

Lake County Safety Council

Nutrition and Fitness

Calories In  Calories Out

Nancy V Rodway MD MPH

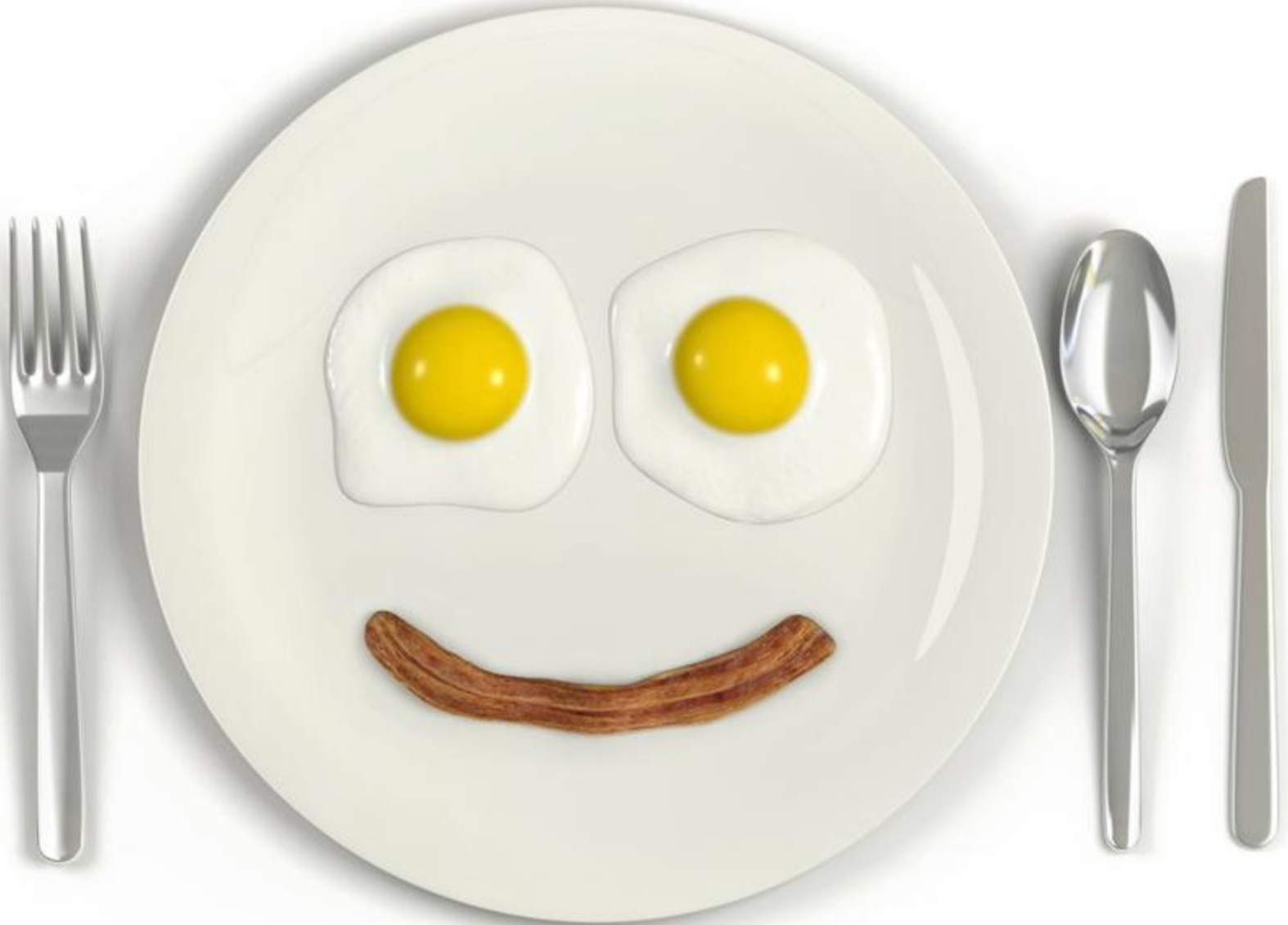
Chris Brill-Packard MA CHES



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







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**

A black and white photograph of two Muppet characters. On the left is an older man with white hair and a mustache, looking slightly to the right with a serious expression. On the right is a younger man with dark hair, looking directly at the camera with a serious expression. They are both wearing dark suits. A dark grey rectangular box is overlaid on the lower half of the image, containing white text.

**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**

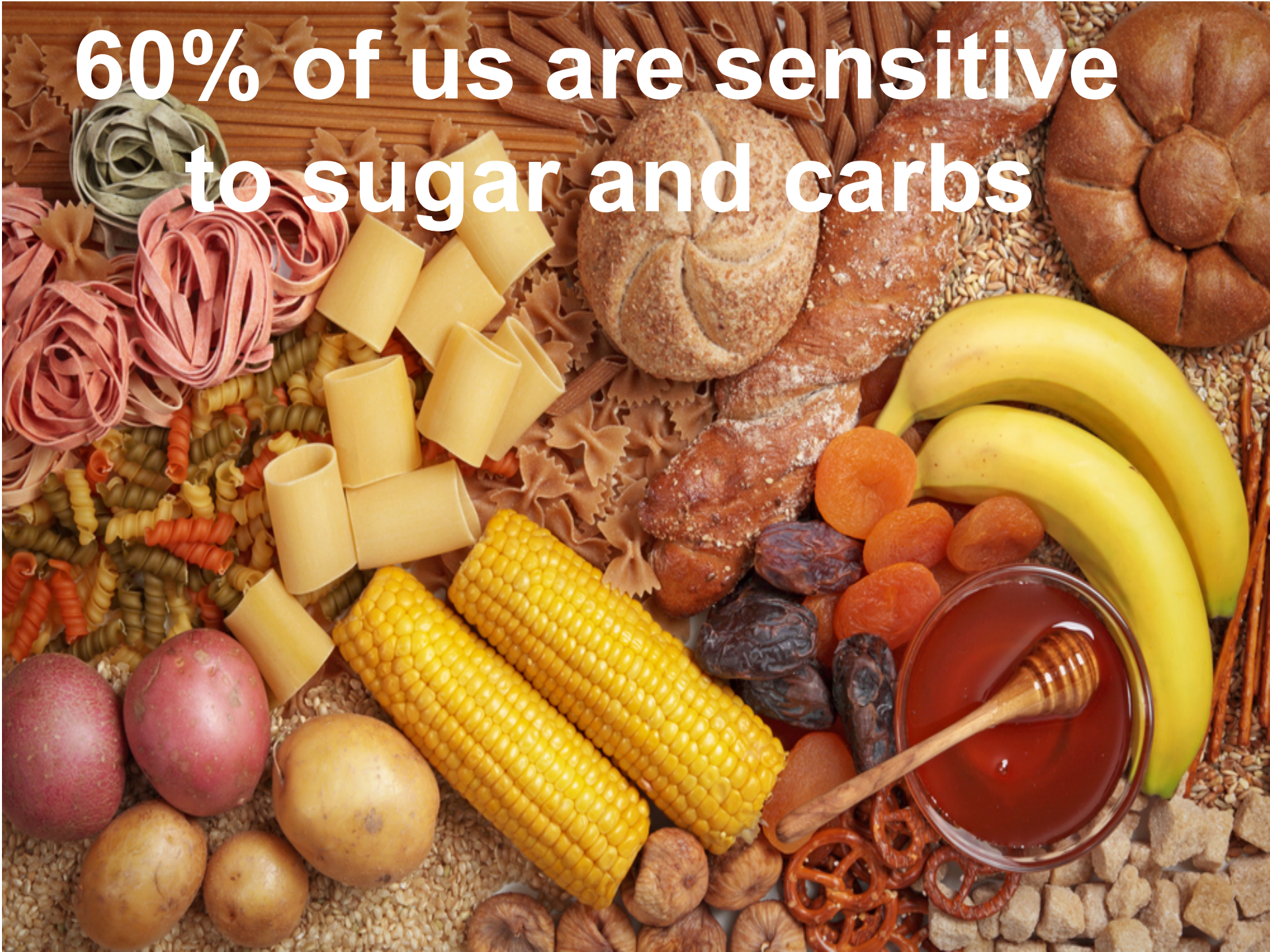


Carbohydrates cause heart attacks



And other bad things . . .

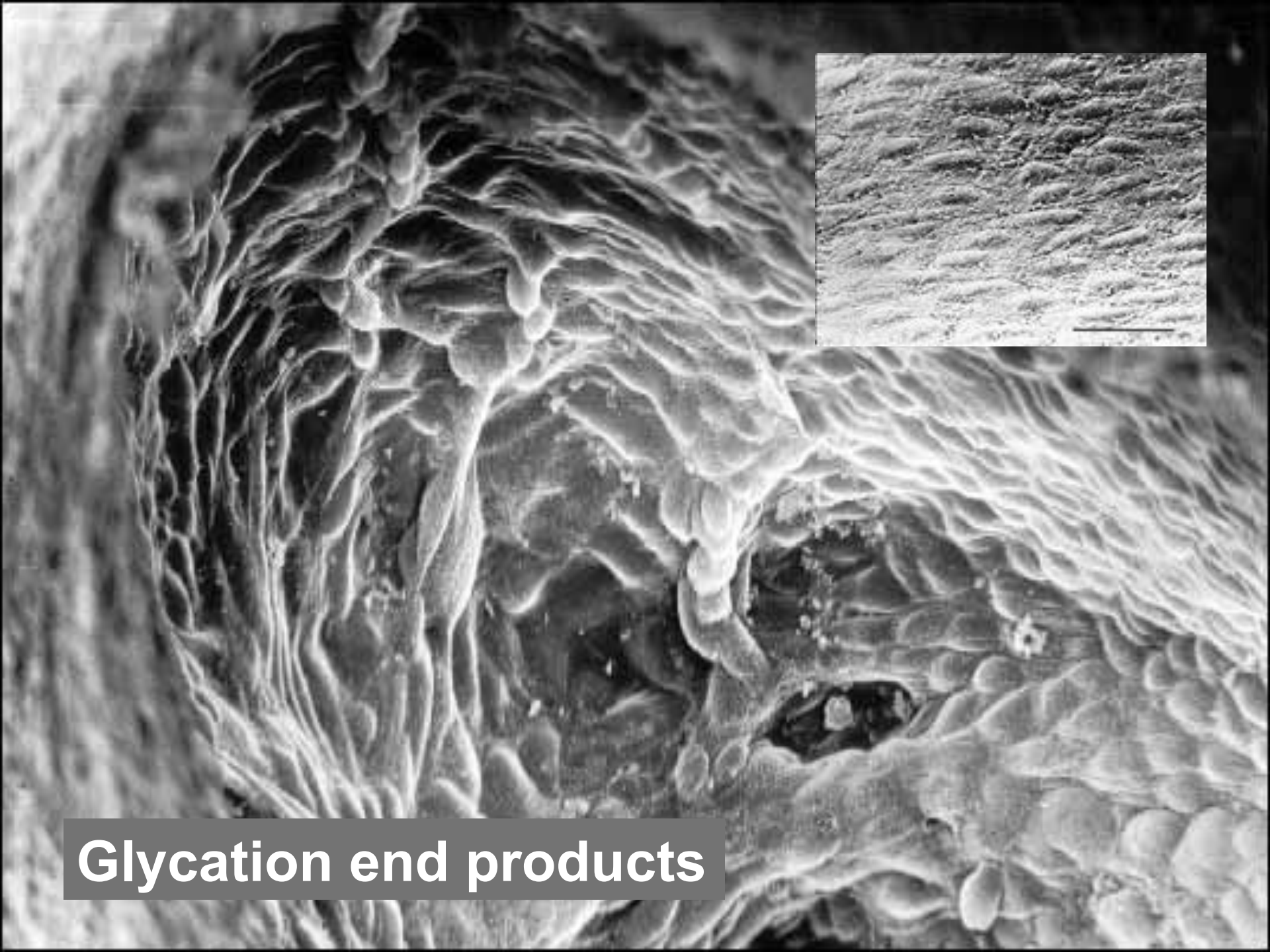
**60% of us are sensitive
to sugar and carbs**



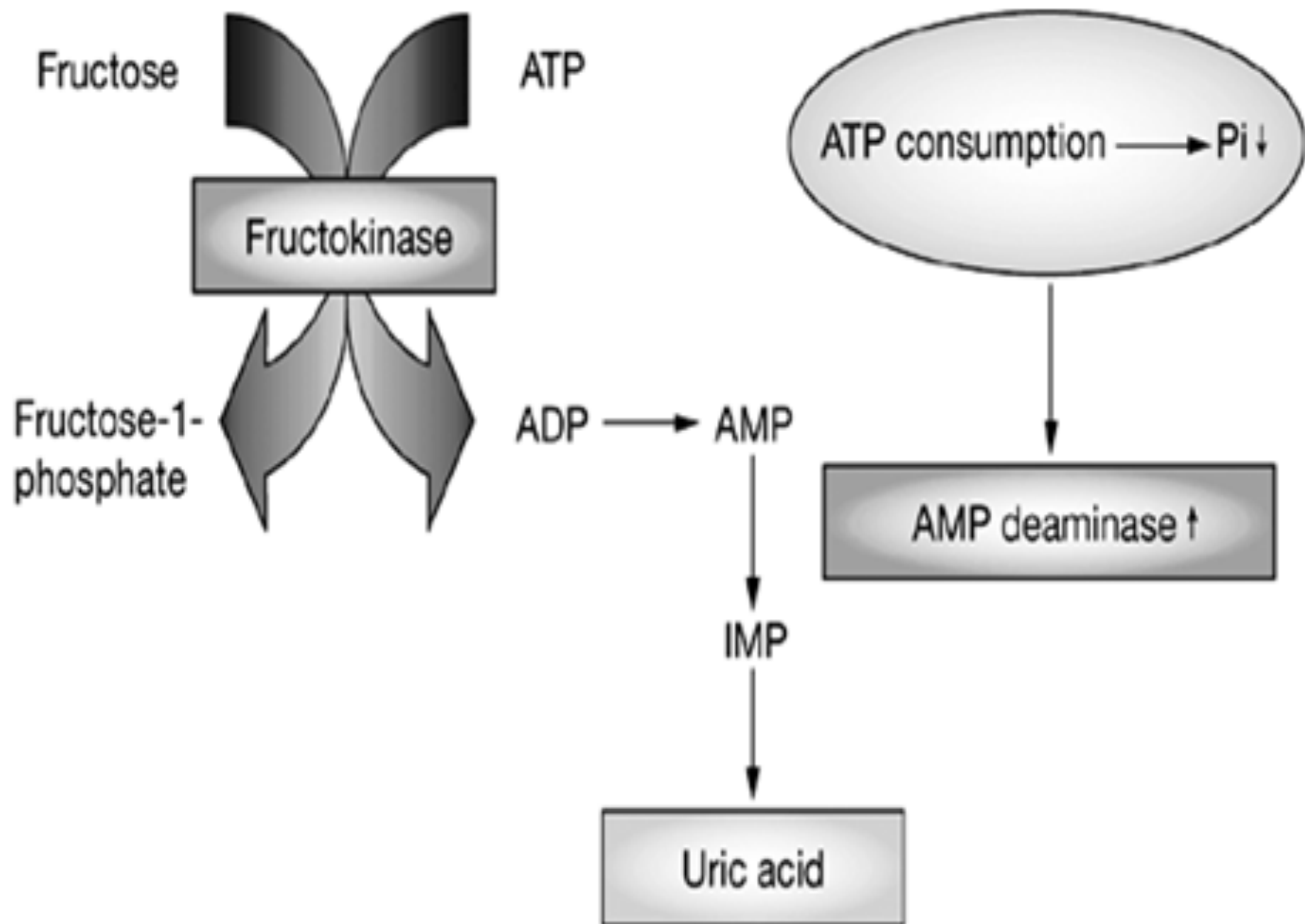
Sugars and Carbs cause:

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

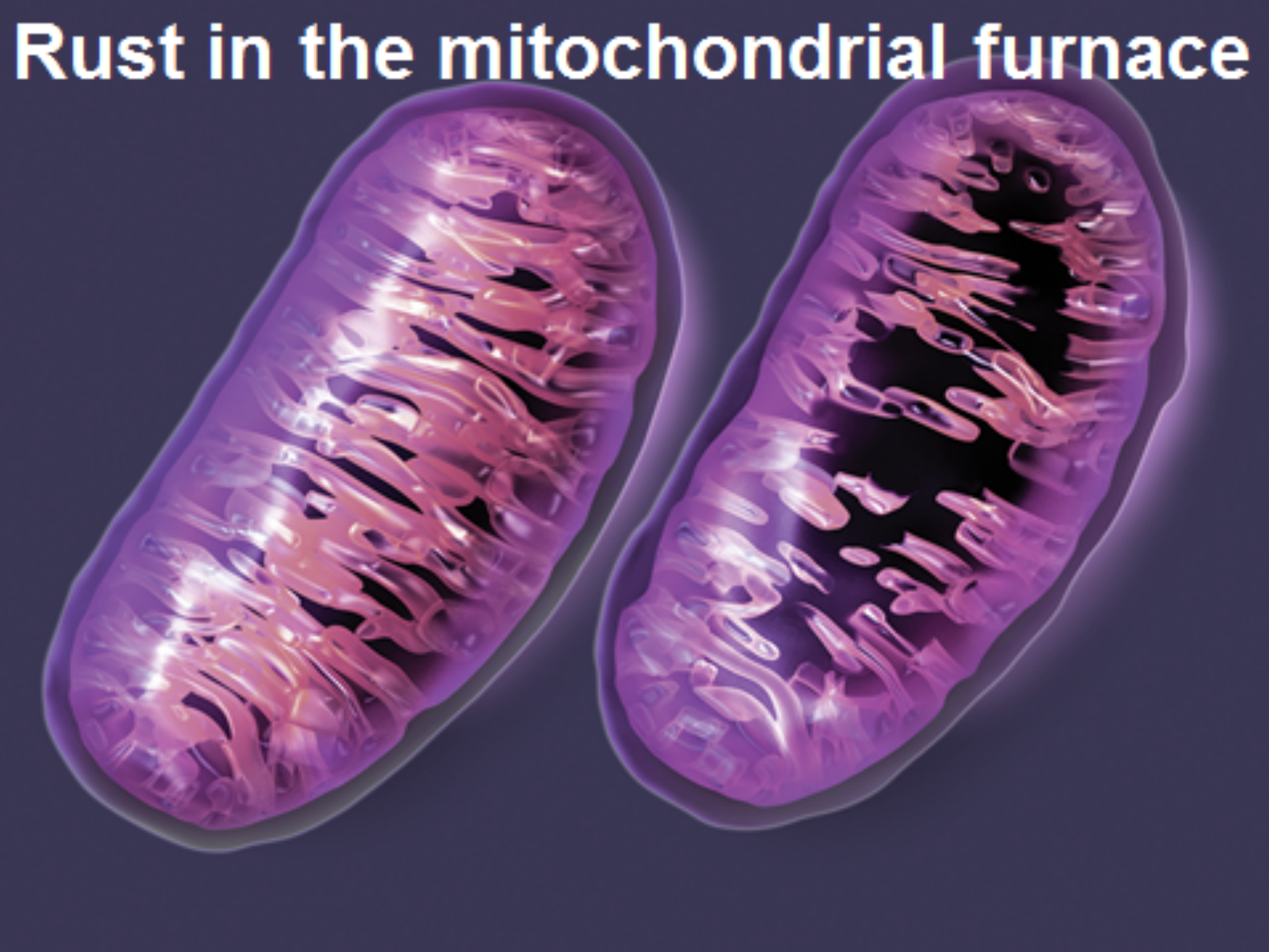
INFLAMMATION



Glycation end products









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**

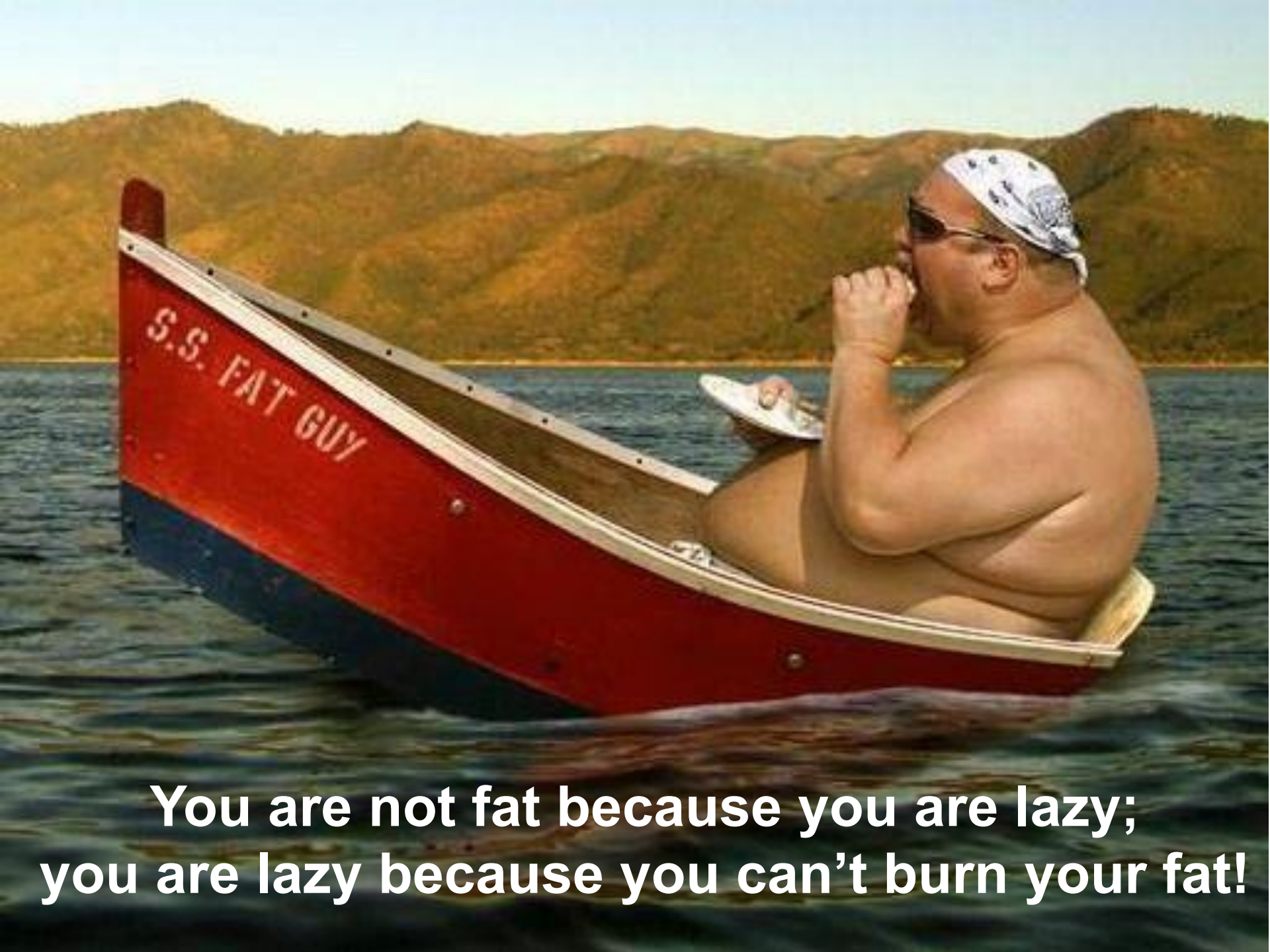
- Fructose (**table sugar, fruit juices, pop**)
- Honey
- **BEER**
- High fructose corn syrup
- **Carbohydrates**
- **Eating throughout the day**

**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**

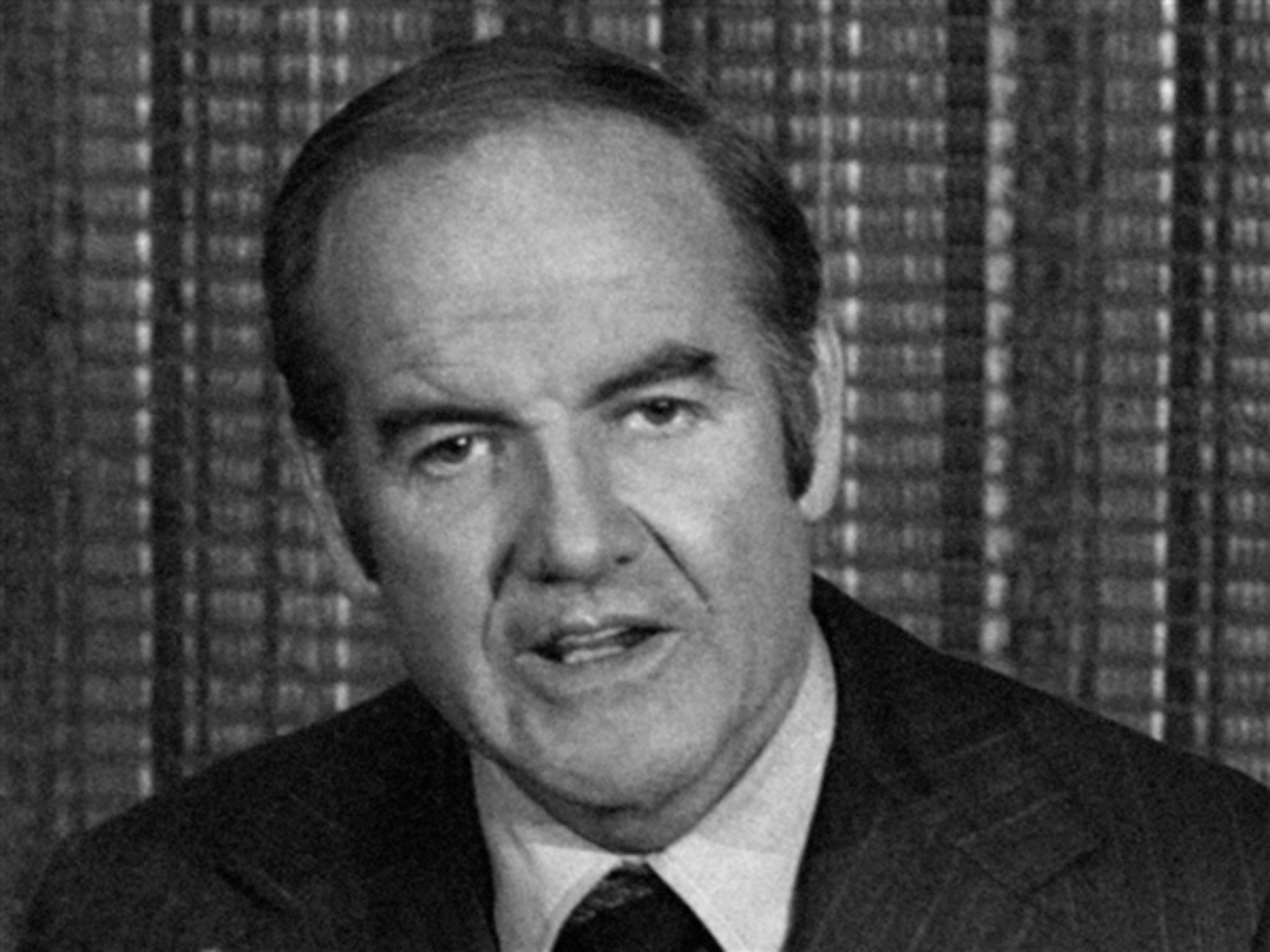


**You are not fat because you are lazy;
you are lazy because you can't burn your fat!**

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

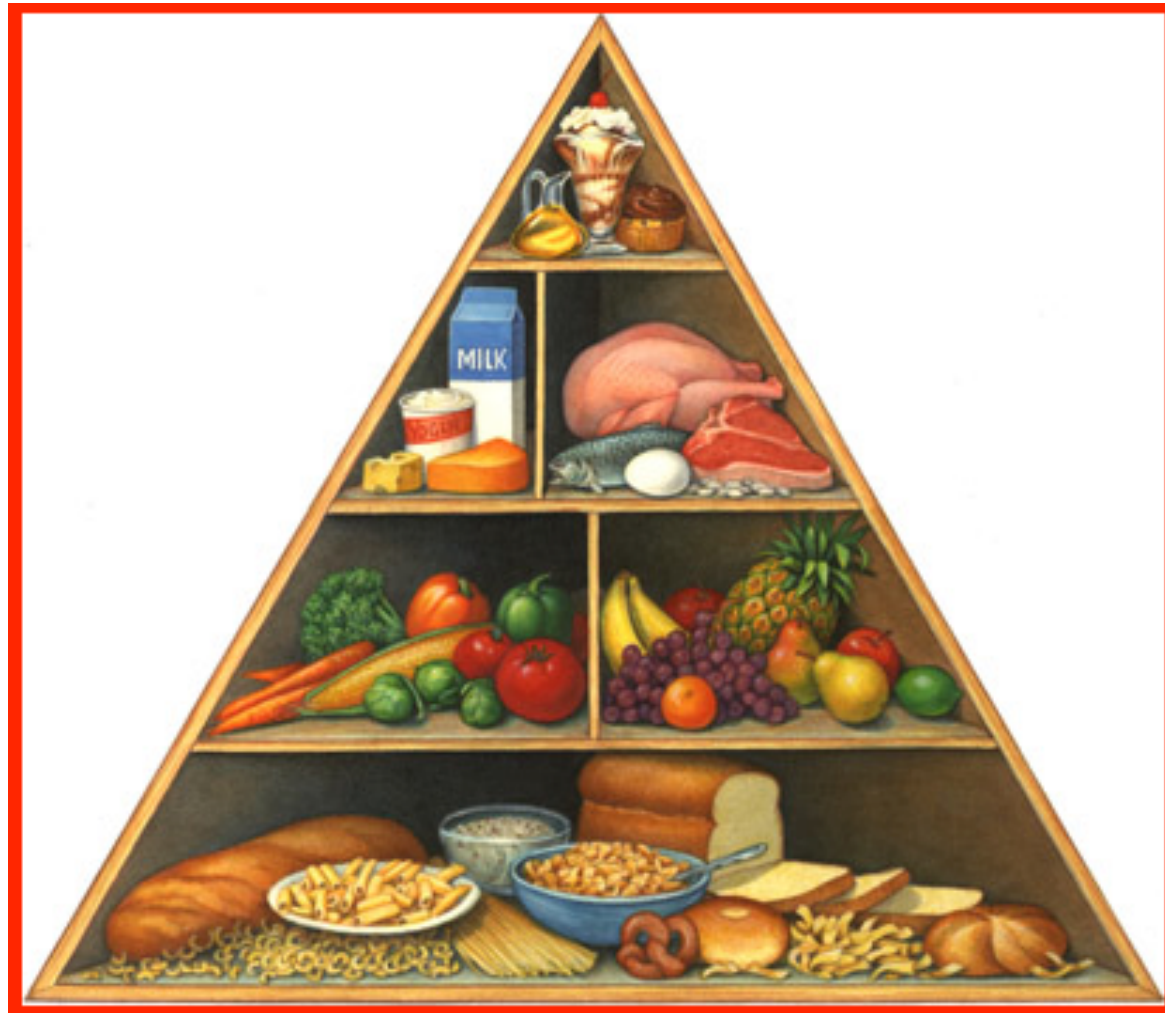
Gary Taubes

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.



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

Eat plenty of fruits of all colors.

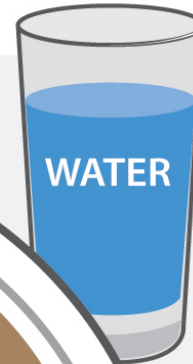


STAY ACTIVE!

© Harvard University



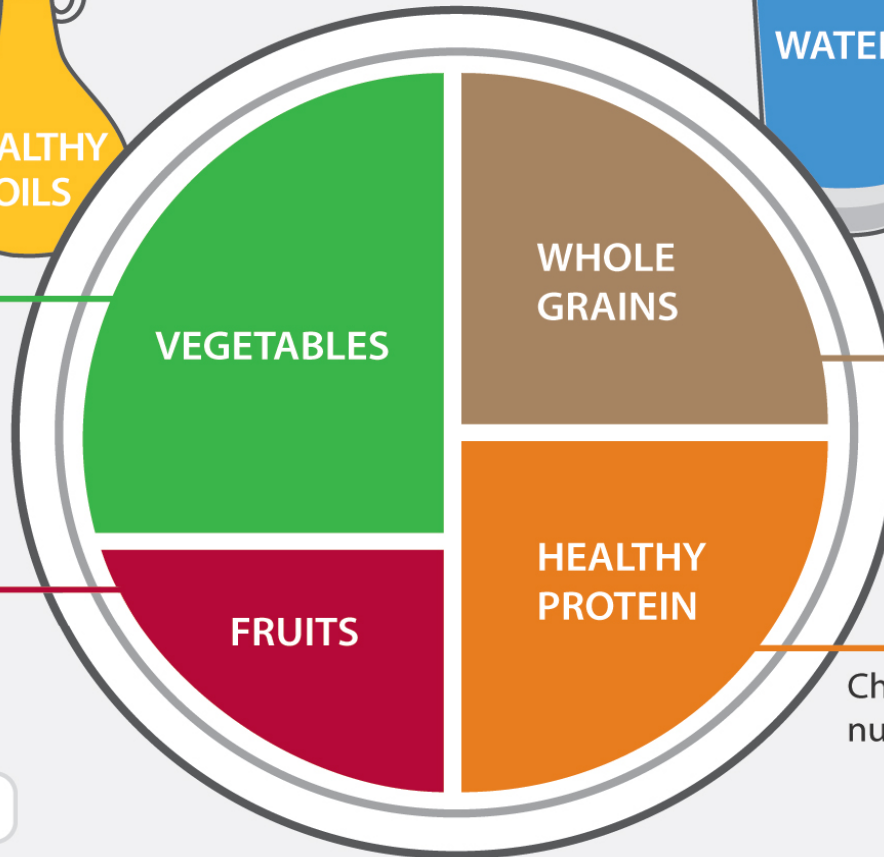
Harvard School of Public Health
The Nutrition Source
www.hsph.harvard.edu/nutritionsource



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.

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).

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



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**

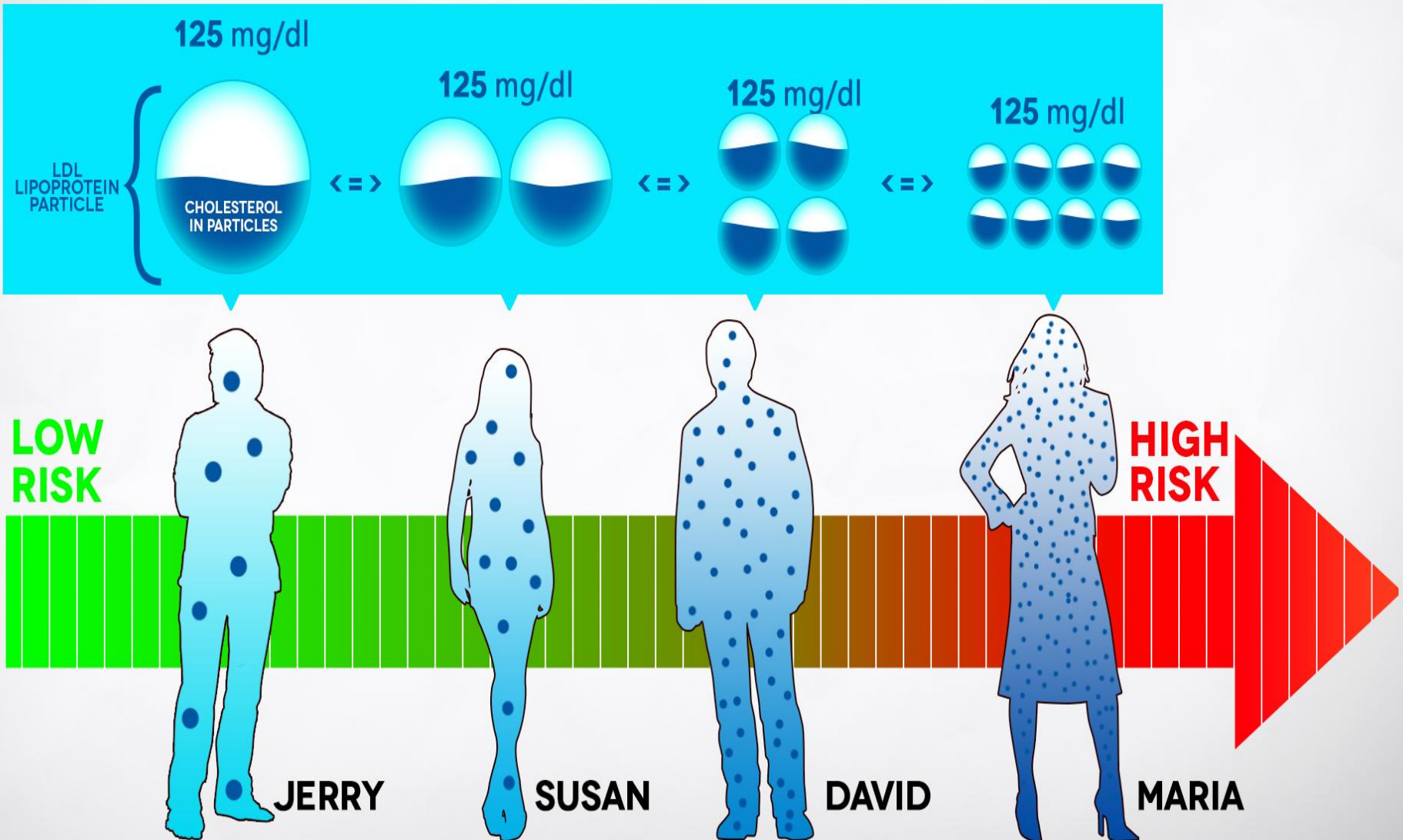
**It's the size of the LDL
“bad” cholesterol
particles that counts**

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 is running outdoors in a park-like setting with lush green trees in the background. She is wearing a white sports bra and black athletic shorts with two white vertical stripes on the left leg. The image is used as a background for text.

**Aerobics don't
cause weight
loss**

But they give you an aerobic base

The dead lift




A person is running on a green soccer field. In the background, there are stadium lights, bleachers, and a line of trees under a blue sky with some clouds. The text "High intensity interval training is the most effective way to burn fat" is overlaid on the left side of the image in yellow.

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 positioned 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,



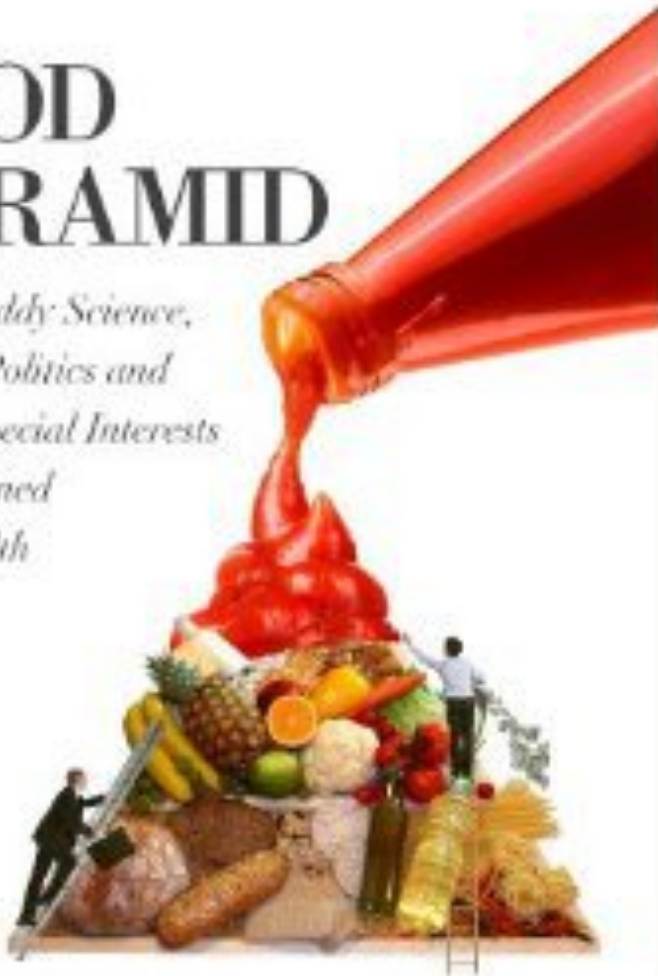
BAD CALORIES

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