

Lake County Safety Council

Nutrition and Fitness

Calories In  Calories Out

Nancy V Rodway MD MPH

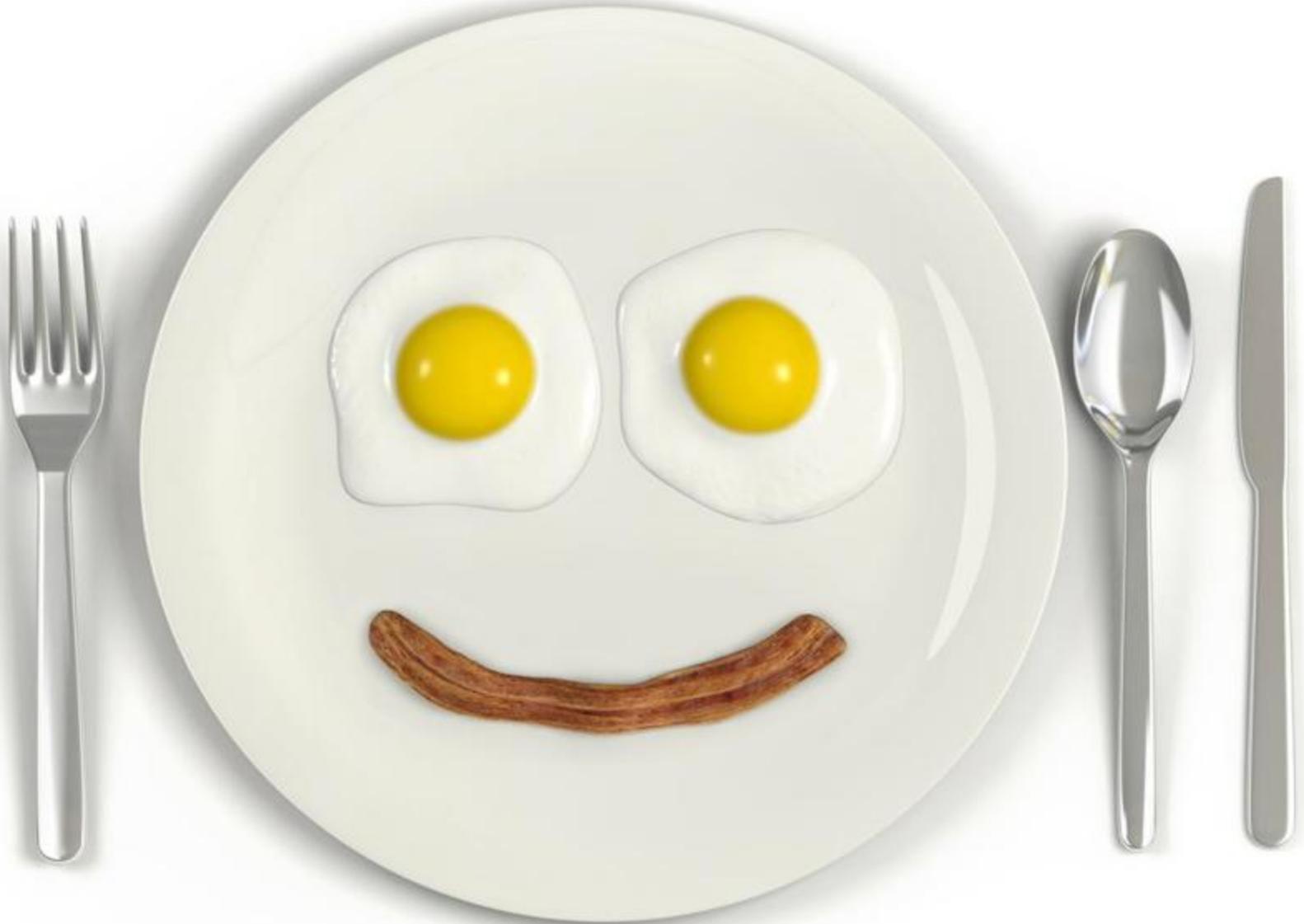
Chris Brill-Packard MA CHES



Objectives

- Provide simple steps to improve metabolic fitness and physical fitness
- Explain the history behind our current nutritional recommendations and the physiologic consequences
- Summarize the current knowledge on nutrition and how it has impacted health and fitness and costs
- Add a quickie on cholesterol

EAT ME!!





**Wheat, especially whole wheat, is
more damaging than you think**





It's not nice to fool mother nature!





Fat doesn't make you fat



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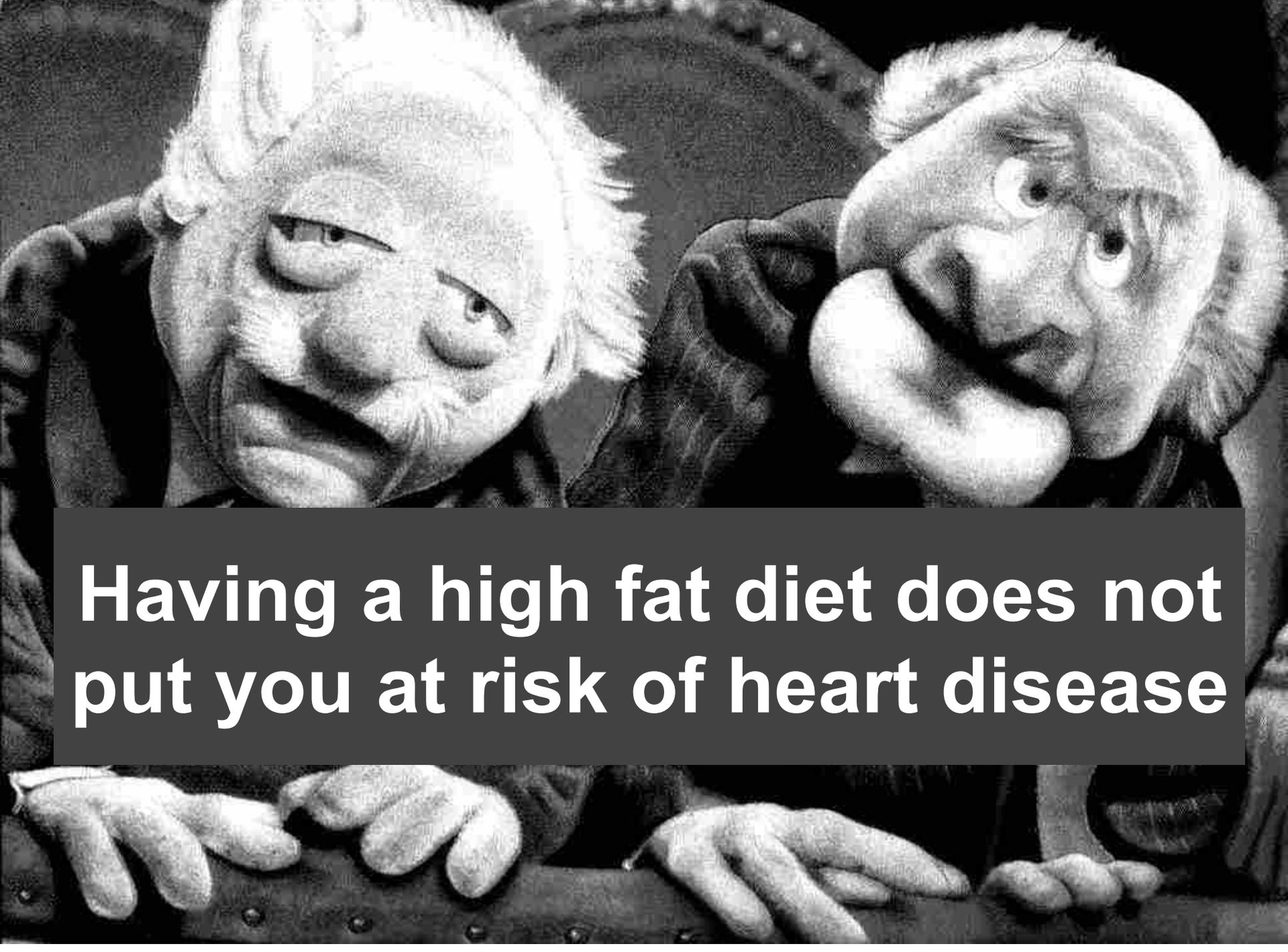


Eating red meat does not increase your risk of a heart attack



**Saturated fat is good for
you**

**Full fat dairy is healthy for
diabetics**



**Having a high fat diet does not
put you at risk of heart disease**

**Having a high
cholesterol
does not put
you at risk of
heart disease**

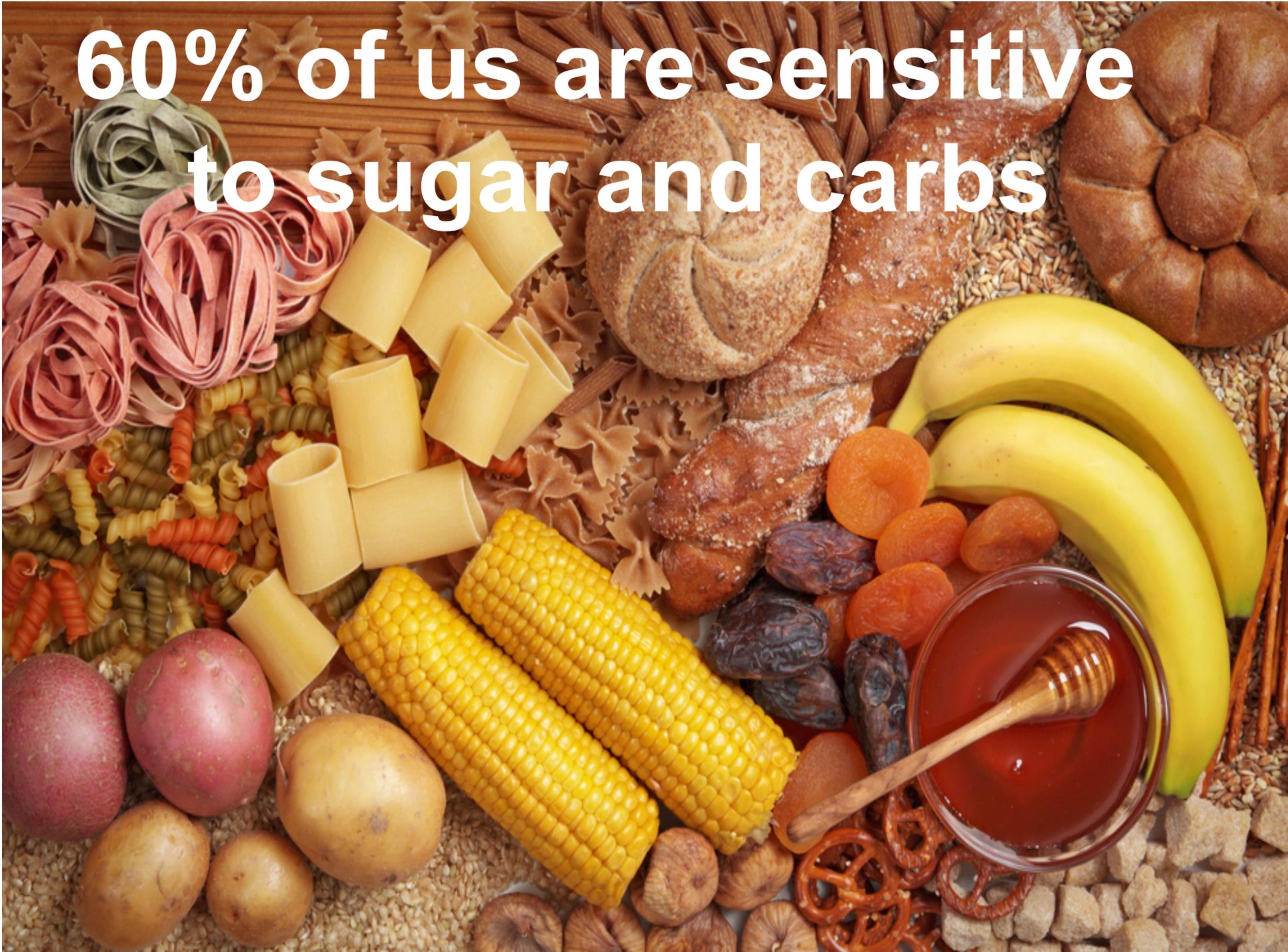


Carbohydrates cause heart attacks



And other bad things . . .

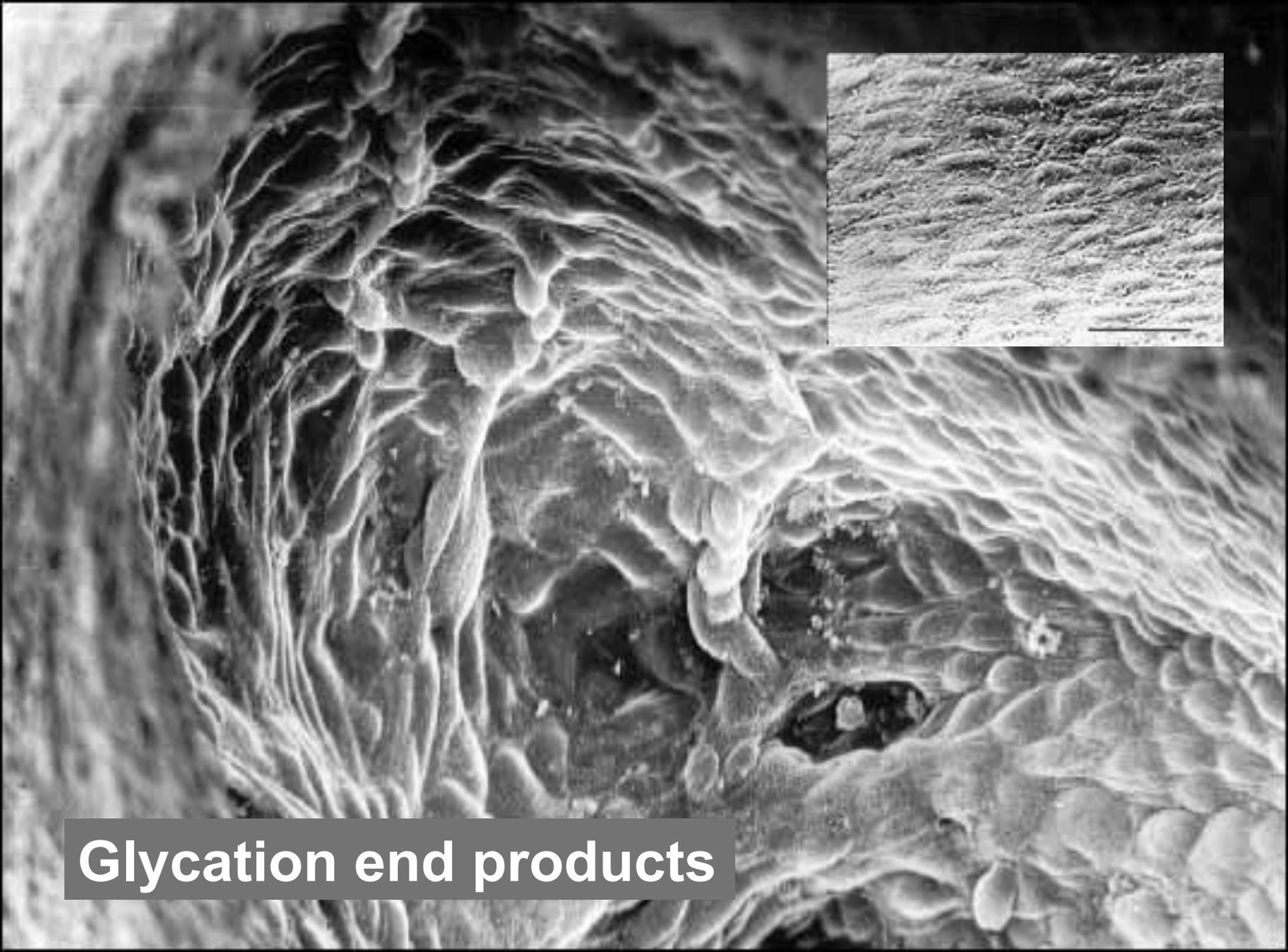
**60% of us are sensitive
to sugar and carbs**



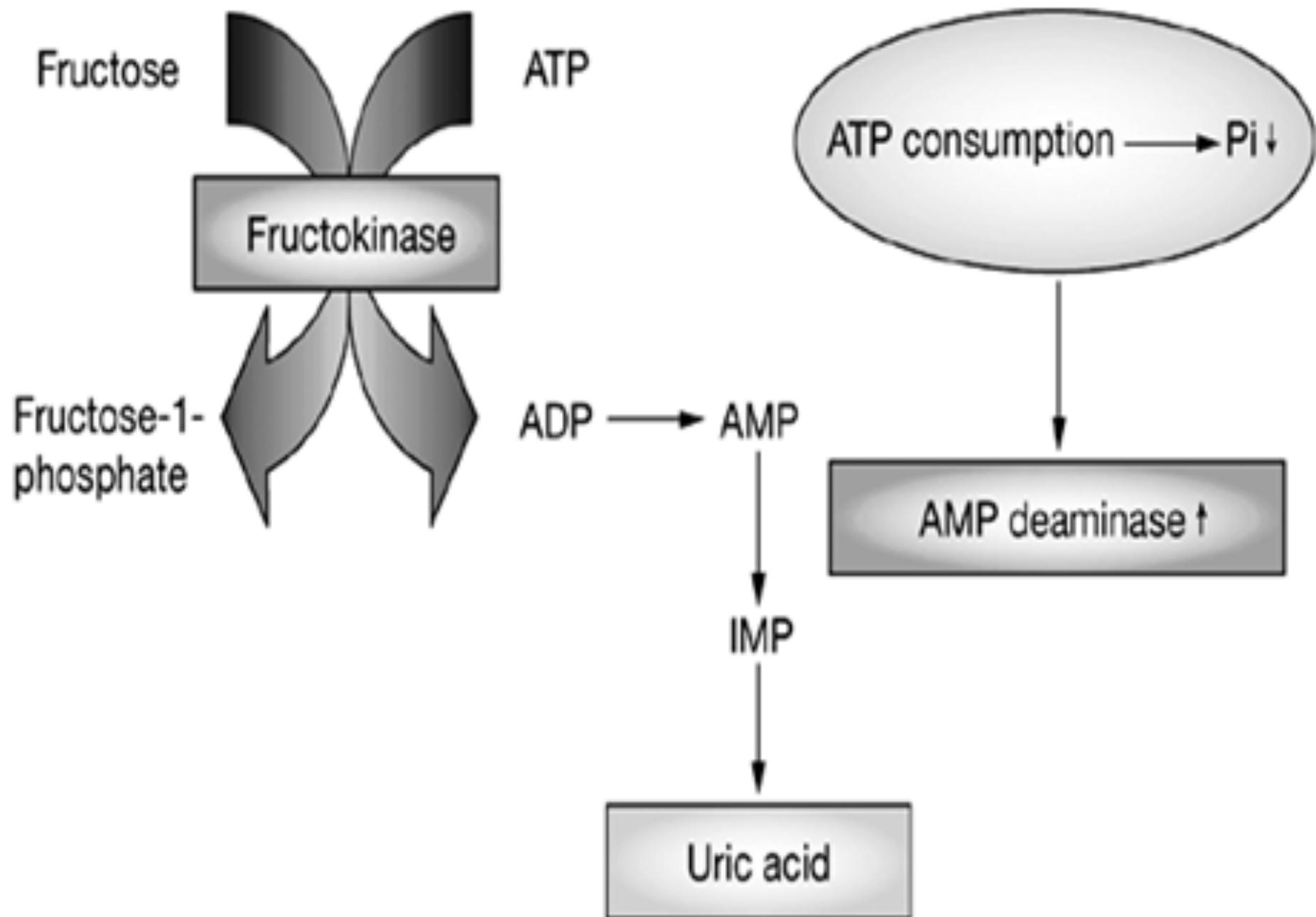
Sugars and Carbs cause:

- Arthritis
- Rapid aging
- Diabetes-related conditions
- Dementia
- Cataracts
- Depression
- Autoimmune diseases
- Irritable Bowel syndrome

INFLAMMATION

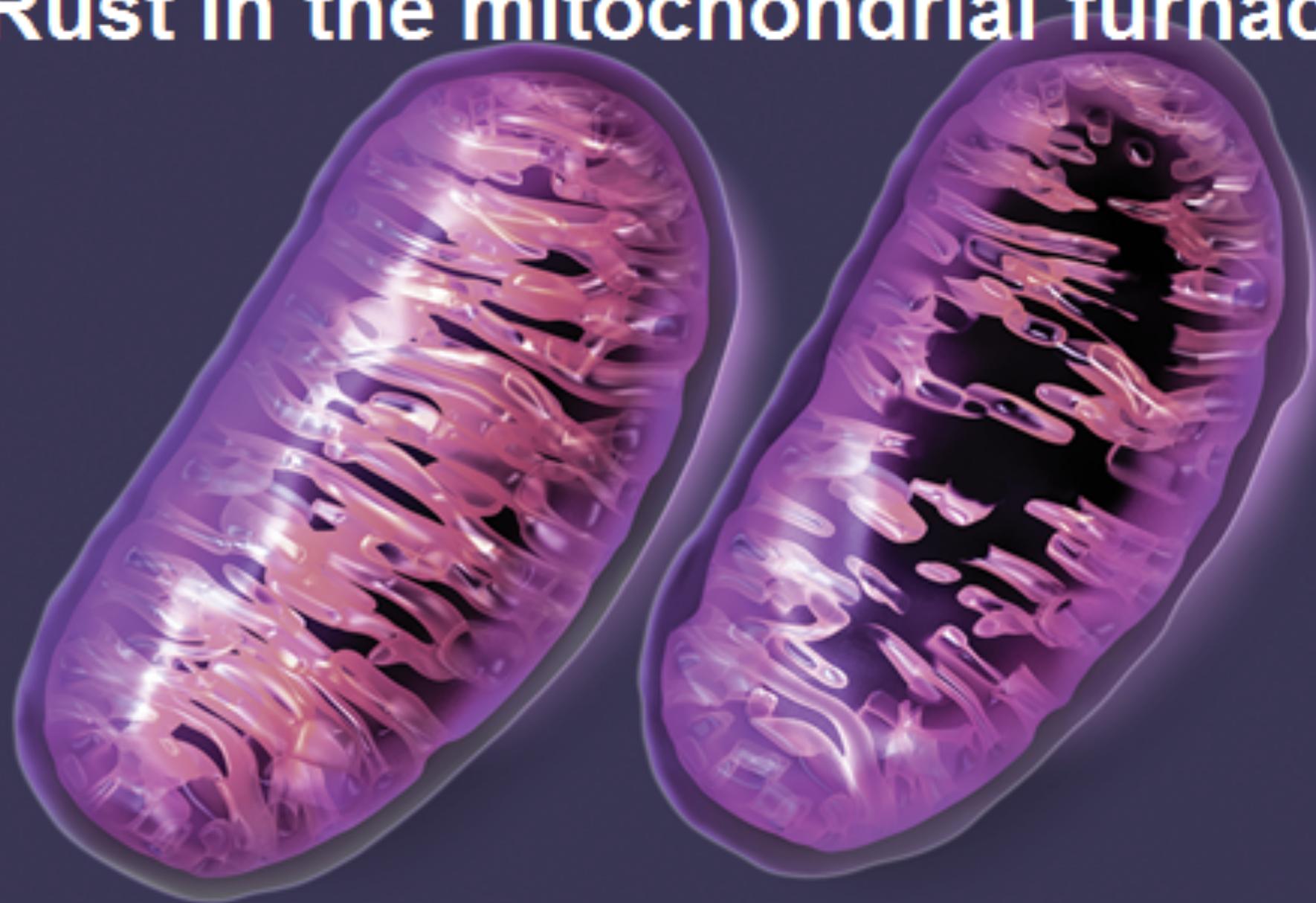


Glycation end products





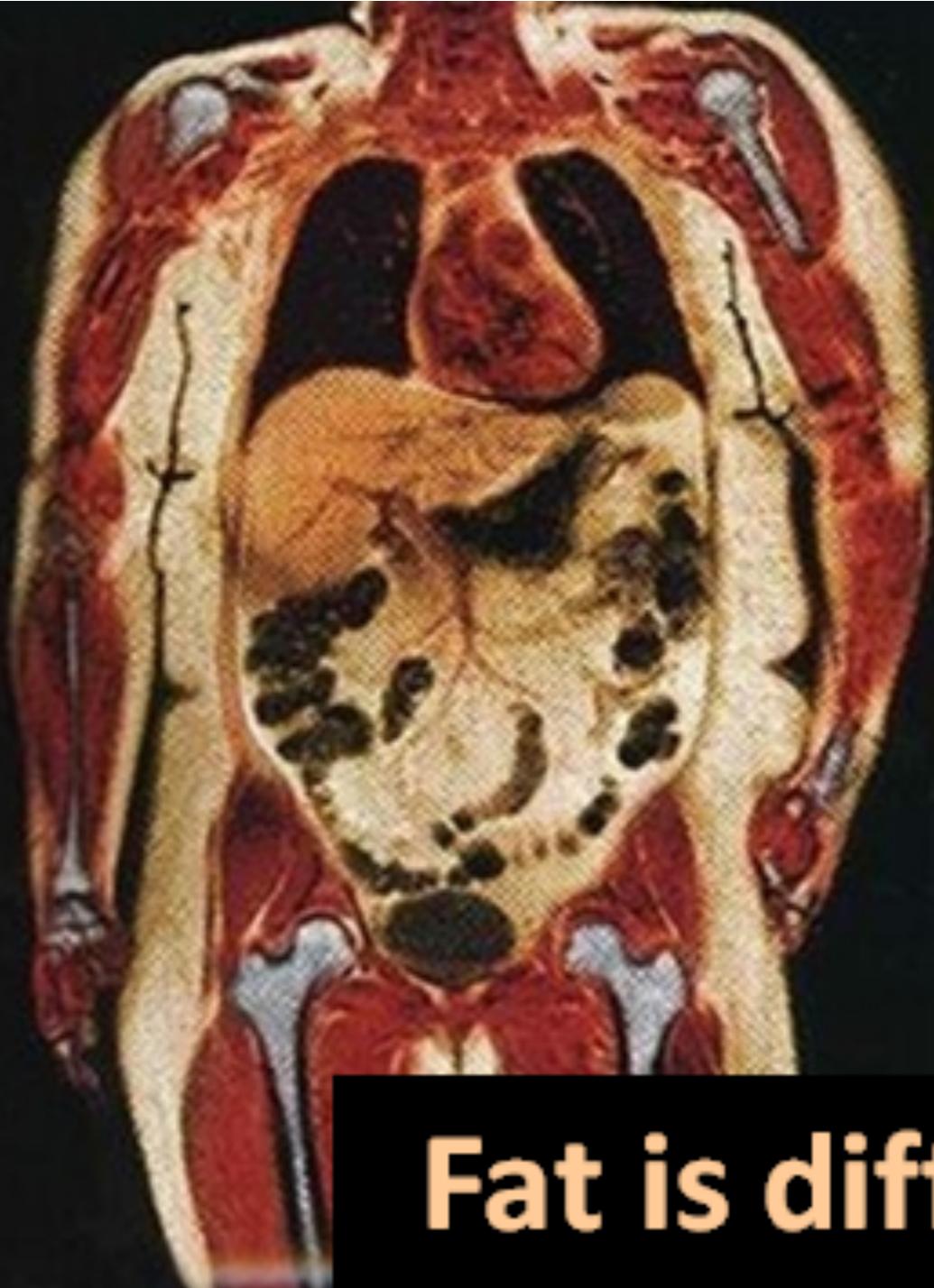
Rust in the mitochondrial furnace





Low fat diets:

- High in grains and sugars
- Grains cause GI damage and disease
- Sugars and carbs trigger high insulin levels
- Insulin causes:
 - Fat deposition and **stops fat burning**
 - Energy conservation
 - Food addiction



Fat is different



40% of skinny people are metabolically ill



40% of fat people are metabolically healthy



Fat Deposition Switch **ON**

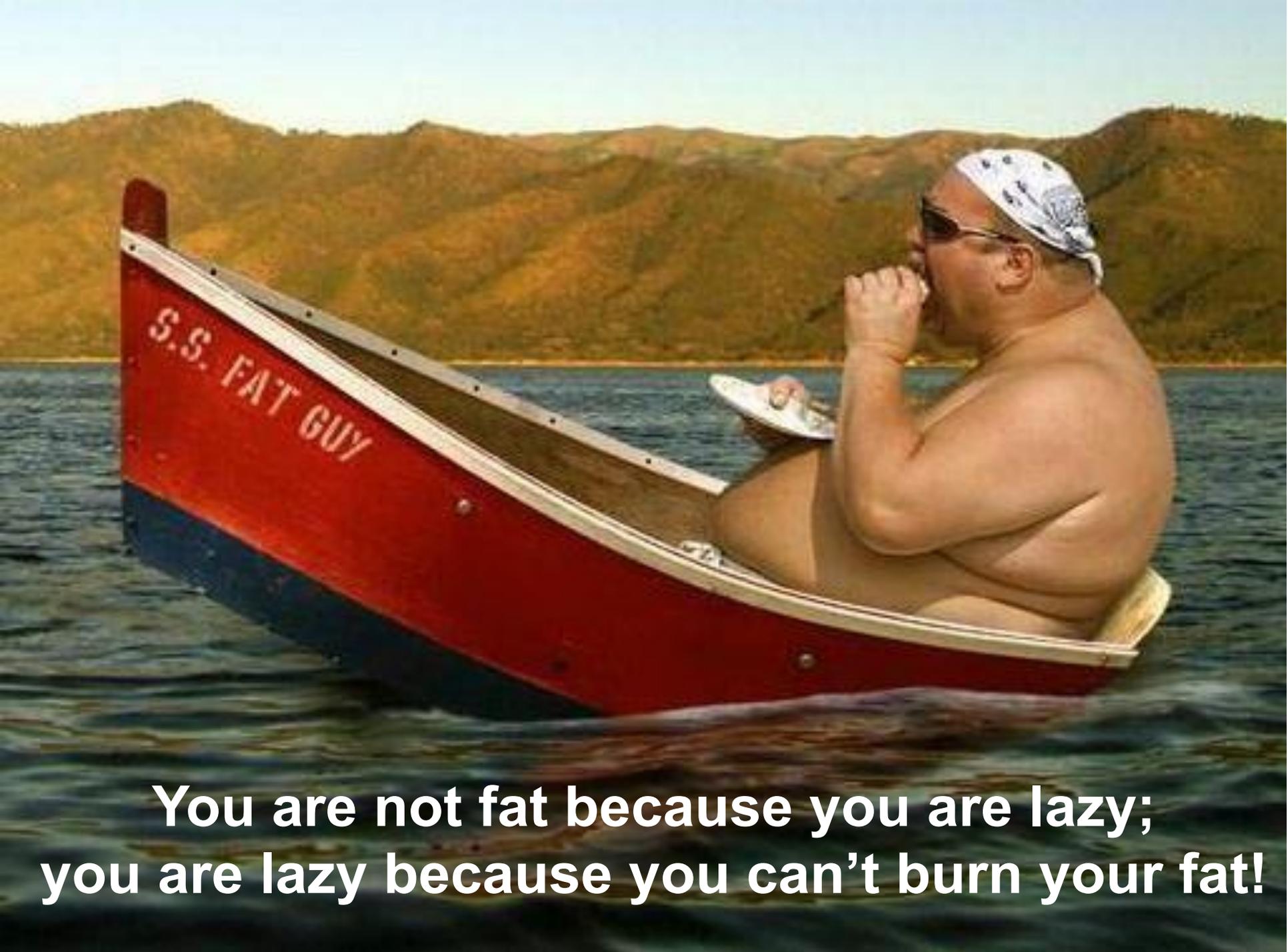
- Fructose (**table sugar, fruit juices, pop**)
- Honey
- **BEER**
- High fructose corn syrup
- **Carbohydrates**
- **Eating throughout the day**

**Keep the
metabolic
fire burning!**



FLIP THE SWITCH

- **No transfats**
- **No high fructose corn syrup**
- **Limit sugars**
- **Cut down on wheat (bread and pasta)**
- **Avoid BEER**
- **No “industrial” vegetable oils**

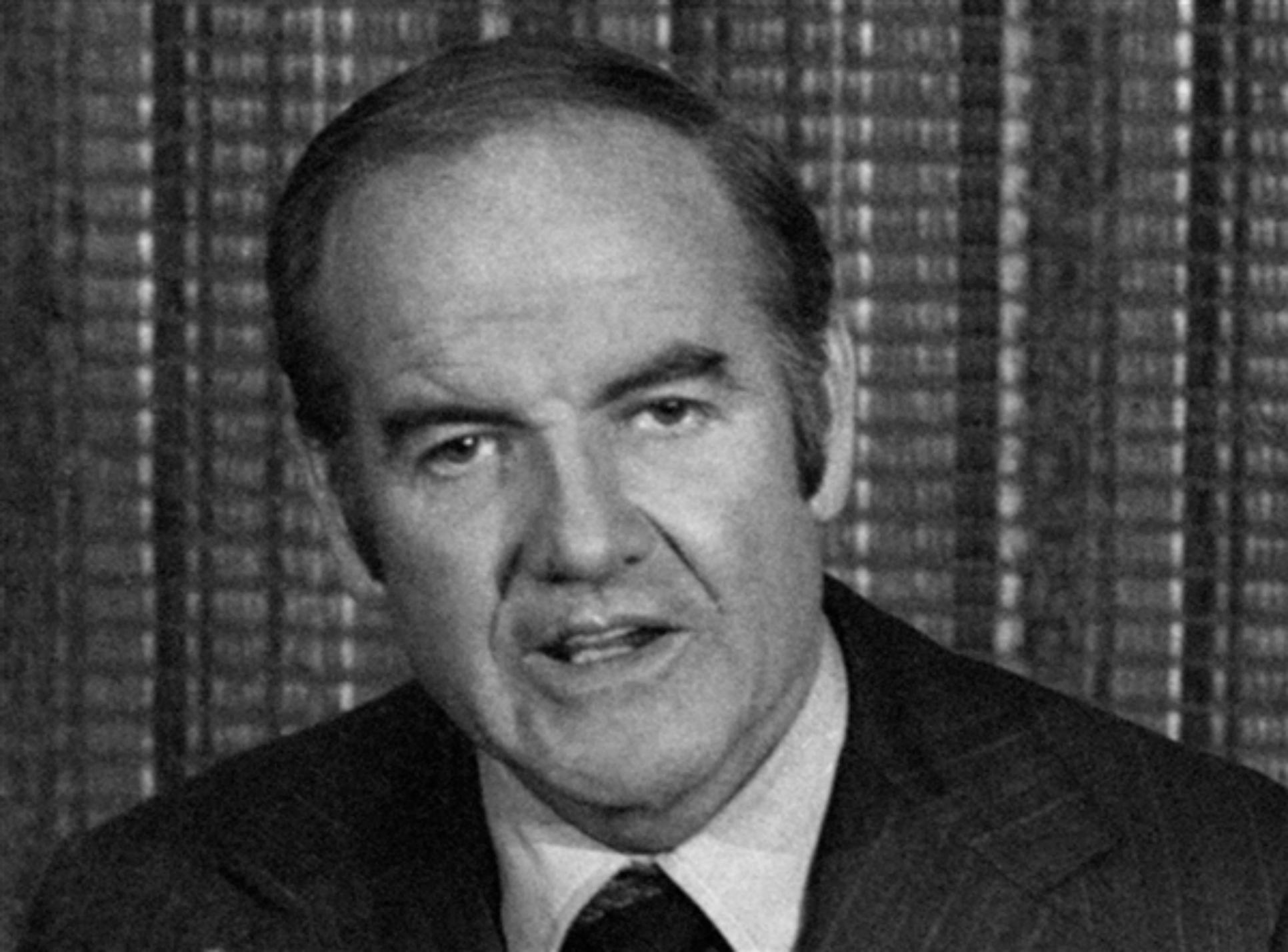


**You are not fat because you are lazy;
you are lazy because you can't burn your fat!**

**The shift to a low fat diet
was one of the most
dangerous conceptual
shifts in public health in
American history**

Gary Taubes

Good Calories, Bad Calories





Dietary Goals for the US 1977



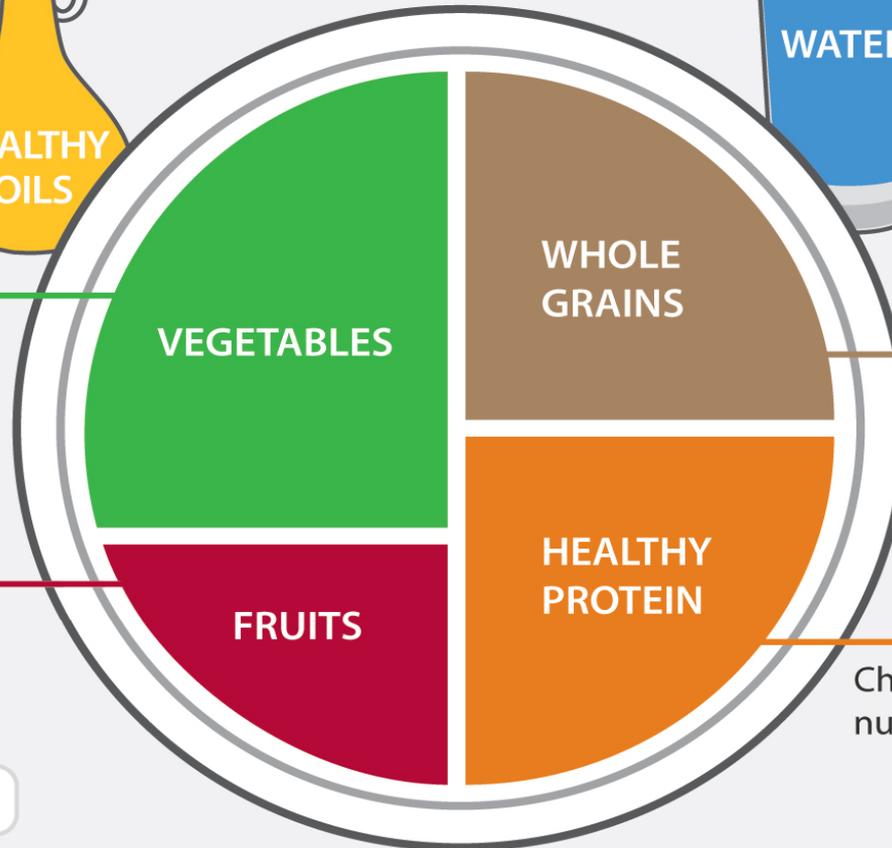
HEALTHY EATING PLATE



Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.



Drink water, tea, or coffee (with little or no sugar). Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day). Avoid sugary drinks.



The more veggies – and the greater the variety – the better. Potatoes and French fries don't count.

Eat a variety of whole grains (like whole-wheat bread, whole-grain pasta, and brown rice). Limit refined grains (like white rice and white bread).

Eat plenty of fruits of all colors.

Choose fish, poultry, beans, and nuts; limit red meat and cheese; avoid bacon, cold cuts, and other processed meats.



STAY ACTIVE!

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Harvard School of Public Health
The Nutrition Source
www.hsph.harvard.edu/nutritionsource

Harvard Medical School
Harvard Health Publications
www.health.harvard.edu



It's not about your booty



**The average serum cholesterol
in acute MI patients is 104 mg/
dl**



WHICH IS NORMAL!

**Those with a
cholesterol of 220-240
live the longest**

**Low cholesterol is linked with
stroke, cancer, depression, suicide**



**LDL “Bad Cholesterol”
level is outdated
VERY**

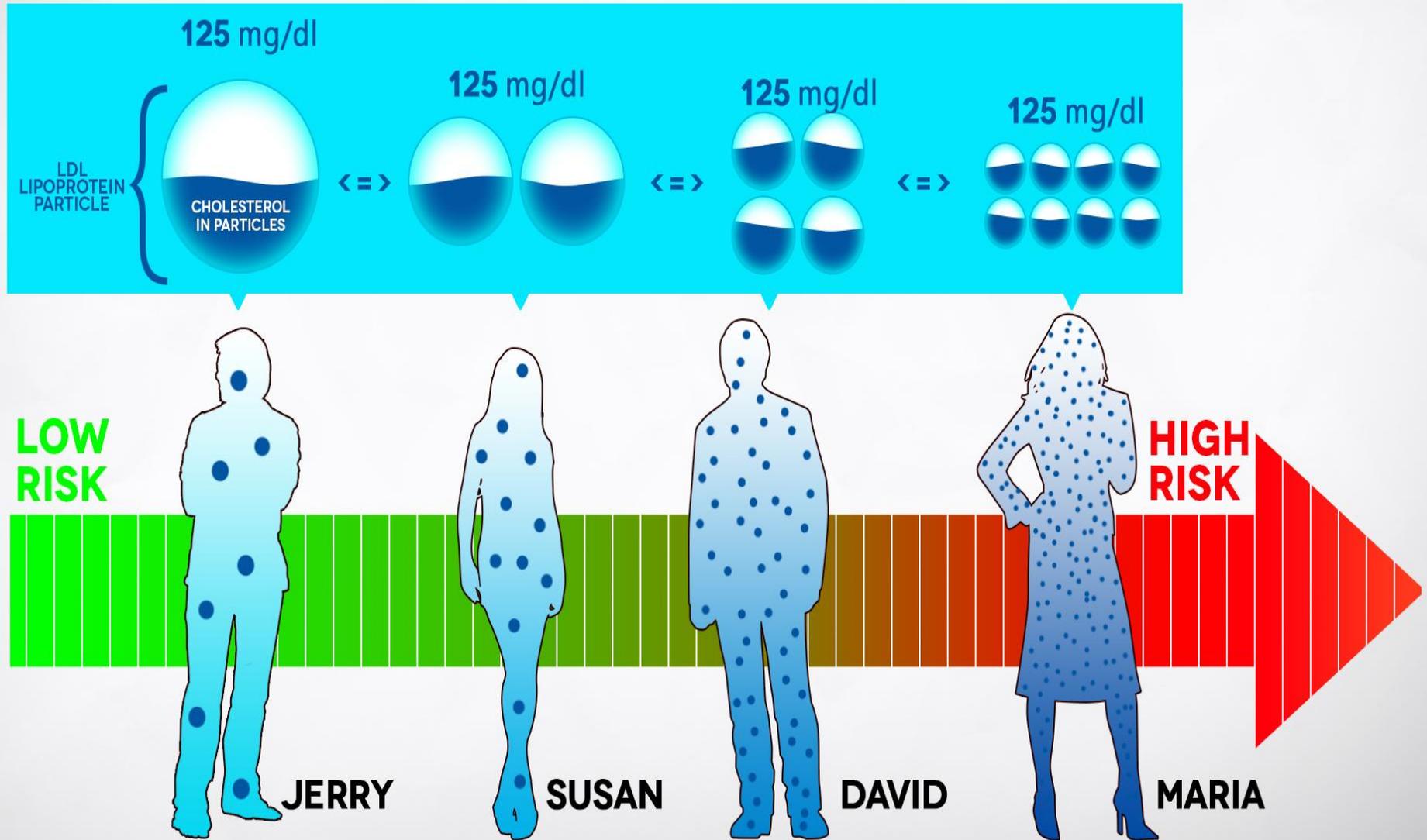
**It's the size of the LDL
“bad” cholesterol
particles that counts**

Yes, size does count!

Bigger IS better!

LIPOPROTEIN PARTICLES VS. CHOLESTEROL

EACH PATIENT SHOWN HAS THE SAME LDL CHOLESTEROL OF 125 mg/dL (3.25 mmol/L)
MARIA HAS THE HIGHEST RISK BECAUSE HER LDL PARTICLES ARE SMALLEST AND SHE HAS A LOT OF THEM



**You can have a perfectly
normal total cholesterol**

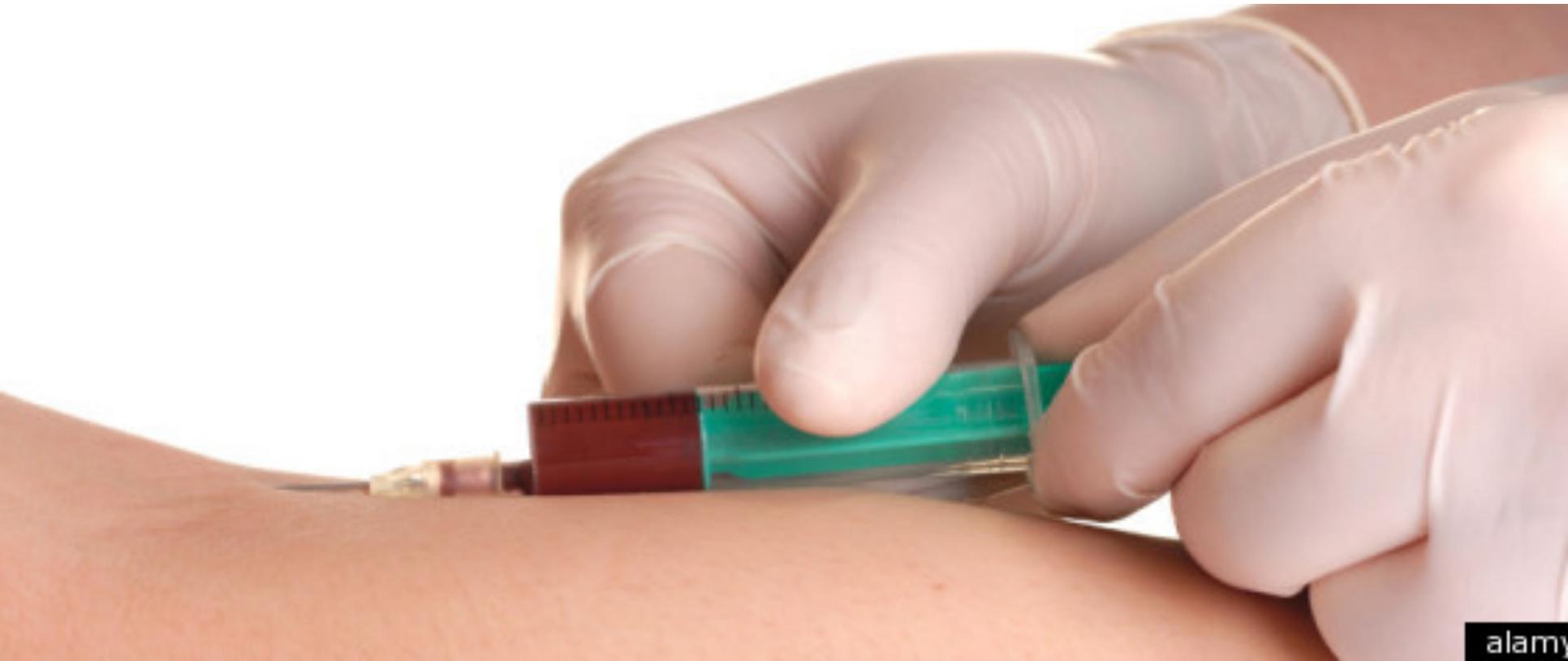
**and still have a high LDL
particle count**

You may be on a cholesterol pill and not need it.

You may have a perfectly normal blood lipid panel and be at high risk of a heart attack

There's a blood test for that!

LDL particle count



Triglyceride/HDL >3



Trig/HDL ratio

- POOR MAN'S LDL PARTICLE COUNT
- You want it to be as small as possible
- **1 is excellent**
- **More than 3 is concerning**
- **More than 5 is damaging**
- **More than 7 is dangerous**

What will make your LDL particles fatter?

- **Low-carbohydrate diet**
- **Omega 3 fatty acids (fish oil)**
- **Exercise*****
- **Niacin**
- **Statin cholesterol medication . . . sorta**

A woman with long brown hair, wearing a white sports bra and black shorts with white stripes, is running in a park. The background is a lush green forest with sunlight filtering through the trees.

Aerobics don't cause weight loss

But they give you an aerobic base

The dead lift



A shirtless man in black shorts is running on a green field, likely a soccer field, with stadium lights and trees in the background. The text is overlaid on the left side of the image.

**High intensity interval
training is the most
effective way to burn fat**

Stretching does not prevent injuries



A glass salt shaker and a metal salt dispenser are shown on a pile of white salt. The background is a solid blue color. The text is overlaid on the image.

**A healthy sodium intake
is 4-6 gm daily**

Not 1.5-2.0 gm

Clean up your diet



Improves your labs

Five foods to never eat





Summary!

- Eat real food including fat
- Limit sugar (eat Stevia) because it damages your liver, mitochondria and creates uric acid
- Limit wheat because it increases your insulin and causes leaky gut syndrome that causes inflammation and autoimmune conditions
- Limit soy because it damages sex and thyroid hormones



EVERYONE IS UNIQUE

WHY WE GET FAT

AND
WHAT
TO DO
ABOUT IT



GARY TAUBES

AUTHOR OF *GOOD CALORIES, BAD CALORIES*

"A vitally important book, destined to change the way we think about food."
—MICHAEL POLLAN, AUTHOR OF *IN DEFENSE OF FOOD*

"Gary Taubes is a brave and bold science journalist who does not
accept conventional wisdom." —*THE NEW YORK TIMES*

GOOD CALORIES,



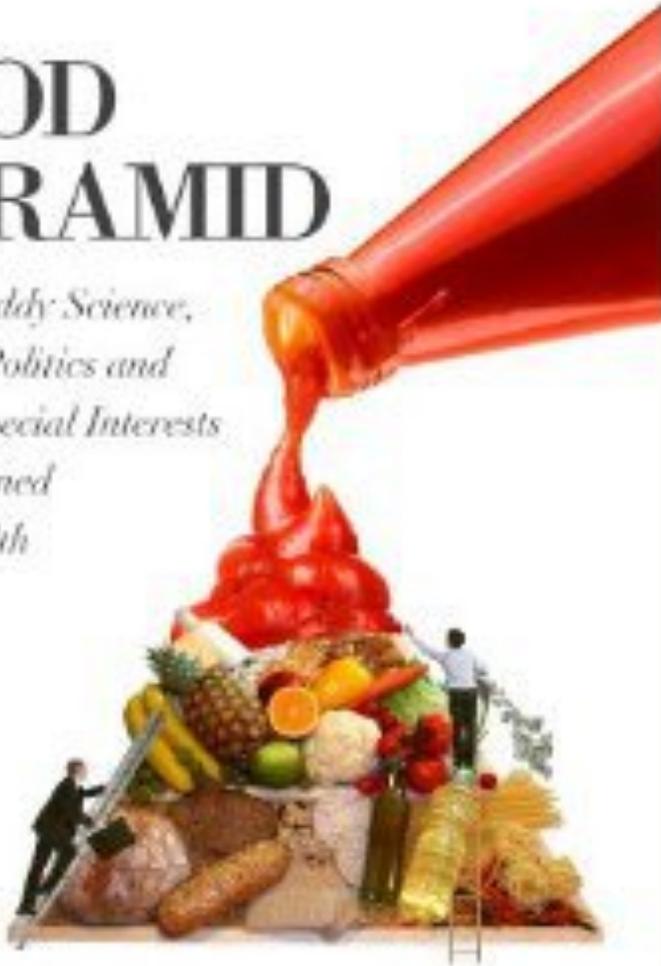
BAD CALORIES

FATS, CARBS, AND THE CONTROVERSIAL
SCIENCE OF DIET AND HEALTH

GARY TAUBES

DEATH BY FOOD PYRAMID

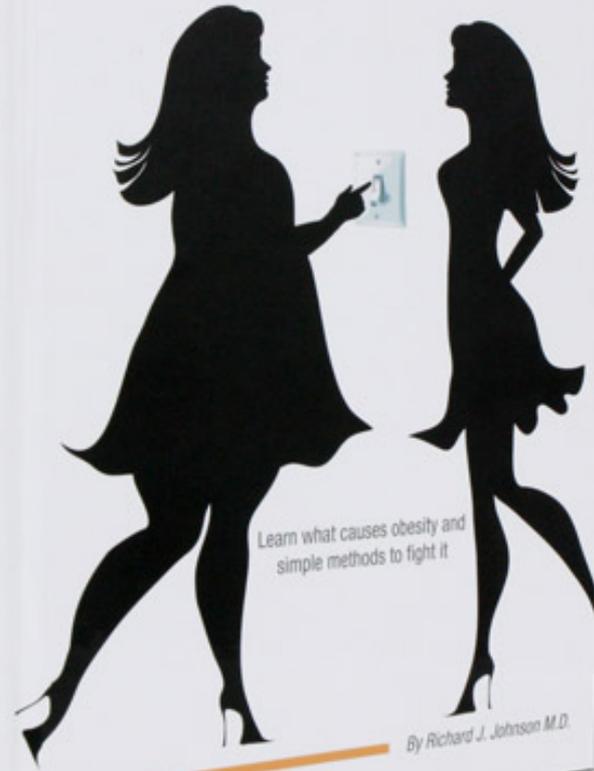
*How Shoddy Science,
Sketchy Politics and
Shady Special Interests
Have Ruined
Our Health*



DENISE MINGER

the fat switch

the fat switch



Learn what causes obesity and
simple methods to fight it

By Richard J. Johnson M.D.

By Richard J. Johnson M.D.

New York
Times
BESTSELLER



THE BIG
FAT
SURPRISE

Why Butter, Meat & Cheese
Belong in a Healthy Diet

NINA TEICHOLZ

<http://www.fhit.org/>

Lecturepad.org

Sugarscience.org