

# HYPERINSULINEMIA 101

Melanie Nelson & Kory Seder  
Good Food Low Carb Cafe





“I can make you fat. I can make anybody fat.  
**I just need to give enough insulin.”**

–Dr. Jason Fung

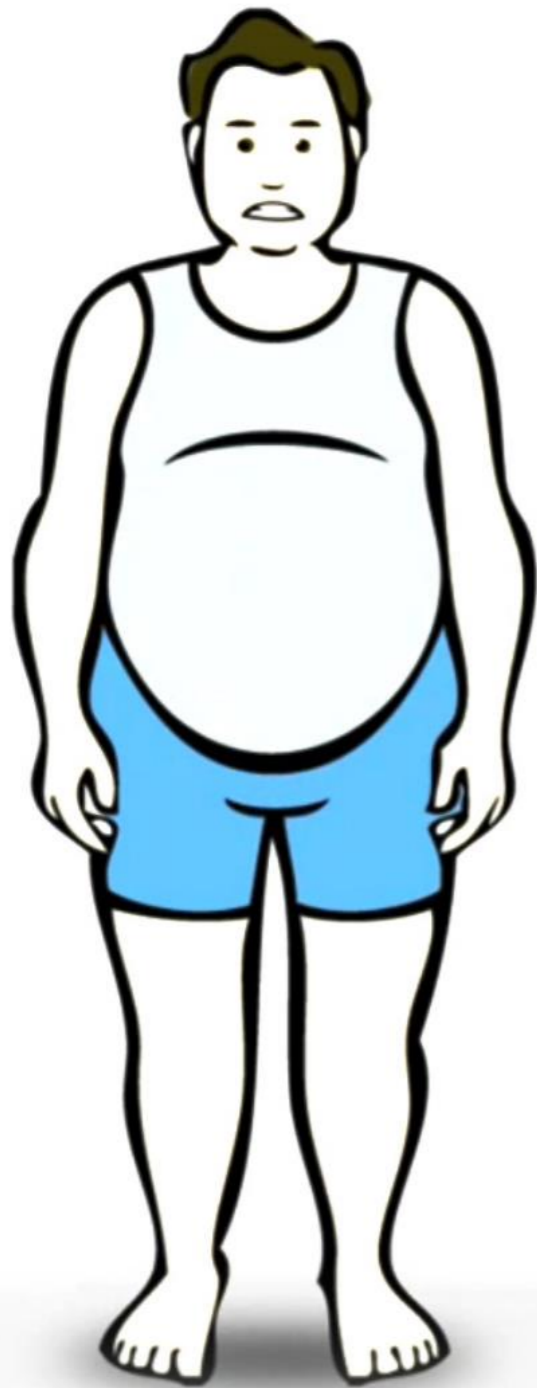
Canadian nephrologist, founder of Intensive Dietary Management, author, and world-leading expert on intermittent fasting and LCHF, especially for treating people with type 2 diabetes.

# INSULIN

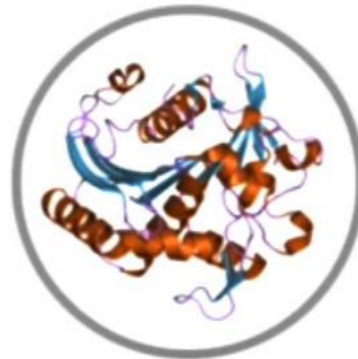
- **Insulin:** Hormone released by the pancreas after meals that allows your cells to use glucose for energy. Insulin is also the body's main fat storage hormone & involved in many biochemical regulatory processes.
- **Insulin Resistance (IR):** decreased sensitivity of the body's cells to insulin. If someone is IR they require ever-MORE insulin to bring down high circulating blood sugar levels after carbohydrate-rich meals.
- **Hyperinsulinemia:** condition of chronic elevated levels of insulin in the blood.
- **Reactive Hypoglycemia:** Low blood sugar levels after eating caused by hyperinsulinemia. An early indicator of insulin resistance and metabolic syndrome.
- **Metabolic Syndrome: Insulin Resistance Syndrome**



# THE METABOLIC SYNDROME



HEART DISEASE



LIPID PROBLEMS



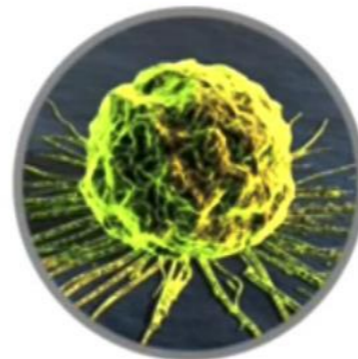
HYPERTENSION



TYPE 2 DIABETES



DEMENTIA



CANCER



POLYSYSTIC  
OVARIAN  
SYNDROME



NON-ALCOHOLIC  
FATTY LIVER  
DISEASE

**Metabolic Syndrome is Hyperinsulinemia!**



**Carbohydrates:**  
**Starch, Sugar**

**Protein:**  
**Meat, Fish,**  
**Eggs, Nuts**

**Fats**

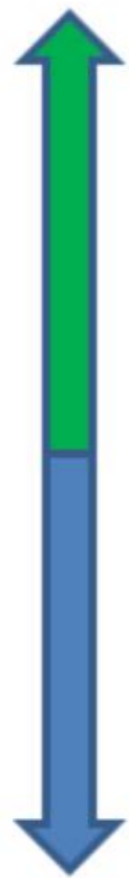
Breakfast

Lunch

Dinner

8 hours of sleep  
(fasting)

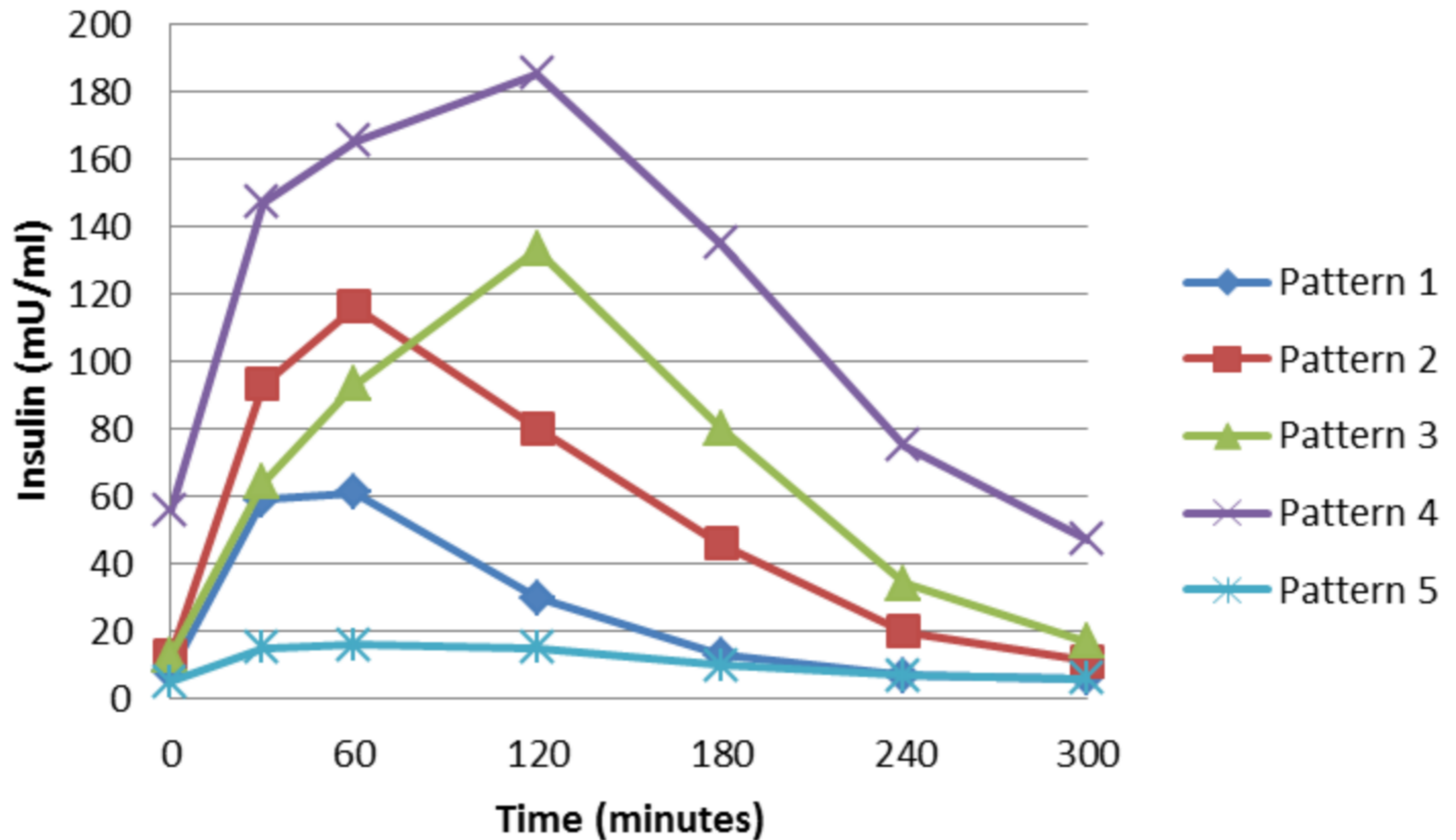
Insulin-  
Stimulated Fat  
Formation



Fat Loss Due  
to Reduced  
Insulin









Breakfast

Lunch

Dinner

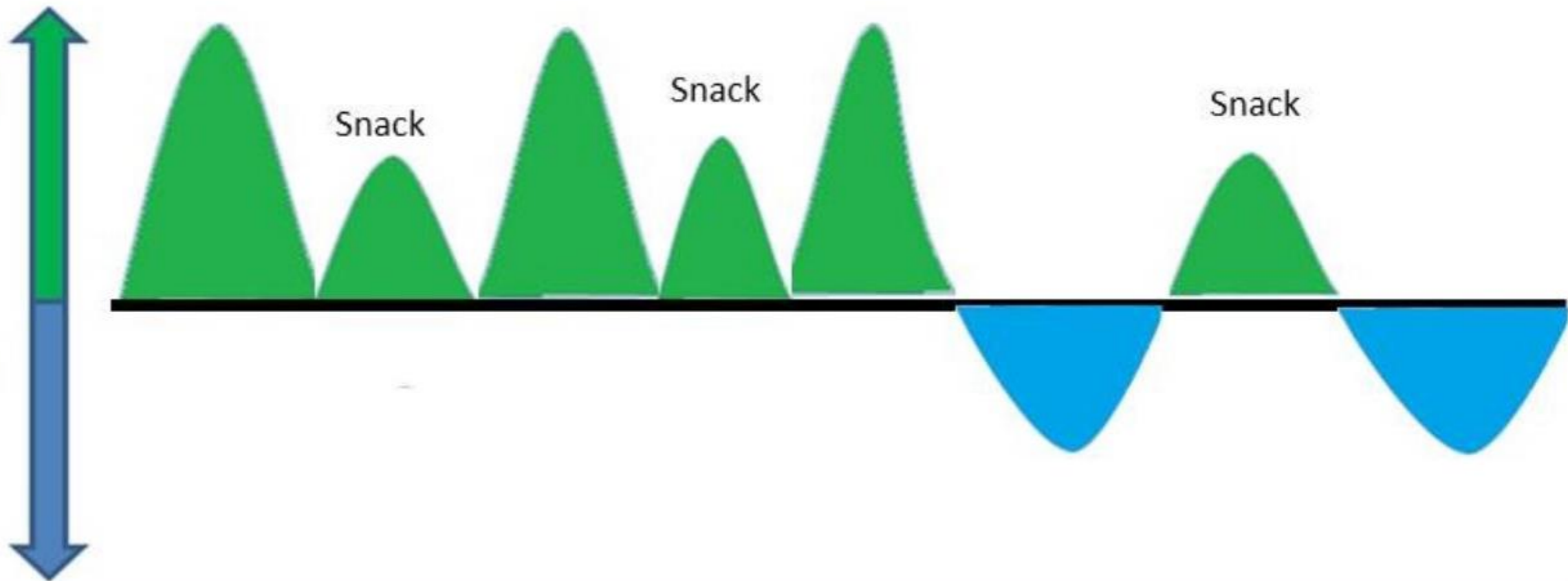
Increased  
Insulin

Snack

Snack

Snack

Decreased  
Insulin



How many of you in this room have ever had  
your Insulin levels measured?



How did we get to this diabetes & obesity epidemic?

**“Senators don't have the luxury that a research scientist does of waiting until every last shred of evidence is in.”**

- Senator George McGovern, 1977

Ignoring a lack of evidence, it was agreed that the USDA would draft official low-fat & low-cholesterol dietary guidelines for Americans (1980) using the non-expert McGovern Report (1977) as a substrate.

NEW YORK TIMES BESTSELLER



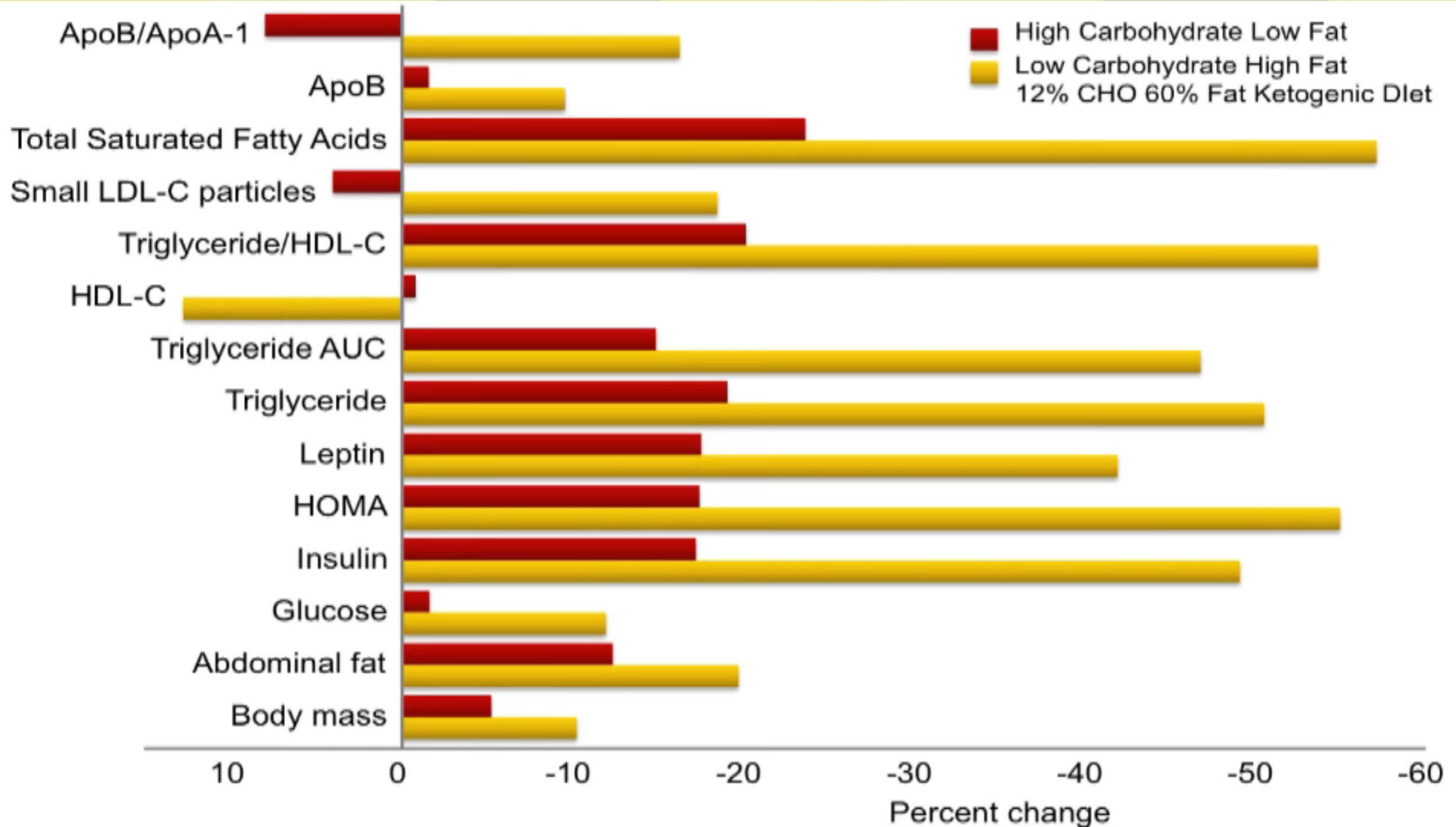
THE BIG  
FAT  
SURPRISE

Why Butter, Meat & Cheese  
Belong in a Healthy Diet

NINA TEICHOLZ



# A HIGH FAT DIET REVERSES ALL CORONARY RISK FACTORS MORE EFFECTIVELY THAN A LOW FAT DIET



Volek JS, Fernandez ML, Feinman RD, Phinney SD. Dietary carbohydrate restriction induces a unique metabolic state positively affecting atherogenic dyslipidemia, fatty acid partitioning, and metabolic syndrome. *Prog Lipid Res* 2008; 47: 307-318.

“Healthcare is rife with controversy, and the field of nutrition more so than many, characterised as it is by much **weak science, polarised opinion, and powerful commercial interests.**[4] **But nutrition is perhaps one of the most important and neglected of all health disciplines,** traditionally relegated to non-medical nutritionists rather than being, as we believe **it deserves to be, a central part of medical training and practice.** The current state of nutrition research should be a matter of grave concern to those attempting to develop evidence based health and economic policies that truly serves the public interests.”

–Dr Fiona Godlee, Editor in Chief, The BMJ The BMJ, December 1, 2016



# WHAT CAN EMPLOYERS DO?

- Encourage consumption of meats & vegetables - foods humans evolved to eat over 3.5 million years.
- Encourage short walks after meals to bring down post-prandial blood sugar levels even quicker.
- Don't reward your team with donuts or pizza (or any grains & sugar)
- Get rid of sugar-sweetened beverages, candy, chips, cookies, and other high-carb vending machines
- Avoid Foods marketed as being "Low Fat"
- Enlighten your team with information about low carb healthy fat diets.

“Please understand: **Obesity** is purely a marker  
of a  
**high carbohydrate diet** in someone who is  
**insulin resistant.”**

-Professor Tim Noakes

Emeritus Professor, Medical Doctor and Research Scientist in the  
Division of Exercise Science and Sports Medicine at the  
University of Cape Town.