

# LIFESTYLE MEDICINE

## TRANSFORMING PRIMARY CARE

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DiplABLM



# DISCLOSURES

NOTHING TO DISCLOSE



# LEARNING OBJECTIVES

- ▶ 1. DEFINE THE 6 PILLARS OF LIFESTYLE MEDICINE
- ▶ 2. LEARN ABOUT THE BENEFITS OF PLANT-BASED NUTRITION
- ▶ 3. ILLUSTRATE THE POWER OF LIFESTYLE MEDICINE AS A THERAPEUTIC APPROACH IN TREATING CHRONIC DISEASE

# Lifestyle Medicine Defined

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Lifestyle Medicine is the use of a whole food, plant-predominant dietary lifestyle, regular physical activity, restorative sleep, stress management, avoidance of risky substances and positive social connection as a primary therapeutic modality for treatment and reversal of chronic disease.





# Simple, Powerful Therapy

- **NUTRITION:** Choose predominantly whole, plant-based foods that are fiber-filled, nutrient dense, health-promoting and disease-fighting
- **SLEEP:** Lack of, or poor-quality sleep can lead to a strained immune system. Identify and alter environmental habits that may hinder healthy sleep
- **EXERCISE:** Regular and consistent physical activity is an essential piece of an optimal health equation
- **SUBSTANCE USE:** The well-documented dangers of any addictive substance use can increase risk for many cancers and heart disease
- **STRESS MANAGEMENT:** Identify both positive and negative stress responses with coping mechanisms and reduction techniques for improved wellbeing
- **SOCIAL CONNECTION:** Being connected to others is essential to emotional resiliency and overall health



# Epidemic

- Healthcare in US costs \$3.3 trillion annually
- 90% of these costs are attributed to the treatment of chronic conditions
- Lifestyle Medicine addresses the **root cause** to both improve health & reduce costs

## Chronic Disease in U.S.

### Problem



6 in 10 Americans have a **Chronic Disease**



4 in 10 Americans have **2 or more Chronic Diseases**



38% of Americans will be diagnosed with **Cancer** during their lifetimes



**Chronic diseases** - heart disease, cancer, diabetes, stroke, & Alzheimer's are the leading causes of disability and death



Half of all Americans have **Cardiovascular Disease**



1 in 3 Americans have Pre-Diabetes

**88 Million**

Americans have Pre-Diabetes | 90% do NOT know it

**34 Million** people live with Type 2 Diabetes

**72% of Americans with Overweight or Obesity**

36 million men and 29 million women with overweight  
32 million men and 36 million women with obesity





# Less Than 3 Percent of Americans Live a 'Healthy Lifestyle'

*Statistics from a Mayo Clinic study*

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Mayo Clinic researchers looked at data from a representative sample of 4,745 people who participated in the National Health and Nutrition Examination Survey.

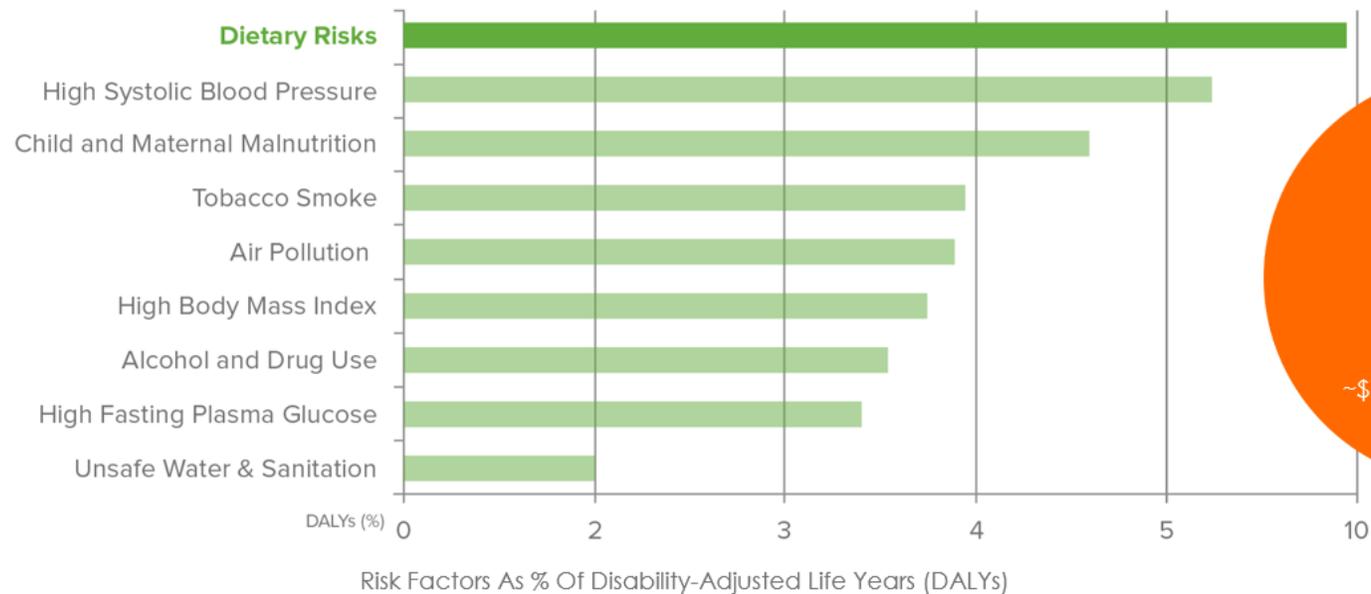
They found that less than 3 percent of Americans live a "Healthy Lifestyle" defined by four qualifications:

1. Moderate or vigorous exercise for at least 150 minutes a week
2. A diet score in the top 40 percent on the Healthy Eating Index
3. A body fat percentage under 20 percent (for men) or 30 percent (for women)
4. Not smoking



# Diet is the leading cause of chronic disease and disability

- *“The most important dietary risks in the United States are diets low in fruits, low in nuts and seeds, high in sodium, high in processed meats, low in vegetables, and high in trans fats”<sup>1</sup>*
  - These risks are the leading cause of chronic disease, not other common culprits



**86%**  
Health Spending:  
People with 1+  
chronic disease  
~\$7,500/yr/patient for  
diabetes alone

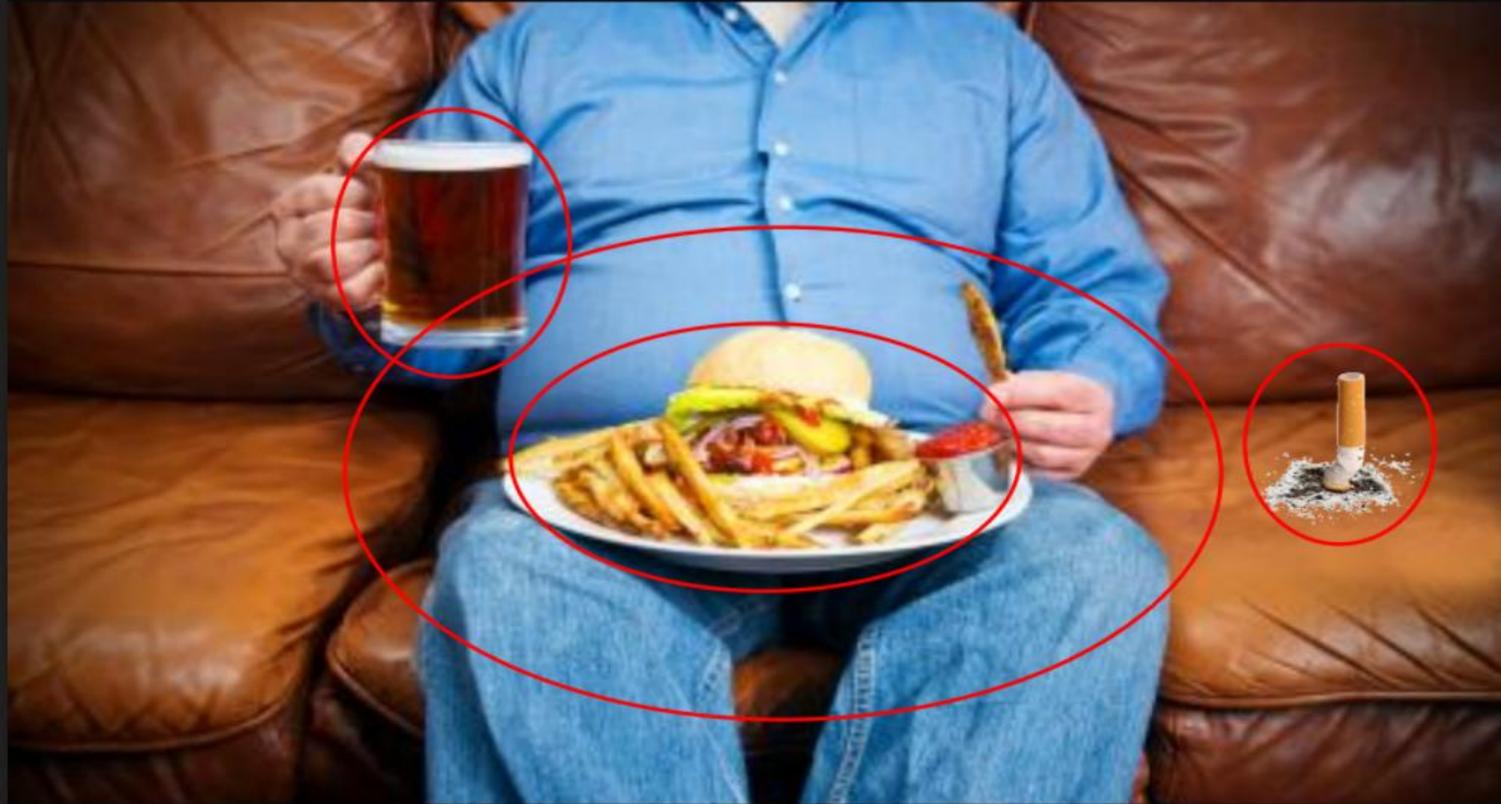


## What We Know



- 70% of all deaths are due to chronic diseases of our own making.
- An estimated 90% of type 2 diabetes, 80-90% of heart disease and 40-70% of cancers are considered entirely preventable.

# The Big 4 Lifestyle Culprits



WHO. Global status report on noncommunicable diseases. 2011.

## Unhealthy Diet Defined

An unhealthy diet is one that is based on processed foods with added fat, sugar and salt, and animal products rich in saturated fats. It is low in vegetables, fruits, legumes, whole grains, nuts and other high fiber foods.



# Highest Risk

- ▶ Inactive populations consuming Western-style diets.
- ▶ Highest rates globally – North America, Northern Europe, Australia....

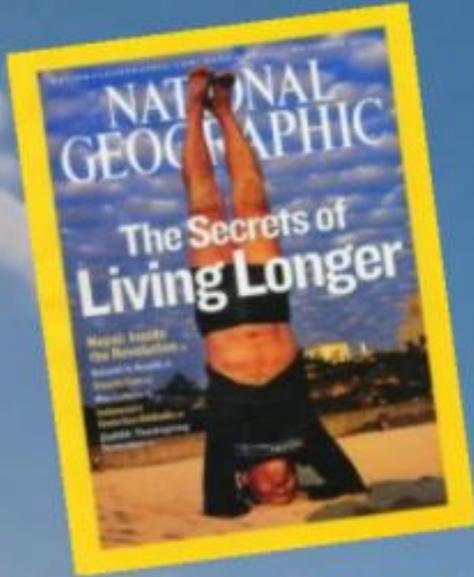


## Lowest Risk

- ▶ Populations who live simply, are physically active, and consume unprocessed, plant-based diets.
- ▶ Lowest rates globally – some parts of rural Asia, South America and ....



# The Blue Zones



# The 5 Blue Zones

- ▶ Okinawa Japan
- ▶ Sardinia Italy
- ▶ Loma Linda  
California
- ▶ Ikaria Greece
- ▶ Nicoya Peninsula -  
Costa Rica



# Common to ALL Blue Zones

- 
- ▶ Family
  - ▶ No smoking
  - ▶ Socially engaged
  - ▶ Constant, moderate physical activity
  - ▶ **Plant-based diet**
  - ▶ **Legumes**

# The Evidence is Building



## A Whole-Food, Plant-Based Diet

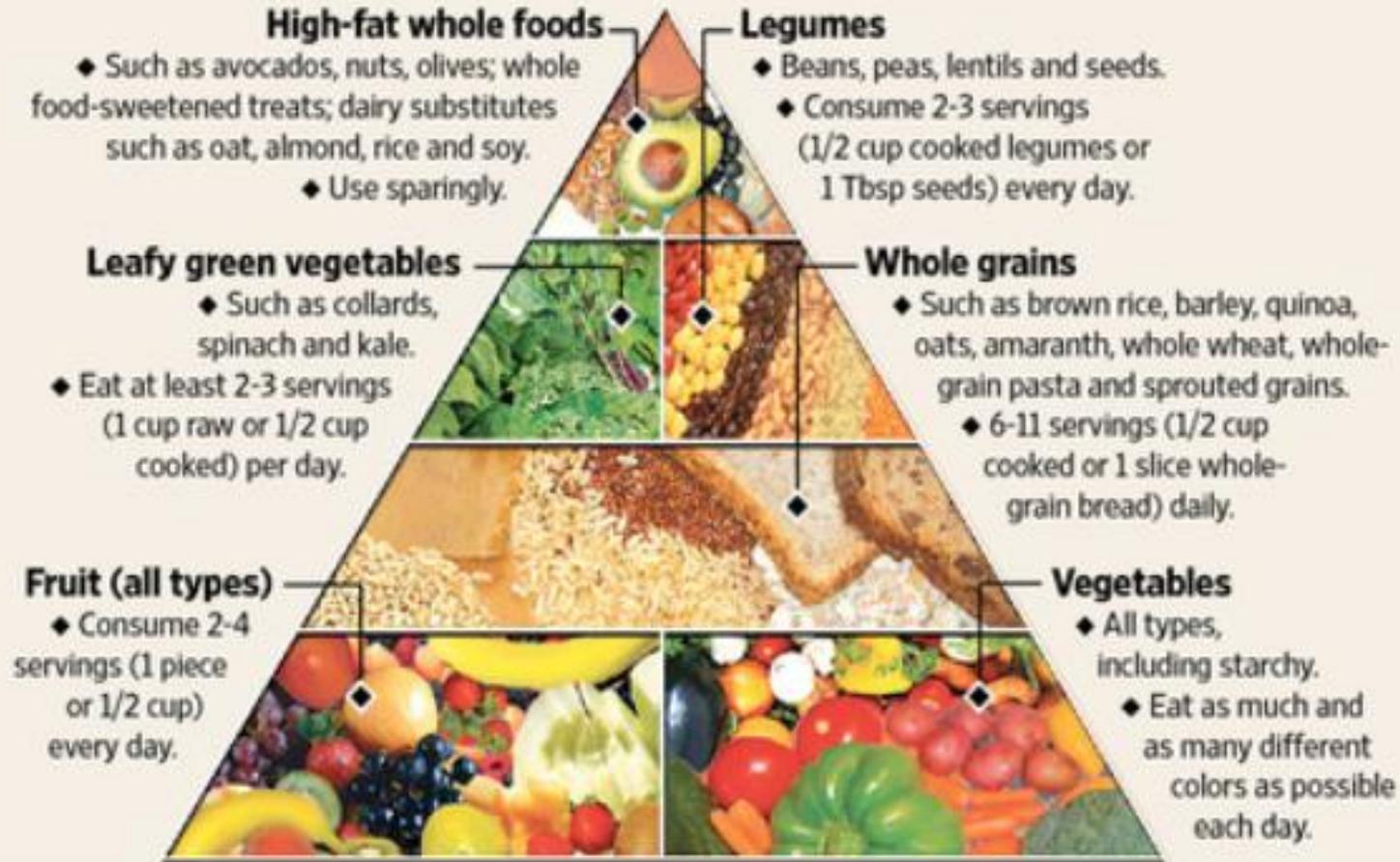


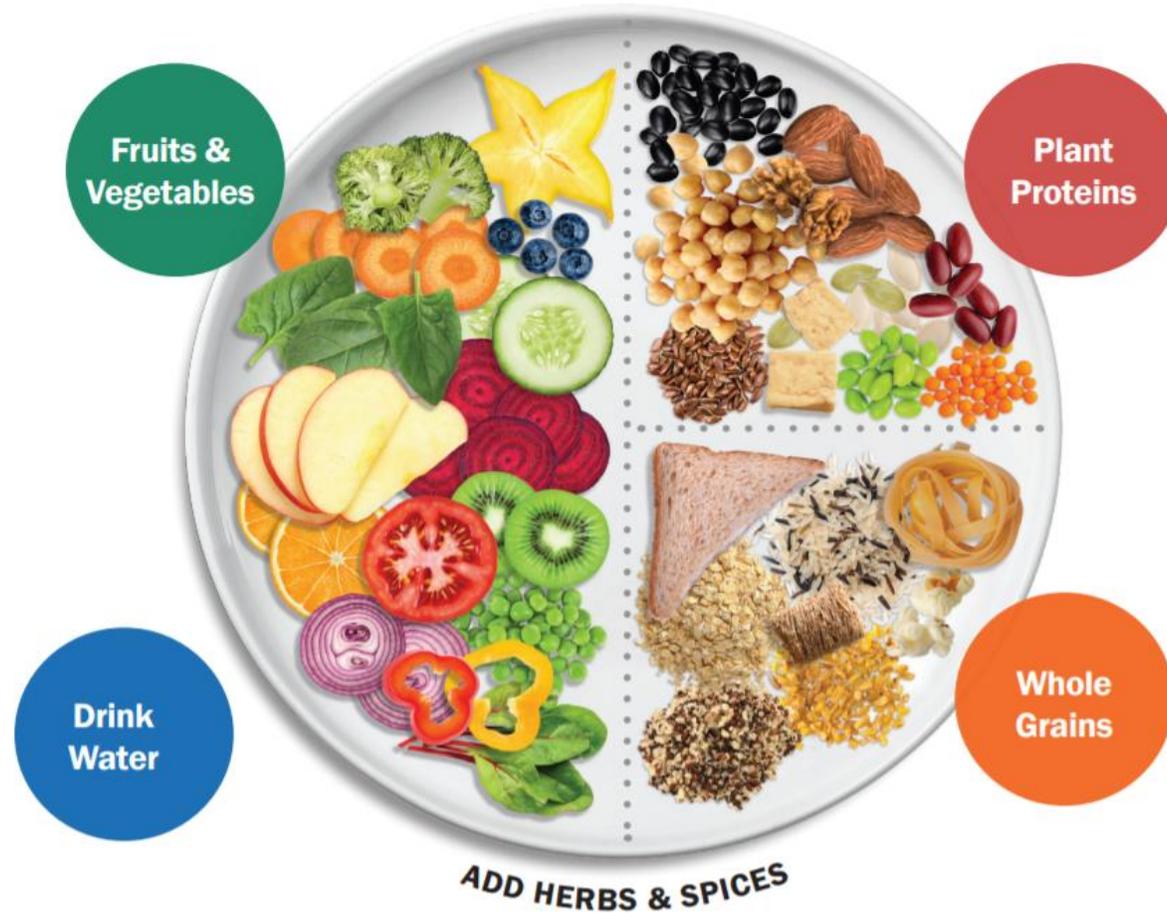
Image: Sherri Nesterowich

The Wall Street Journal

# A WHOLE FOOD, PLANT-BASED PLATE

## *Nutrition Prescription for Treating & Reversing Chronic Disease*

The American College of Lifestyle Medicine Dietary Lifestyle Position Statement for Treatment and Potential Reversal of Disease: ACLM recommends an eating plan based predominantly on a variety of minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds.



# PLANT-BASED vs. VEGAN

	Vegan Diet	Plant-Based Diet	Whole-Food, Plant-Based Diet
 <b>Meat &amp; Poultry</b>	✗	—	—
 <b>Seafood</b>	✗	—	—
 <b>Eggs &amp; Dairy Products</b>	✗	—	—
 <b>Oils</b>	✓	✓	—
 <b>Highly Processed Foods</b> <small>Refined Sweeteners, Bleached Flours, White Rice</small>	✓	✓	—
 <b>Whole Grains</b> <small>Including Whole Grain Flours, Breads, Pastas</small>	✓	✓	✓
 <b>Fruits, Veggies, &amp; Starchy Veggies</b>	✓	✓	✓
 <b>Legumes</b>	✓	✓	✓

# Health Benefits of A Plant-Based Diet



- ✓ Lower BMI, body fat
- ✓ Lower overall mortality
- ✓ Lower mortality from ischemic heart disease
- ✓ Reduced medication requirements
- ✓ Sustainable weight management
- ✓ Reduced incidence of hypertension, hyperlipidemia, and hyperglycemia
- ✓ Reduced risk of certain cancers (especially colorectal cancer)
- ✓ Reduced obesity inflammatory markers
- ✓ Reversal of advanced coronary artery disease
- ✓ Reversal of type 2 diabetes

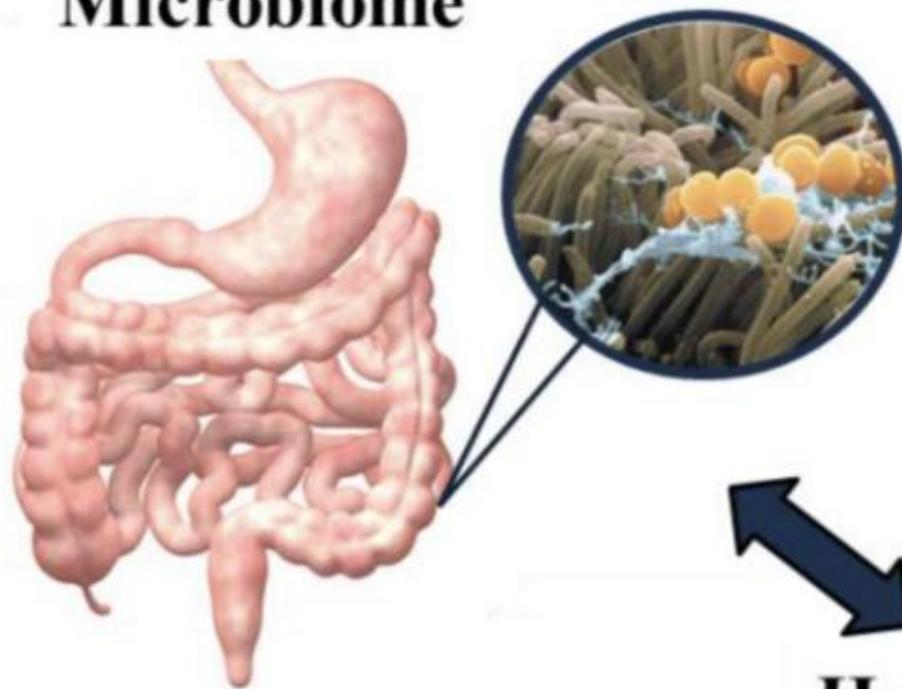
A plant-based diet supports **living** longer not just living **longer**

# Whole food plant-based diet: Benefits

- Complex carbohydrates/starches for fuel, but also contain fiber, vitamins and minerals
- High in fiber (animal foods contain no fiber)
- Naturally lower in fat but contain healthy fats: Mono and PUFA omega-3 and 6's
- Minimizes/eliminates trans fats, saturated fats, and cholesterol
- Ideal levels and type of protein
- Micronutrient rich: vitamins and minerals, antioxidants
- Phytonutrients: Discovered and yet undiscovered nutrients found only in plants, critical for optimal health
- Low calorie density, helping prevent overeating and obesity



# Microbiome



## Nutrition

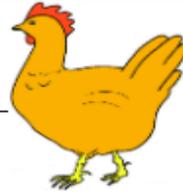


## Health/Disease



## Chicken

Breast, meat only, baked



### Nutrition Facts

Serving Size 100g (½ cup)

Amount per serving

**Calories** 164      **Calories from Fat** 32

% Daily Value

**Total Fat** 4g      5%

Saturated fat 1g      5%

**Cholesterol** 85mg      **28%**

**Sodium** 74 mg      3%

**Total Carbohydrate** 0g      0%

Dietary Fiber 0g      **0%**

**Protein** 31g

## Salmon

Atlantic, baked



### Nutrition Facts

Serving Size 100g (½ cup)

Amount per serving

**Calories** 208      **Calories from Fat** 121

% Daily Value

**Total Fat** 13g      **21%**

Saturated fat 3g      **15%**

**Cholesterol** 55mg      **18%**

**Sodium** 59mg      2%

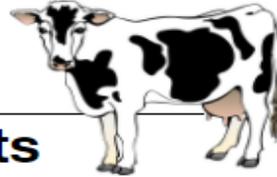
**Total Carbohydrate** 0g      0%

Dietary Fiber 0g      **0%**

**Protein** 20g

## Steak

Trimmed to 1/8" fat, baked



### Nutrition Facts

Serving Size 100g (½ cup)

Amount per serving

**Calories** 189      **Calories from Fat** 100

% Daily Value

**Total Fat** 11g      **17%**

Saturated fat 4g      **22%**

**Cholesterol** 41mg      **14%**

**Sodium** 53mg      2%

**Total Carbohydrate** 0g      0%

Dietary Fiber 0g      **0%**

**Protein** 21g

Nutrition facts from [www.NutritionData.com](http://www.NutritionData.com).

## Beans

Black, boiled



### Nutrition Facts

Serving Size 100g (½ cup)

Amount per serving

**Calories** 132      **Calories from Fat** 5

% Daily Value

**Total Fat** 1g      1%

Saturated fat 0g      1%

**Cholesterol** 0mg      **0%**

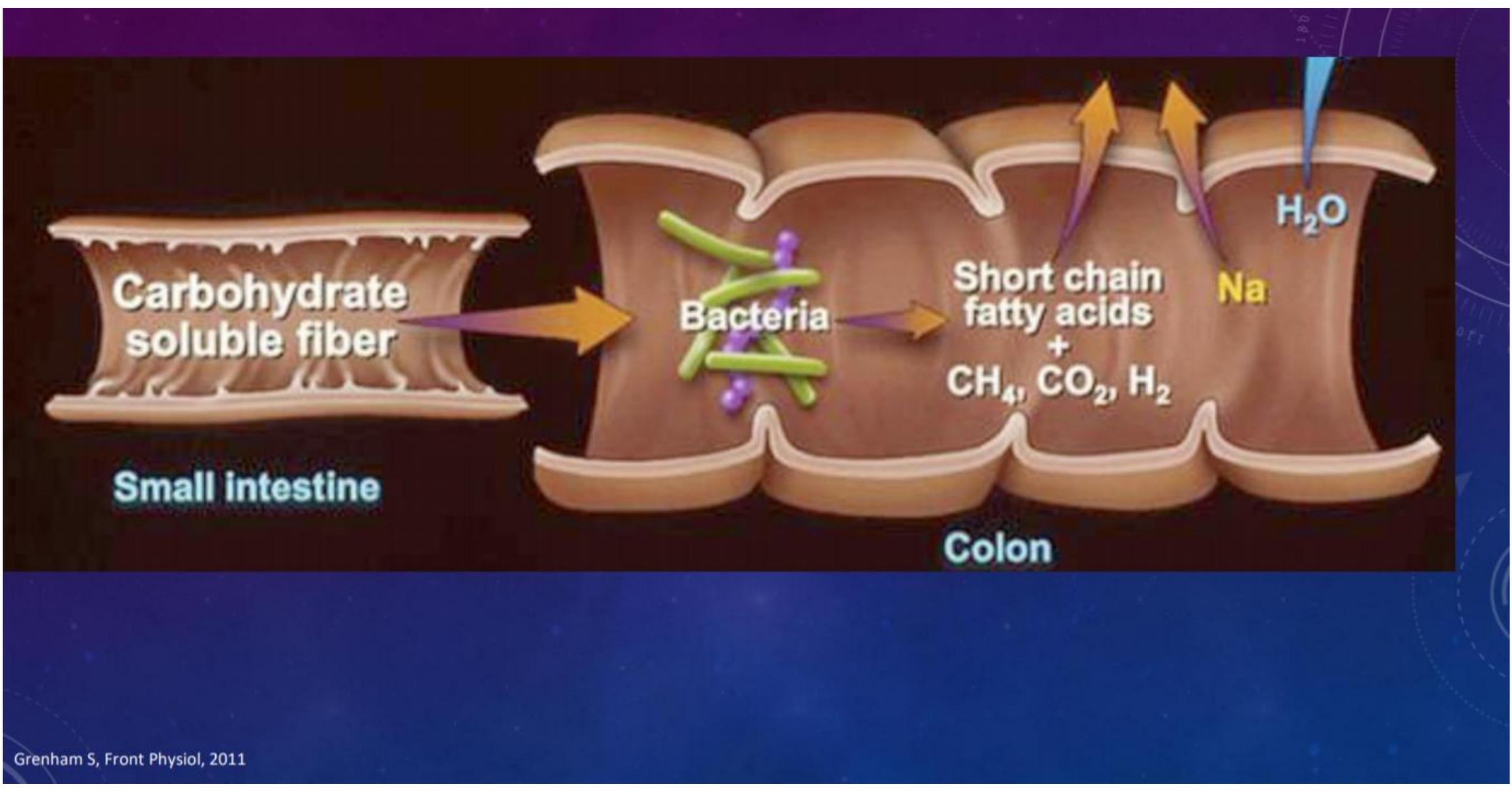
**Sodium** 1mg      0%

**Total Carbohydrate** 24g      8%

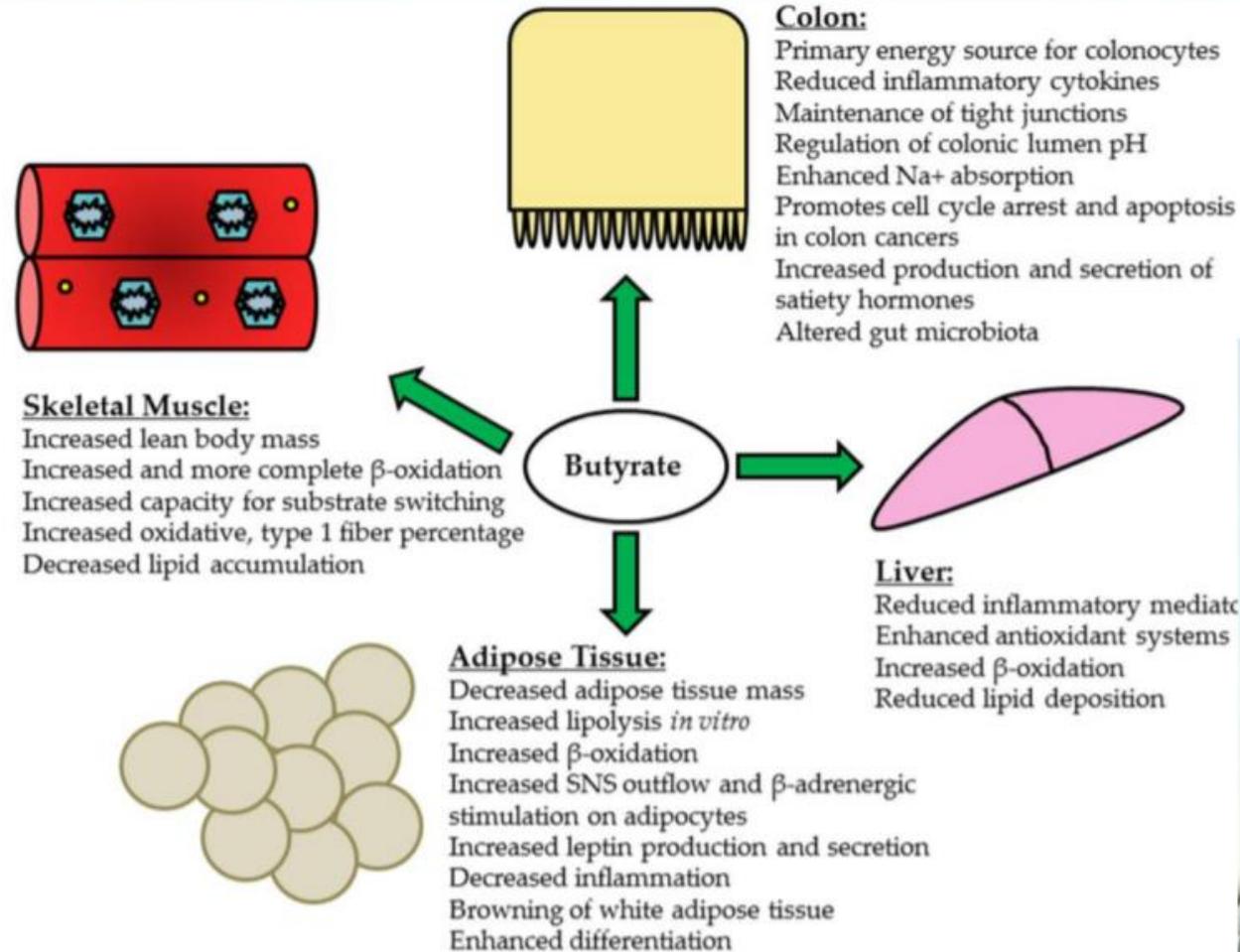
Dietary Fiber 9g      **35%**

**Protein** 9g

**Cholesterol** is only found in **animal-based foods**. These foods are also our main source of **saturated fat**, which our bodies can turn into cholesterol. **Fiber** helps to lower our cholesterol and is only found in **plant-based foods**.



# SHORT CHAIN FATTY ACIDS



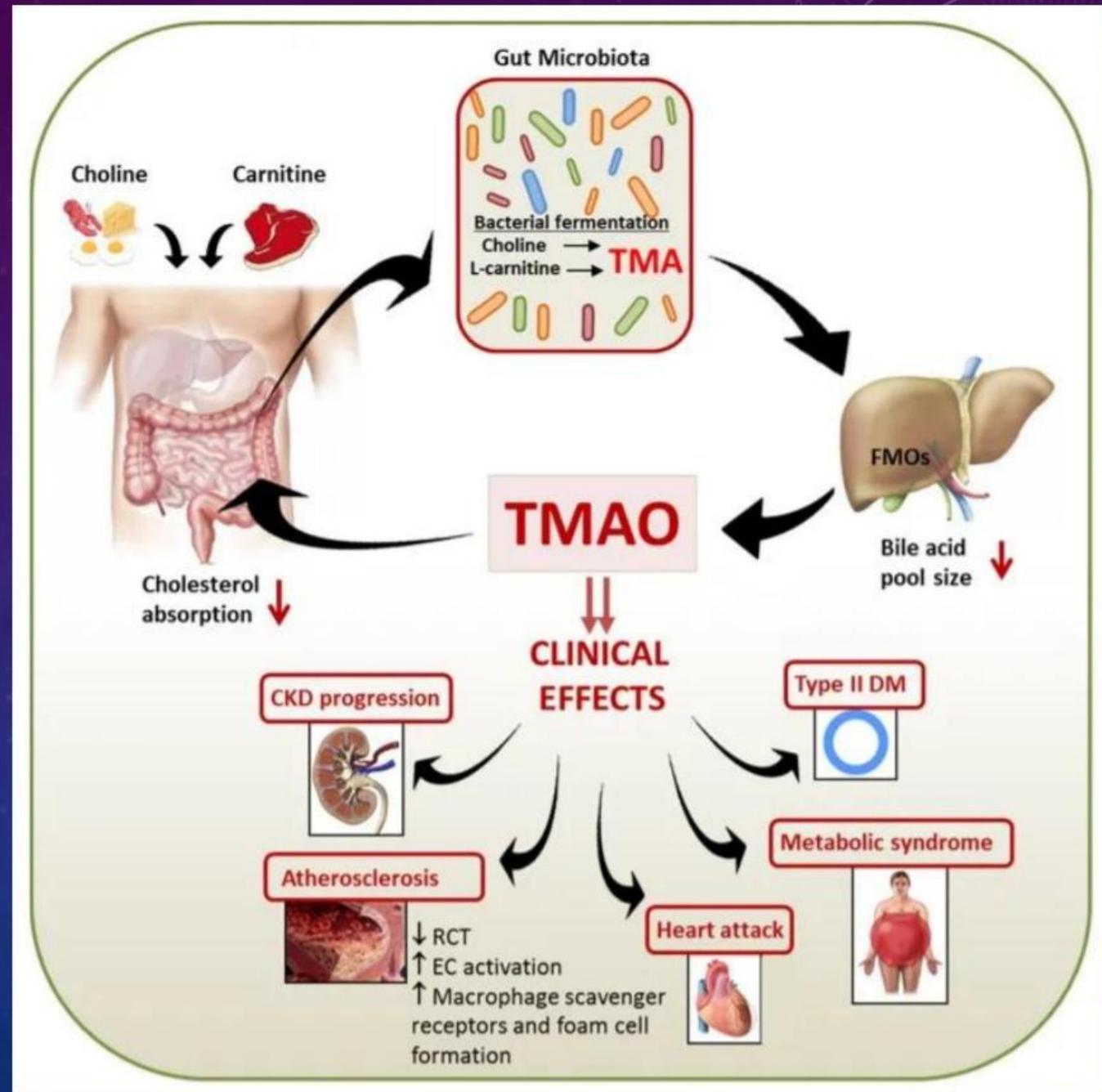
**Figure 1.** Summary of principle effects of butyrate and its potential mechanisms of action in the and peripheral tissues; liver, skeletal muscle and adipose tissue.



# METABOLITES

High TMAO levels cause 2-3 fold increase in risk of heart disease

For every 10 micromolar increase in TMAO, there is a 7.6% increase in all cause mortality as shown in a study of over 25K participants



"It's time to wake up and harness the power of 39 trillion microbes in your gut: dive into *Fiber Fueled* and find out how." —WILLIAM W. LI, MD, New York Times bestselling author of *Eat to Beat Disease*

**The Plant-Based Gut Health Program**  
for Losing Weight, Restoring Your Health,  
and Optimizing Your Microbiome

# FIBER *FUELED*



NEW YORK  
TIMES  
BESTSELLER

**WILL BULSIEWICZ, MD, MSCI**

Healthy BMI

Overweight

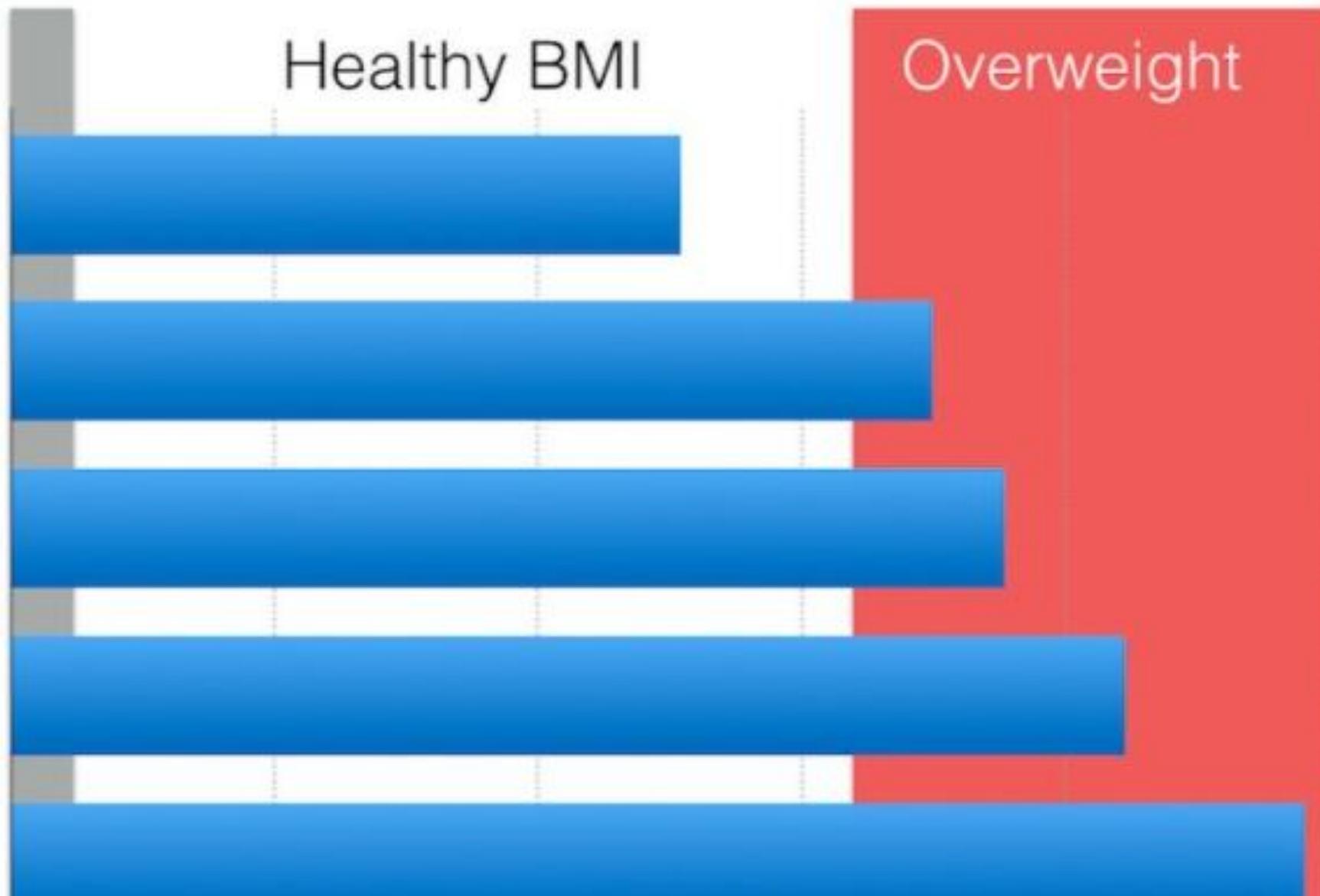
Vegan

Milk & Egg Eater

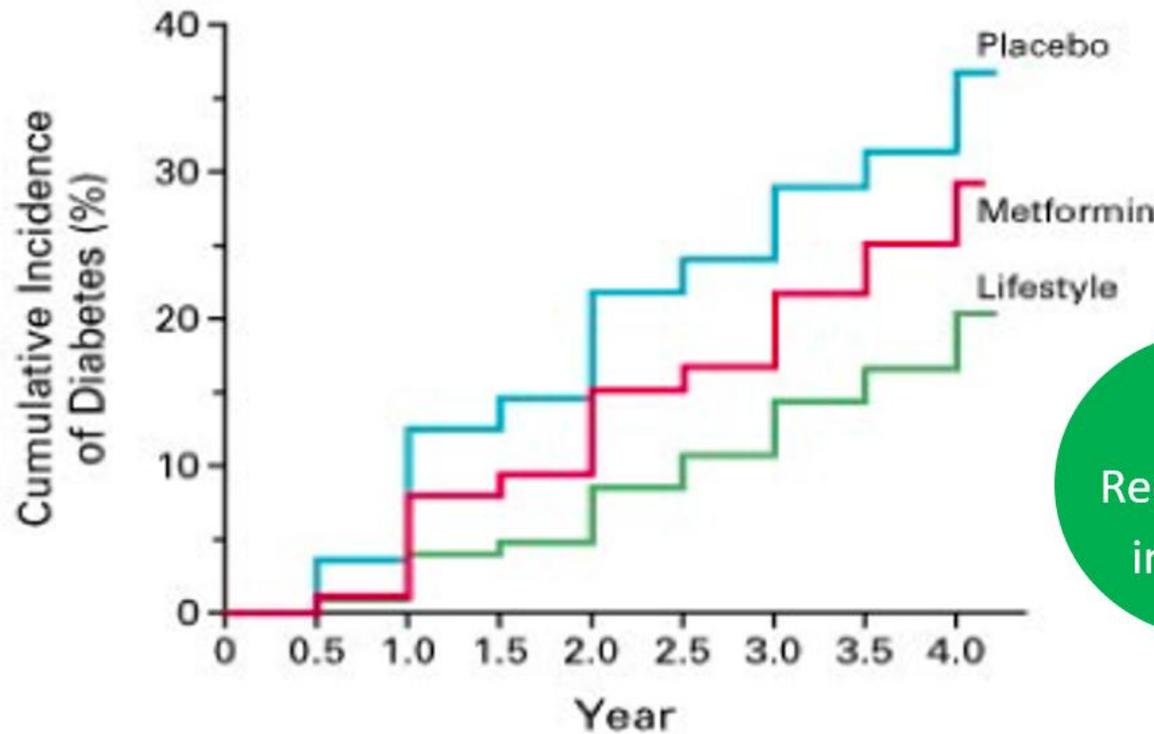
Fish-Eater

Semi-Vegetarian

Meat-Eater



# Lifestyle change has the power to prevent disease



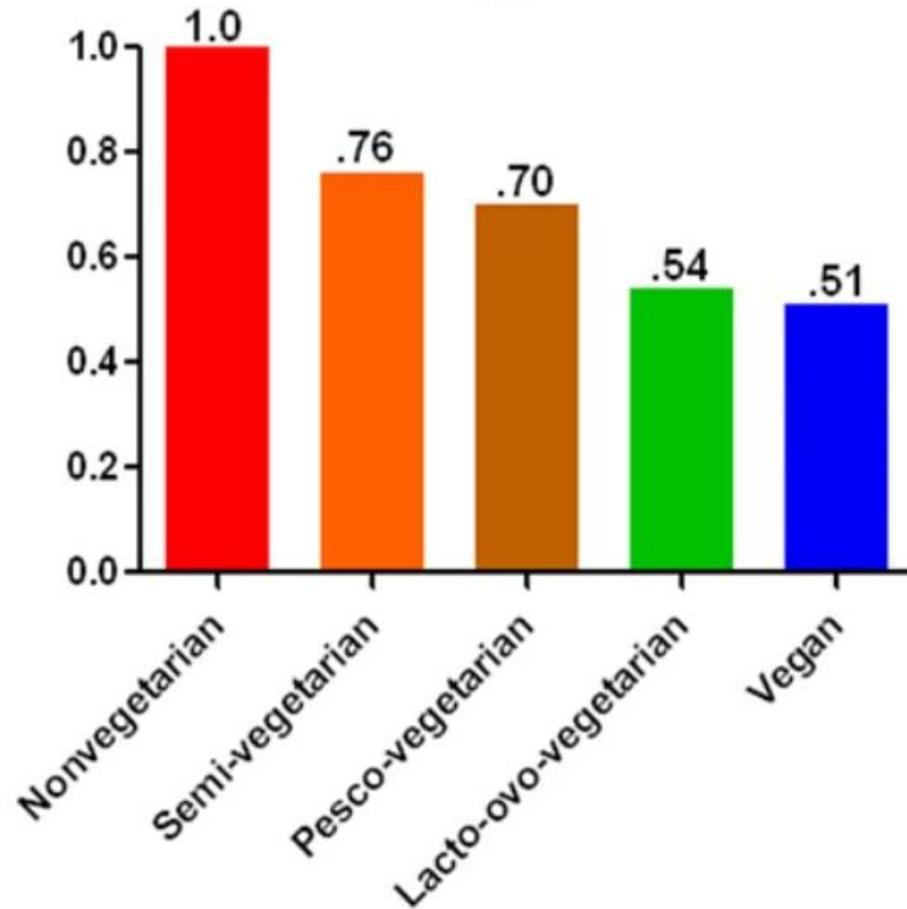
Diabetes Prevention Program (DPP) “science in action)

58%  
Reduction in  
incidence

***Real Life Example  
of Lifestyle  
Medicine***



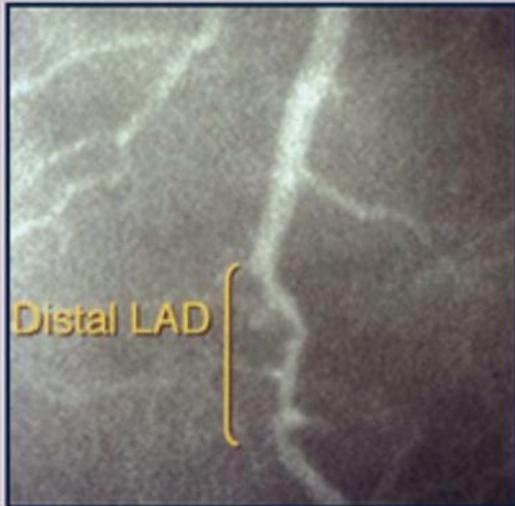
### Odds Ratio\* of Type 2 Diabetes



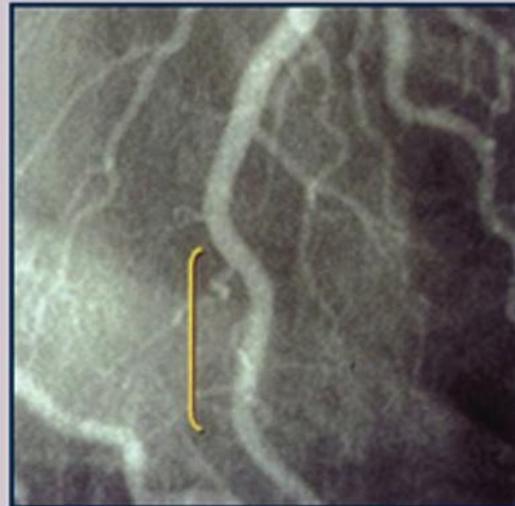
\* Adjusted for BMI, age, sex, ethnicity, physical activity, and other factors

## Reversal of Coronary Disease Achieved with Plant-Based Diet

1996



1999



Coronary angiograms of the distal left anterior descending artery before (left bracket) and after (right bracket) 32 months of a plant-based diet without cholesterol-lowering medication, showing profound improvement. Used with permission from Dr. Caldwell B. Esselstyn, Jr. (Source: *Prevent and Reverse Heart Disease* by Dr. Esselstyn.)

# Lifestyle change has the power to reverse disease



## CV Disease - Angina

- RCT of coronary heart disease patients randomized to intensive lifestyle changes (plant-based diet, smoking cessation, exercise) and followed for 5 years including quantitative arteriography
- Experimental group - 91% reduction in reported frequency of angina after 1 year
- Control group - 185% increase in reported frequency of angina
  - Control group patients asked to follow the advice of their personal physicians regarding lifestyle changes
- At 5 years experimental group's angina symptoms sustained at similar levels
- Long-term reduction in angina comparable to that achieved following CAB surgery or angioplasty
- Angina reduction helped maintain long-term adherence
- Stenosis diameter
  - Experimental group - progressively improved at 1 and 5 years (8% improvement)
  - Control group – progressively worsened at 1 and 5 years (28% worsening)
- More cardiac events in control group with RR 2.47 (1.48-4.20)

Intensive lifestyle changes for Reversal of Coronary Heart Disease. JAMA, December 16, 1996-Vol 280; No 23. Ornish

## Lipid panel with reflex to direct LDL

Order

Status: Final result Visible to patient: Yes (not seen) Dx: Generalized anxiety disorder

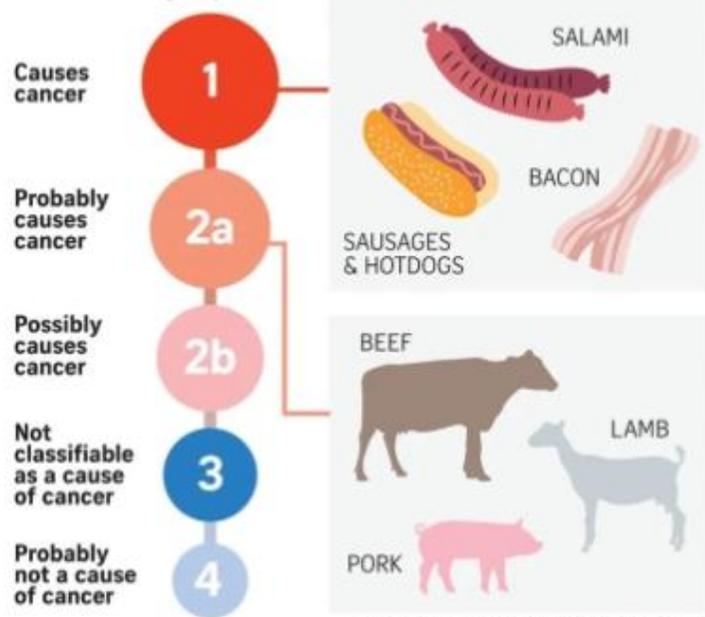
### Result Notes | 1 HM Topic

	Ref Range & Units	12:00	2 wk ago
Cholesterol	<200 MG/DL	212 ^	262 ^
HDL Cholesterol	>40 MG/DL	51	54
Triglycerides	0 - 150 MG/DL	125	99
LDL Cholesterol	<129 MG/DL	136 ^	188 ^
TOT/HDL Cholesterol	<4.9	4.2	4.9 CM

Comment: Non-fasting lipid panels show up to 20% higher triglyceride

## WHO classification of red and processed meats

IARC\* Carcinogenic classification groups



\* International Agency for Research on Cancer

## DANGERS OF PROCESSED MEAT



### COLORECTAL CANCER

According to the IARC, each 50g (e.g. one to two slices of ham) portion of processed meat eaten daily increases the risk of colorectal cancer by 18 per cent.



### HEART DISEASE

For each 50g increase in daily consumption of processed meat, the risk of heart failure incidence increased by 8 per cent and the risk of death from heart failure by 38 per cent.



### INCREASED RISK OF DEATH

A study by the National Cancer Institute of 500,000 people found that those who ate red meat daily were 30 per cent more likely to die during a 10-year period than those who ate very little red meat.



### PROSTATE CANCER

Men preferring red meat, fat and processed grains were 2 ½ more likely to die from cancer-related cause.

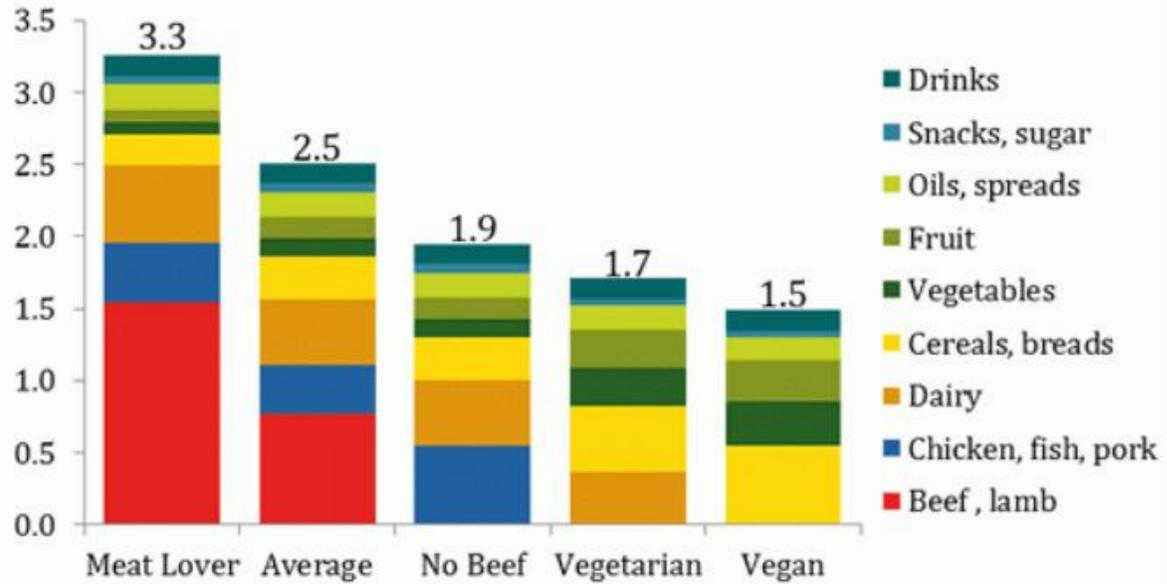


### BREAST CANCER

Researchers at Harvard University analysed data, and scientists estimated that among women who ate the most amount of red meat, there were an extra 6.8 cases of breast cancer for every 1,000 women over 20 years of follow-up.

Source: BCC, CBC NEWS, THE GUARDIAN ST GRAPHICS

## Foodprints by Diet Type: t CO<sub>2</sub>e/person



Note: All estimates based on average food production emissions for the US. Footprints include emissions from supply chain losses, consumer waste and consumption.. Each of the four example diets is based on 2,600 kcal of food consumed per day, which in the US equates to around 3,900 kcal of supplied food.

Sources: ERS/USDA, various LCA and EIO-LCA data



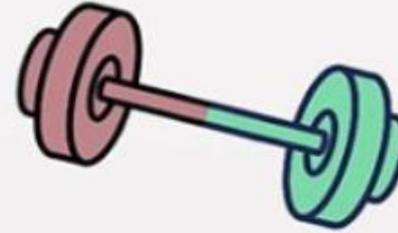
# 6 myths about plant-based eating



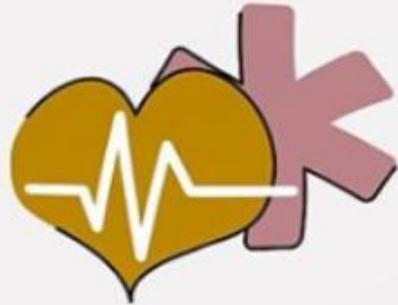
IT'S TOO  
EXPENSIVE



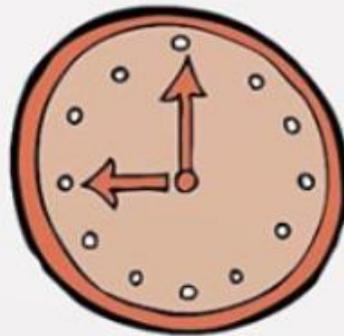
EATING OUT  
OPTIONS ARE SLIM



YOU CAN'T BUILD  
MUSCLE



YOU CAN'T GET ALL OF  
YOUR NUTRIENTS



MEAL PLANNING  
IS HARDER



IT'S RISKY FOR  
CHILDREN

@stonepierpress

# VEGAN ON A BUDGET

@MeatFreeAthlete



# Restaurant Guide



Powered by  
**HappyCow.net**

# Find Vegan Restaurants Nearby

Search for city, region, or zipcode



Photo by Rustic Veg

## Vegan Food Near Me

[View all >](#)



 **Hutkay Fusion**  
Ann Arbor, Michigan, USA

★★★★★ 3 reviews

A vegetarian restaurant serves



 **Seva - Ann Arbor**  
Ann Arbor, Michigan, USA

★★★★☆ 48 reviews

Extensive menu. gluten-free menu.



 **Earthen Jar**  
Ann Arbor, Michigan, USA

★★★★☆ 27 reviews

Small restaurant offering a vegetarian



 **Vedge Cafe**  
Ann Arbor, Michigan, USA

★★★★☆ 23 reviews

Restaurant which opened Nov 2016

# There are many excellent sources of **Vegan Protein**



PEAS



SUN DRIED TOMATOES



TOFU



TEMPEH



DARK  
LEAFY  
GREENS



NONDAIRY  
MILKS



HEMP



SESAME



SUNFLOWER



FLAX



PUMPKIN



CHIA

SEEDS



EDAMAME



ALL NUTS & NUT BUTTERS!



ALL KINDS OF BEANS!



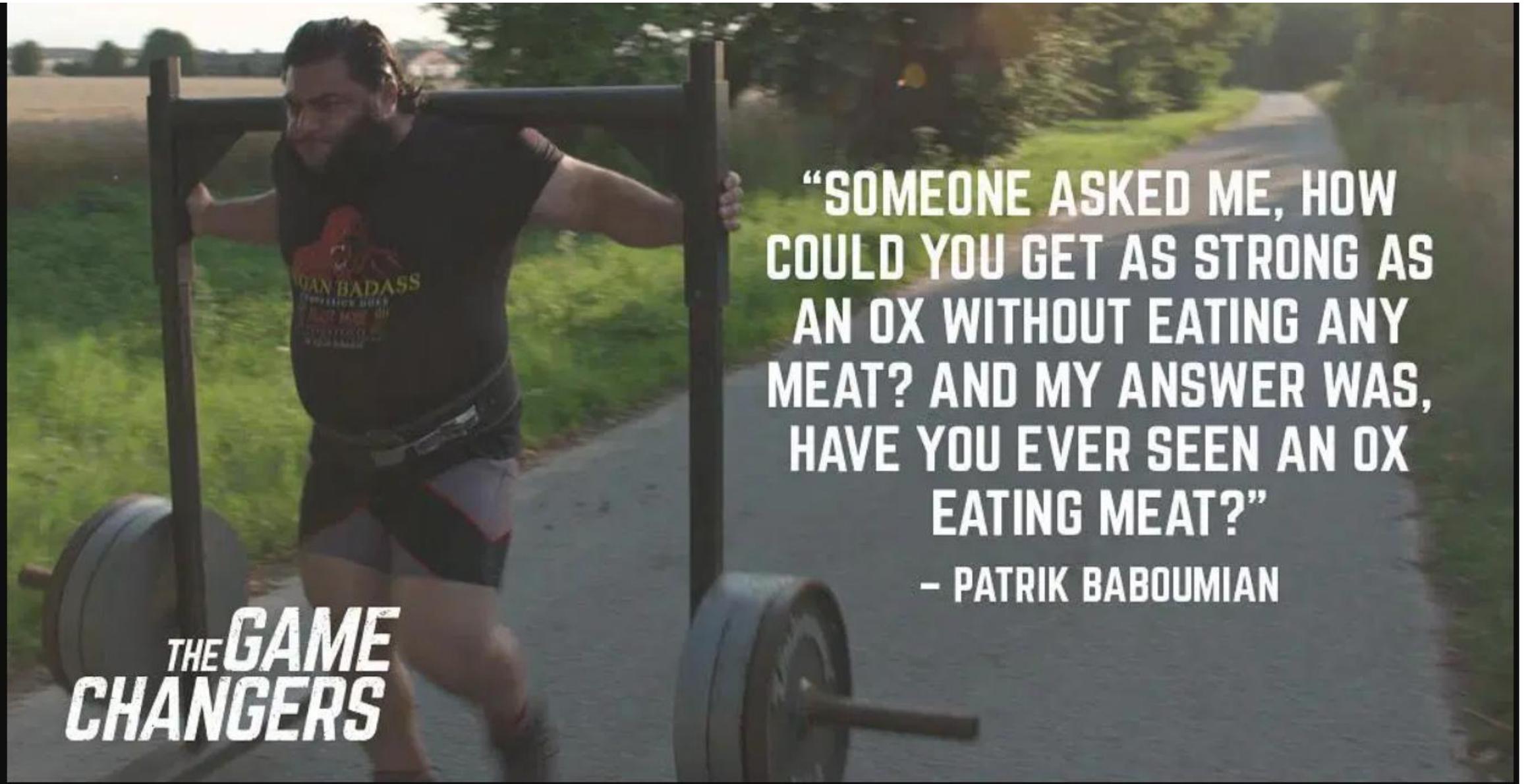
SEITAN

QUINOA



AND  
SO  
VERY  
MANY  
MORE!

[VeganStreet.com](http://VeganStreet.com)



**“SOMEONE ASKED ME, HOW  
COULD YOU GET AS STRONG AS  
AN OX WITHOUT EATING ANY  
MEAT? AND MY ANSWER WAS,  
HAVE YOU EVER SEEN AN OX  
EATING MEAT?”**

**– PATRIK BABOUMIAN**

**THE *GAME*  
CHANGERS**

# CALCIUM FOODS



stepintomygreenworld.com



Broccoli



Bok Choy



Collards



Spinach



Green Beans



Artichokes



Okra



Brussels Sprouts



Swiss Chard



Asparagus



Mulberry



Coconut Meat



Onions



Prickly Pears



Almonds



Butternut Squash



Cabbage



Avocados



Fennel



Brazil Nuts



Celery



Leeks



Pumpkin Seeds



# High Iron Vegan Sources



@vegainstrength



**Lentils**



**Dried Apricots**



**Soybeans**



**Spinach**



**Tofu**



**Chickpeas**



**Kidney beans**



**Potatoes**



**Nuts**



**Dark Choc**



**Avoid caffeine  
and alcohol  
when eating  
high-iron meals**



**Peas**



**Seeds**



**Eat Vitamin C rich  
foods with iron-rich  
foods and boost iron  
absorption up to 5 times**

# CALORIE DENSITY

## WHAT 500 CALORIES LOOK LIKE

OIL



CHEESE



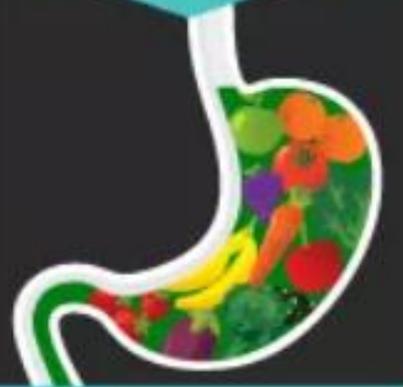
MEAT



POTATOES,  
RICE, BEANS



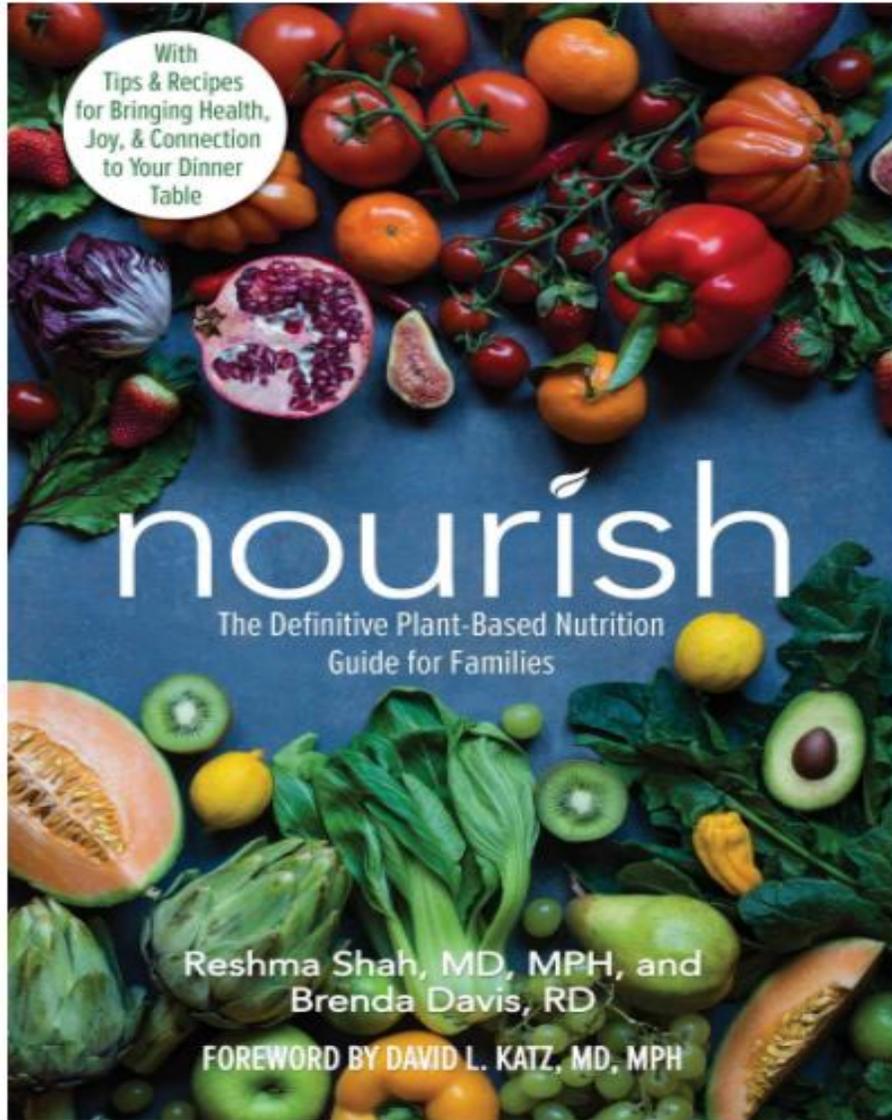
FRUITS &  
VEGGIES



*...and why whole plant-based foods will help keep you lean and satisfied.*

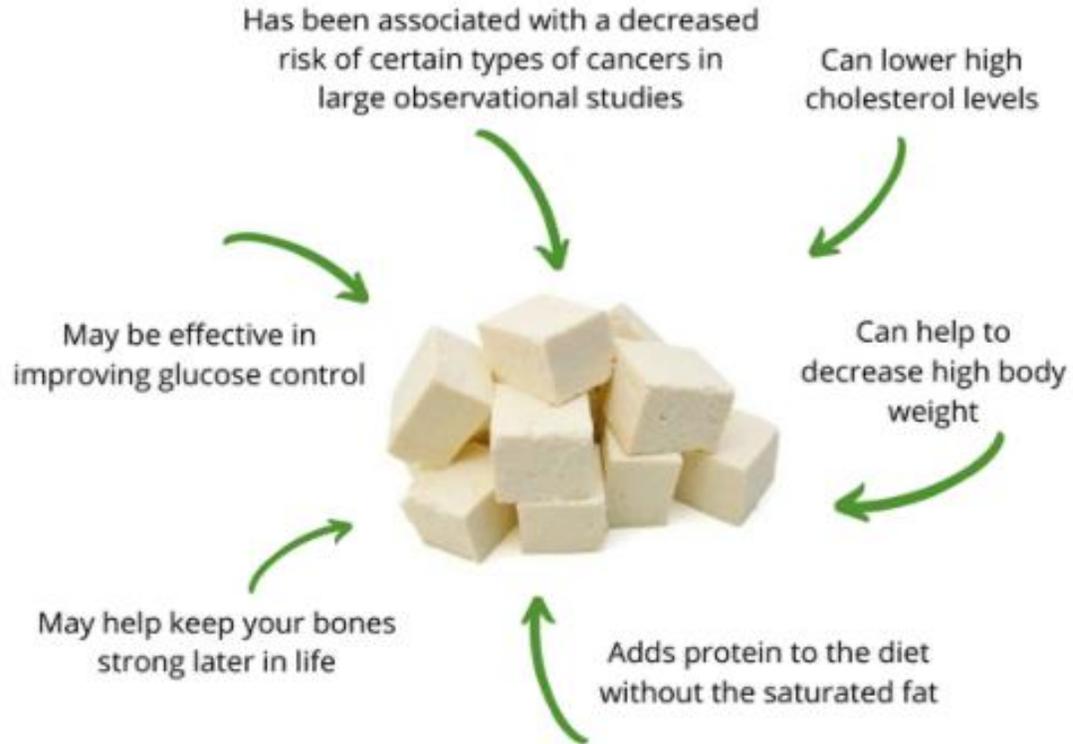
[forksoverknives.com](http://forksoverknives.com)





# HUMAN HEALTH BENEFITS OF EATING SOY

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# DOES IT REALLY WORK???



- ▶ 2020 was a year that many are complaining about but to me it was just a year of great change and gratitude. My future is bright and I pray long. I see the future as "what can I do today to make a difference for me and anyone I might encounter" My mindset is so much more positive because I am on a path that makes me hopeful. I am so very grateful for all the individuals that I have followed on social media that offer advice because they truly want to see people healthier not because they want to sell a diet plan. It is really a welcoming community.

# Jeff Tritten



1 Result Note | 1 Patient Communication | 1 HM Topic

	Ref Range & Units	1 d ago	5 mo ago
Hemoglobin A1C	4.0 - 5.7 %	8.1 ^	11.0 ^
Estimated Average Glucose	mg/dL	186	269 ^ R
Resulting Agency		SJLV	SJAA
Specimen Collected: 10/05/21 08:45		Last Resulted: 10/05/21 17:35	

[Lab Flowsheet](#) | [Order Details](#) | [View Encounter](#) | [Lab and Collection Details](#)  
[Routing](#) | [Result History](#)

R=Reference range differs from displayed range

1 Result Note | 1 Patient Communication | 1 HM Topic

	Ref Range & Units	1 d ago	5 mo ago
Sodium Level	135 - 144 MEQ/L	137	132 v
Potassium	3.5 - 5.3 MEQ/L	4.9	4.9
Chloride	98 - 112 MEQ/L	101	101
Carbon Dioxide	20 - 30 MEQ/L	29	19 v
Glucose	70 - 100 MG/DL	118 ^	233 ^
Blood Urea Nitrogen (BUN)	6 - 23 MG/DL	9	19
Creatinine	0.64 - 1.27 MG/DL	0.87	0.99
Calcium	8.5 - 10.1 MG/DL	9.4	9.3
Protein Total	6.1 - 7.9 G/DL	6.5	6.8
Albumin	3.2 - 4.8 G/DL	4.4	4.4
Bilirubin Total	0.0 - 1.6 MG/DL	0.6	0.6
Aspartate aminotransferase (AST)	15 - 41 IU/L	15	15
Alanine Aminotransferase (ALT)	10 - 63 IU/L	17	20

type 2 d...

1 Result Note | 1 Patient Communication | 1 HM Topic

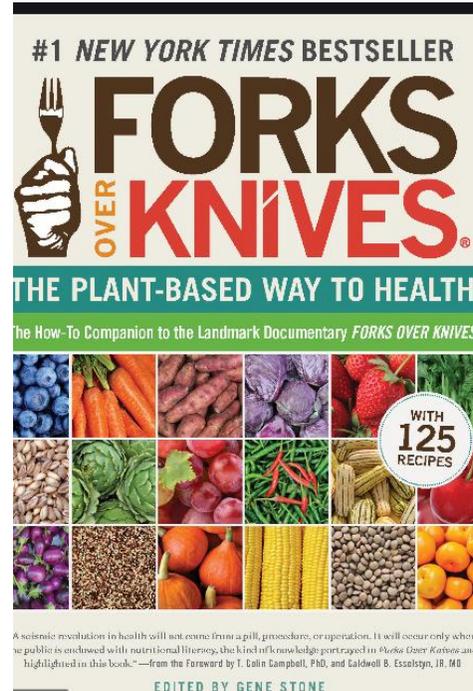
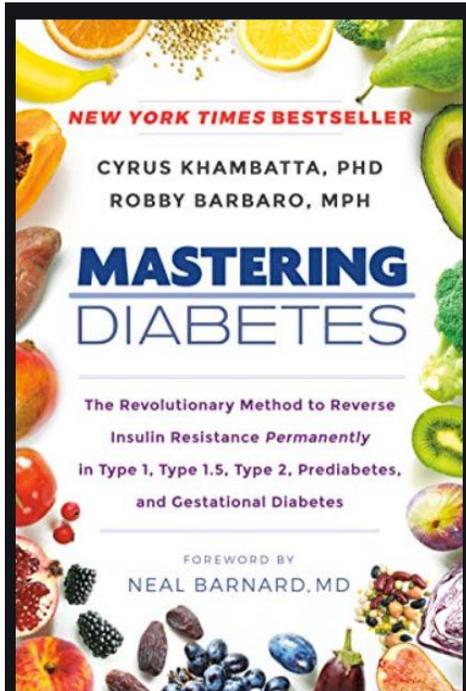
	Ref Range & Units	1 d ago	5 mo ago
Cholesterol	<200 MG/DL	157	229 ^
HDL Cholesterol	>40 MG/DL	46	43
Triglycerides	0 - 150 MG/DL	248 ^	531 ^
LDL Cholesterol	<129 MG/DL	61 <sup>vc</sup>	* <sup>cm</sup>

Comment: National Cholesterol Education Program (NCEP) Guidelines for LDL levels (in mg/dL):  
 <100: Optimal

# PRACTICE WHAT YOU PREACH





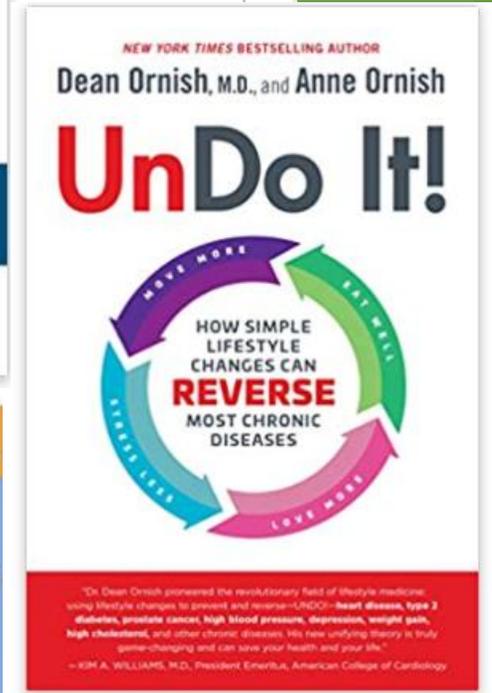
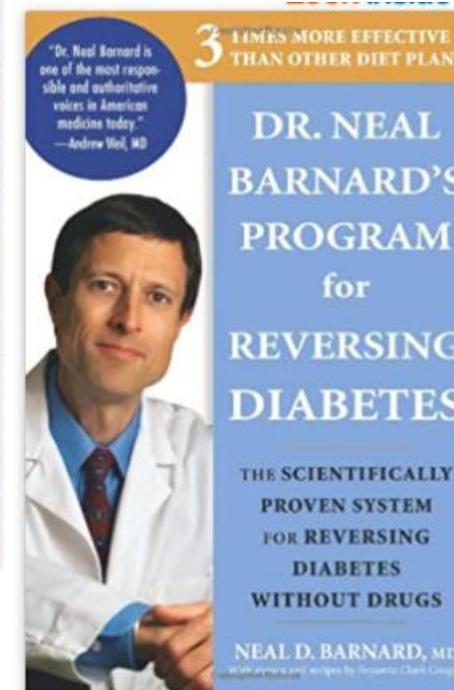
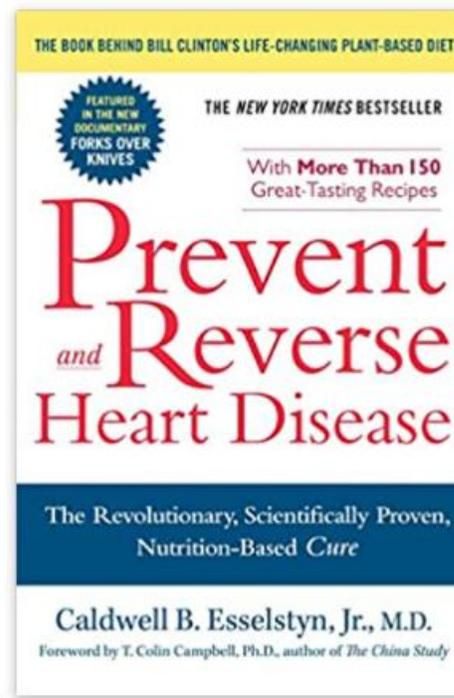
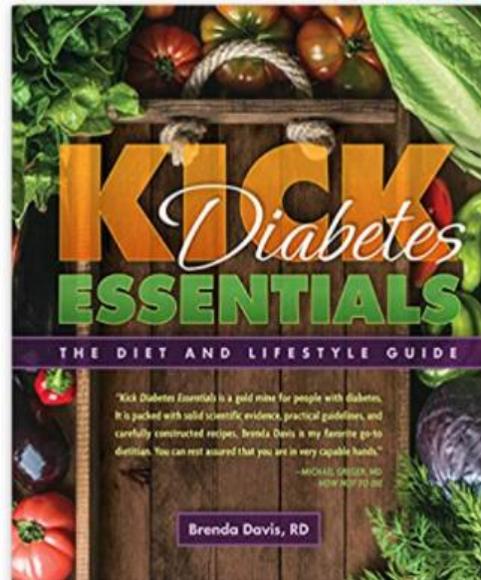
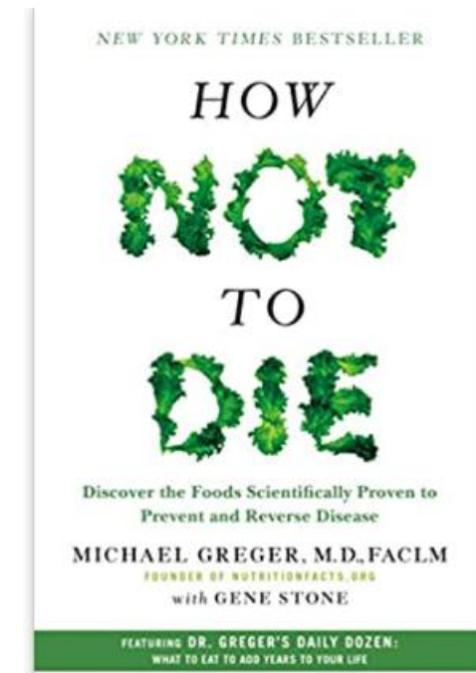
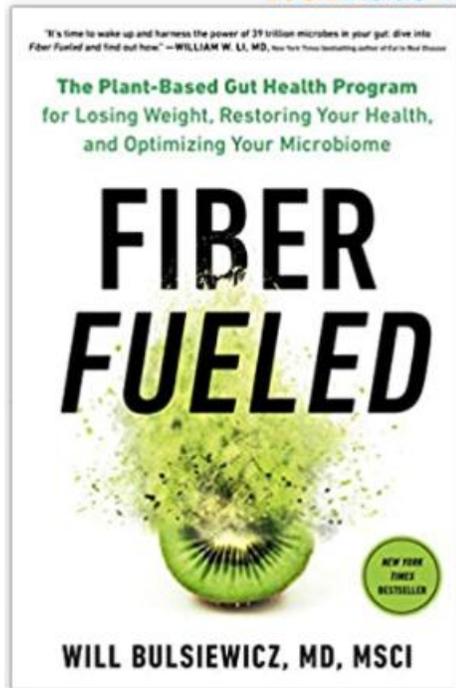


NUTRITION FACTS

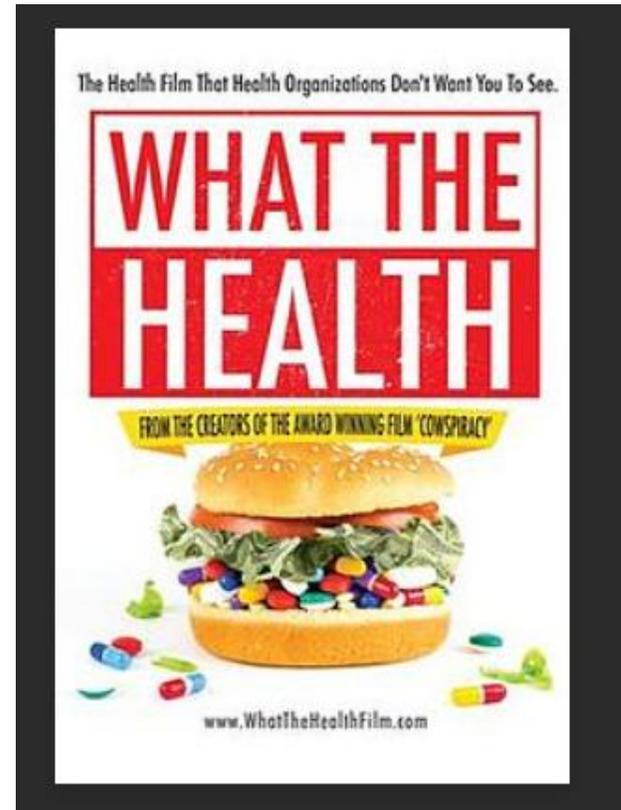
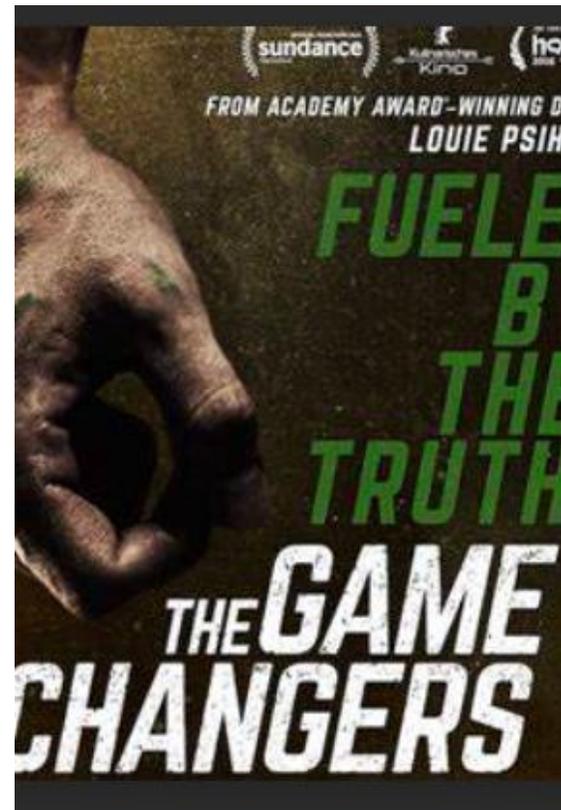
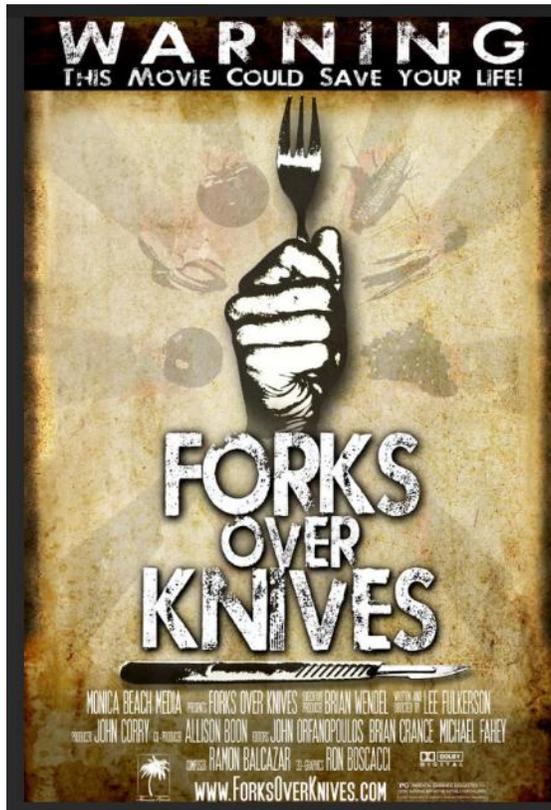


# RESOURCES

# BOOKS



# DOCUMENTARIES



# PODCASTS

- THE EXAM ROOM (PCRM.ORG)
- HEALTHY HUMAN REVOLUTION (DR. LAURIE MARBAS, MD)
- PLANT STRONG (RIP ESSELSTYN)
- RICH ROLL PODCAST
- ▶ -NUTRITION FACTS (DR. MICHAEL GREGER)
- ▶ -PLANT PROOF (SIMON HILL)
- ▶ -SWITCH 4 GOOD (DOTSIE BAUSCH)
- ▶ -PLANT TRAINERS (ADAM/SHOSHANA CHAIM)
- ▶ -VEGGIE DOCTOR RADIO (DR. YAMI, MD)



 Edit

# Lifestyle Medicine Washtenaw/Livingston Counties

 Public group · 1.7K members



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### Meet Our Team of Physicians

Our team of Lifestyle Medicine specialists are all certified by the American College of Lifestyle Medicine. We look forward to partnering with you on your health!



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