

THE CONDITION OF CARBOHYDRATE RESISTANCE

KE Petersen, S Dufour, DB Savage, PNAS 104: 12587-12594, 2007

The metabolism of every human is
not the same.

Those with insulin resistance are
unable to metabolize carbohydrate
safely.

Plasma glucose concentrations

Plasma triacylglyceride concentrations

0 10am 12pm 2pm 4pm 6pm 10pm 12am 2am 4am 6am

Insulin sensitive

Insulin resistant

Petersen KE, Dufour S, Savage DB, et al. The role of skeletal muscle insulin resistance in the pathogenesis of the metabolic syndrome. *Proc Natl Acad Sci U S A* 2007; 104: 12587-12594.

**Coronary risk factors should be
grouped according to:**

***Abnormalities in carbohydrate
metabolism – insulin resistance***

***Abnormalities in lipoprotein
metabolism***

Abnormalities in inflammation

Others

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

Meta-analysis ... on data obtained in 1,141 obese patients, showed the low carbohydrate diet to be associated with significant decreases in body weight, body mass index, abdominal circumference, systolic blood pressure, diastolic blood pressure, plasma triglycerides, fasting plasma glucose, glycated hemoglobin, plasma insulin and plasma C-reactive protein, as well as an increase in high-density lipoprotein cholesterol. Low-density lipoprotein cholesterol and creatinine *did not change significantly*, whereas limited data exist concerning plasma uric acid.

Santos FL et al. Systematic review and meta-analysis of clinical trials of the effects of low carbohydrate diets on cardiovascular risk factors. *Obes Rev* 2012; 13: 1048-1066.

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.

INCREASED HEPATIC GLUCOSE PRODUCTION

Pathogenesis of Fasting and Postprandial Hyperglycemia IN TYPE 2 DIABETES

Type 2 Diabetes is caused by failure of the glucose homeostat in the pancreas that determines the co-ordinated secretion of insulin and glucagon in response to changing blood glucose concentrations

treated the same regardless of the underlying cause of their People with so-called mild type 2 diabetes have both

DIABETES AND OBESITY RATES IN THE US HAVE SORED SINCE THE ADOPTION OF THE 1977 DIETARY GUIDELINES

% of Americans with diabetes

% of US children who are obese



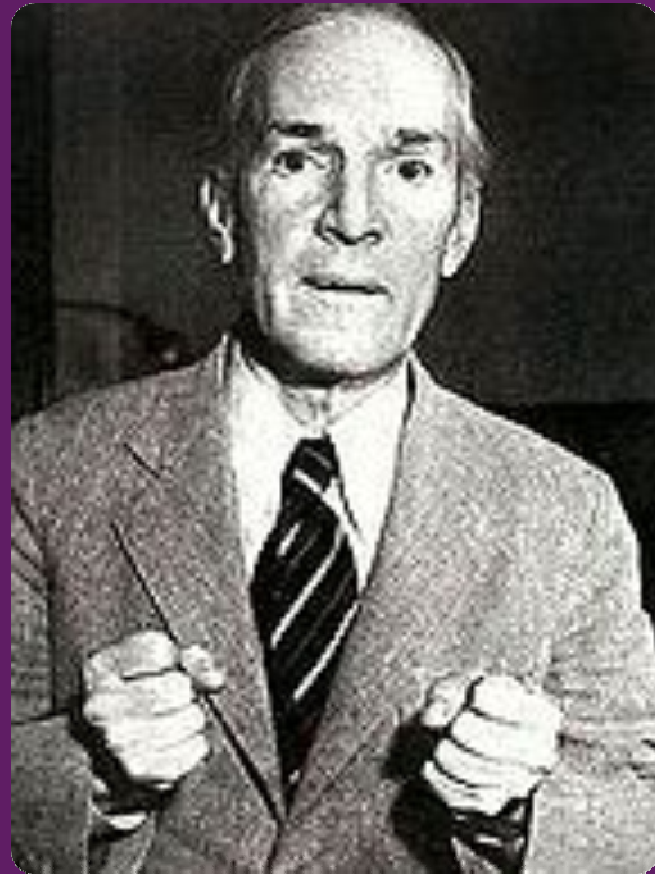
“WHY MESS
WITH SUCCESS?”

Prof. Jaques Rossouw, National Institute of Health

Data from USDA, CDC, US Census Bureau.

THE UPTON SINCLAIR THEOREM

“It is difficult to get a man to understand something, when his salary depends upon his not understanding it.”



Winner of the Pulitzer Prize

**MICHAEL
MOSS**



“Don’t talk to me about nutrition,” he said, taking on the voice of a typical consumer. “Talk to me about taste, and if this stuff tastes better, don’t run around trying to sell stuff that doesn’t taste good.”



Winner of the Pulitzer Prize

**MICHAEL
MOSS**



Salt

SUGAR

fat



10 COMPANIES THAT CONTROL ENORMOUS NUMBER OF CONSUMER BRANDS



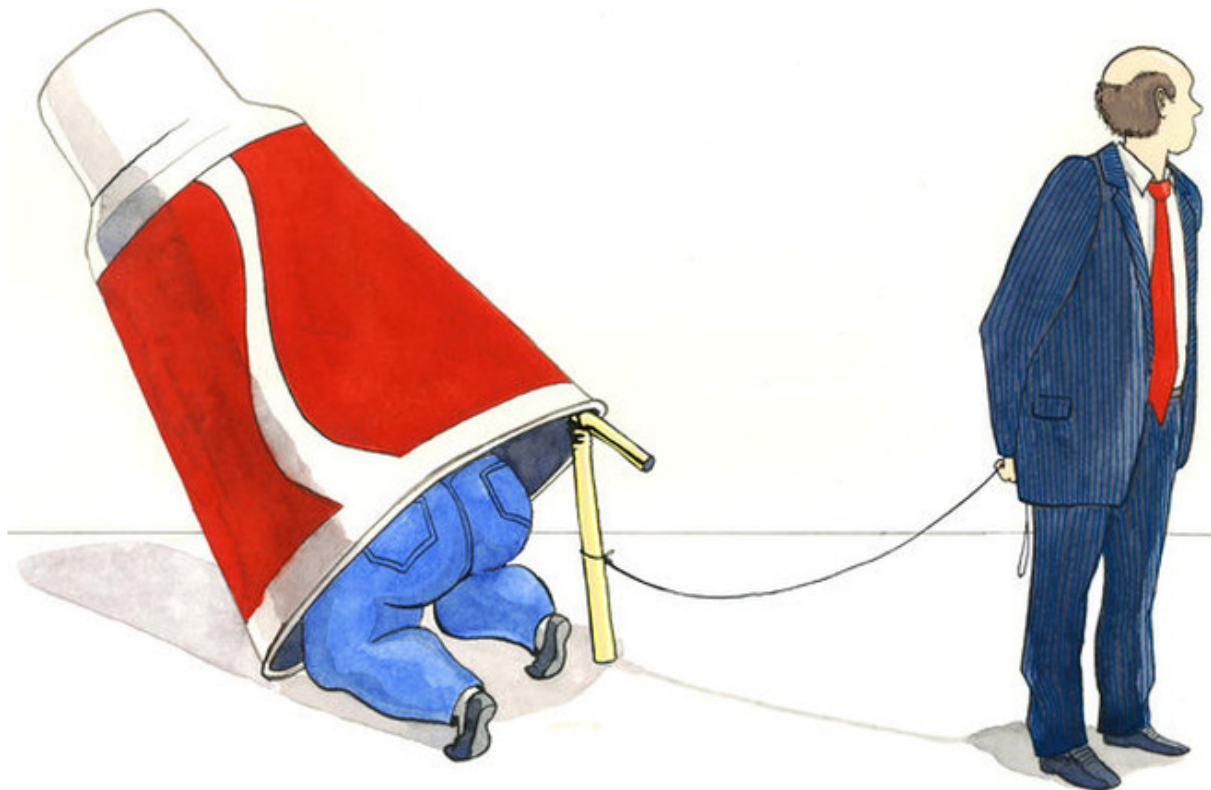
The New York Times

Sunday Review | The Opinion Pages

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS OPINION

OPINION

How to Force Ethics on the Food Industry



Andrea Tsurumi

By MICHAEL MUDD
Published: March 16, 2013

“Confronted with this, the executives who run these companies like to say they don’t create demand, they try only to satisfy it. “We’re just giving people what they want. We’re not putting a gun to their heads,” the refrain goes. Nothing could be further from the truth. Over the years, relentless efforts were made to increase the number of “eating occasions” people indulged in and the amount of food they consumed at each.

”

WEAPONS OF MASS DESTRUCTION

These companies support research activities which promote the unproven theory that obesity is due to reduced energy output (physical activity) independent of changes in energy intake





DIFFERENT MODELS OF OBESITY

Energy Balance Model:

Calories In >> Calories Out

Failed Homeostat Model:

*Addictive food choices cause obesity
in those with carbohydrate/insulin
resistance*

MODEL 1

1
MODEL

**ENERGY
INTAKE**

>

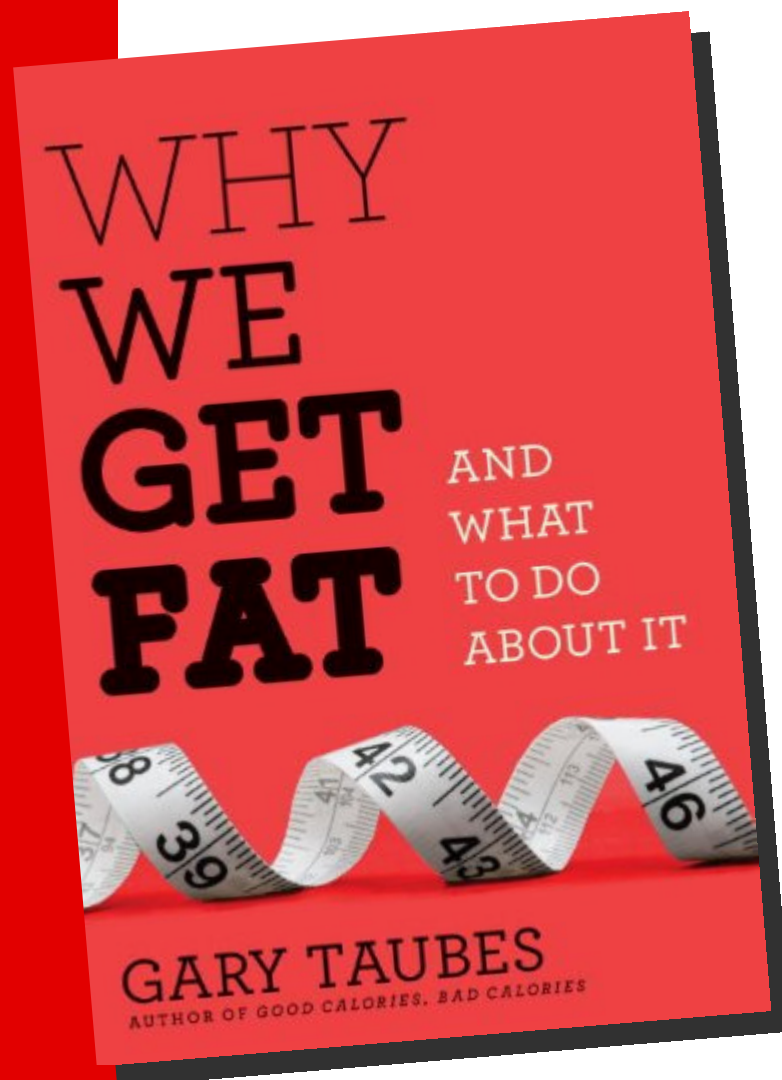
**ENERGY
EXPENDITURE**

= WEIGHT GAIN





**People who
gain weight
are slothful &
gluttinous**



To remain at an
ideal
body weight

Be
motivated

disciplined

focused

Eat less
(count calories)

Exercise more
(expend more calories)



This model does not work because it is brainless.

It ignores the roles of :

- (i) homeostatic control of body weight**
- (ii) hunger**
- (iii) addictive food choices.**

Severe obesity is a disease of food addiction with loss of homeostatic control of body weight.

= WEIGHT GAIN



**This model does not work because it is brainless.
It ignores:**

**(i) the role of homeostatic control of body weight
through the modulation of hunger, and**

(ii) the role of addictive food choices.

**More exercise and less (of the same food) simply
makes the patient more hungry.**

**The key to managing obesity is to understand that it
is a disease of food addiction with loss of
homeostatic control of body weight.**



This model does not work because it is brainless.

It ignores:

(i) the role of homeostatic control of body weight through the modulation of hunger, and

(ii) the role of addictive food choices.

More exercise and less (of the same food) simply makes the patient more hungry.

Obesity is a disease of food addiction with loss of homeostatic control of body weight in those with carbohydrate resistance/intolerance.

MODEL 2

