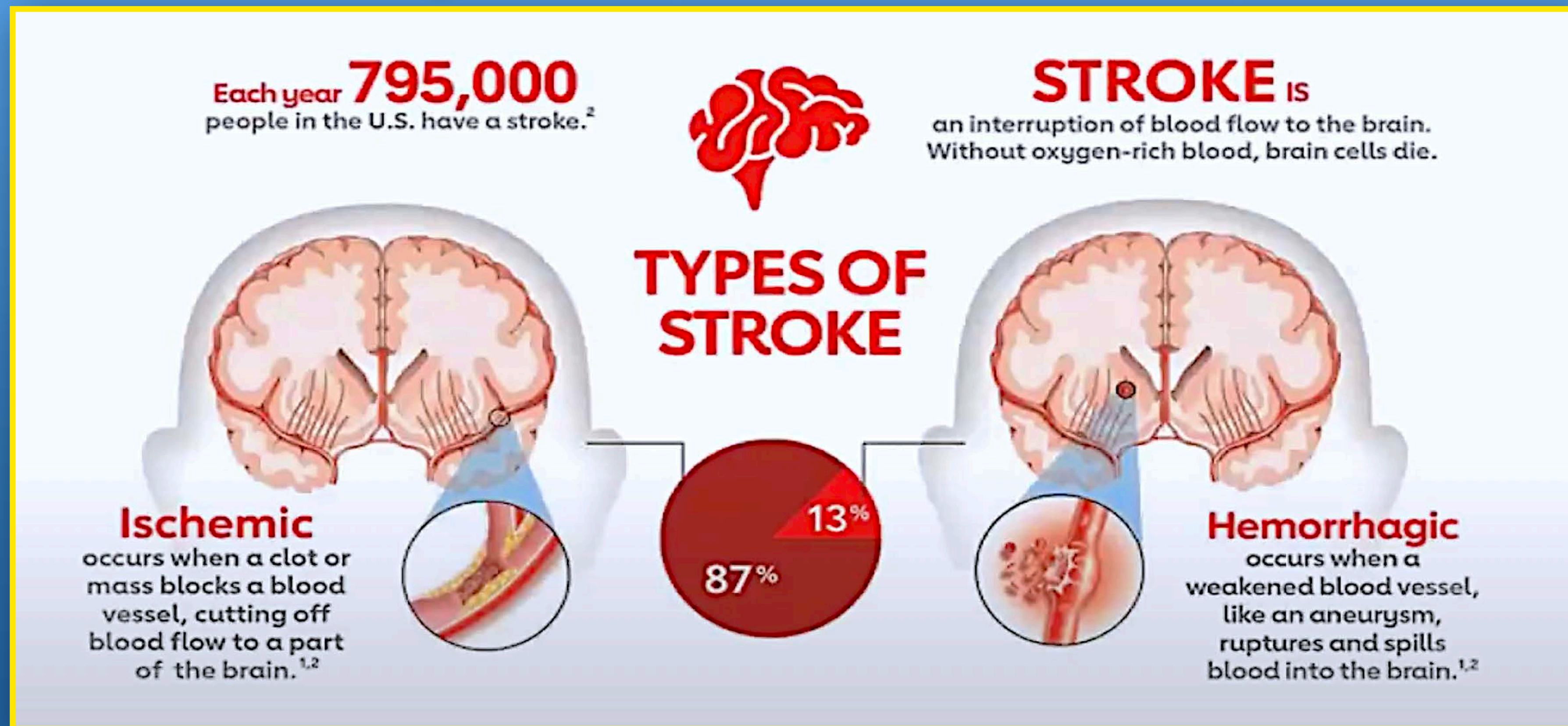
An anatomical illustration of a human head and neck, showing the brain, muscles, and blood vessels. The illustration is in a classic, detailed style with a red border. The word "STROKE" is overlaid in large, white, bold letters.

STROKE

What is a Stroke?

A **Stroke** occurs when a blood vessel that carries **oxygen** to the brain is either **blocked** or **ruptures**. The **impairment in blood flow** leads to **brain cell death**.

Stroke Categories



*It is estimated **2 million neurons** are lost every minute after a stroke event occurs!*

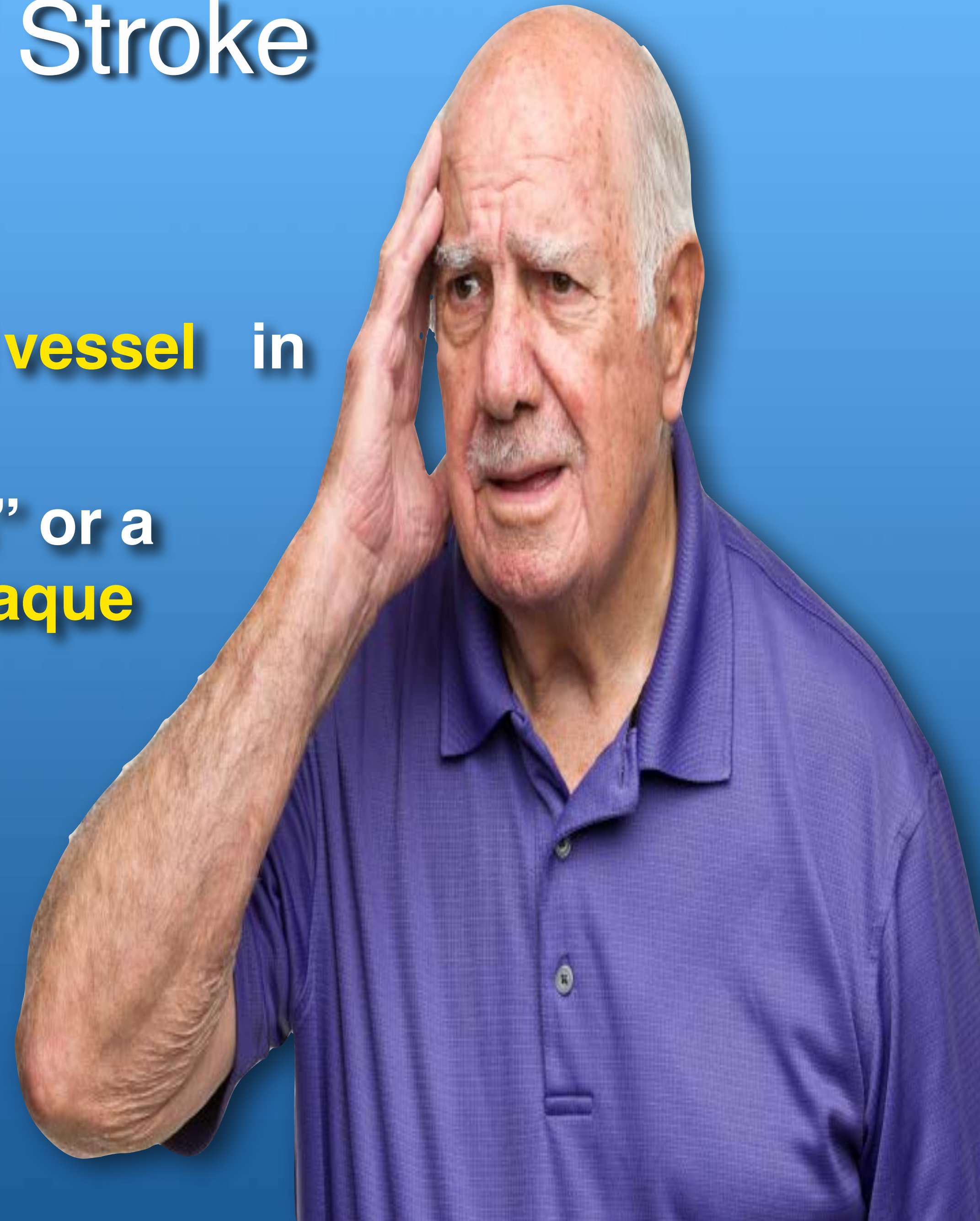
Types of Stroke

► Ischemic Stroke

- Caused by a Blocked blood vessel in the brain
- May be due to an “**Embolus**” or a “**Clot**” formed at site of a **Plaque**

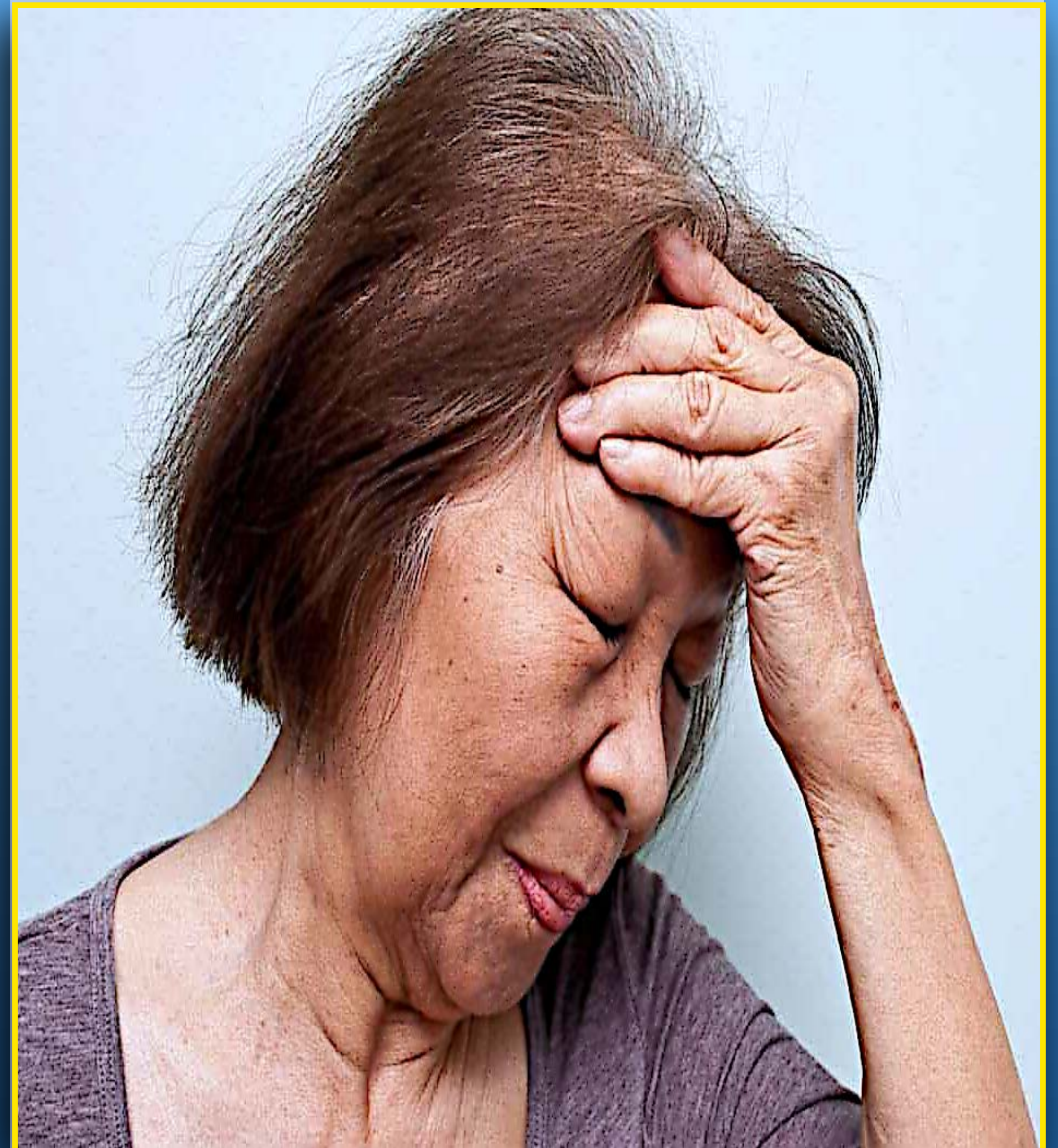
► Hemorrhagic Stroke

- Caused by a Ruptured vessel in the brain
- May be **AVM**, **Aneurysm**, **HTN-weakened Artery**



Demographics of Stroke

- **Women** have about 60,000 more strokes than men.
- **Native Americans** have the highest prevalence.
- **African Americans** have almost twice the rate compared to Caucasians.
- **Hispanic Americans** have slightly higher rates when compared to **non-Hispanic Whites**.
- Modifiable risk factors must be addressed in our “**aging population**” given the propensity to suffer strokes in this age group.



Risk Factors for Ischemic Stroke

- **Hypertension** (BP > 140/90)
- **Diabetes/Obesity**
- **Heart Disease** (Atrial & Valve Disease)
- **Smoking**
- **High Cholesterol** (LDL > 130)
- **Male Gender**
- **Age**
- **Ethnicity/Race** (Epigenetics of Racism)

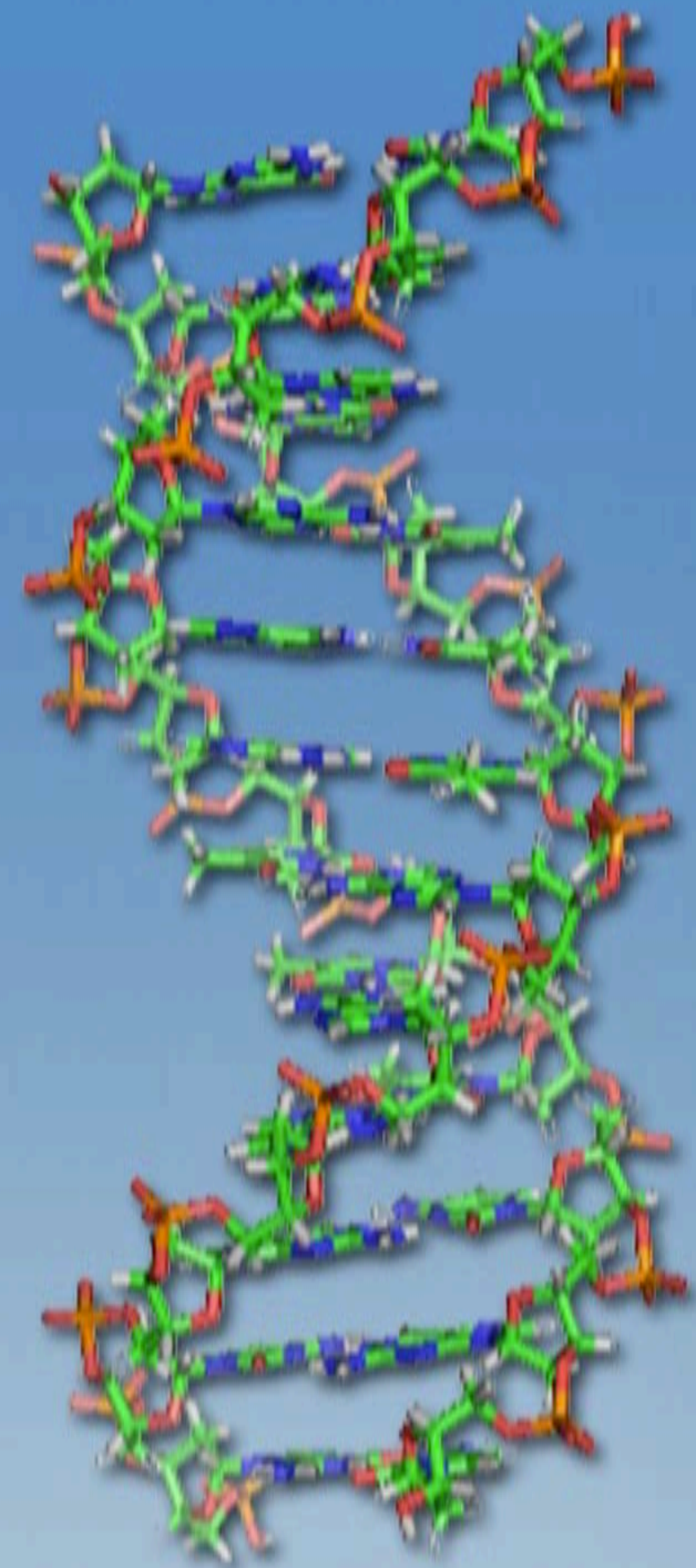


An anatomical illustration of the human heart and lungs, rendered in a classic, detailed style with brown and tan tones. The heart is centrally located, with the lungs on either side. The illustration is framed by a red border. Overlaid on the illustration is the text "Risk Factor Reduction Through Diet Change" in a bold, dark brown font.

Risk Factor Reduction Through Diet Change

Hypertension (HTN)

- Affects 1 in 4 Americans
- Often called “**the Silent Killer**”
- Increases risk for Heart Disease, PVD and Stroke
- Risk factors include:
 - Obesity
 - Family history
 - excess ETOH
 - Smoking
 - excess Sodium
 - High Fructose Corn Syrup
 - lack of Regular Exercise



**Heart Disease &
Stroke**

Changes in Systolic Blood Pressure Due to Vegetarian



- Group 1 = Control Group
- Group 2
- ▲ Group 3
- Time of Diet as Vegetarian
- Time of Diet as Vegetarian

Heart Disease &
Stroke

Stroke Food?

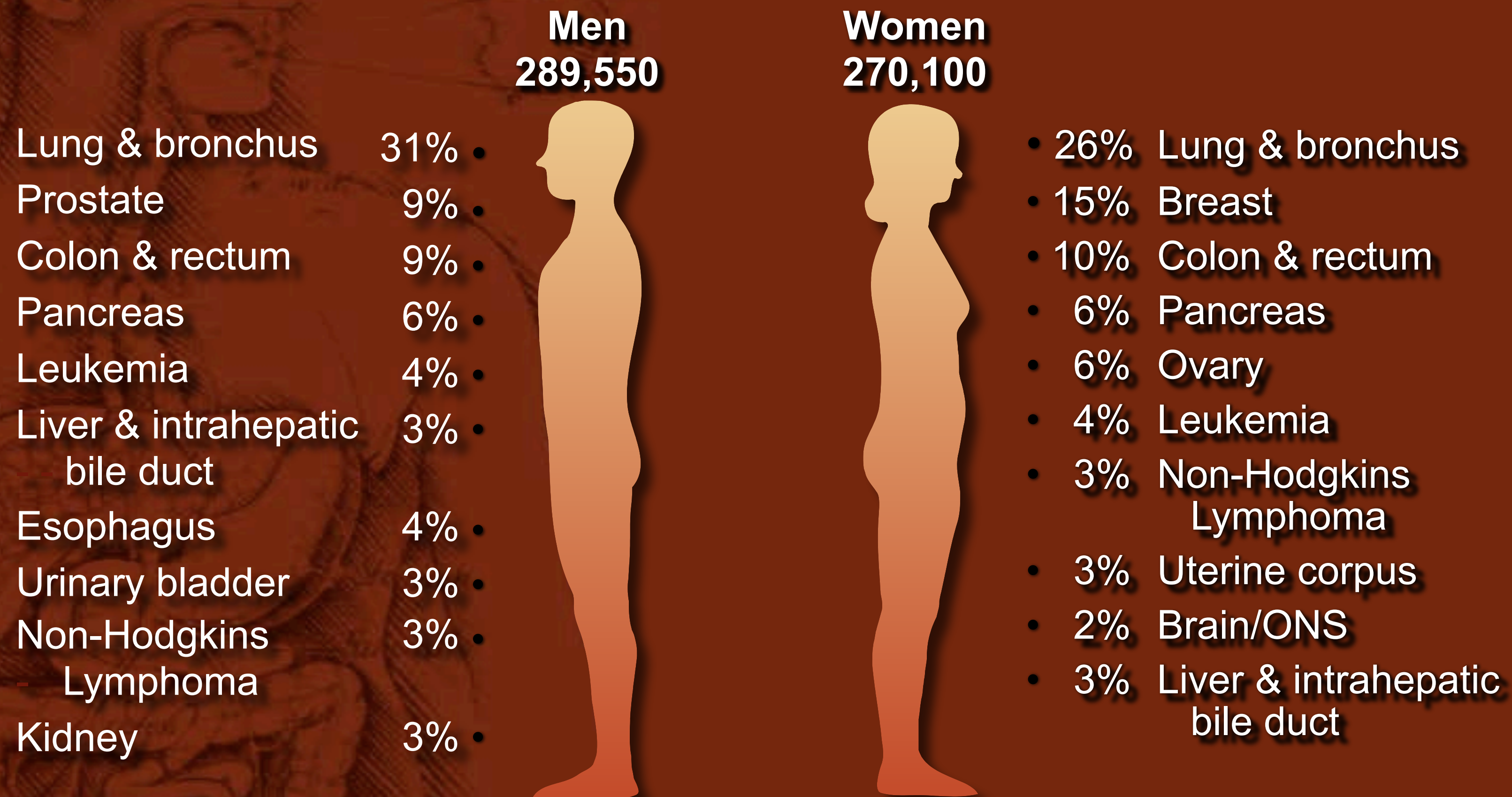
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“On average, high blood pressure medications reduce the risk of heart attack by 15 percent and the risk of stroke by 25 percent. But in a randomized, controlled trial, three portions of whole grains a day were able to help people achieve this blood-pressure-lowering benefit too.”



—Dr. Michael Greger in *How Not to Die*

2007 Estimated U.S. Cancer Deaths



ONS = Other Nervous System

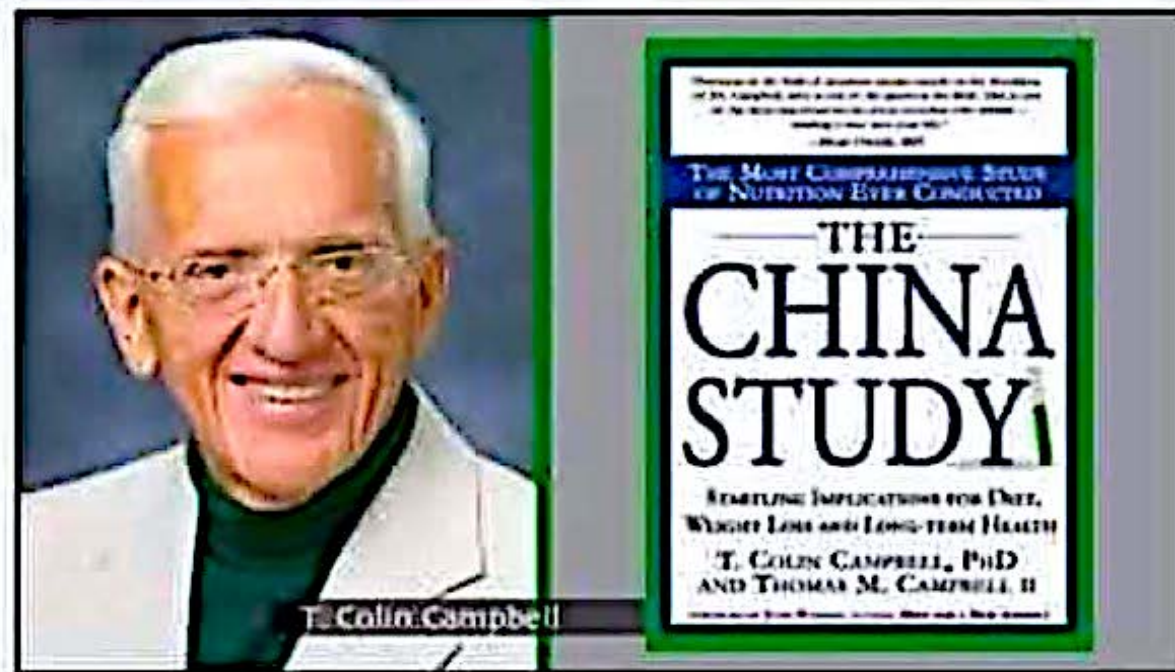
Source: American Cancer Society, 2007

Cancer

- **Prostate** and **Colon** cancers have been shown to be **increased** by diets that are **high in fat** and **animal protein** *and simultaneously low in grains, vegetables and fruit*. Diets that are high in **saturated** and *trans* fats, and red meat are **especially** problematic.
- These cancers strike **African Americans (AA)** to a **disproportionate degree** and with **greater** lethality.
- AA men have a **60% to 70% higher incidence rate** for prostate cancer than White men. Moreover, once diagnosed, AA men are **more than twice as likely to die** from prostate cancer **relative to White men** because **Black men** get more aggressive and deadly forms of the disease that tend to metastasize early in the course of the disease!
- Colon cancer rates have been increasing for **the entire American population** over the last half century. **It is now recommended that Americans get their first screening colonoscopy at age 45** rather than wait till age 50 because of increasing incidence of this disease!
- **AA's may need to start screening at age 40** due to increased risk associated with eating a western-style diet!

Dairy Products Increase Risk for Prostate Cancer!

“What protein consistently and strongly promoted **cancer**? **Casein**, which makes up **87%** of **cow's milk** protein, promoted **all stages** of the cancer process.”



Dairy Increases Risk for Prostate Cancer

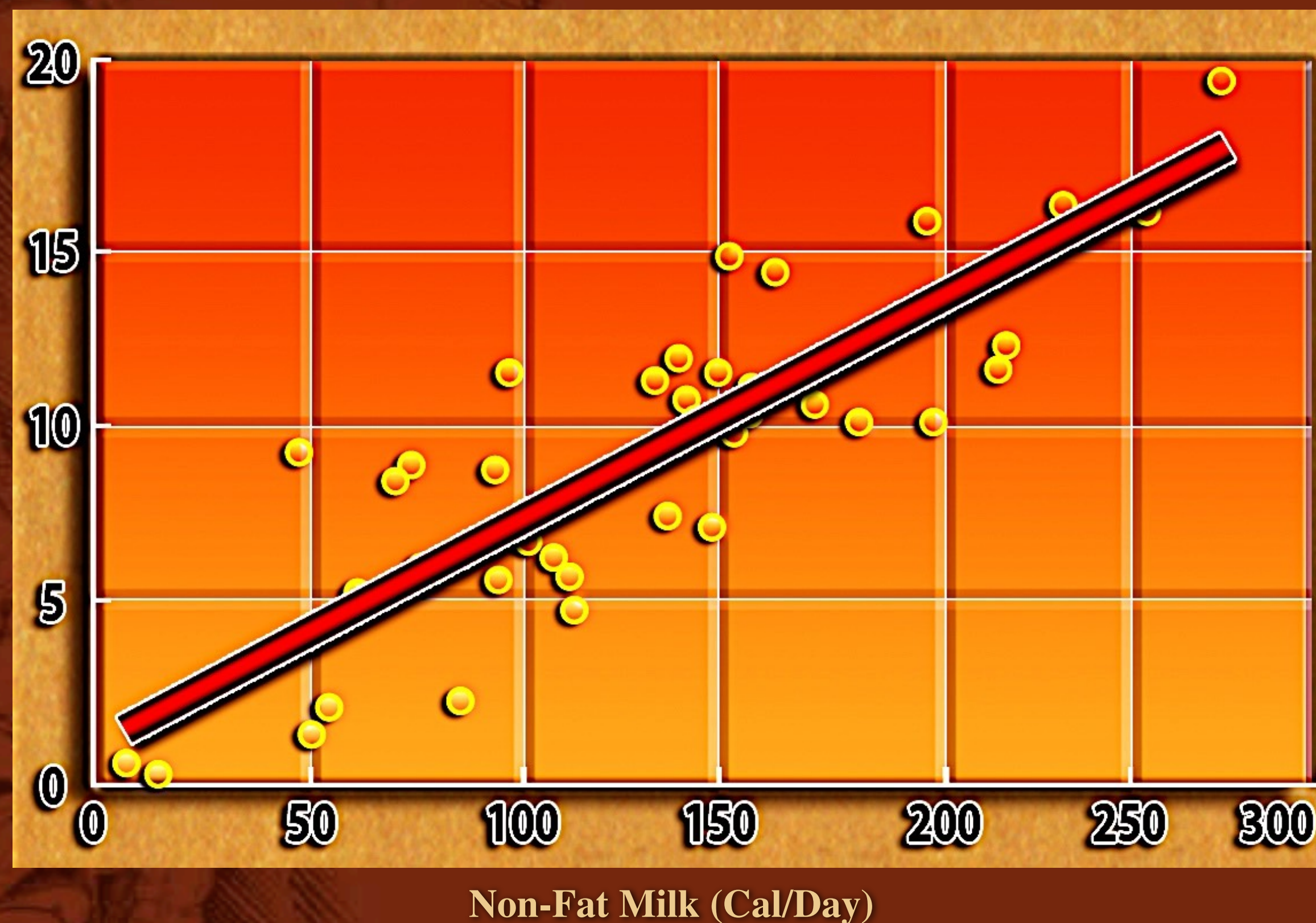


Photo: Getty Images

Consumption of dairy products continues to show a risk for prostate cancer, according to a new study published in the *American Journal of Clinical Nutrition*. As part of the Adventist Health Study-2, researchers looked at data from 28,737 men and found that as dairy product consumption rose, so did the risk for prostate cancer. However, the risk was not seen with nondairy sources of calcium. This study adds to the already large number of studies showing increased prostate cancer risk associated with dairy consumption. A 2016 meta-analysis of 11 different studies showed that men consuming the most milk products had a 43% higher risk of dying of prostate cancer, compared with men who generally avoided dairy products.

Skim Milk & Prostate Cancer

1986 Prostate Cancer Mortality



Source: Alternative Medicine Review 1999 Volume 4, Number 3; p. 164 Author; William B. Grant, PhD

The saturated animal fat in dairy products has long been linked to higher risk for cancers, but this study also provides strong evidence that *it is the proteins in milk that are largely responsible for the increased risk of Prostate Cancer.*

Habitual Egg Consumption Increases Prostate Cancer

Eating 2½ eggs a week
increases risk of prostate cancer

Am J Clin Nutr 2012;96:855–63.

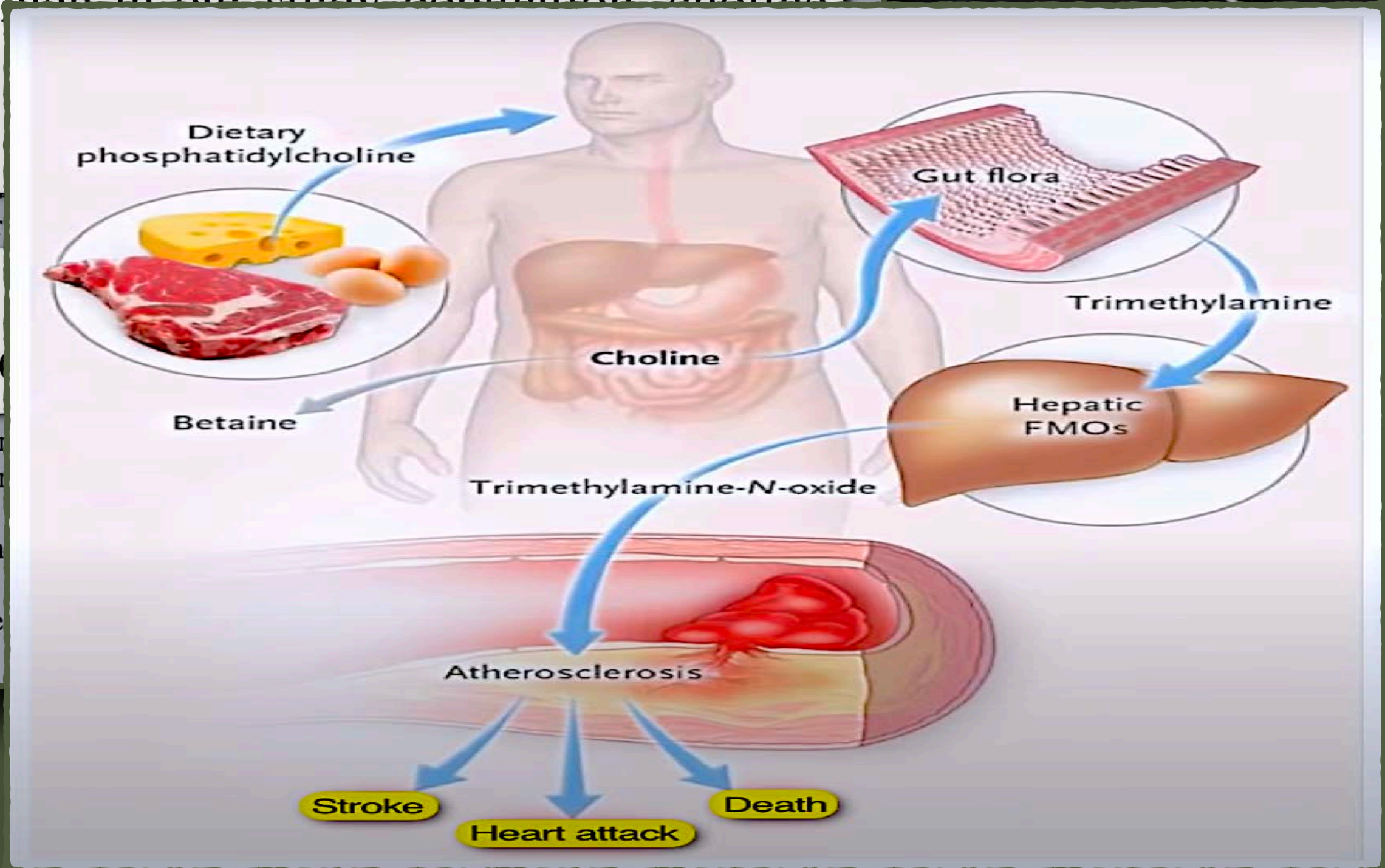
Choline intake and risk of lethal prostate cancer: incidence and survival^{1–3}

Conclusion: Of the 47,896 men in our study population, choline intake was associated with prostate cancer.

of choline—a nutrient that may affect prostate cancer

choline intake had a 70% increase

Design: We prospectively examined the intake of these nutrients and the risk of lethal prostate cancer among 47,896 men in the Professionals Follow-Up Study. In a case-only survival analysis, we examined the postdiagnostic intake of these nutrients among men with lethal prostate cancer among 4282 men with an initial nonmetastatic disease during follow-up. Diet was assessed using a validated questionnaire 6 times during 22 y of follow-up.



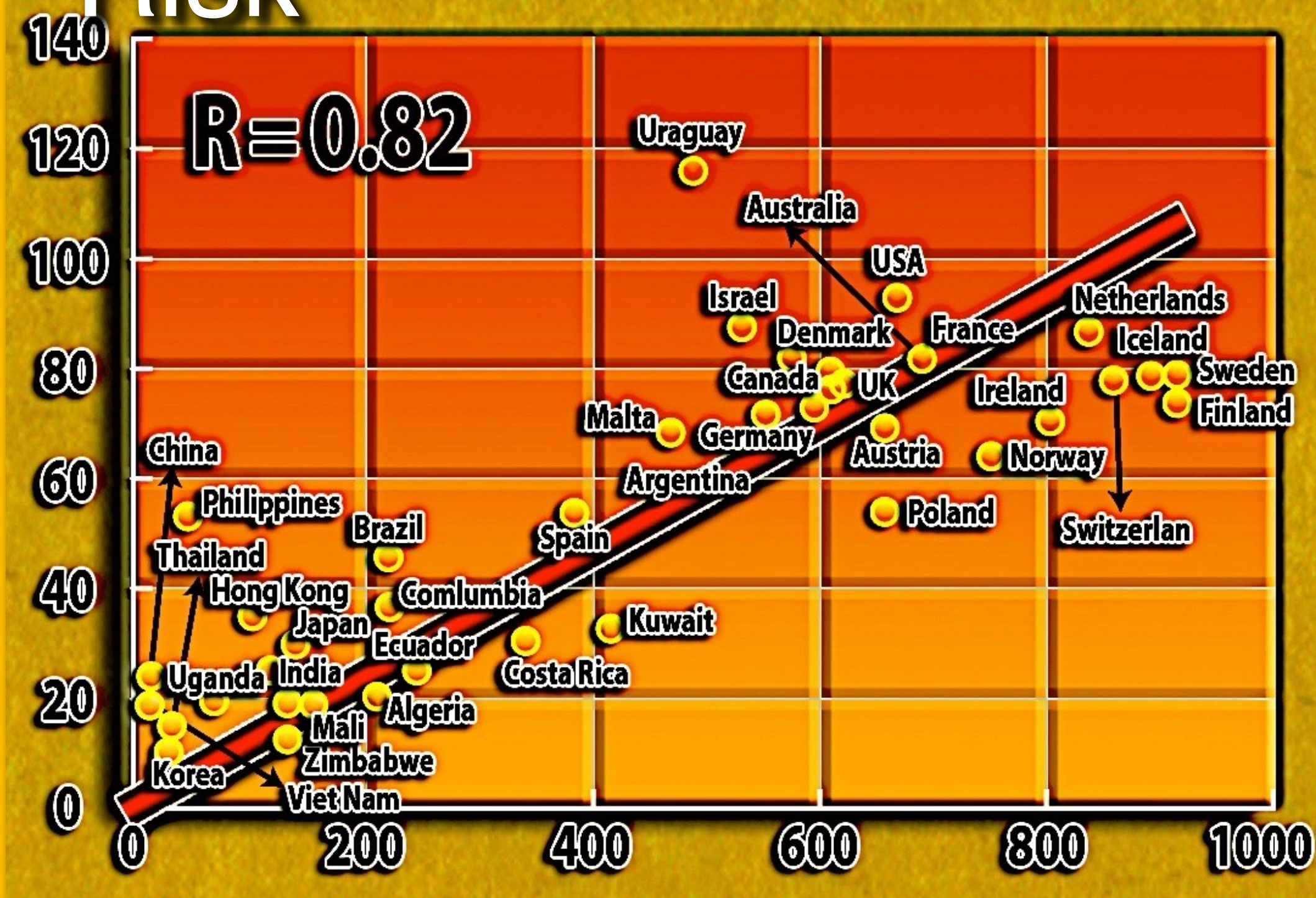
- It is critical to identify factors that can prevent PC and to develop a diet (spread) which may reduce the risk of PC.
- Meat, fish, eggs and dairy are high in choline, which may increase the risk of spread.
- Choline in eggs, meat & dairy is converted in the gut to TMAO which increases risk for several lethal diseases including the spread of PC!

Risk

Milk & Breast Cancer

Risk

BREAST CANCER, per 100K



MILK CONSUMPTION, g/day

Ganmaa and Sato, 2005

ESTROGEN
INCREASES RISK OF PROSTATE,
BREAST, UTERINE AND OVARIAN
CANCERS.



WHILE THE DAIRY INDUSTRY FOR
MARKETING FOR COWS' MILK W
ADDED HORMONES, THEY FAIL
THE PLETHORA OF NATURAL HO
MILK, INCLUDING ESTROGEN AN

IN CONTRAST TO
PLANT FOODS, INCLUDING SOY,
REGULATE LEVELS OF THESE HO

nes

Women:



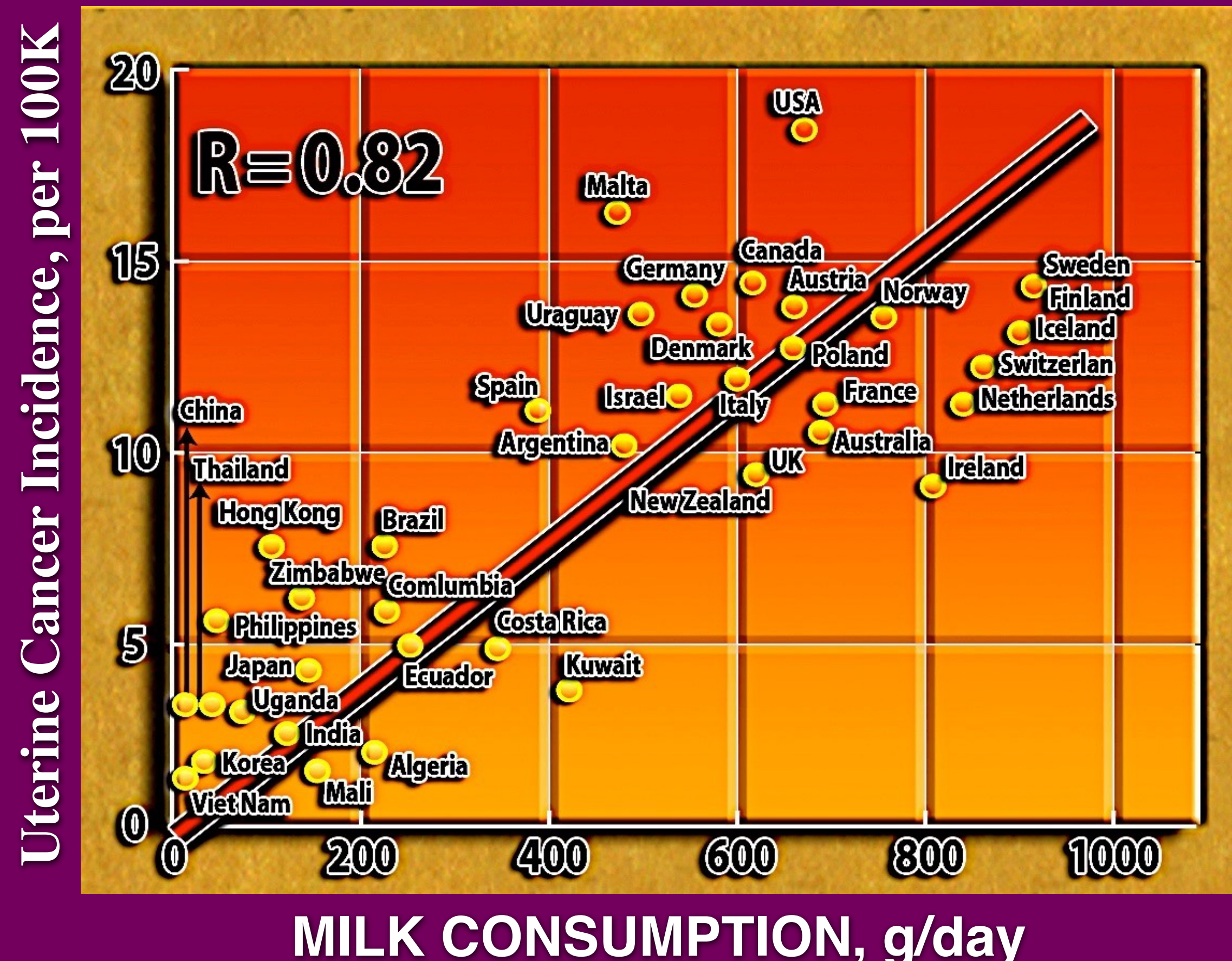
Age (Years)

Risk Factors Dairy, Hormones & Lifestyle

Synnove Knutsen, et al.
Dairy, soy and risk of breast cancer. *Internat. Journal of Epidemiology*, 2020; DOI 1093/ije/dyaa007

Giovannucci E, et al.,
Calcium & fructose intake in relation to risk of prostate cancer *Cancer Res* 1998 Feb 1, 58(3):442-7

Milk & Uterine Cancer



Ganmaa and Sato, 2005

Slide courtesy of Dr. T. Colin Campbell

Risk Factors



Processed Meats

- C
- S
- H
- M
- F
- C
- C
- C
- F



inogens which is in the
ham, smoked & cured
S.

d meats form “Nitrosa-
carcinogens that attack
ety of cancers.

children who have a
ne #2 Pediatric cancer.

ve 10 times the risk of
Pediatric cancer.

have been **increasing**
d cancers **over the last**

Bladder, Endometrial,
Gastric and Colorectal

Cancers among others:

Benefits of PBD's for Cancer

Benefits of Plant-based Diets

Antioxidant properties

- Inhibits Iron-mediated oxidative reactions

Enhances Immunity

- Increases NK cell function and activity
- Stimulates respiratory burst and bacterial killing by Neutrophils

Affects Signaling molecules & Gene expression

- Blocks PI3-K/Akt and Erk1/2 signaling
- Affects PKC; Up-regulates PKCd

Causes G₀/G₁ arrest in cancer cells

- Up-regulates p27^{Kp1} and p21^{WAF1/CIP1}
- Decreases pRb phosphorylation
- Up-regulates p57 mRNA

Induces Apoptosis

- Degradation and cleavage of Caspase 3 and Caspase 9
- Cleavage of poly ADP-ribose polymerase (PARP)

Inhibits Angiogenesis

- Inhibits VEGF secretion
- Inhibits MMPs secretion

Inhibits Metastasis

- Inhibits cell adhesion
- Inhibits cell migration
- Inhibits cell invasion
- Inhibits lung metastatic colonies

Mode of Action

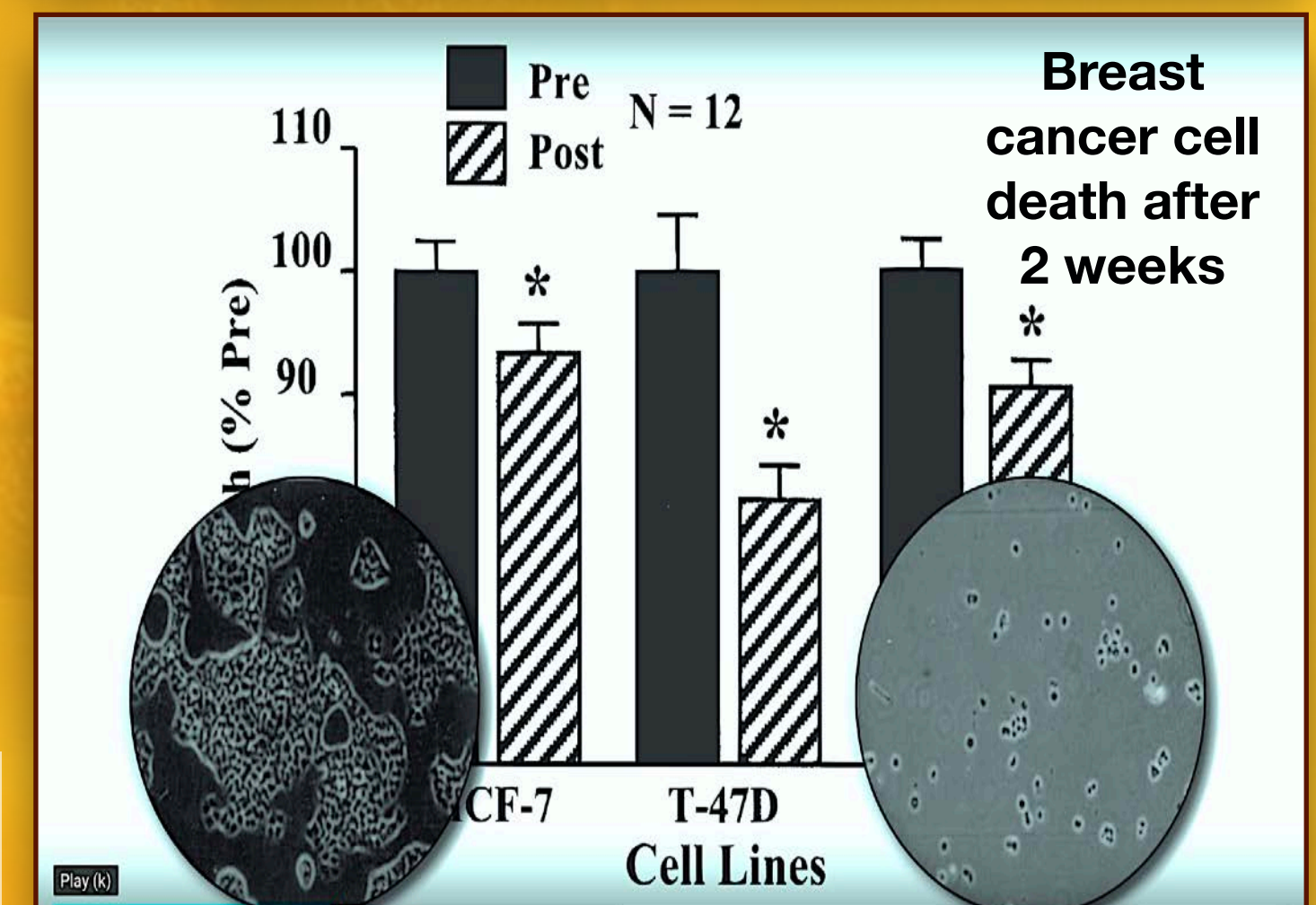
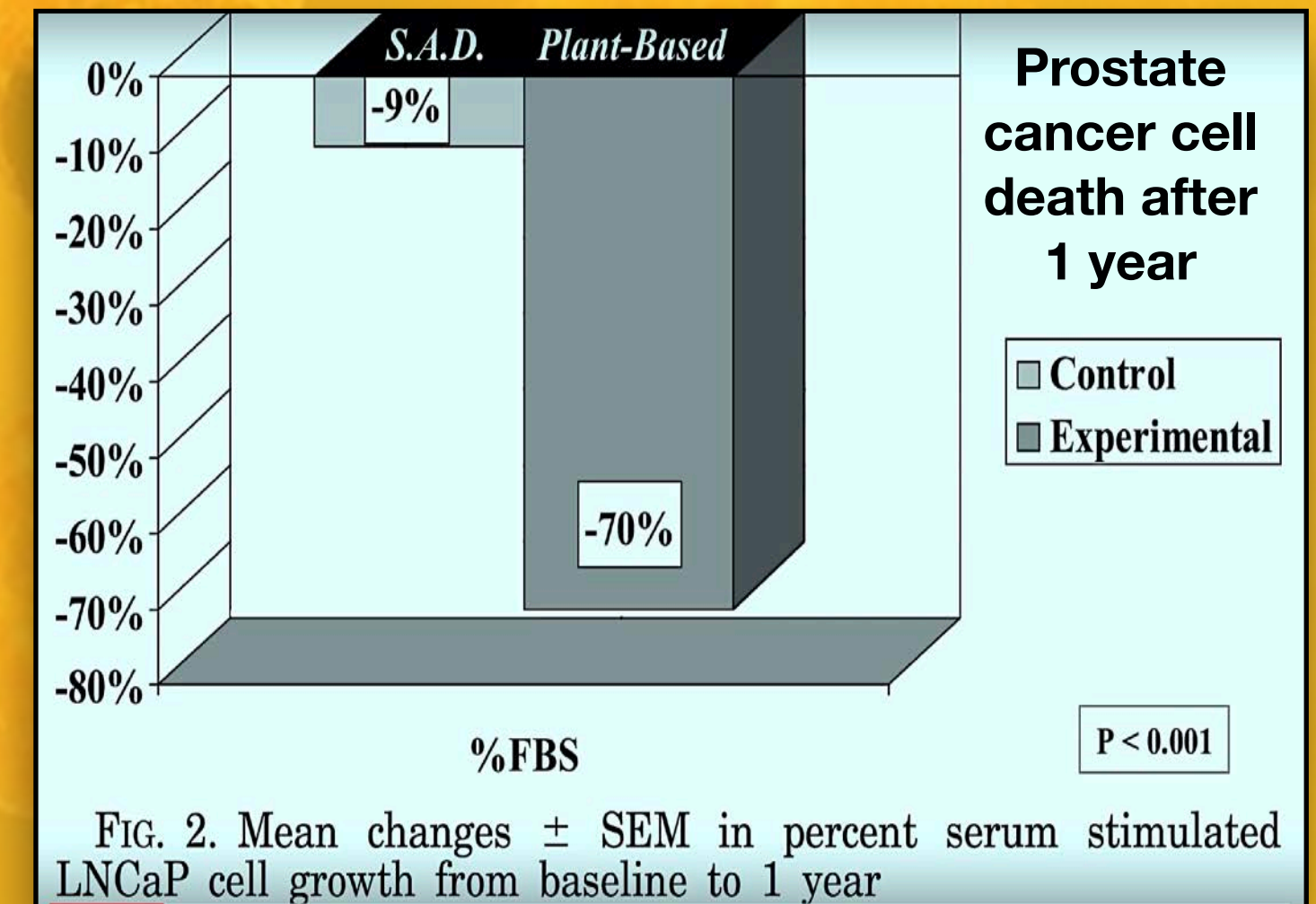
- Blood from men with Prostate cancer on PBD's for one year *killed 70% of cancer cells* when dripped on cultured Prostate cancer cells.
- Blood taken from women with Breast cancer placed on PBD's for only 2 weeks *killed the majority of the cells* in the Breast cancer cultures!
- Phytates in beans and grains show *broad-spectrum anti-neoplastic* activity against a wide variety of cancer types.
- Phytates and Lectins found in beans & grains have been shown to even "*rehabilitate*" or kill cancerous and/or pre-cancerous cells!

Role of phytic acid in legumes: antinutrient or beneficial function?

G. Urbano et al.; J Physiol. Biochem., 56 (3) 283-294, 2000

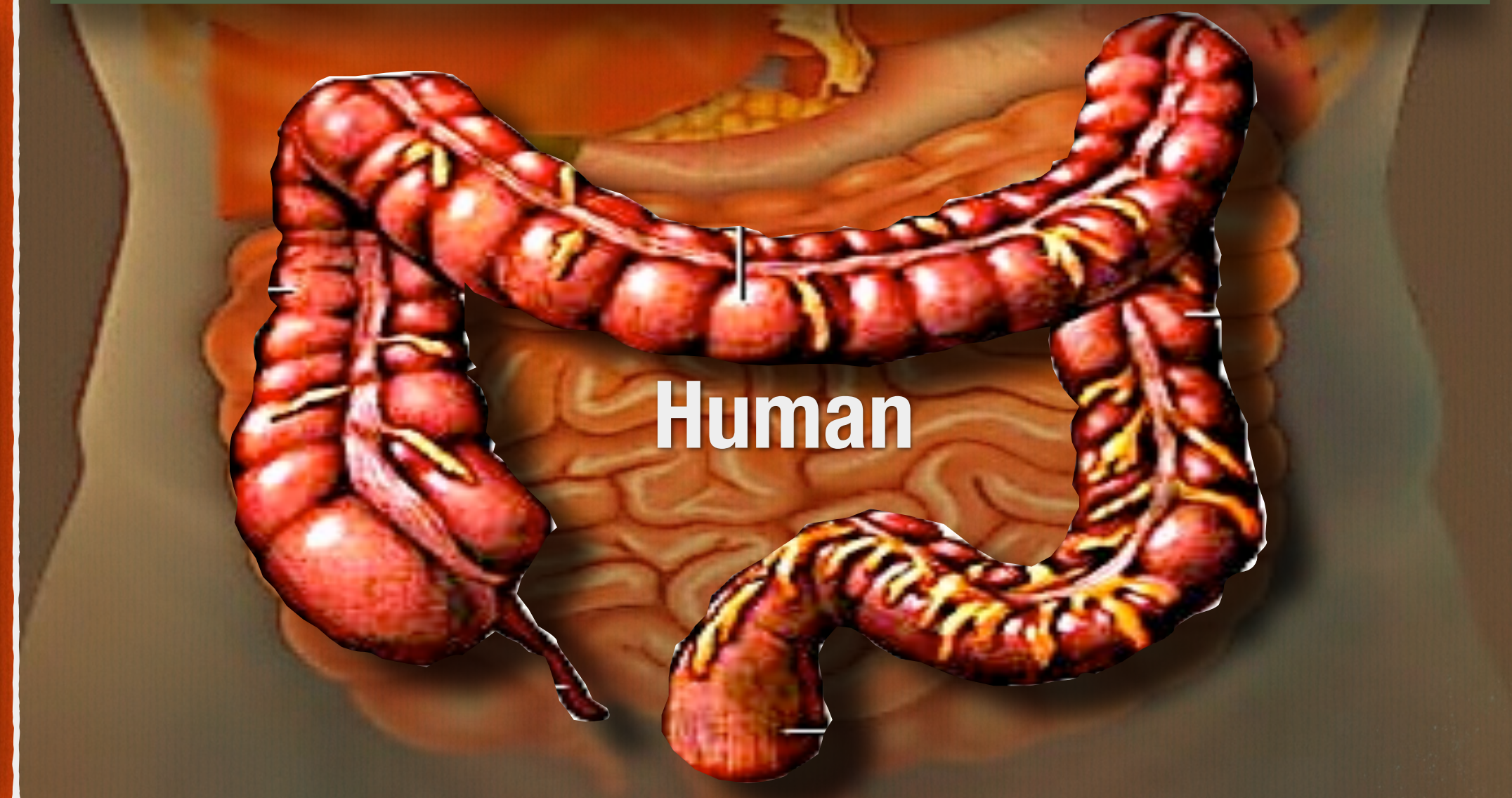
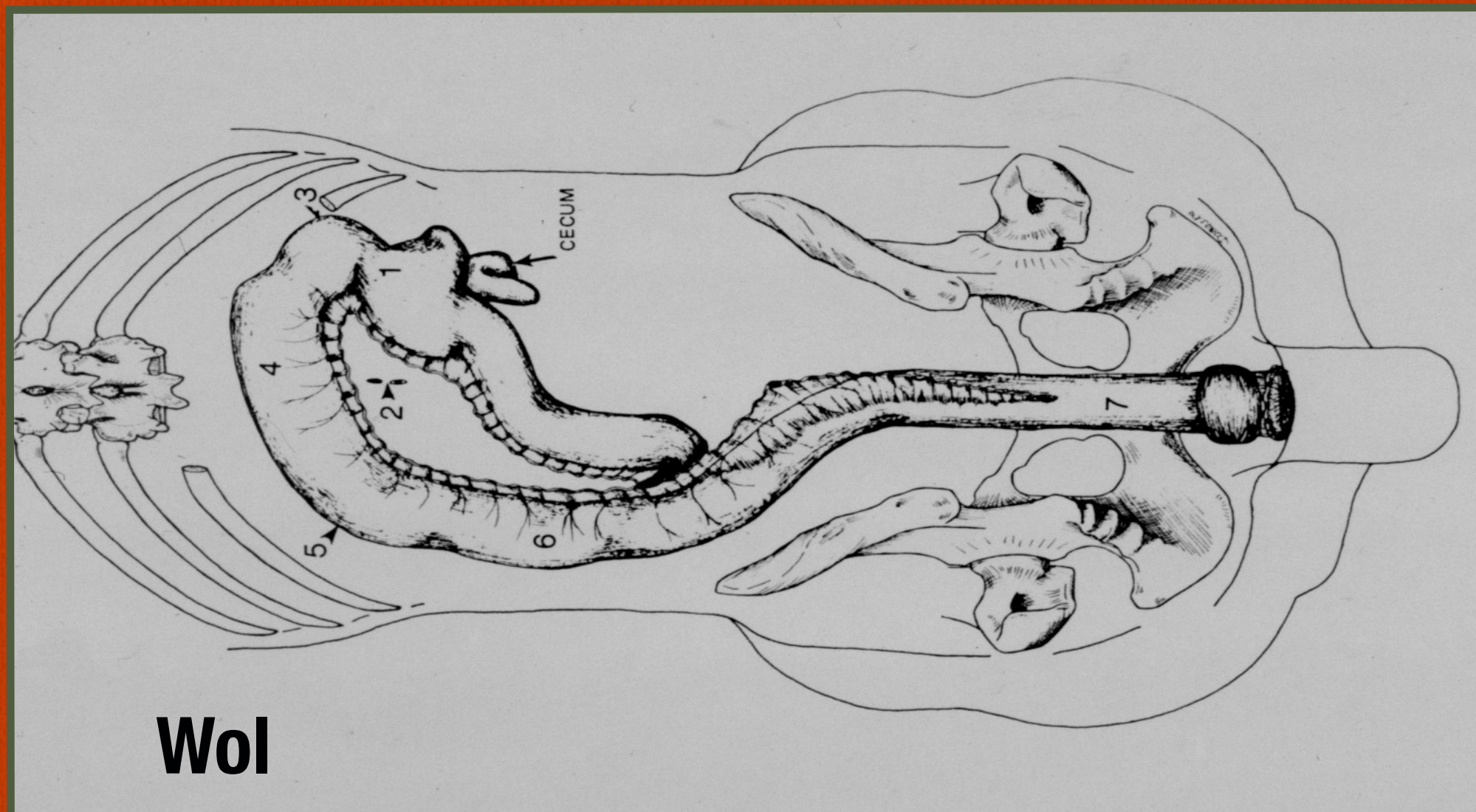
Anti-cancer function of phytic acid

International J of Food Science & Technology 2002, 37,



COLON CANCER

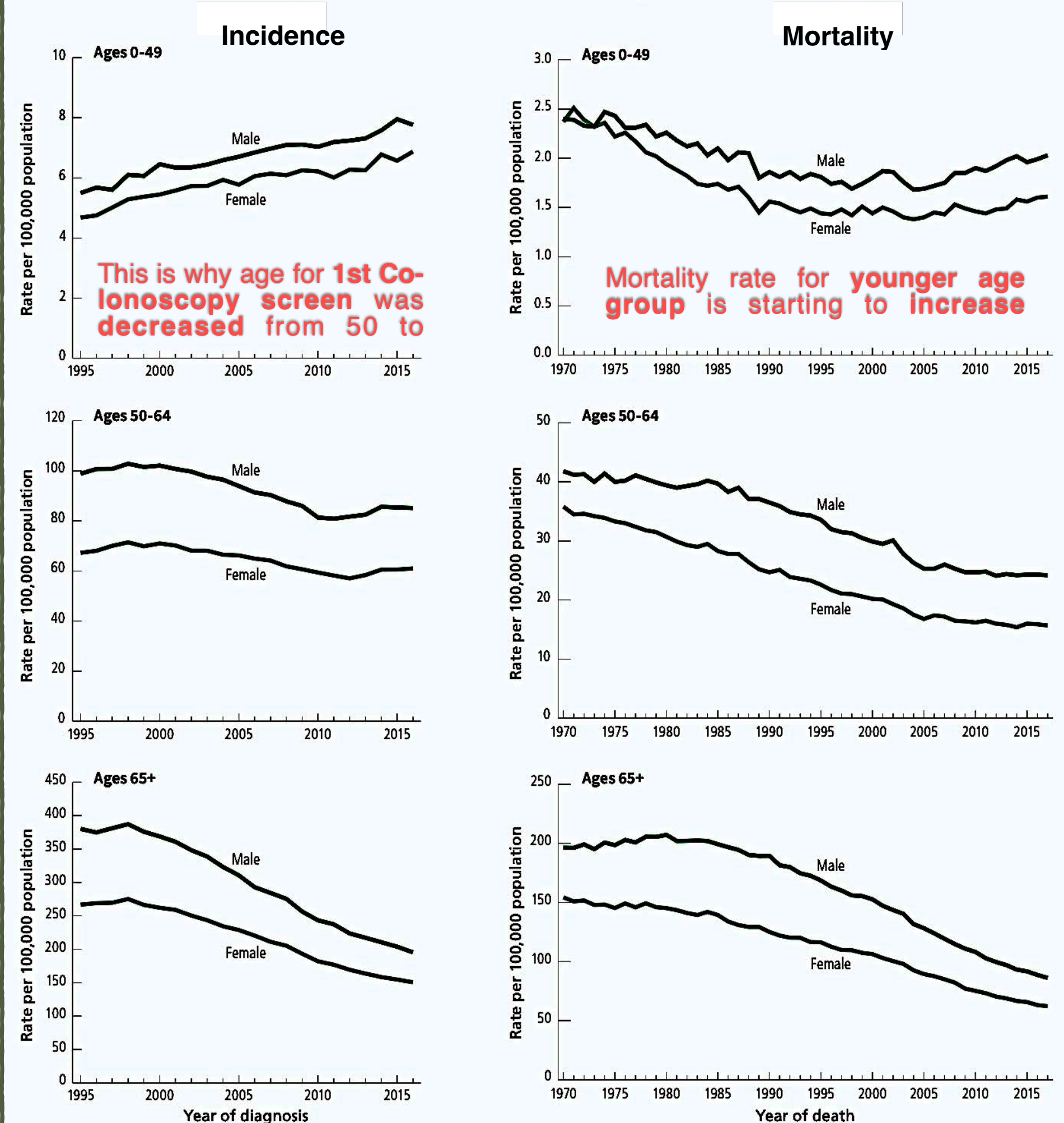
Brief Anatomy Review!



Differences in Colon Cancer Incidence & Risk by Ethnic Group

- ➔ Among broadly defined racial and ethnic groups, CRC Incidence and Mortality are highest in Black Americans.
- ➔ American Indians and Alaska Natives (AI/ANs) are next highest.
- ➔ NHW's have the third highest incidence rate for Americans.
- ➔ CRC rates are lowest in Asians/ Pacific Islanders (A/PI).
- ➔ During 2012-2016, CRC incidence rates in Blacks were about 20% higher than those in NHW's and 50% higher than those in A/PIs.
- ➔ The disparity for Mortality is twice that for Incidence; CRC death rates in Blacks are almost 40% higher than those in NHW's and double those in A/PI's.
- ➔ Incidence increasing in 0-49 age range, but *decreasing* for others!

Figure 7. Trends in Colorectal Cancer Incidence (1995-2016) and Mortality (1970-2017) Rates by Age and Sex, US



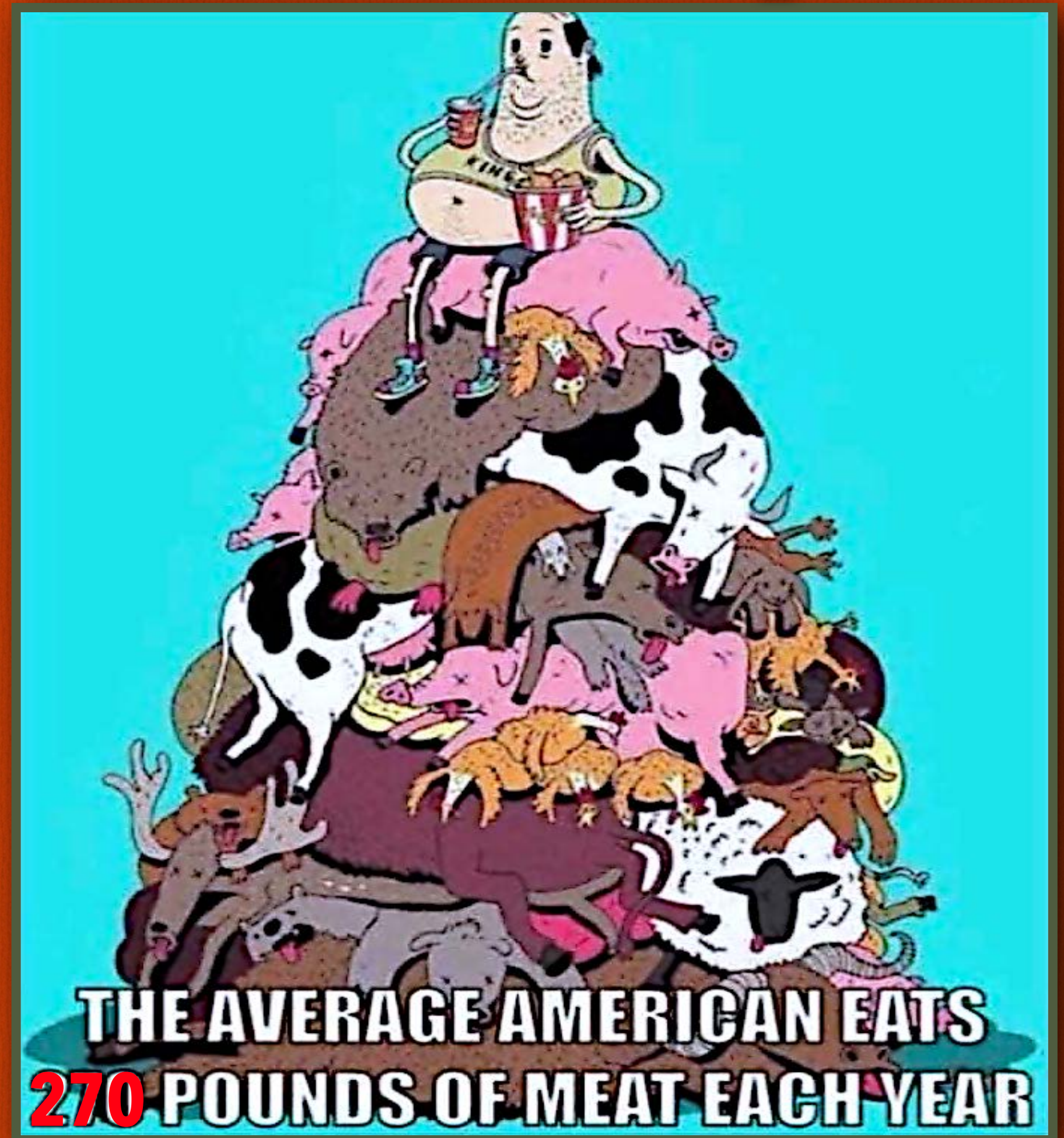
Rates are age adjusted to the 2000 US standard population. Incidence rates are adjusted for reporting delays and exclude appendix.
Source: Incidence – NAACCR, 2019. Mortality – NCHS, 2019.

©2020, American Cancer Society, Inc., Surveillance Research

U.S. per capita Meat/Cheese Consumption

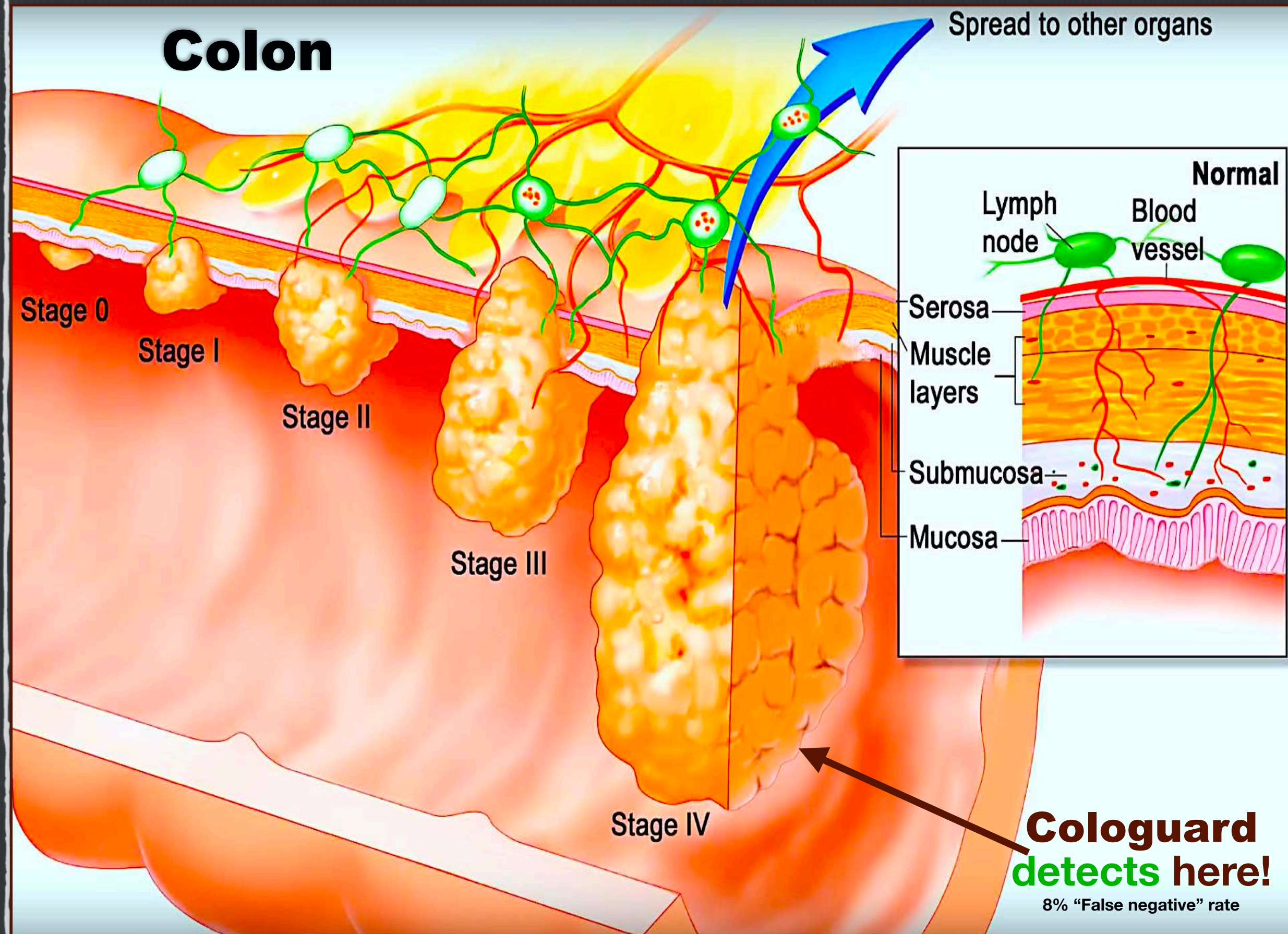
Current Meat Consumption in U.S.

- From 2015 to 2019, per capita meat consumption (excluding aquatic animals) *increased* each year, reaching **264 pounds per person** in 2020.*
- 270 lbs./per person may sound like an overestimate, but it *actually averages out to only 4oz. animal tissue per meal/day*. Many people eat significantly *more* meat than that at each meal!
- In 2019 the average consumer in the U.S. ate **40.4 pounds of cheese annually**. Over the past 10 years, U.S. per capita cheese consumption increased by over 5 lbs.!
- Consuming large amounts of animal protein, saturated fats and dairy hormones have been major contributors to the **increases in CRC rates over*the last 50 years!**



Colon Cancer Development & Spread

HI=Heme Iron; HGM=Heat Generated Mutagens; AP= Animal Protein; Inflam=Inflammation; DF=Dietary Fat



- **Stage 0:** Initial damage is done by HI; HGM's; ETOH; AP; putrefaction; DF; toxins; hormones; long transit times.
- **Stages 1,2:** growth fueled by AP; HI; inflam; toxins; hormones; TMAO; DF.
- **Stage 3:** growth and **tissue invasion** are fueled by inflam, toxins; AP, DF; hormones; and **limited fruits/veges/ grains and legumes**.
- **Stage 4:** *metastasis* is fueled by AP, inflam; toxins; DF; hormones.
- **Phytates, Lignins, Lectins, Anti-oxidants; Phytochemicals; Sterols and other plant compounds suppress cancer transformation & spread at ALL stages!**

“Inadequate consumption of prebiotics—the fiber and resistant starch concentrated in unprocessed plant foods—can cause a disease-promoting imbalance in our gut microbiome.”



nutritionfacts.org/video/gut-dysbiosis-starving-microbial-self

N NutritionFacts.org

Dietary Fiber

- Diets high in animal/dairy protein and/or animal fats can cause unhealthy changes in the gut microbiome that can *elevate risk for cancers* and other metabolic diseases.
- In low fiber diets, *CHO depletion in the distal colon* results in increased production of toxins like NH₃, toxic amines, phe-nols & sulfides; and other putrefactive compounds.
- HS impairs cytochrome oxidase, DNA methylation and tissue metabolism.
- Western (SAD) diets can deliver up to 12g of animal protein residues/day to the colon which produces 3.5 - 4g of NH₃/day. That is equal to 60 to 70kg of Ammonia over a 50 year span.
- Ammonia concentrations found in the lower bowel of meat eaters *destroys cells, alters DNA/RNA synthesis, increases virus infections and promotes growth of cancer cells.*
- Dysbiotic bacteria can “re-toxify” carcinogens by *reversing the detoxification actions* of Broccoli-stimulated detox enzymes.

Anti-Cancer Effect of Fibers

There Are Two “**Types**” — but
Many *Varieties* of Fiber

Water Soluble Fibers

Fiber Consumption and all-cause, cardiovascular, and cancer mortalities: A systematic review and meta-analysis of cohort studies. *Lihua Liu et al., Mol. Nutr. Food Res.* 2015, 59, 139-146. DOI 10.1002/mnfr.201400449

Fiber Consumption and Breast Cancer Incidence: A Systematic Review & Meta-Analysis of Prospective Studies *Farvid Maryam, et al., Cancer Month* 0, 2020; DOI: 10.1002/CNCR.32816

Gums	Pectins	Mechanism
Oatmeal Oat Products Dried Beans Legumes Lentils Peas Okra Squash	Squash Apples Citrus fruits Cauliflower Green beans Cabbage Dried peas Carrots Strawberries Potatoes	Decreases blood cholesterol by binding with cholesterol-containing bile acids in the gut, preventing re-absorption. Also, delays glucose absorption and gastric emptying, thus facilitating better control of blood sugar level. Protective against: Heart Disease Diabetes IBS/Colitis Cancers



Benefits of PBD's for Cancer



Benefits of Plant-based Diets

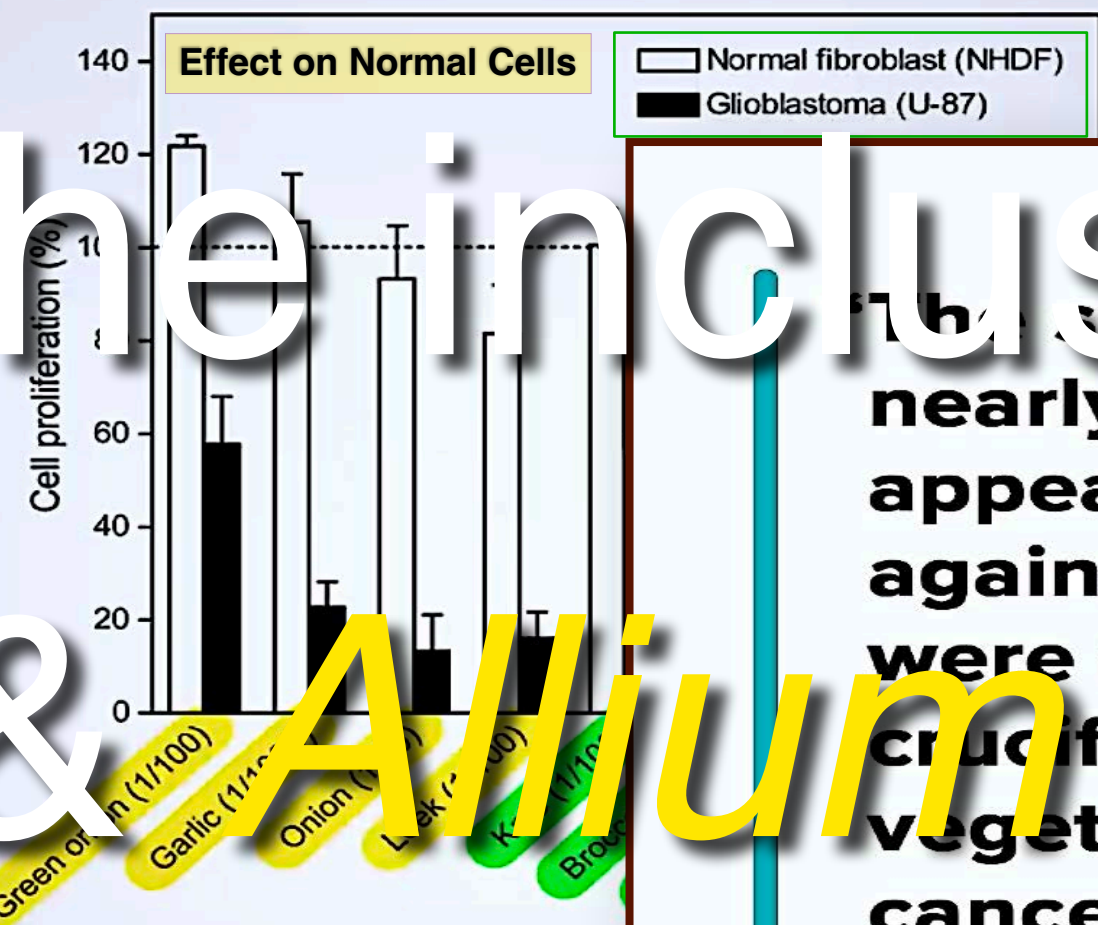
- **Cruciferous plants**
 - Detoxifying enzymes
 - Anti-cancer phytochemicals
- **Whole/Intact Grains**
- **Beans/Legumes**
 - Phytates/Chelation
- **Fruits**
- **Colorful Vegetables**
- **Fibers**
- **Mushrooms** (Cultivated & Wild) - *Beta-glucans/polysaccharides*, & *Pyrogallol* and other compounds have **anti-cancer** and **immune system-boosting** activity
- **Herbs & Medicinal Plants** (Garlic/Onions; Turmeric; Wheat grass; Ginger, etc.)
- **Anticancer compounds in Plants (partial list)**
 - Sulforaphane; Indole-3-Carbinol; Isothiocyanates; Limonoids; Phytosterols; Polyphenols; Flavonoids; Tannins; Curcumin; Resveratrol; Carotenoids
- **Decreased incidence of Cancer in plant-based populations**
 - **Adventist Health Study 1 & 2** show ***decreased incidence*** of cancers in **plant-based participants**; Multiple other studies show same findings
- **Increased "Time to Recurrence" & *increased* "Disease-free Survival"**
 - Multiple studies have shown that those **patients diagnosed with cancer** who **change to a *more plant-based diet*** **increase** their chances of **cure** or of long-term survival and time to recurrence



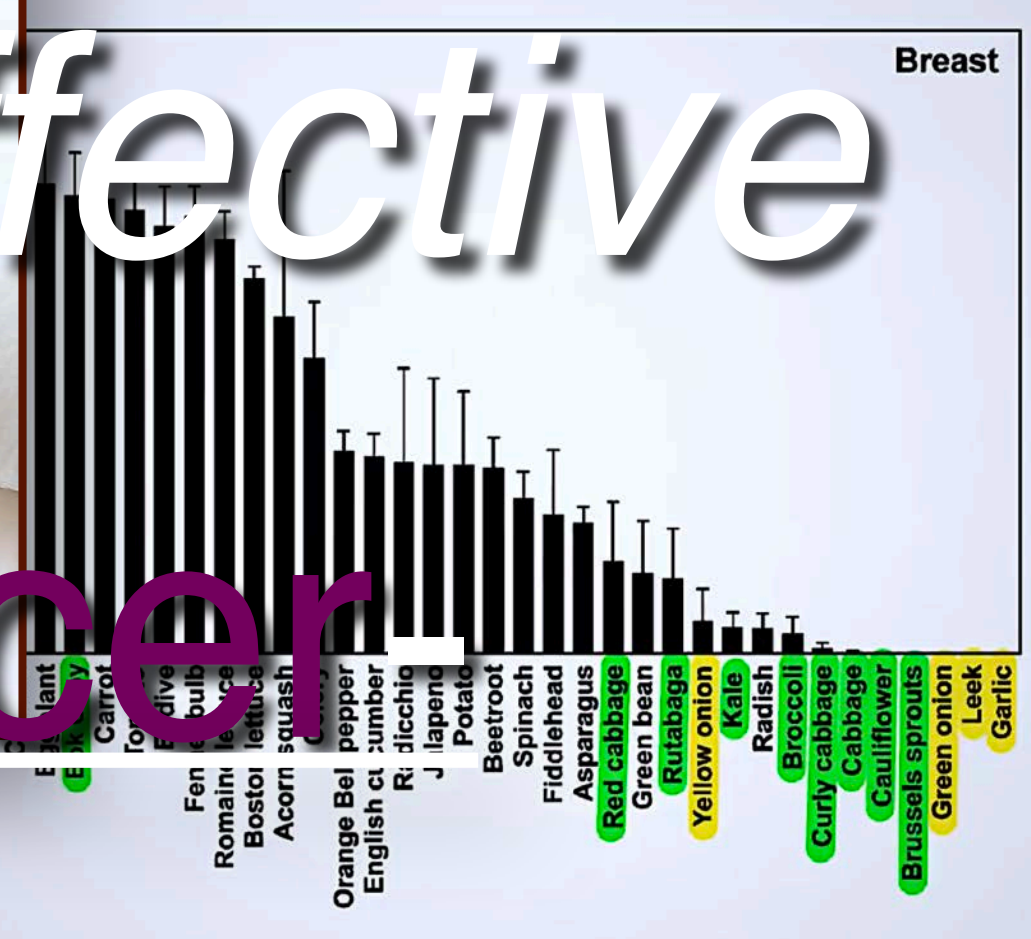
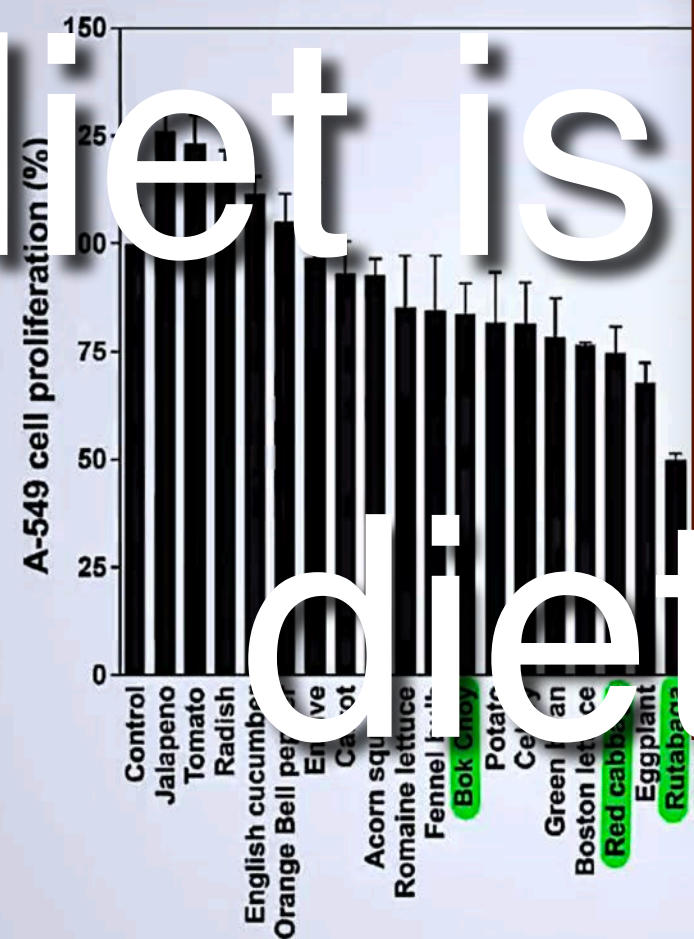
Anti-Cancer Effects of Cruciferous & Allium Vegetables

The inclusion of *Cruciferous* & *Allium* vegetables in the

diet is *Essential* for effective dietary-based *Cancer*



"The same garlic dose that blocked nearly 80% of cancer cell proliferation appeared to have no effect whatsoever against normal cells, and similar results were found for the other allium and cruciferous vegetables. In other words, vegetables are selective; they destroy cancer cells but leave normal cells alone."



Why are
Plant Foods are So
Powerful &
Protective Against
Cancers

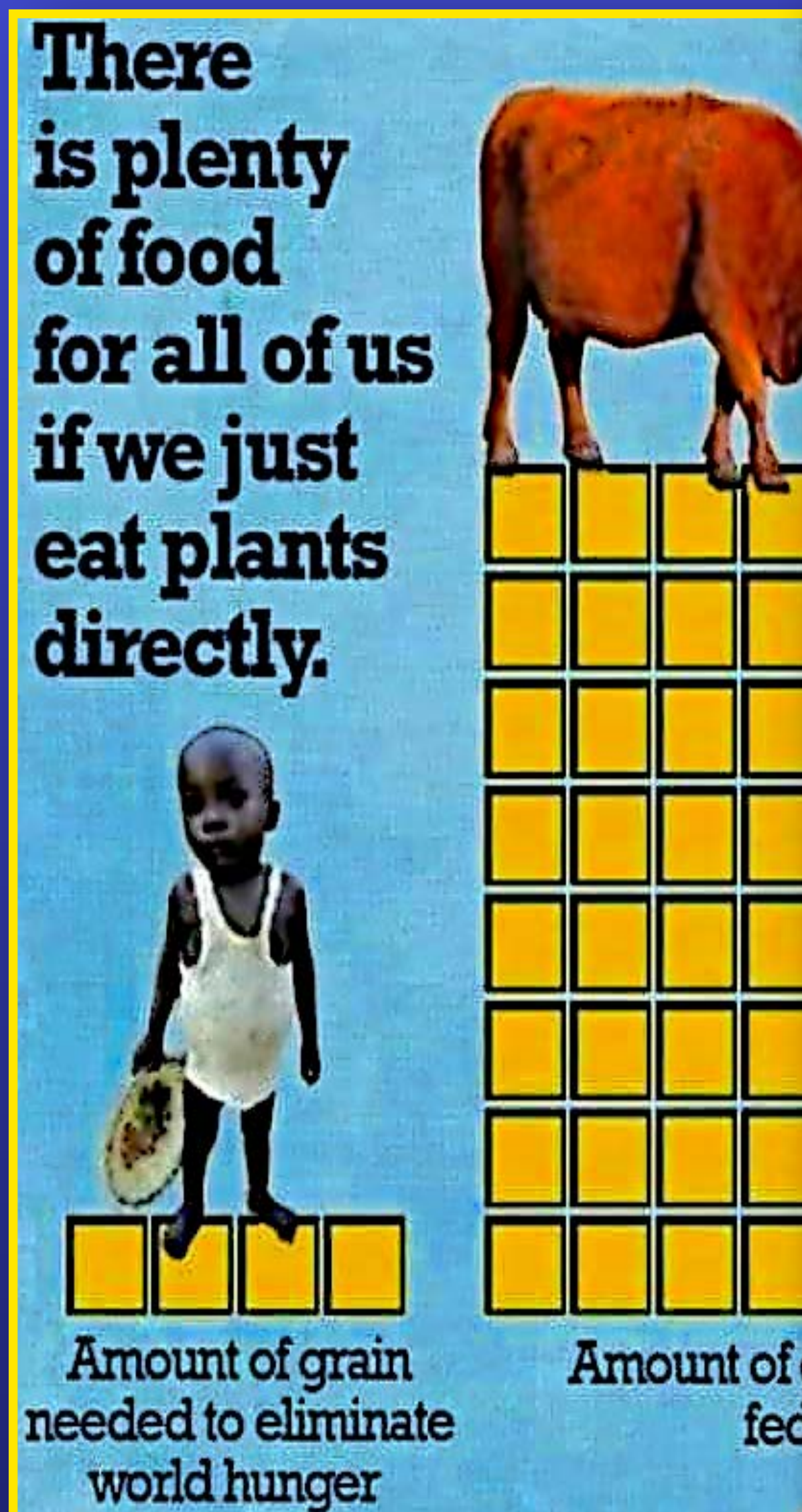
Because
Plant-based Diets
Address the
Actual Causes of
Cancers!

Protective Factors

- ✓ Fiber
- ✓ Phytochemicals
- ✓ Plant enzymes
- ✓ Antioxidants
- ✓ Anti-inflammatory compounds
- ✓ Plant sterols and stanols
- ✓ Pre- and probiotics
- ✓ Macronutrients from healthy sources
- ✓ Micronutrients from healthy sources



Transforming “Abundance” into “Scarcity”!



or World Hunger

ls **consume > 6-20 times** as much food as would be consumed by humans.

Production **requires 8 times more energy** than production of plant-based foods.

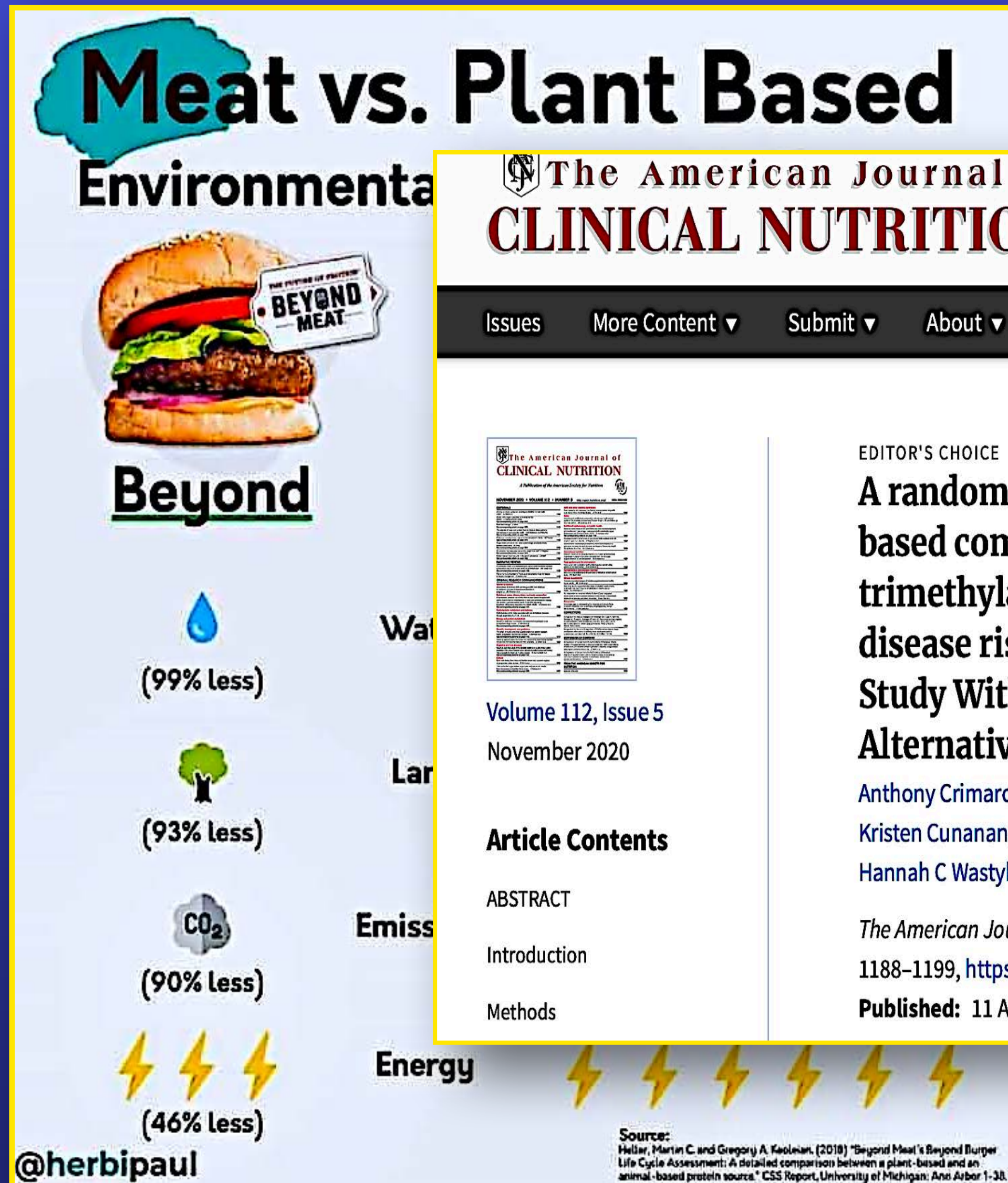
Producing 1 kg of beef requires **100K liters** of water, while chickens require **3.5K** liters.

Soybeans only use **2K** liters/kg; Wheat = **1.9K liters/Kg**; and Potatoes = **500** liters/kg.

In to animals we **create** more greenhouse gas, and **waste** more food!



How Do Plant-based *Meat Analogues* Compare?



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EDITOR'S CHOICE

A randomized crossover trial on the effect of plant-based compared with animal-based meat on trimethylamine-N-oxide and cardiovascular disease risk factors in generally healthy adults: Study With Appetizing Plantfood—Meat Eating Alternative Trial (SWAP-MEAT) ^{FREE}

Anthony Crimarco, Sparkle Springfield, Christina Petlura, Taylor Streaty, Kristen Cunanan, Justin Lee, Priya Fielding-Singh, Matthew M Carter, Madeline A Topf, Hannah C Wastyk ... Show more

The American Journal of Clinical Nutrition, Volume 112, Issue 5, November 2020, Pages 1188–1199, <https://doi.org/10.1093/ajcn/nqaa203>

Published: 11 August 2020 Article history ▼

Article Contents

ABSTRACT

Introduction

Methods

Health Care Research

Stanford

TOPICS MULTIMEDIA

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cardiovascular risk study finds

of plant-based meat alternatives d with a diet that instead ord Medicine scientists found.

y Design

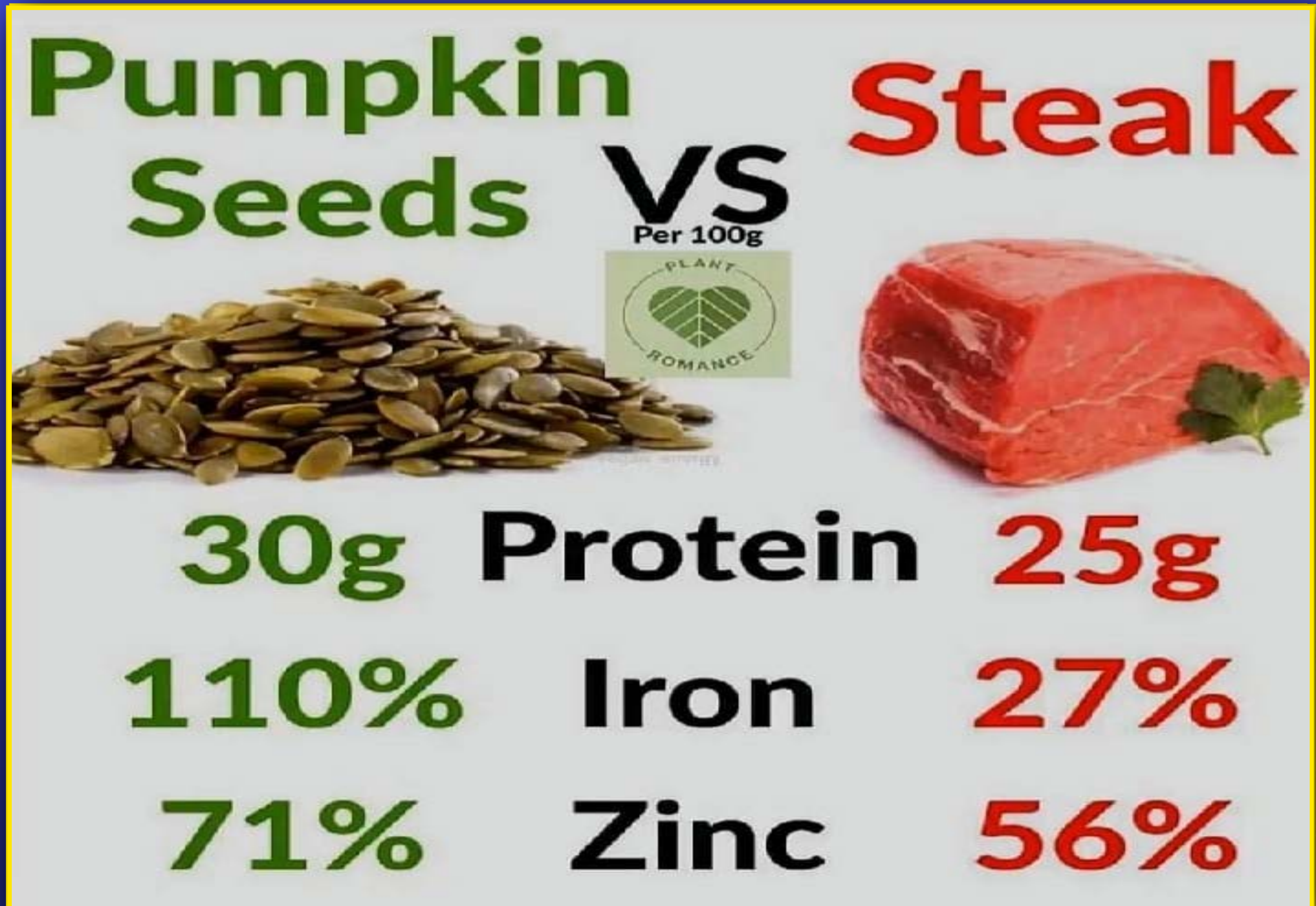
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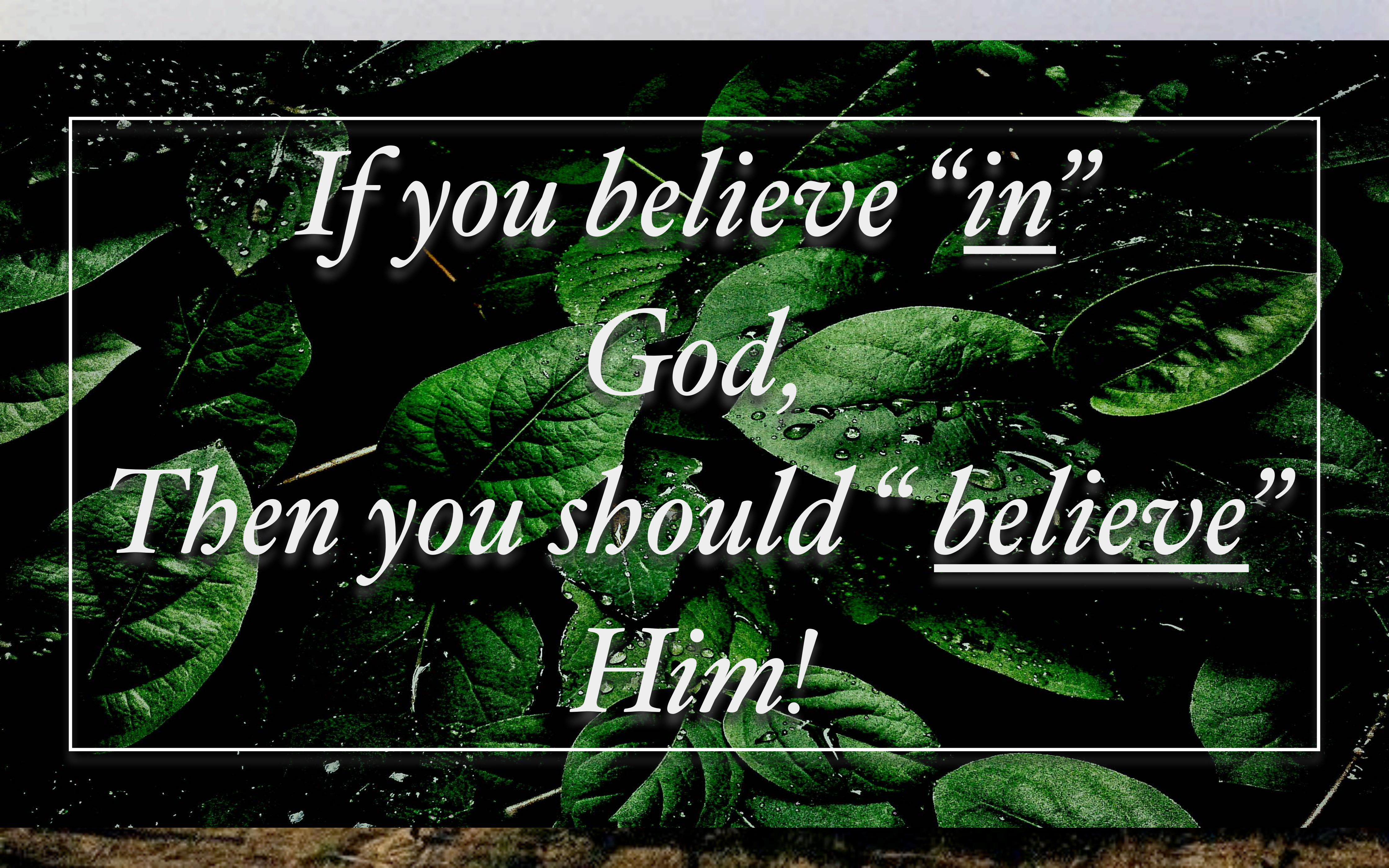
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wered levels of

- Those eating **plant-based meats** also **lost weight** during the study

What are “Healthy” Sources of Protein?





If you believe “in”

God,

Then you should “believe”

Him!

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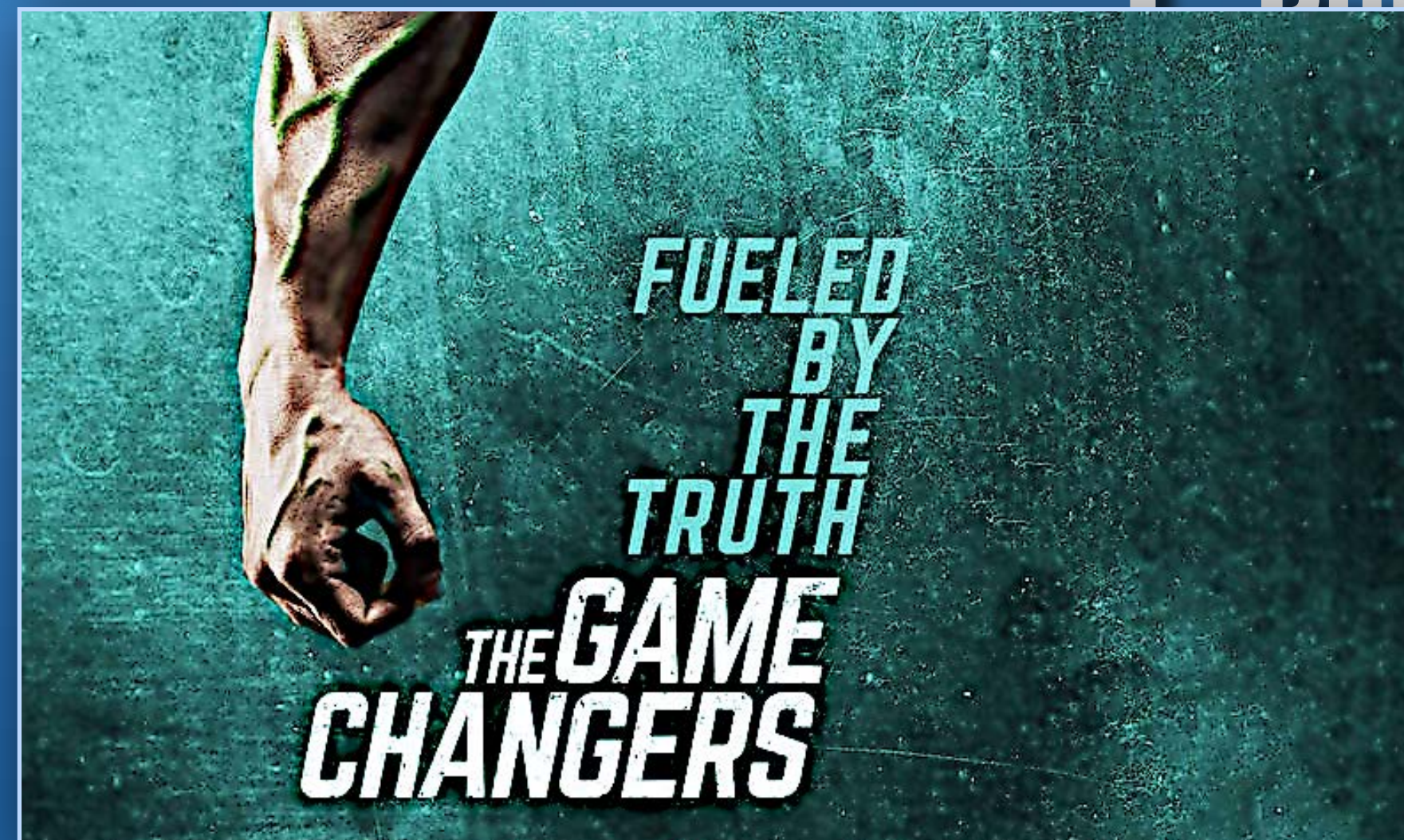
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HEALTH



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1:48:03

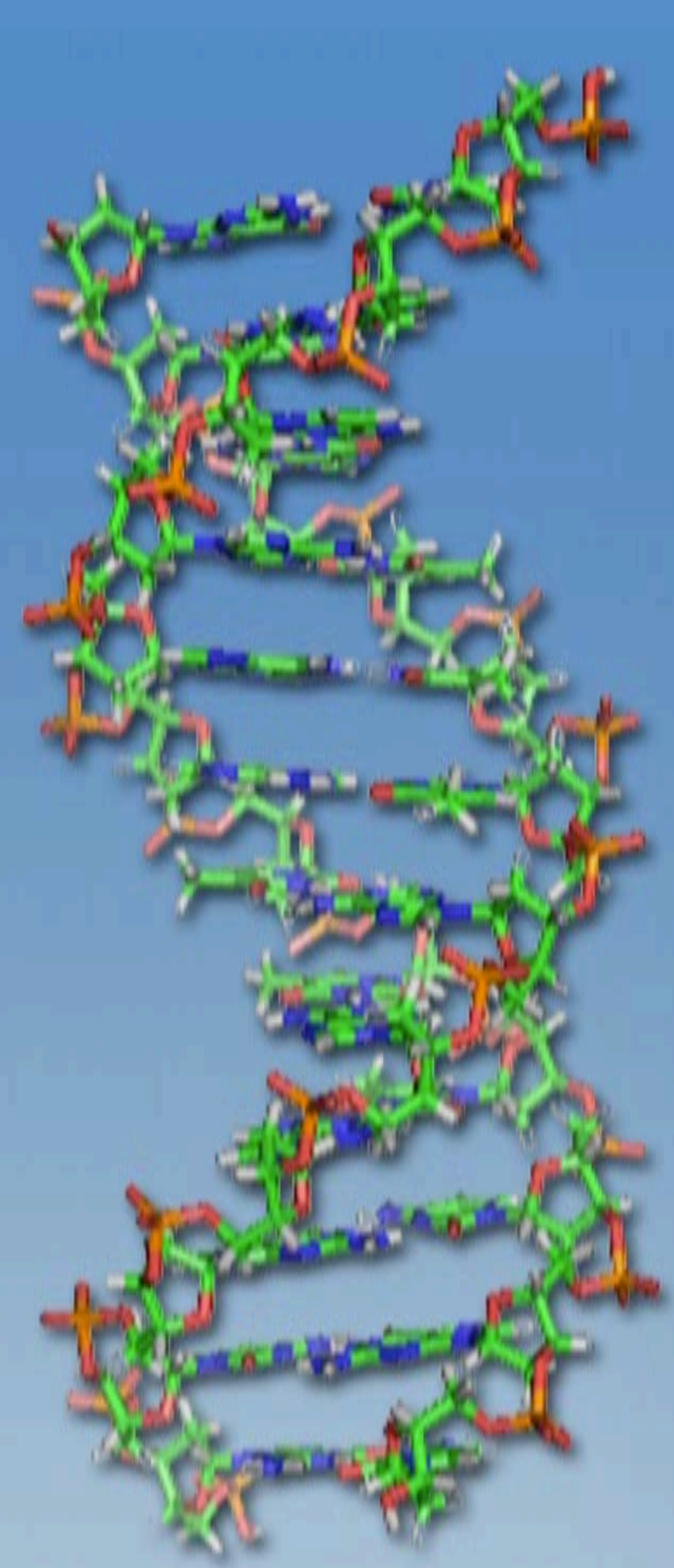
Eating You Alive (1080p) FULL MOVIE - Health & Wellness, Documentary

235K views • 1 month ago



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