MEDICAL BOARD STAFF REPORT

DATE REPORT ISSUED: July 2, 2013
ATTENTION: Education & Wellness Committee Members
SUBJECT: SB 380 (Wright, Chapter 236, Statutes of 2011)
STAFF CONTACT: Jennifer Simoes, Chief of Legislation

This memo provides information regarding the requirements contained in SB 380 (Wright, Chapter 236, Statutes of 2011) and staff's plan for implementation.

BILL INFORMATION:

SB 380 was signed into law in 2011 and was sponsored by the California Academy of Preventive Medicine. This bill requires the Medical Board of California (Board) to convene a working group of interested parties to discuss nutrition and lifestyle behavior for the prevention and treatment of chronic disease at a quarterly Board meeting within three years of the effective date of this bill. This bill requires the Board to periodically disseminate information and educational material regarding the prevention and treatment of chronic disease by the application of changes in nutrition and lifestyle behavior to each licensed physician and surgeon and to each general acute care hospital in California.

In addition to the mandates in this bill, this bill also allows the Board (but does not require) to set content standards for any educational activity concerning a chronic disease that includes appropriate information on the impact, prevention, and cure of the chronic disease by the application of changes in nutrition and lifestyle behavior.

BACKGROUND:

SB 380 made findings and declarations related to health care costs for chronic disease treatment and the last World Health Organization Report that concluded diet was a major factor in the cause of chronic diseases. The findings also stated that practicing physicians rate their nutrition knowledge and skills as inadequate. Every physician has the opportunity to treat patients at risk for chronic disease or that suffer from poor nutrition or lifestyle choices. According to the author's office, chronic conditions are avoidable, but responsible for 7 out of 10 deaths among Americans each year. The author's office believes that education is the key in prevention and reducing health care costs, but states that medical students receive fewer than 20 contact hours of nutrition instruction during their entire medical school careers. One of the Board's medical consultants confirmed this to be true. The Board's medical consultant also stated that little emphasis is put on nutrition and lifestyle behavior as it relates to preventing and treating chronic diseases in medical schools and residencies.

There is a noted prevalence of preventable chronic diseases in California and it is true that medical students do not receive much training in nutrition instruction. The purpose of this bill is to ensure that physicians receive educational material on the prevention and treatment of chronic disease by the application of changes in nutrition and lifestyle behavior and also open up this topic for discussion at one of the Board's quarterly meetings, in particular, the Education Committee. The Board took a Neutral position on this bill.

Senate Bill No. 380

CHAPTER 236

An act to amend Section 2190 of, and to add Sections 2196.6 and 2196.7 to, the Business and Professions Code, relating to medicine.

[Approved by Governor September 6, 2011. Filed with Secretary of State September 6, 2011.]

LEGISLATIVE COUNSEL'S DIGEST

SB 380, Wright. Continuing medical education.

Existing law, the Medical Practice Act, provides for the licensure and regulation of physicians and surgeons by the Medical Board of California. Under that act, the board is required to adopt and administer standards for the continuing education of physicians and surgeons. Existing law requires physicians and surgeons to complete a mandatory continuing education course in the subjects of pain management and the treatment of terminally ill and dying patients, except that it does not apply to physicians and surgeons practicing in pathology or radiology specialty areas. Existing law also requires the board to periodically disseminate information and educational material regarding detection of spousal or partner abuse to physicians and surgeons and acute care hospitals.

This bill would authorize the board to also set content standards for an educational activity concerning chronic disease, as specified. The bill would require the board to periodically disseminate information and educational material regarding nutritional and lifestyle behavior for prevention and treatment of chronic disease to physicians and surgeons and acute care hospitals. The bill would require the board to convene a working group regarding nutrition and lifestyle behavior, as specified.

The people of the State of California do enact as follows:

SECTION 1. The Legislature finds and declares all of the following:

(a) In 2008, U.S. health care spending was about $7,681 per resident and accounted for 16.2 percent of the nation's gross domestic product; this is among the highest of all industrialized countries. Expenditures in the United States on health care surpassed $2.3 trillion in 2008, more than three times the $714 billion spent in 1990, and over eight times the $253 billion spent in 1980.

(b) It is estimated that health care costs for chronic disease treatment account for over 75 percent of national health expenditures.

(c) Seven out of 10 deaths among Americans each year are from chronic diseases. Heart disease, cancer, and stroke account for more than 50 percent of all deaths each year.

(d) The last major report from the World Health Organization in March 2003 concluded diet was a major factor in the cause of chronic diseases.

(e) Dramatic increases in chronic diseases have been seen in Asian countries since the end of WWII with the increase in the gross national product and change to the western diet.

(f) Only 19 percent of students believed that they had been extensively trained in nutrition counseling. Fewer than 50 percent of primary care physicians include nutrition or dietary counseling in their patient visits.

(g) Practicing physicians continually rate their nutrition knowledge and skills as inadequate. More than one-half of graduating medical students report that the time dedicated to nutrition instruction is inadequate.

SEC. 2. Section 2190 of the Business and Professions Code is amended to read:

2190. In order to ensure the continuing competence of licensed physicians and surgeons, the board shall adopt and administer standards for the continuing education of those licensees. The board may also set content standards for any educational activity concerning a chronic disease that includes appropriate information on prevention of the chronic disease, and on treatment of patients with the chronic disease, by the application of changes in nutrition and lifestyle behavior. The board shall require each licensed physician and surgeon to demonstrate satisfaction of the continuing education requirements at intervals of not less than four nor more than six years.

SEC. 3. Section 2196.6 is added to the Business and Professions Code, to read:

2196.6. The board shall periodically disseminate information and educational material regarding the prevention and treatment of chronic disease by the application of changes in nutrition and lifestyle behavior to each licensed physician and surgeon and to each general acute care hospital in the state.

SEC. 4. Section 2196.7 is added to the Business and Professions Code, to read:

2196.7. The board shall convene a working group of interested parties to discuss nutrition and lifestyle behavior for the prevention and treatment of chronic disease at one of its quarterly meetings within three years after the operative date of this section.

O

Facing the Future

Medical Board's first SB 380 Working Group Meeting
July 17, 2013 in Sacramento, CA

The Mission of the Medical Board of California

…is to protect health care consumers

This Is Our Mission

http://www.mbc.ca.gov/publications/annual_report_2010-2011.pdf

BUSINESS AND PROFESSIONS CODE

2001.1. Protection of the public shall be the highest priority for the Medical Board of California in exercising its licensing, regulatory, and disciplinary functions. Whenever the protection of the public is inconsistent with other interests sought to be promoted, **the protection of the public shall be paramount.**

http://www.leginfo.ca.gov/cgi-bin/displaycode?section=bpc&group=01001-02000&file=2000-2029

SB 380 begins with this statement:

"Existing law, the Medical Practice Act, provides for the licensure and regulation of physicians and surgeons by the Medical Board of California. Under that act, the board is **required** to adopt and administer standards for the **continuing education of physicians and surgeons**."

Section 2 of SB 380

"In order to ensure the continuing competence of licensed physicians and surgeons, the board shall adopt and administer standards for the continuing education of those licensees. **The board may also set content standards for any educational activity concerning a chronic disease that includes appropriate information on prevention of the chronic disease, and on treatment of patients with the chronic disease, by the application of changes in nutrition and lifestyle behavior.** The board shall require each licensed physician and surgeon to demonstrate satisfaction of the continuing education requirements at intervals of not less than four nor more than six years."

Potential Benefits of SB 380

1) Healthier and less-medicated Californians,

2) A more robust economy for our state,

3) A chance for medical doctors to more effectively fulfill their professional calling as “healers.”

Californians Suffer from Malnutrition

Adult Obesity Rates:

More than 60% of adults are overweight

24% are obese.

California's children (ages 2 to 5)

16% are overweight

More than 17% are obese

The Opposite End of Malnutrition

Californians Suffer from Malnutrition

Diabetes Rates:

8% of Californians (mostly type-2).

7.9 million (1 in 3) pre-diabetes.

Annual Cost Diabetes CA

$7,900 pp = $24 billion spent annually

38 million people in CA
Diabetics = 3,040,000

Californians Suffer from Malnutrition

Heart Disease Rates:

6% of Californians have heart disease.

Cost of Heart Surgery (No Survival Advantage)

The average total healthcare cost after five years:

Angioplasty = $81,790

Bypass surgery = $100,522

Circulation. 2006;114:1251-7.

Annual Cost Heart Surgery, CA

Extrapolation:

$11 billion for angioplasty surgeries and
$5 billion for bypass surgery annually—

Money spent every year, over the next 5 years after the procedure.

Spending on Sickness in the US (annually):

1980 = $253 billion

1990 = $714 billion

2008 = $2.3 trillion

2011 = $2.7 trillion

(17.3% of GDP)

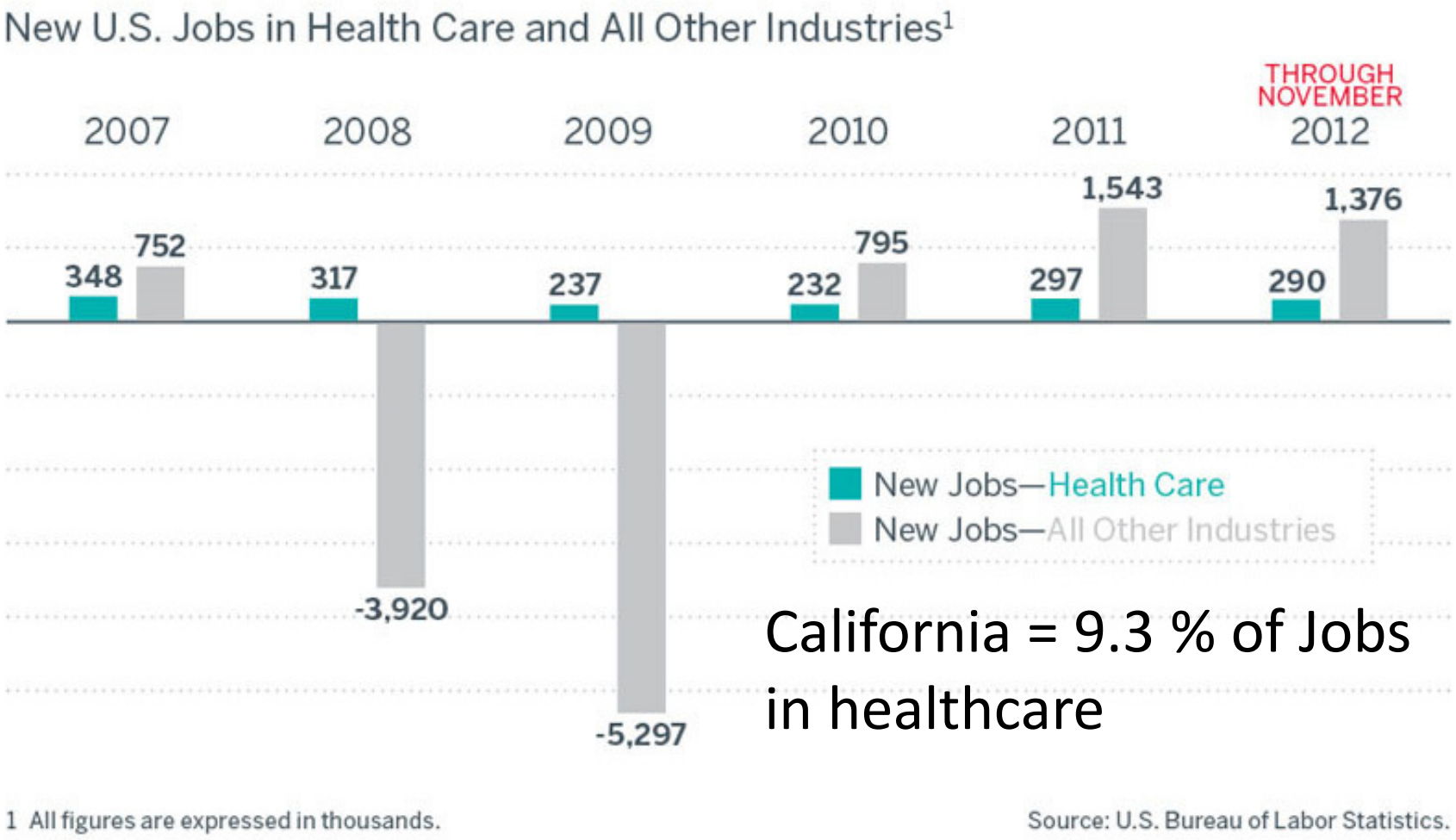
Spending on Sickness in CA (annually)**:**

California Healthcare Costs = $230 billion

GDP of California = $2 trillion

Percent of GDP on healthcare = 12%

Growing Healthcare Economy



California = 9.3 % of Jobs in healthcare

1 All figures are expressed in thousands.

Source: U.S. Bureau of Labor Statistics.

Diet Is Destroying Workers' Competitiveness

Who Would You Hire?

Employees Weighed Down by Health Insurance

Average Insurance Premium
(per family 2011)

$15,073 annually

30/70 split

Workers pay, on average, $4,000
Employers paying nearly $11,000

Business Is Weighed Down by Illnesses

General Motors = 1.1 million employees and former employees

$5 billion on healthcare annually

Adding $1,500 to $2,000 to the sticker price of every automobile

Exporting Jobs to Healthy Workers

September 2011 McDougall Newsletter

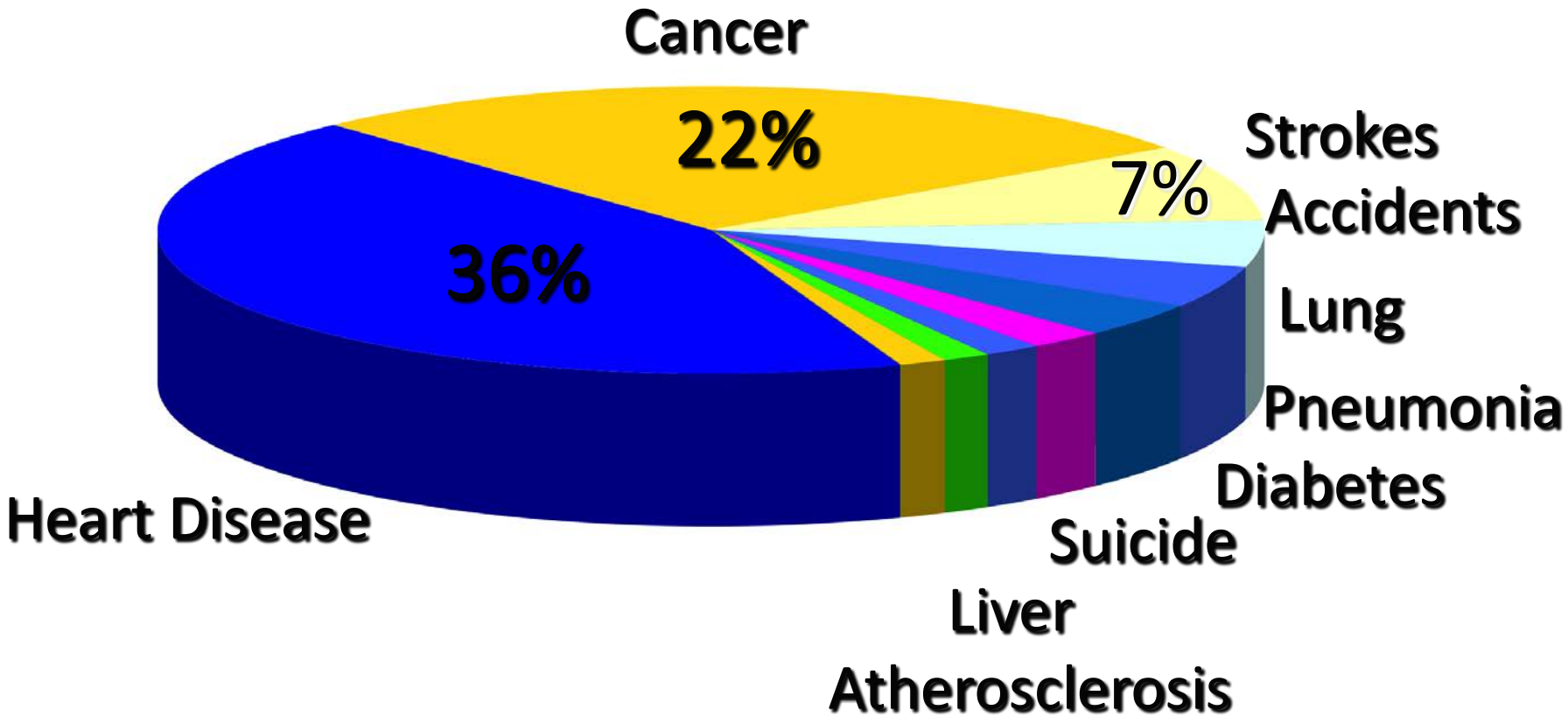
Leveling the Playing Field to a New Low by Exportation of the American Diet

September 2011 McDougall Newsletter

Illnesses of Californians

5 of 10 Causes Due to Diet

(Plus 3 to 4 due to alcohol)



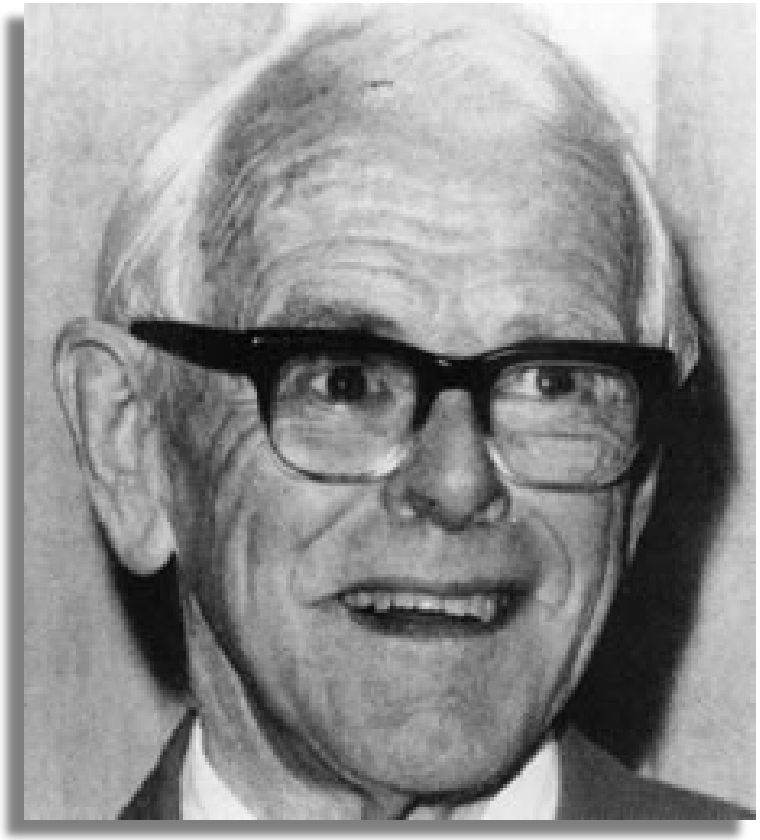
Rich Food Makes People Sick

Diet and Lifestyle

(It’s the Food)

Denis Burkitt (1911-1993)
The Fiber Man

We Met at a Blodgett Hospital Noon Doctor's Conference in 1971



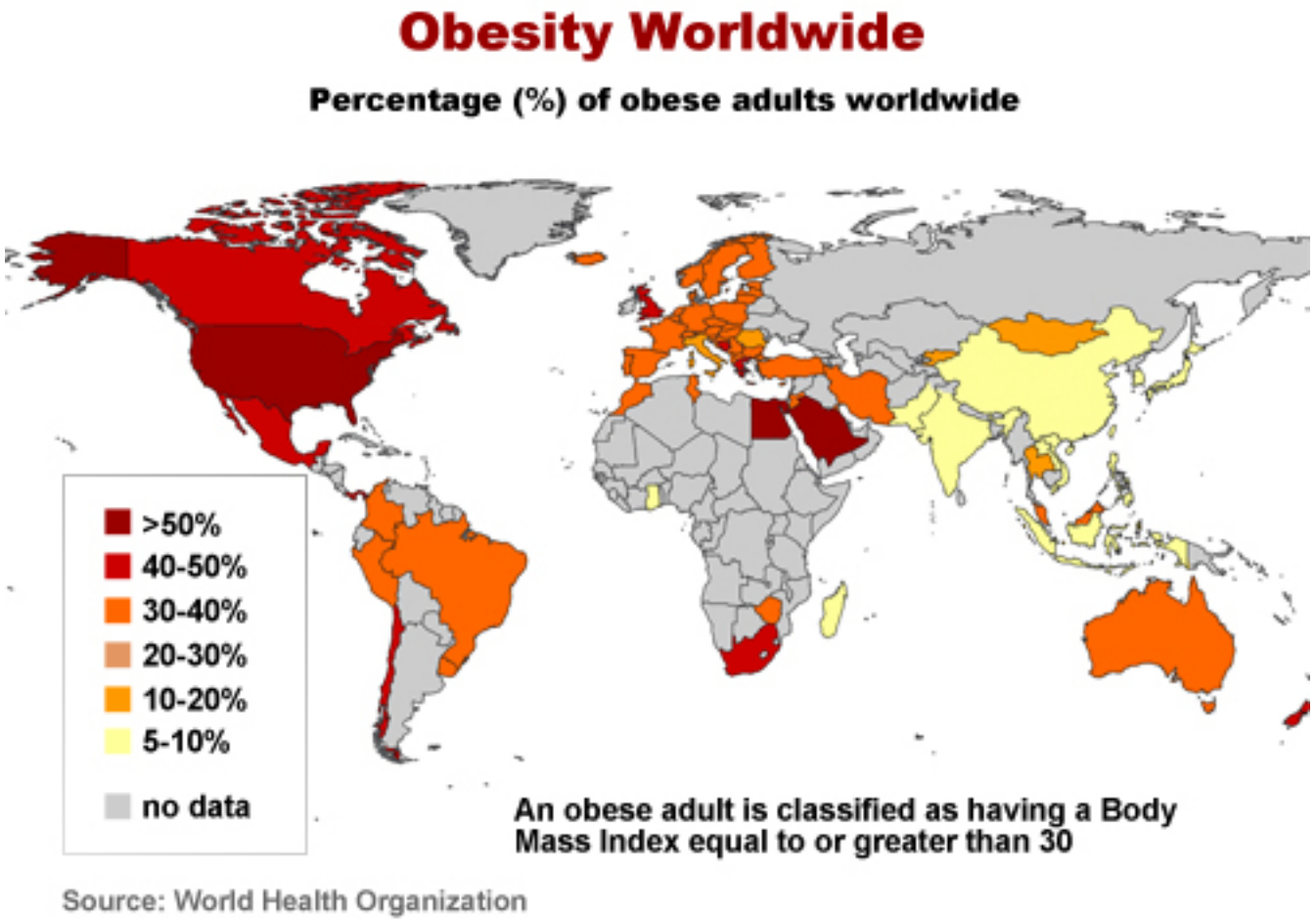
See the January 2013 McDougall Newsletter

Denis Burkitt, MD

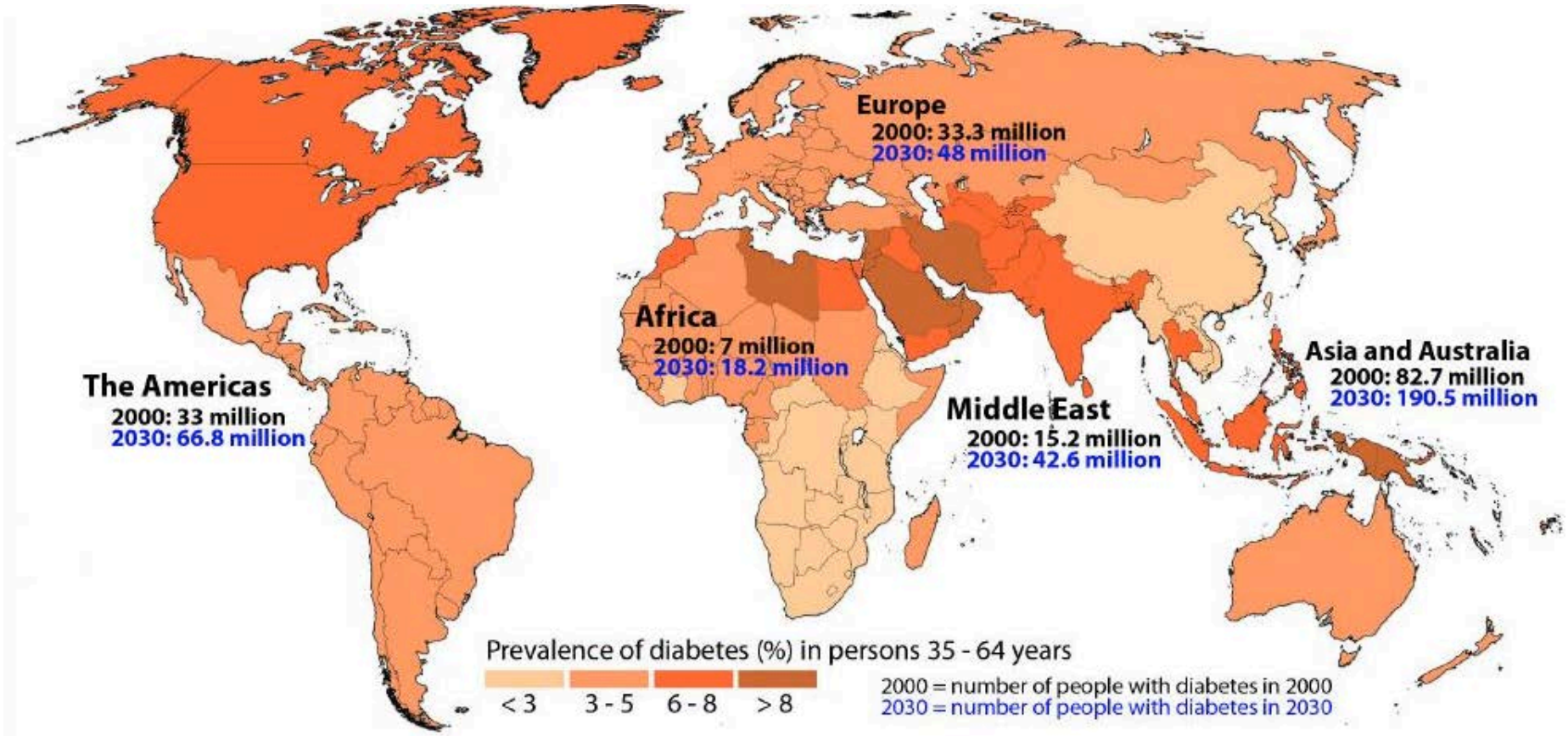
(May 23, 1990)

I Learned the Basics on the Plantation

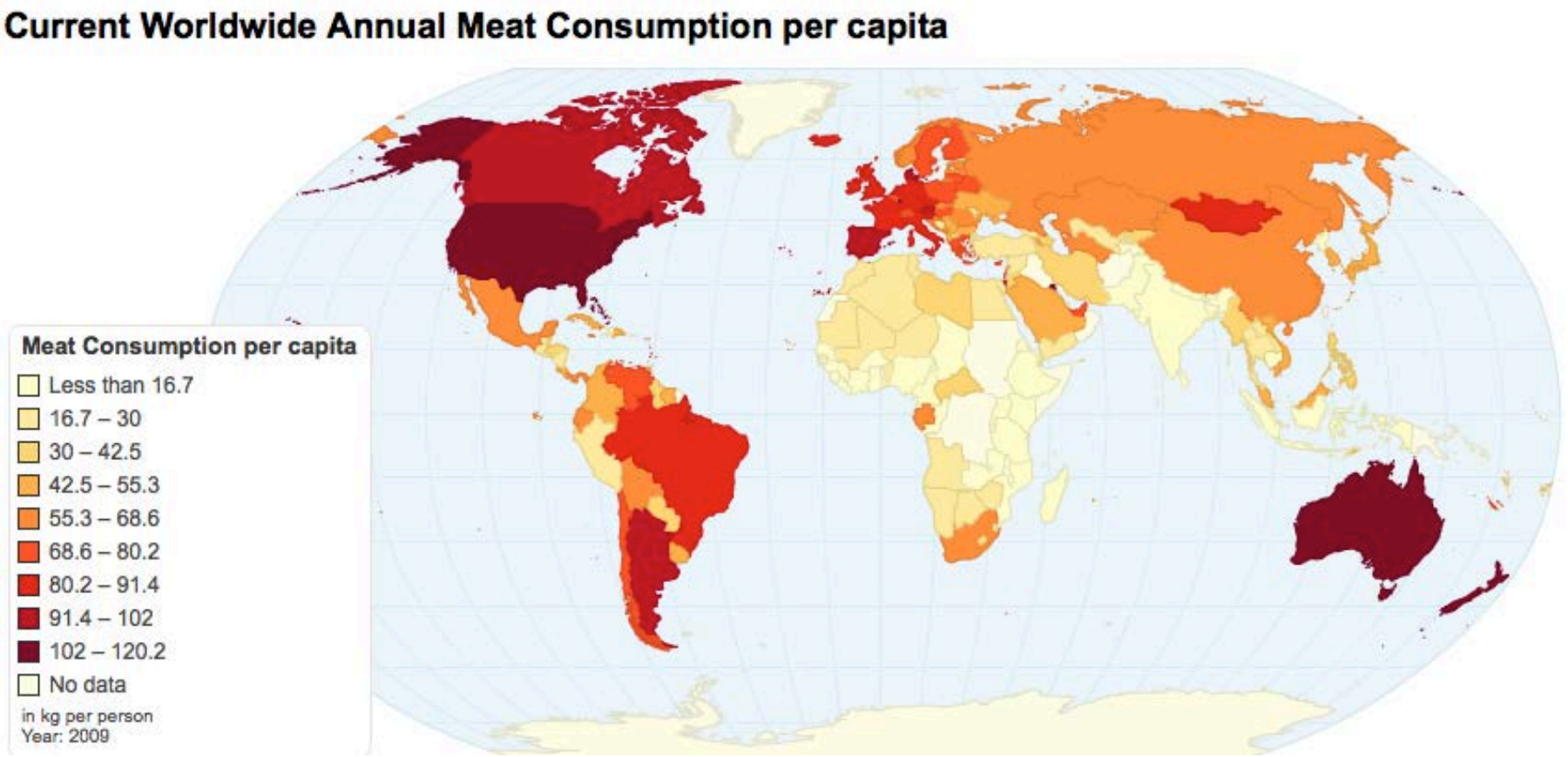
Obesity Worldwide



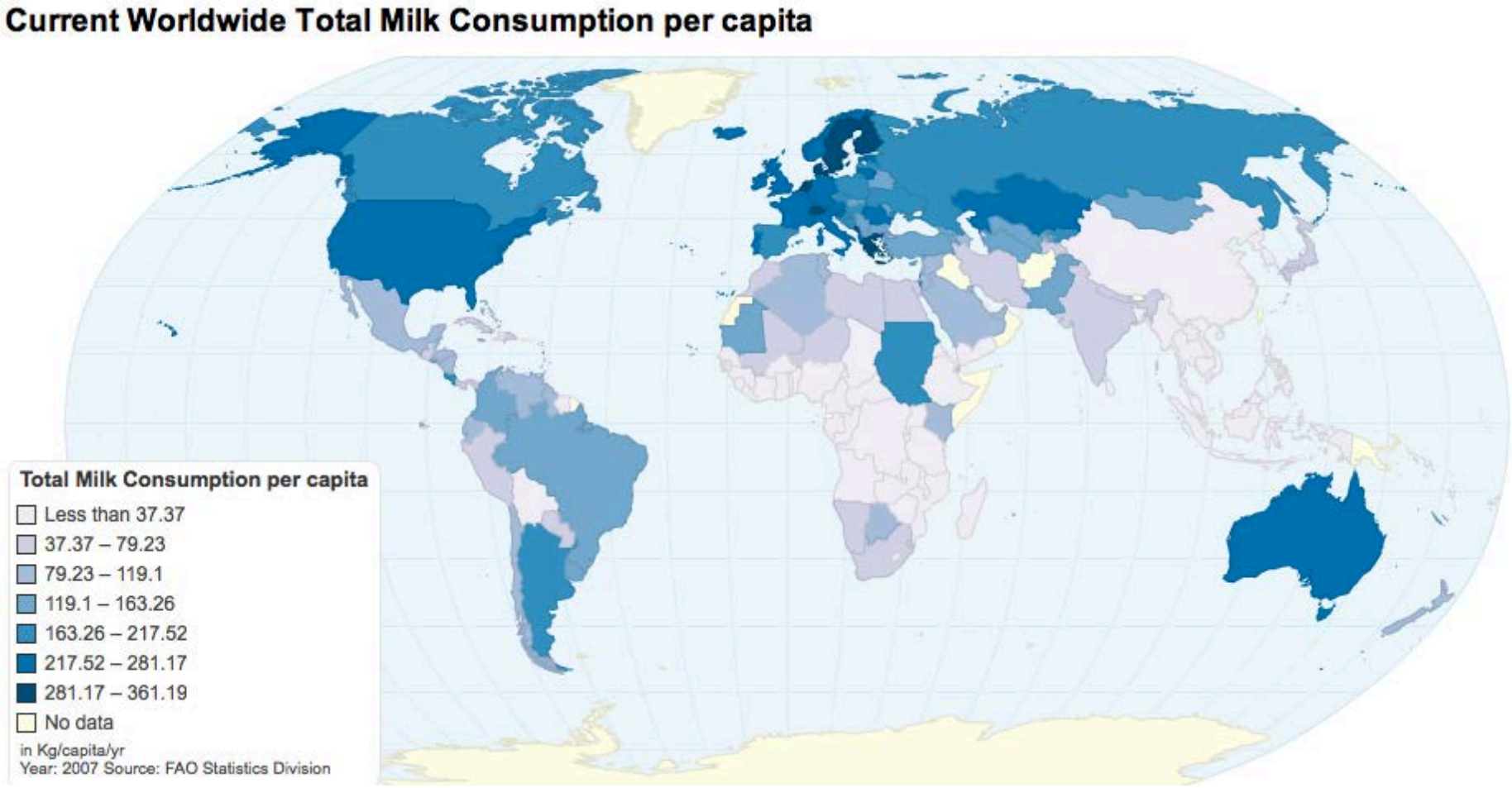
Diabetes Worldwide



Meat Consumed Worldwide



Milk Consumed Worldwide



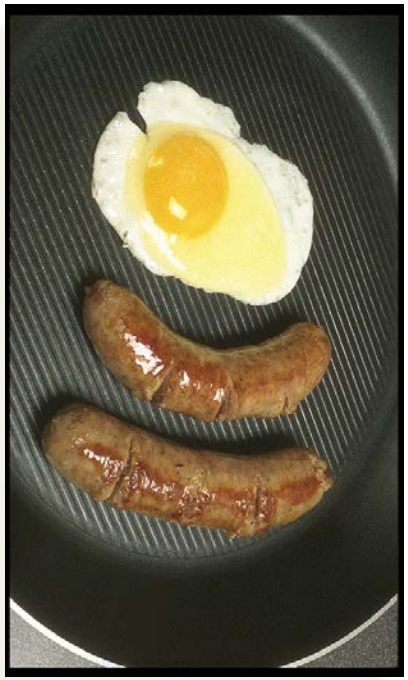
History of Starch Eating

Rich Foods Make People Sick

Every Day's A Holiday

Four And More Feasts A Day!

Breakfast	Lunch	Dinner	Dessert
Easter	Thanksgiving	Christmas	Birthday Party

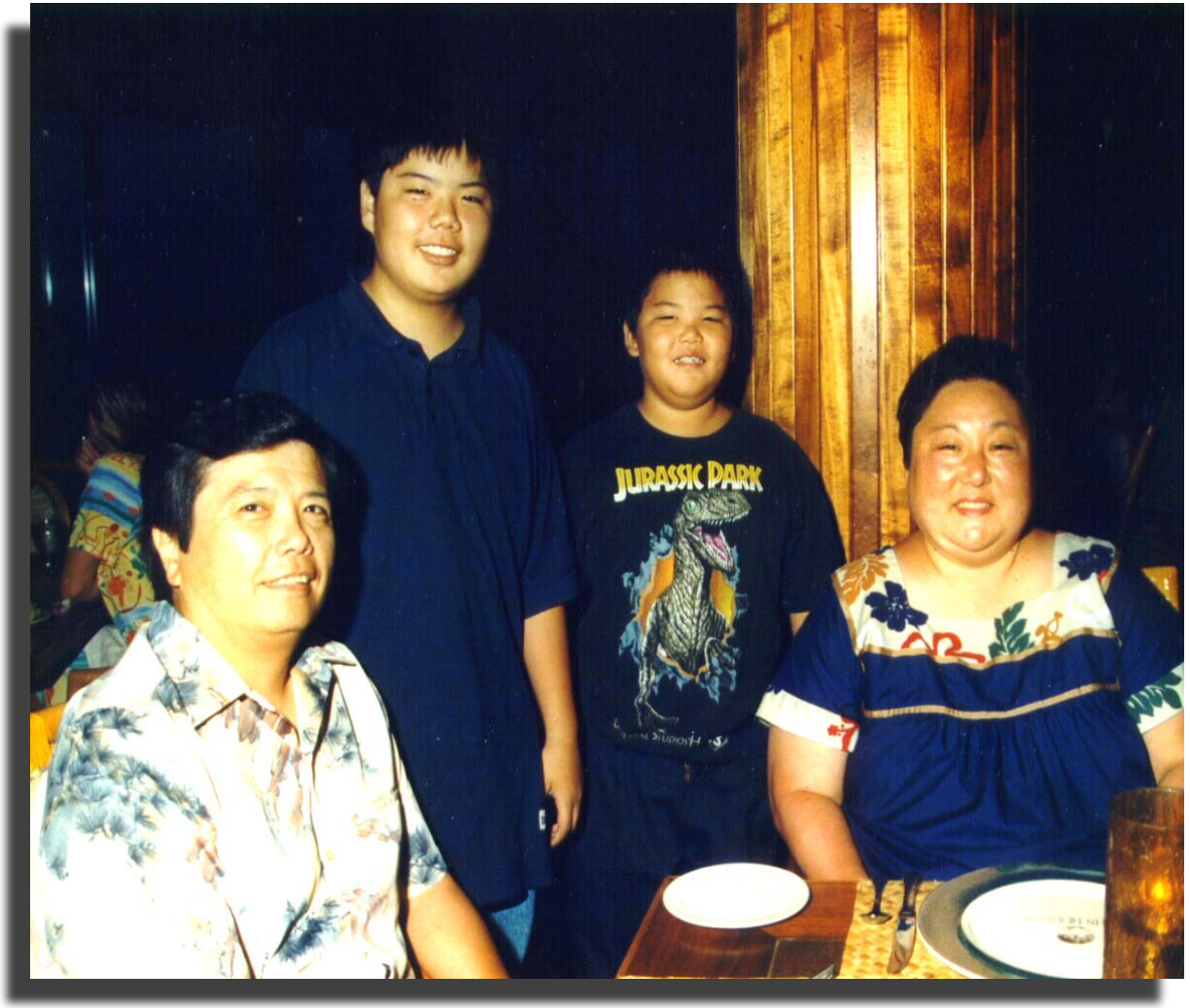


High-carbohydrate, Low-fat Diet

1st and 2nd generation Japanese

Less Carbohydrate, More Protein

3rd and 4th generation Japanese



What Happened?

Did they change their genetics?
Did they eat less rice?
Did they eat more protein, fat, dairy, and meat?

Traditional Foods Make People Well

What Could Happen?

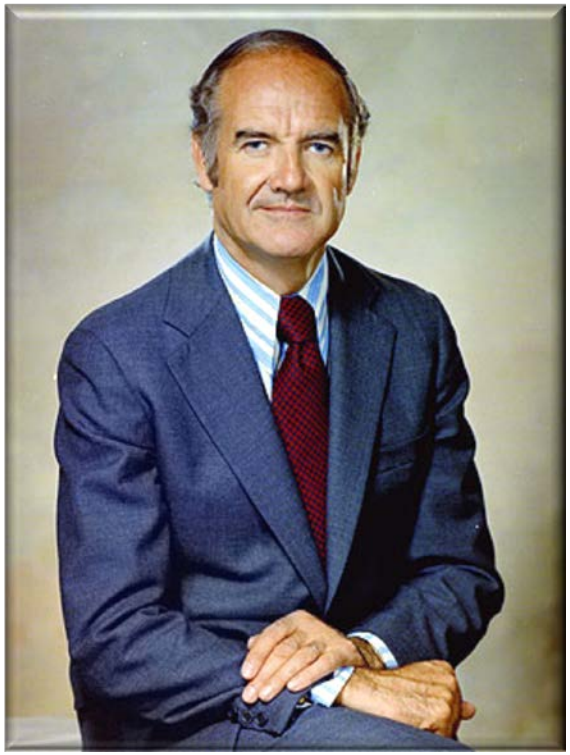
What if you gave “family 2” a one-way ticket back to rural Japan?

And put them to work on the farm?

Fat vs. Carbohydrate

Attempts of Government Intervention

The McGovern Report



Senator George McGovern
(1922 – 2012) (S. Dakota)

DIETARY GOALS FOR THE UNITED STATES

PREPARED BY THE STAFF OF THE
SELECT COMMITTEE ON NUTRITION
AND HUMAN NEEDS
UNITED STATES SENATE

FEBRUARY 1977

Printed for the use of the Select Committee on Nutrition
and Human Needs

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON, D.C.: 1977

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington, D.C. 20402

Stock No. 052-070-03913-2 /Catalog No. Y 4.N95:D 63/3

(Bold added to emphasize certain
statements in this report.)

Dietary Goals for the US

"…there is a great deal of evidence and it continues to accumulate, which strongly implicates and, in some instances, proves that ***the major causes of death and disability in the United States are related to the diet we eat***. I include coronary artery disease, which accounts for nearly half the deaths in the United States, several of the most important forms of cancer, hypertension, diabetes and obesity as well as other chronic diseases."

(February 1977)

D. Mark Hegsted, PhD Harvard School of Public Health
(1914 – 2009)

Dietary Goals for the US

"**The question to be asked, therefore, is not why should we change our diet, but why not?** What are the risks associated with eating less meat, less fat, less saturated fat, less cholesterol, less sugar, less salt, and more fruits, vegetables, unsaturated fat, and cereal products—especially whole grain cereals? There are none that can be identified and important benefits can be expected."

(February 1977)

Dietary Goals for the US

"Ischemic heart disease, cancer, diabetes and hypertension are the diseases that kill us. They are epidemic in our population. **We cannot afford to temporize.** We have an obligation to inform the public of the current state of knowledge and to assist the public in making the correct food choices. To do less is to avoid our responsibility."

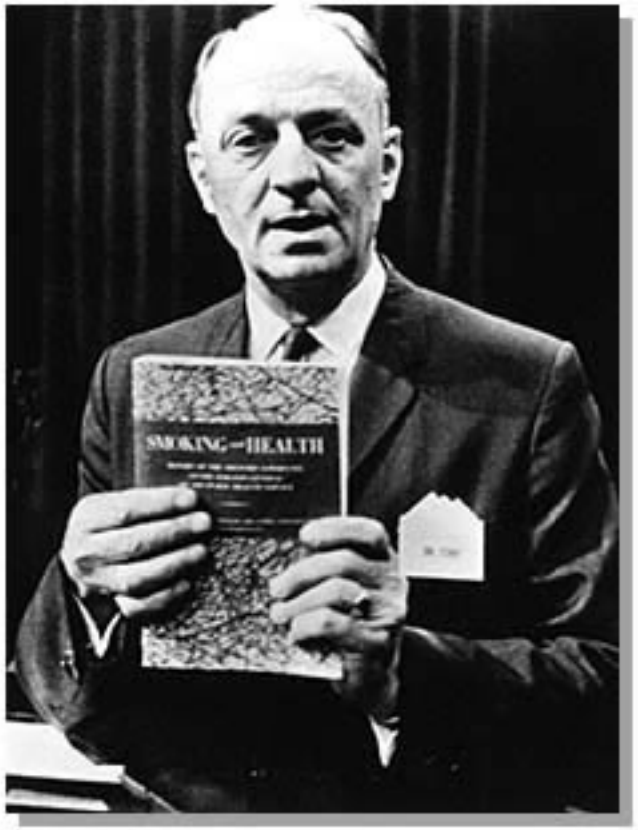
(February 1977)

Dietary Goals for the US

"It is the **responsibility of government** at all levels to take the initiative in creating for Americans an appropriate nutritional atmosphere—one conducive to improvement in the health and quality of life of the American people."

(February 1977)

Major Report Calls for Quit Smoking



Surgeon General Luther L. Terry
Surgeon General's Report
on Smoking and Health (1964)

1970s more than 50% smoked

2010 fewer than 20% smoke

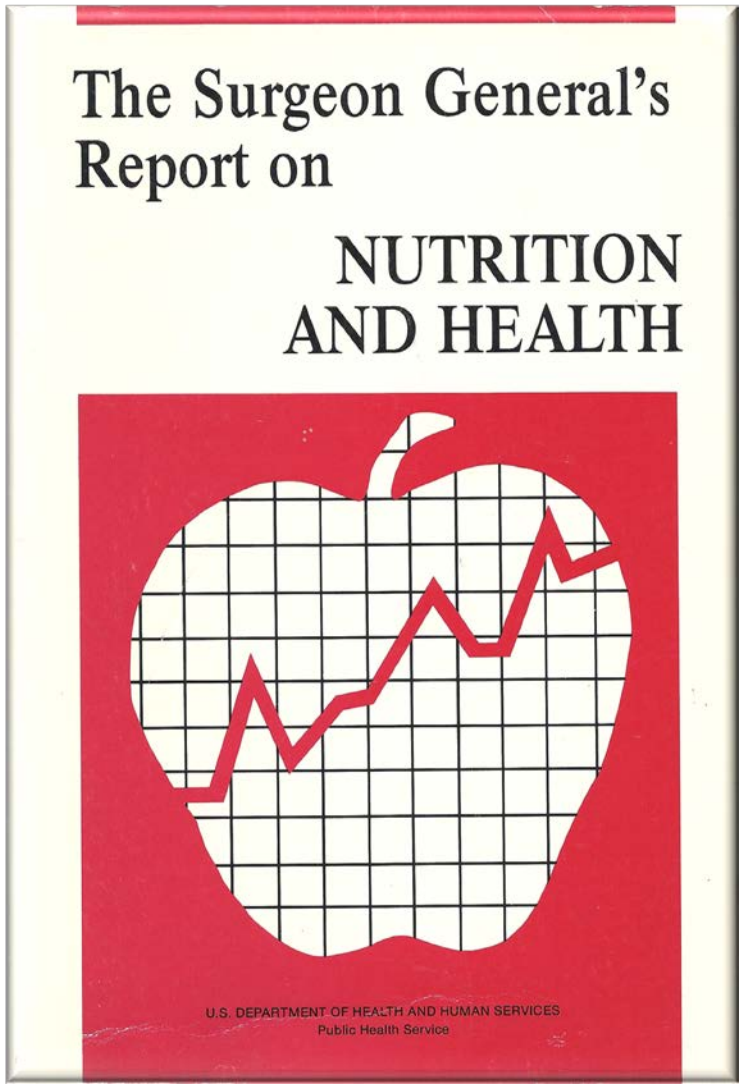
Major Report Calls for Diet Changes (Less meat and dairy)

Surgeon General C. Everett Koop
Surgeon General's Report on Nutrition and Health (1988)
died February 25, 2013 at 96

1970s fewer than 14% obese

2010 more than 33% obese

Koop's Report - 1988



Koop's Report - 1988

Fats and cholesterol:
Reduce consumption of fat
(especially saturated fat)
and cholesterol.

Government's Purpose

The government is to protect the community against foreign and domestic threats.

Marketing with Unique Positioning

Calcium =

Protein =

Omega-3 fat =

Propagating Myths

The Are No Reports
of People Following
Any Natural Diets of:

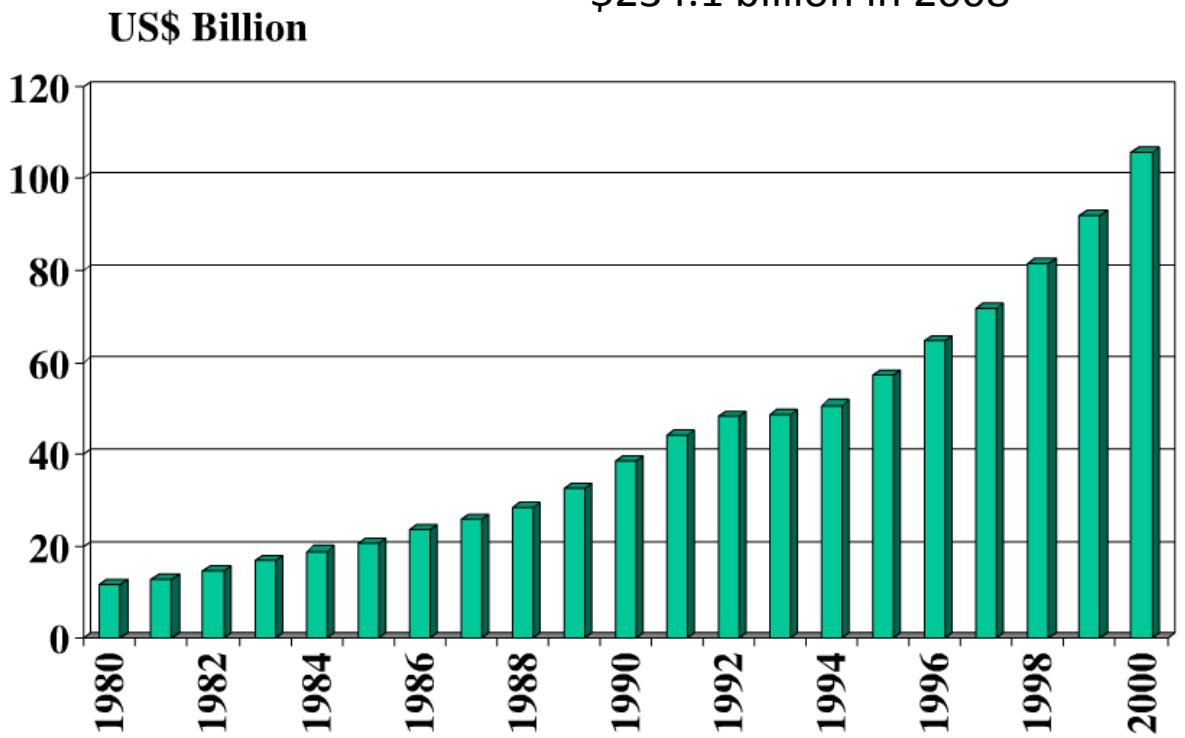
Calcium Deficiency
Protein Deficiency
Omega-3 Fat Deficiency

Profits Driving Medical Practices

Profit rather than science is behind the vast majority of doctors office visits, hospitalizations, tests, pharmaceuticals, and procedures carried out in California.

Annual Pharmaceutical Sales US

$234.1 billion in 2008



Medication Facts (United States)

- Percent of persons using at least one prescription drug in the past month: 48%
- Percent of visits involving drug therapy: 74%
- Among children (under age 12), less than 10% used two or more prescription drugs in the past month.

http://www.cdc.gov/nchs/data/databriefs/db42.pdf

Before “Good” Medical Care

Dx:
Hypertension
Type-2 Diabetes
Hypercholesterolemia
Hypertriglyceridemia
Gout
Mild Kidney Failure
Overweight
Mild Osteoarthritis
Constipation
Depressed

After 2-years Poly-pharmacology

Dx:
Hypertension
Type-2 Diabetes
Hypercholesterolemia
Hypertriglyceridemia
Gout
Mild Kidney Failure
Overweight
Mild Osteoarthritis
Constipation
Depressed

What Has Changed? NOTHING!

Treating Diabetes

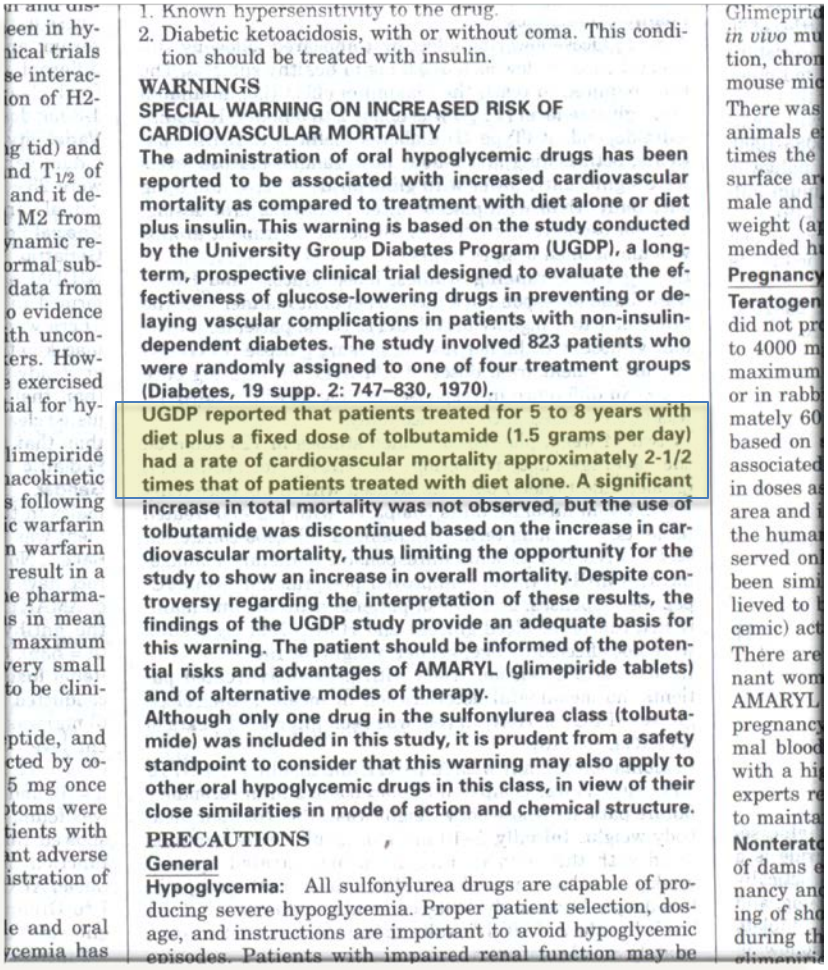
Criteria for FDA Approval

Glycemic control, as measured by changes in glycated hemoglobin levels, remains an acceptable primary efficacy end point for approval of drugs to treat hyperglycemia.

Non-binding recommendation from the FDA (2008):
…**all new drugs developed for the treatment of type 2 diabetes show that they do not increase the risk of cardiovascular events.**

http://www.medscape.com/viewarticle/585593

Sulfonylurea Study



1. Known hypersensitivity to the drug.
2. Diabetic ketoacidosis, with or without coma. This condition should be treated with insulin.

WARNINGS

SPECIAL WARNING ON INCREASED RISK OF CARDIOVASCULAR MORTALITY

The administration of oral hypoglycemic drugs has been reported to be associated with increased cardiovascular mortality as compared to treatment with diet alone or diet plus insulin. This warning is based on the study conducted by the University Group Diabetes Program (UGDP), a long-term, prospective clinical trial designed to evaluate the effectiveness of glucose-lowering drugs in preventing or delaying vascular complications in patients with non-insulin-dependent diabetes. The study involved 823 patients who were randomly assigned to one of four treatment groups (Diabetes, 19 supp. 2: 747–830, 1970).

UGDP reported that patients treated for 5 to 8 years with diet plus a fixed dose of tolbutamide (1.5 grams per day) had a rate of cardiovascular mortality approximately 2-1/2 times that of patients treated with diet alone. A significant increase in total mortality was not observed, but the use of tolbutamide was discontinued based on the increase in cardiovascular mortality, thus limiting the opportunity for the study to show an increase in overall mortality. Despite controversy regarding the interpretation of these results, the findings of the UGDP study provide an adequate basis for this warning. The patient should be informed of the potential risks and advantages of AMARYL (glimepiride tablets) and of alternative modes of therapy.

Although only one drug in the sulfonylurea class (tolbutamide) was included in this study, it is prudent from a safety standpoint to consider that this warning may also apply to other oral hypoglycemic drugs in this class, in view of their close similarities in mode of action and chemical structure.

PRECAUTIONS

General

Hypoglycemia: All sulfonylurea drugs are capable of producing severe hypoglycemia. Proper patient selection, dosage, and instructions are important to avoid hypoglycemic episodes. Patients with impaired renal function may be

JAMA. 1971 Nov;218(9):1400-10.

Intensive Therapy Increases Problems

ORIGINAL INVESTIGATION

Cardiovascular Events and Correlates in the Veterans Affairs Diabetes Feasibility Trial

Veterans Affairs Cooperative Study on Glycemic Control and Complications in Type II Diabetes

Carlos Abraira, MD; John Colwell, MD, PhD; Frank Nuttall, MD, PhD; Clark T. Sawin, MD; William Henderson, PhD; John P. Comstock, MD; Nicholas V. Emanuele, MD; Seymour R. Levin, MD; Ivan Pacold, MD; Hae Sook Lee; and the Veterans Affairs Cooperative Study on Glycemic Control and Complications in Type II Diabetes (VACSDM) Group

"…found a strong tendency toward worsening of CV outcomes in patients with intensive control."

Ann Intern Med. 1996 Jan 1;124(1 Pt 2):178-9
Diabetes Care. 2001 May;24(5):942-5.

Intensive Therapy Increases Problems

European Heart Journal (2000) **21**, 1937–1943
doi:10.1053/euhj.2000.2244, available online at http://www.idealibrary.com on IDEAL®

Long-term prognosis of diabetic patients with myocardial infarction: relation to antidiabetic treatment regimen

I. Gustafsson[1], P. Hildebrandt[1], M. Seibæk[2], T. Melchior[2], C. Torp-Pedersen[2], L. Køber[2], P. Kaiser-Nielsen[3] and the TRACE Study Group

"Diabetic patients treated with oral hypoglycaemic agents or insulin, but not those treated with diet alone, have a significantly increased mortality following acute myocardial infarction compared with non-diabetic patients."

Eur Heart J. 2000 Dec;21(23):1937-43.

Trandolapril Cardiac Evaluation (TRACE) study

Intensive Therapy Increases Problems

Effects of Intensive Glucose Lowering in Type 2 Diabetes

The Action to Control Cardiovascular Risk in Diabetes Study Group*

Intensive therapy was stopped before study end because of higher mortality in that group

N Engl J Med. 2008 Jun 12;358(24):2545-59.

Intensive Therapy Increases Problems

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Intensive Blood Glucose Control and Vascular Outcomes in Patients with Type 2 Diabetes

The ADVANCE Collaborative Group*

"There were no significant effects of the type of glucose control on major macrovascular events, death from cardiovascular causes, or death from any cause…"

N Engl J Med. 2008 Jun 12;358(24):2560-72.

Intensive Therapy Increases Problems

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Glucose Control and Vascular Complications in Veterans with Type 2 Diabetes

William Duckworth, M.D., Carlos Abraira, M.D., Thomas Moritz, M.S., Domenic Reda, Ph.D., Nicholas Emanuele, M.D., Peter D. Reaven, M.D., Franklin J. Zieve, M.D., Ph.D., Jennifer Marks, M.D., Stephen N. Davis, M.D., Rodney Hayward, M.D., Stuart R. Warren, J.D., Pharm.D., Steven Goldman, M.D., Madeline McCarren, Ph.D., M.P.H., Mary Ellen Vitek, William G. Henderson, Ph.D., and Grant D. Huang, M.P.H., Ph.D., for the VADT Investigators*

"Intensive glucose control…no significant effect on the rates of major cardiovascular events, death, or microvascular complications with the exception of progression of albuminuria."

N Engl J Med. 2009 Jan 8;360(2):129-39.

Drug Managements

Lower blood sugars, but…

Higher mortality
More heart disease
Increased risk of sudden death
Much more hypoglycemia
Twice the weight gain

Diabetic Management

"…it is important to remember that 'diabetic control' means a lot more than 'blood sugar control.'" T.D.R Hockaday, 1987

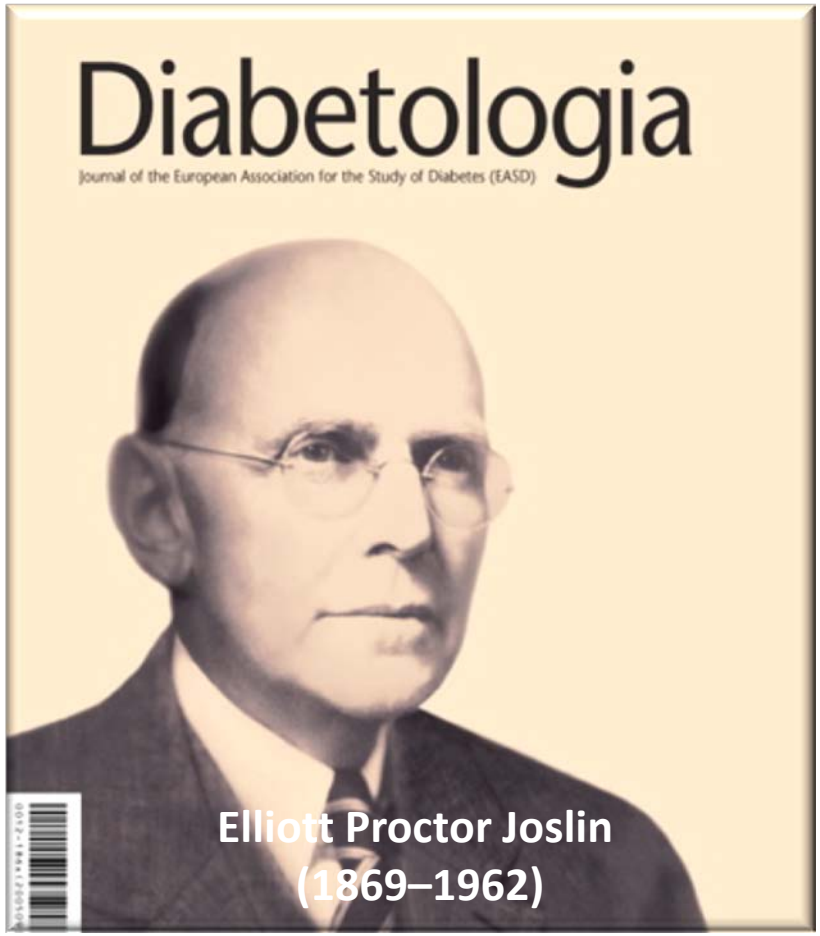
Medications (oral and insulin) effectively lower blood sugar levels and the patients die sooner with better looking numbers!

Scand J Gastroenterol Suppl. 1987;129:124-31.

Elliott Joslin, MD

Prophetically wrote in 1927:

"I believe the chief cause of premature atherosclerosis in diabetes, save for advancing age, is an excess of fat, an excess of fat in the body (obesity), an excess of fat in the diet, and an excess of fat in the blood. With an excess of fat diabetes begins and from an excess of fat diabetics die, formerly of coma, recently of atherosclerosis."



Ann Clin Med 1927;5:1061.

Diet Therapy

Please test your servants for ten days: Give us nothing but vegetables to eat and water to drink…
At the end of the ten days they looked healthier and better nourished than any of the young men who ate the royal food.

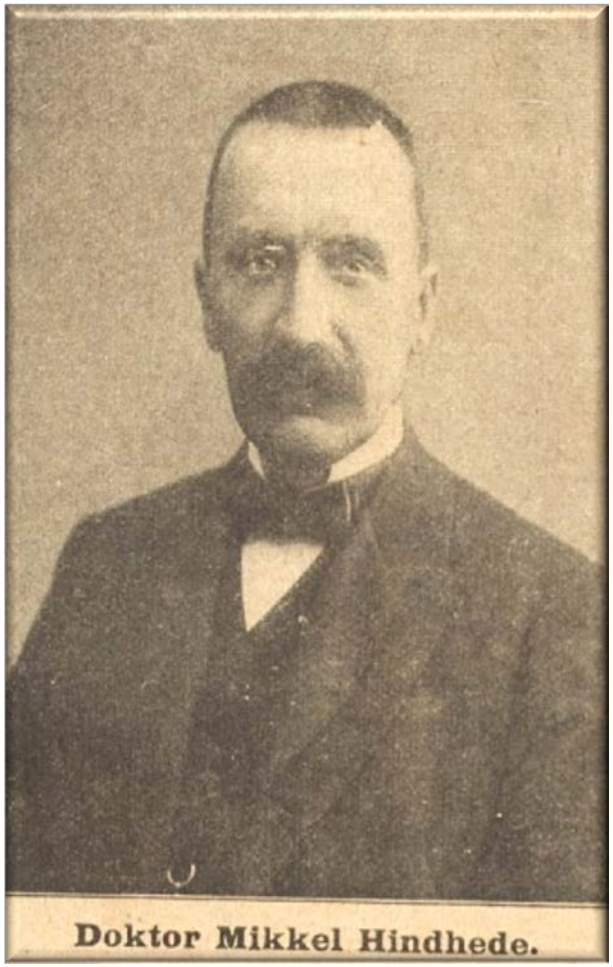
700 BCE: Daniel 1:12-15

Denmark World War I

Blockade North Sea

Lessons from the Past, Directions for the Future

The WWI Starch Solution for Denmark


Doktor Mikkel Hindhede.

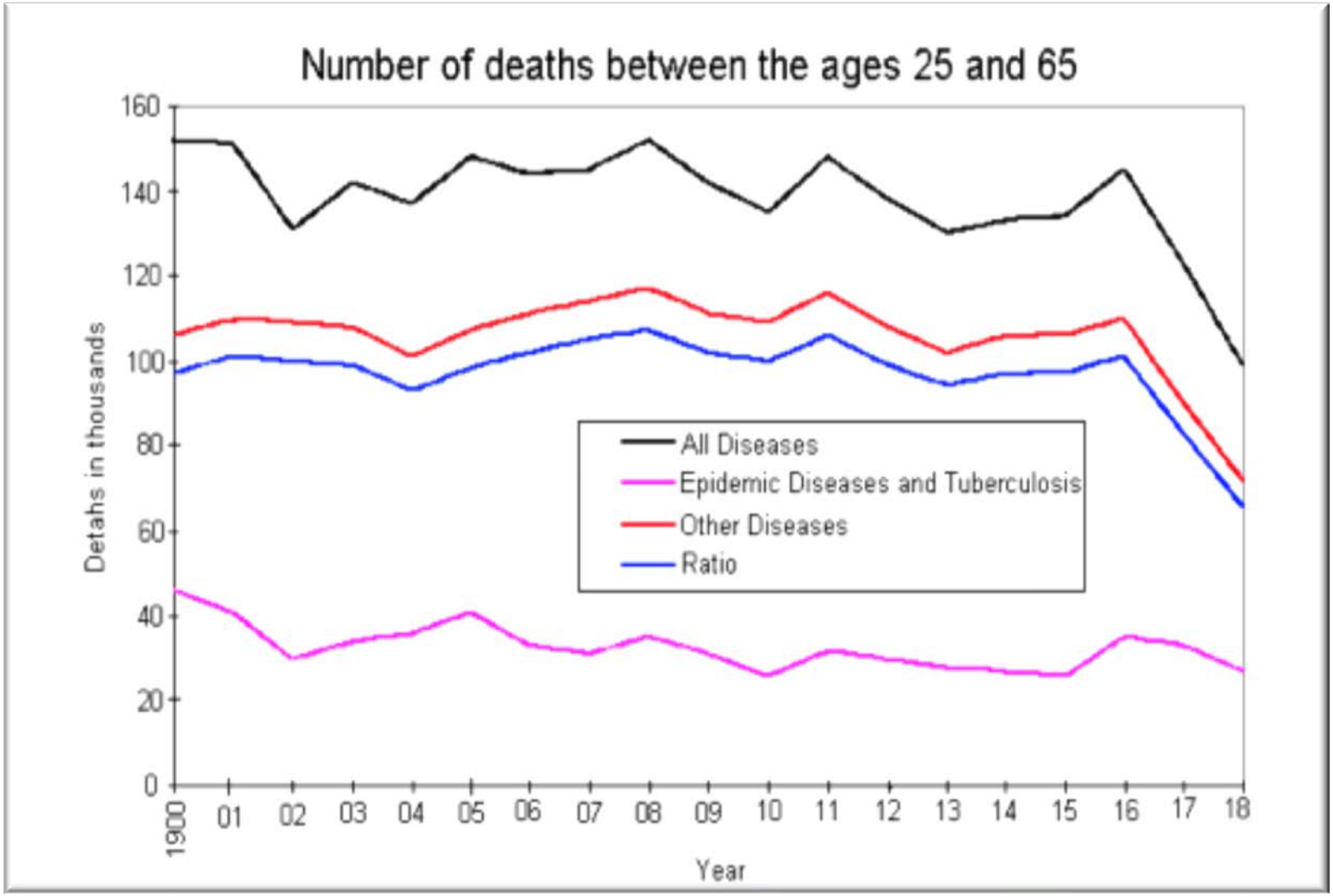
(1862-1945)

Served as the manager of the Danish National Laboratory for Nutrition Research in Copenhagen and food advisor to the Danish government during World War I.

JAMA (1920), 74 (6): 381-2

Lessons from the Past, Directions for the Future

The WWI Starch Solution for Denmark



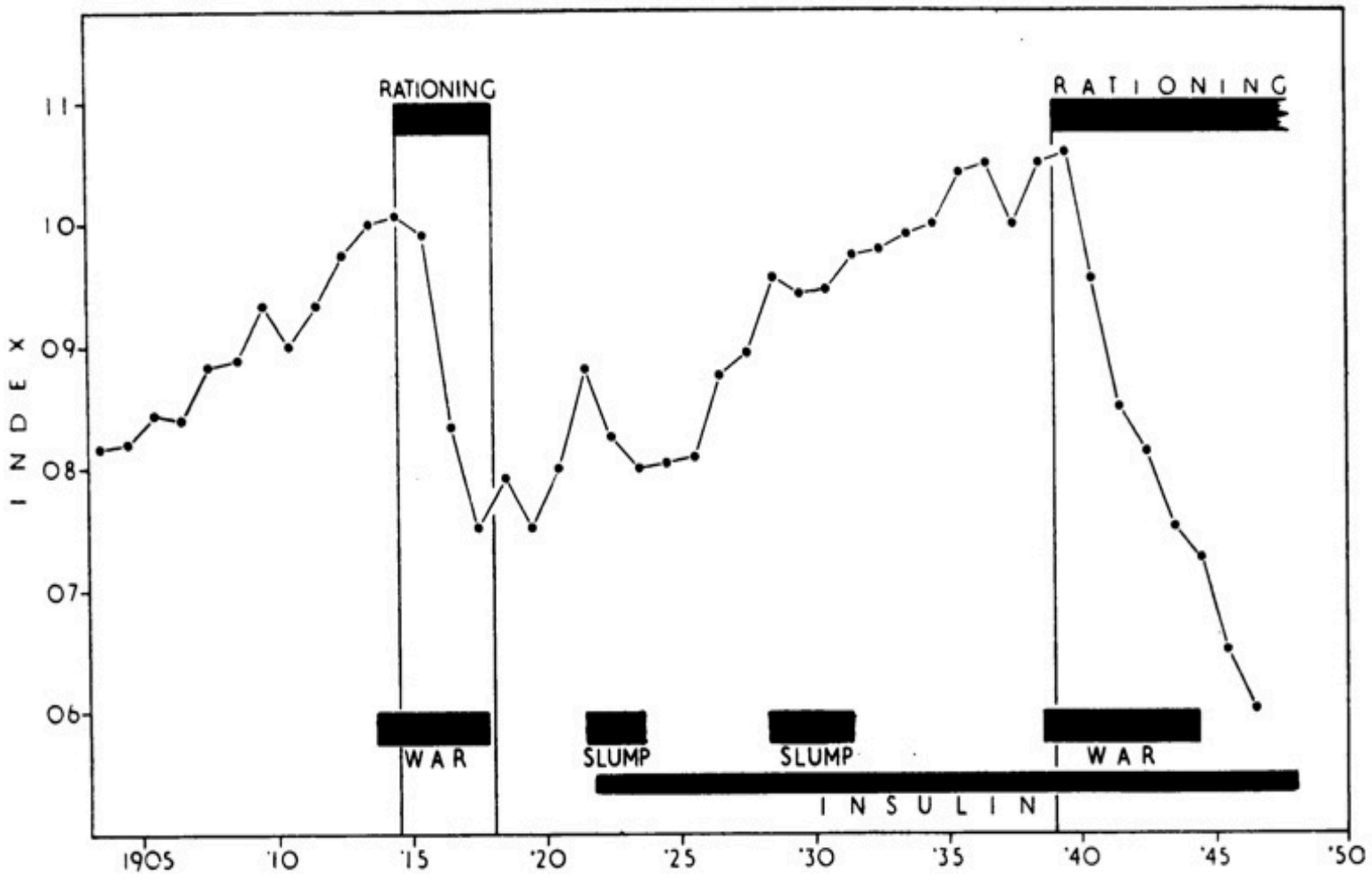
Nathan Pritikin

(1915 – 1985)

Nathan Pritikin

(October 1982)

Mortality from Diabetes in England and Wales during Wars



Obesity = Type-2 Diabetes

Excess body weight is the most important modifiable risk factor for the development of diabetes:

Risk ratios: 20.1 for overweight and obese

38.8 for morbid obesity

Overweight and obese (30 and 35 kg/m2)
Morbid Obesity (> 35 kg/m2)
Compared with a BMI <23 kg/m2

Nutr Met Cardiovasc Dis (2011), doi:10.1016/j.numecd.2011.03.009

Diabetes Prevention Trials

Dietary counseling, increased exercise, diet plus exercise, vs. control.

Da Qing trial in China. 577 individuals	30% reduction
The Finnish Diabetes Prevention Study (FDP)	50% reduction
Diabetes Prevention Program	58% reduction
Japanese RCT	68% reduction
The PREDIMED study	50% reduction

Diabetes Care 1997;20:537e44; N Engl J Med 2001;344:1343e50; N Engl J Med 2002;346:393e403; Res Clin Pract 2005;67:152e62; Diabetes Care 2011;34:14e9.

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Reduced Risk of Type-2 Diabetes

Higher Dietary Fiber
Lower Glycemic Index and Load
Less Sugar (Colas, sodas, juices, etc.
More Legumes
Less Total Fat, Saturated Fat
Fewer Eggs
Fewer Meats
Less Processed Meats
More good fats

Bariatric Surgery

A recent meta-analysis included 3188 patients with type-2 diabetes:

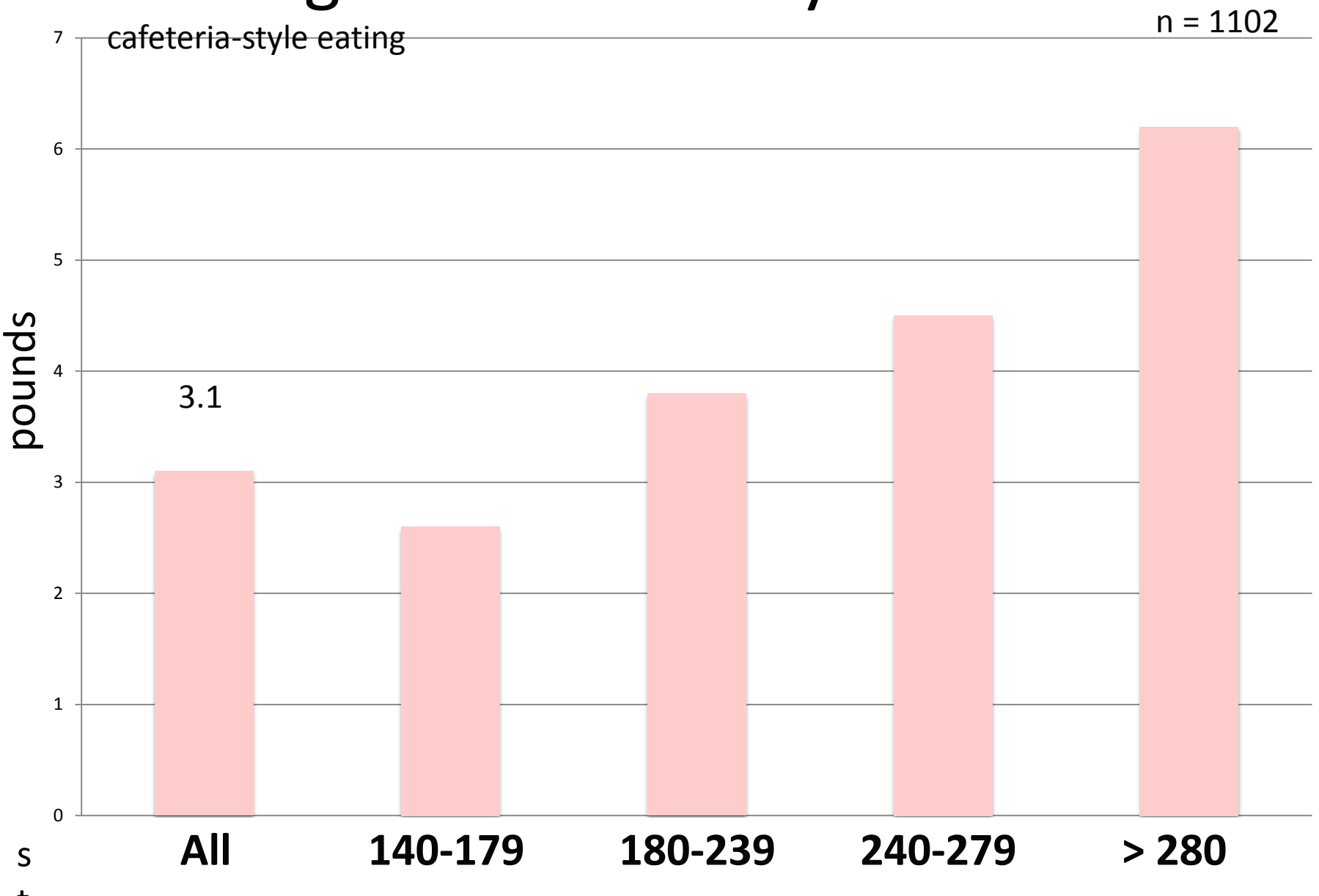
78.1% = complete resolution

86.6% = improved or resolved

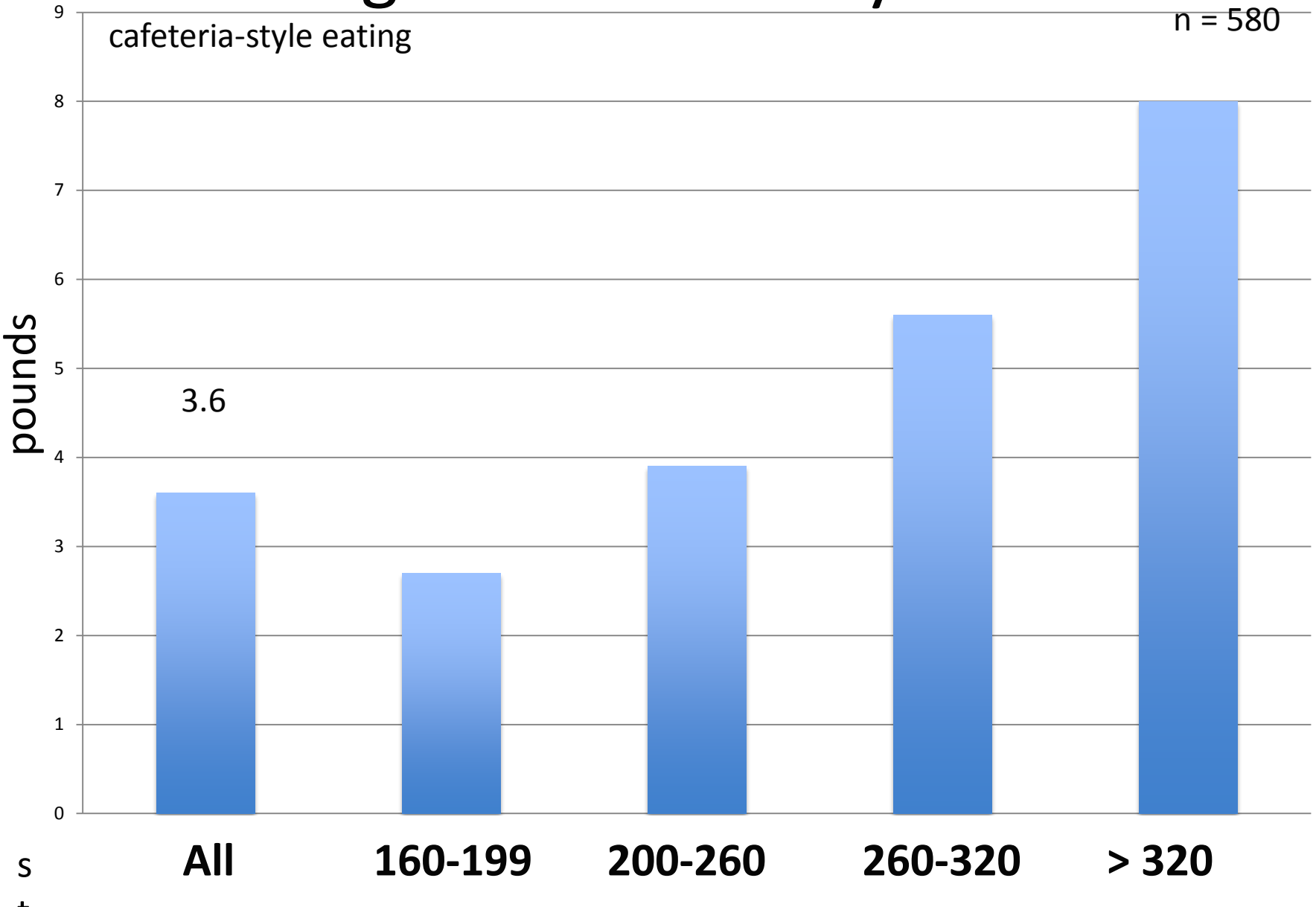
Surgically-induced malabsorption
and sickness

Am J Med. 2009 Mar;122(3):248-256.e5.

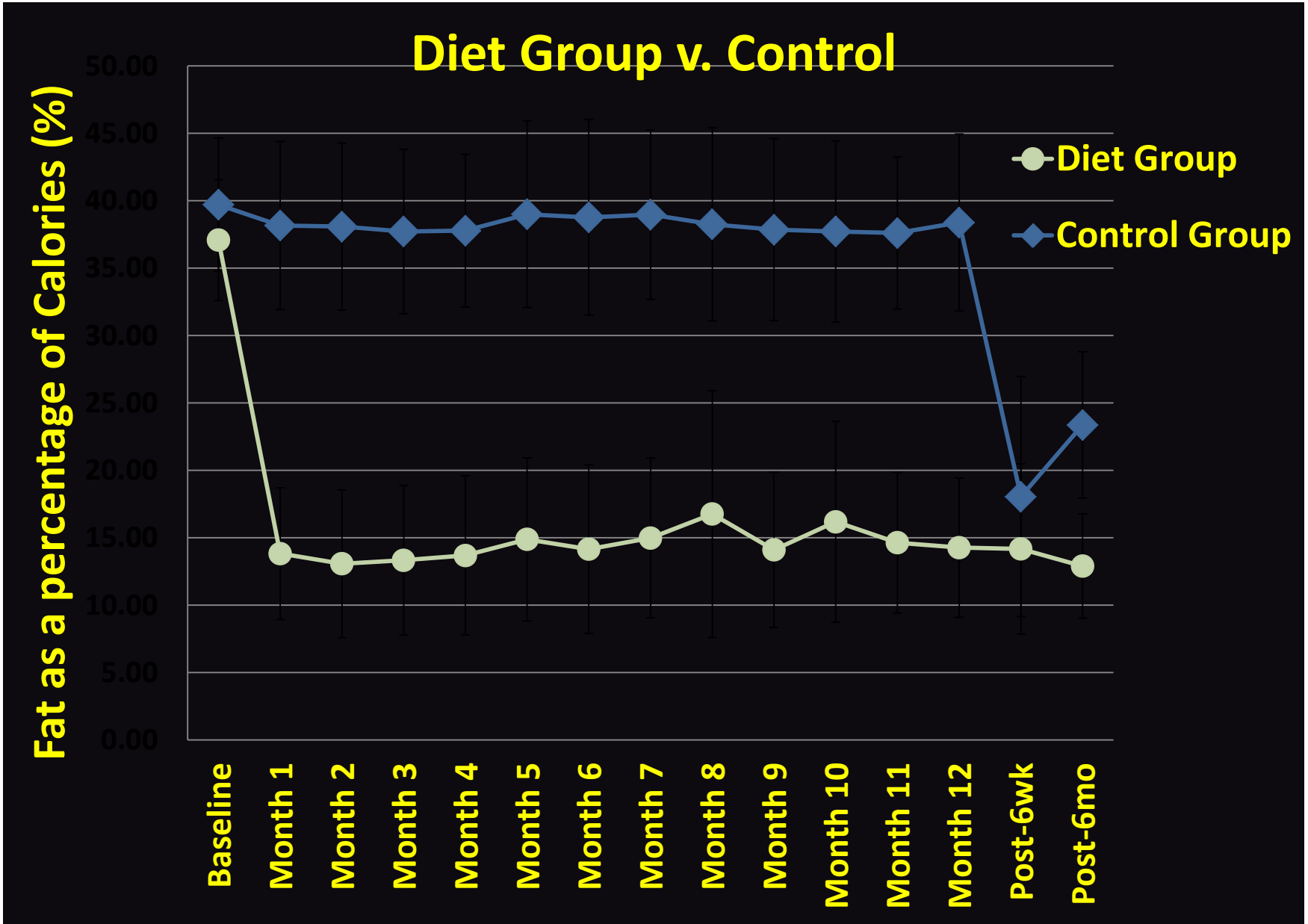
Weight Loss In 7 Days - Women



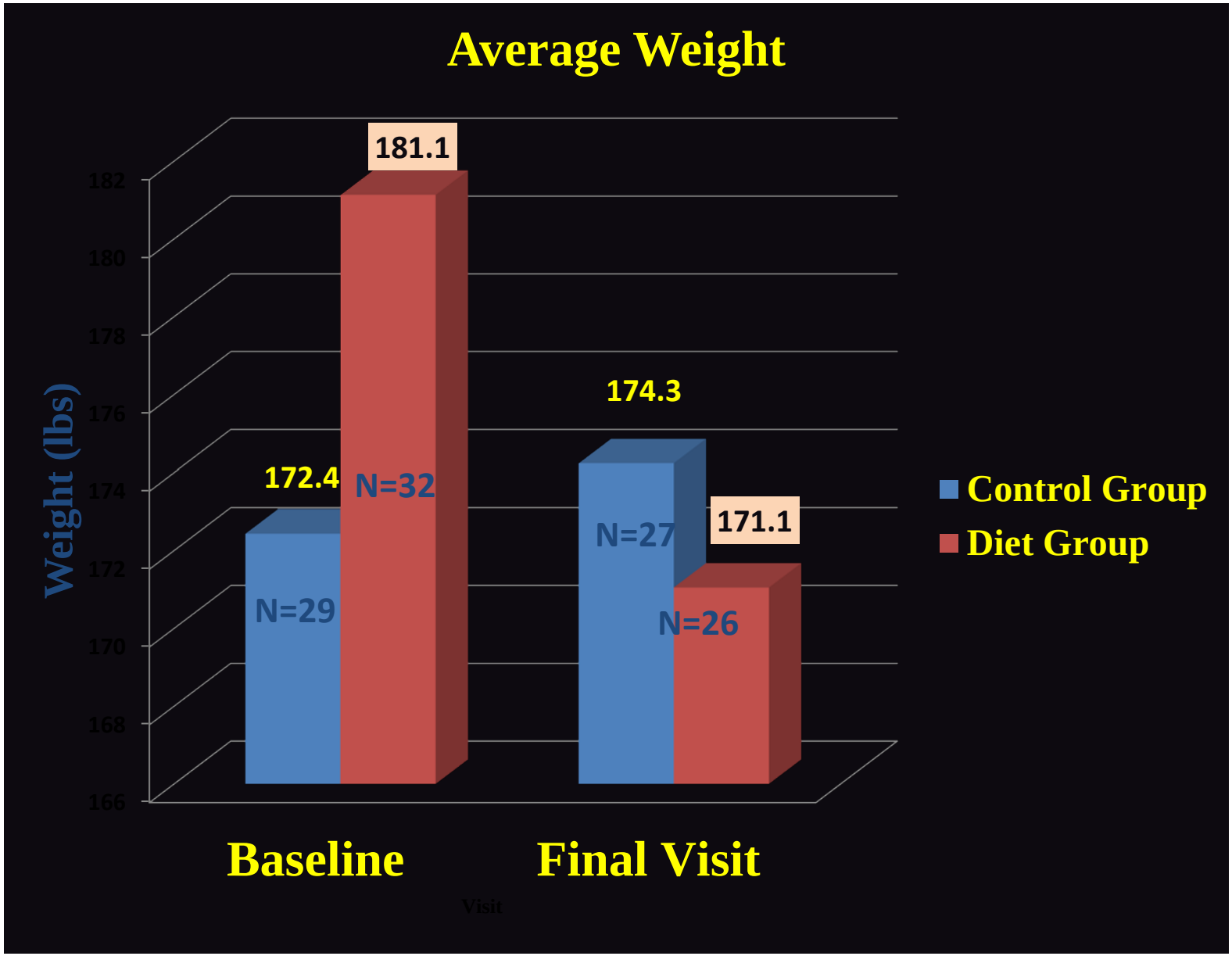
Weight Loss In 7 Days - Men



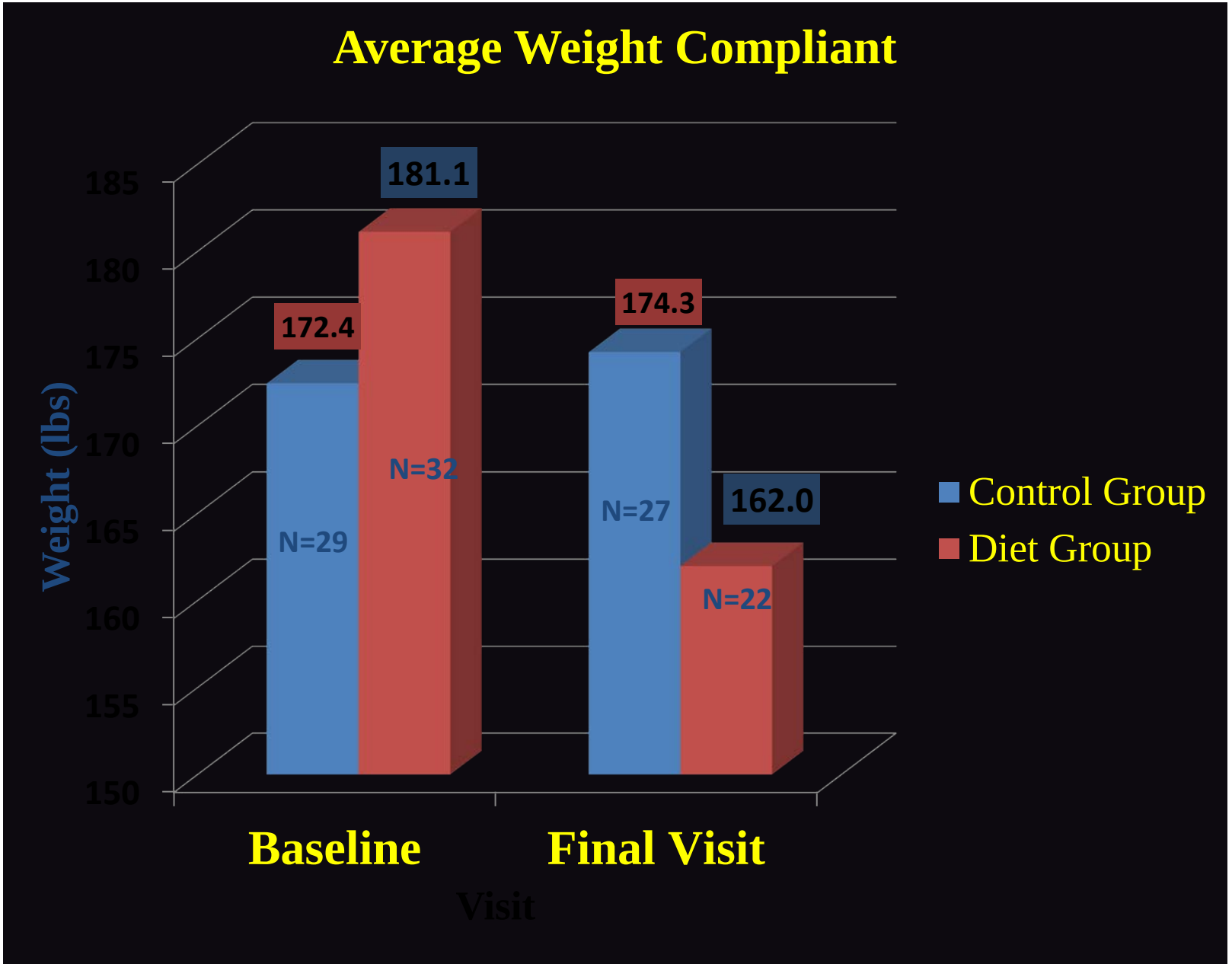
OHSU / McDougall Diet & MS Study



OHSU / McDougall Diet & MS Study



OHSU / McDougall Diet & MS Study



Himsworht

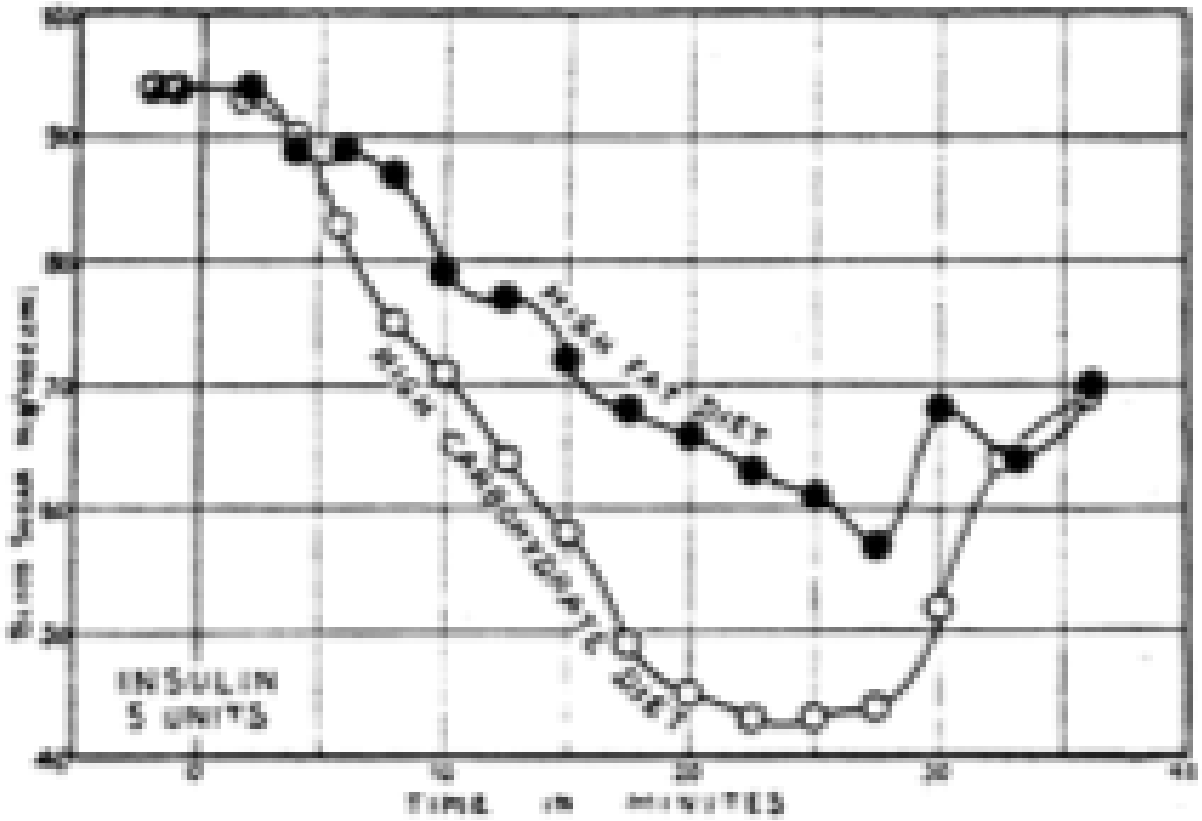
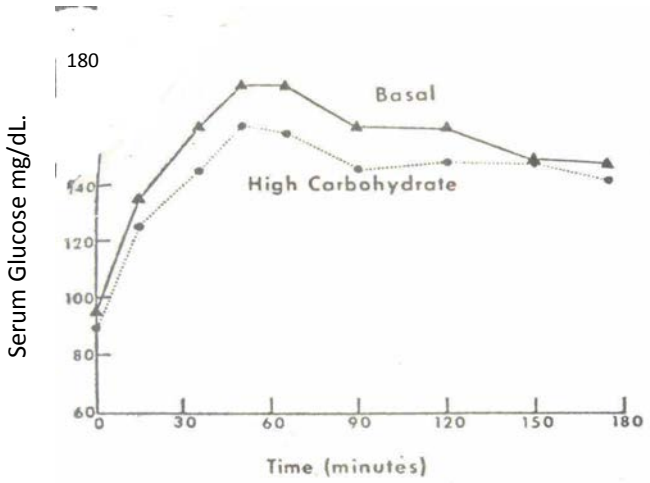
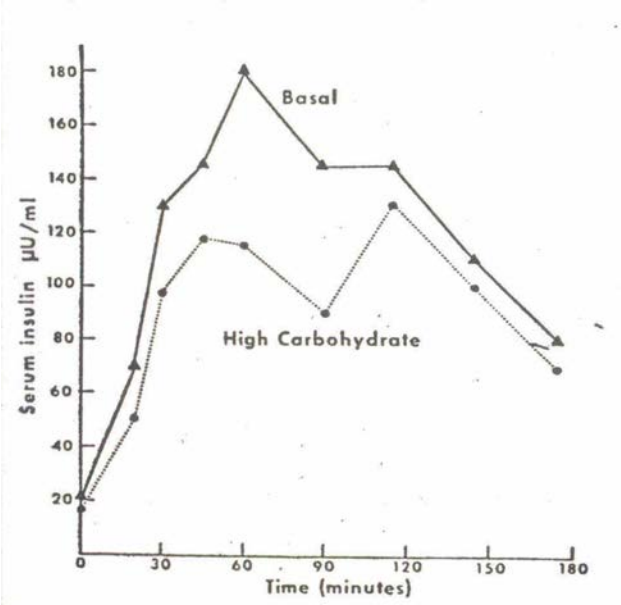


FIG. 2.—Two insulin-depression curves from the same normal subject—one when taking a low carbohydrate–high fat diet and the other when taking an equicaloric high carbohydrate–low fat diet. On the first diet the insulin injected intravenously comes into action more slowly and to less extent than when the subject takes the second diet (Himsworth, 1934b).

Sugar Makes Diabetes Better





45% vs. 85% Carbohydrate: FBS fell, OGT improved, fasting insulin lower

"These data suggest that the high carbohydrate diet increased the sensitivity of peripheral tissues to insulin."

N Engl J Med. 1971 Mar 11;284(10):521-4.

The Canadian
Medical Association Journal

Vol. XXVI TORONTO, FEBRUARY, 1932 No. 2

THE PRESENT STATUS OF THE HIGH CARBOHYDRATE-LOW CALORIE DIETS FOR THE TREATMENT OF DIABETES*

BY I. M. RABINOWITCH,

Montreal

FROM our clinical and laboratory experiences with the high carbohydrate-low calorie diet in hundreds of cases for more than one year, I believe that, subject to future discoveries in hydrate-high fat diets. (Note that these diets are called high carbohydrate-low *calorie* and not high carbohydrate-low *fat*.) Our respiratory metabolism data clearly indicate the absence

"May I, however, observe that we now have over 500 patients on this diet, and that 16 failures among them is, at least in my opinion, a highly satisfactory state of affairs."

Can Med Assoc J 1930;26: 142-148

I.M Rabinowitch, MD
1930

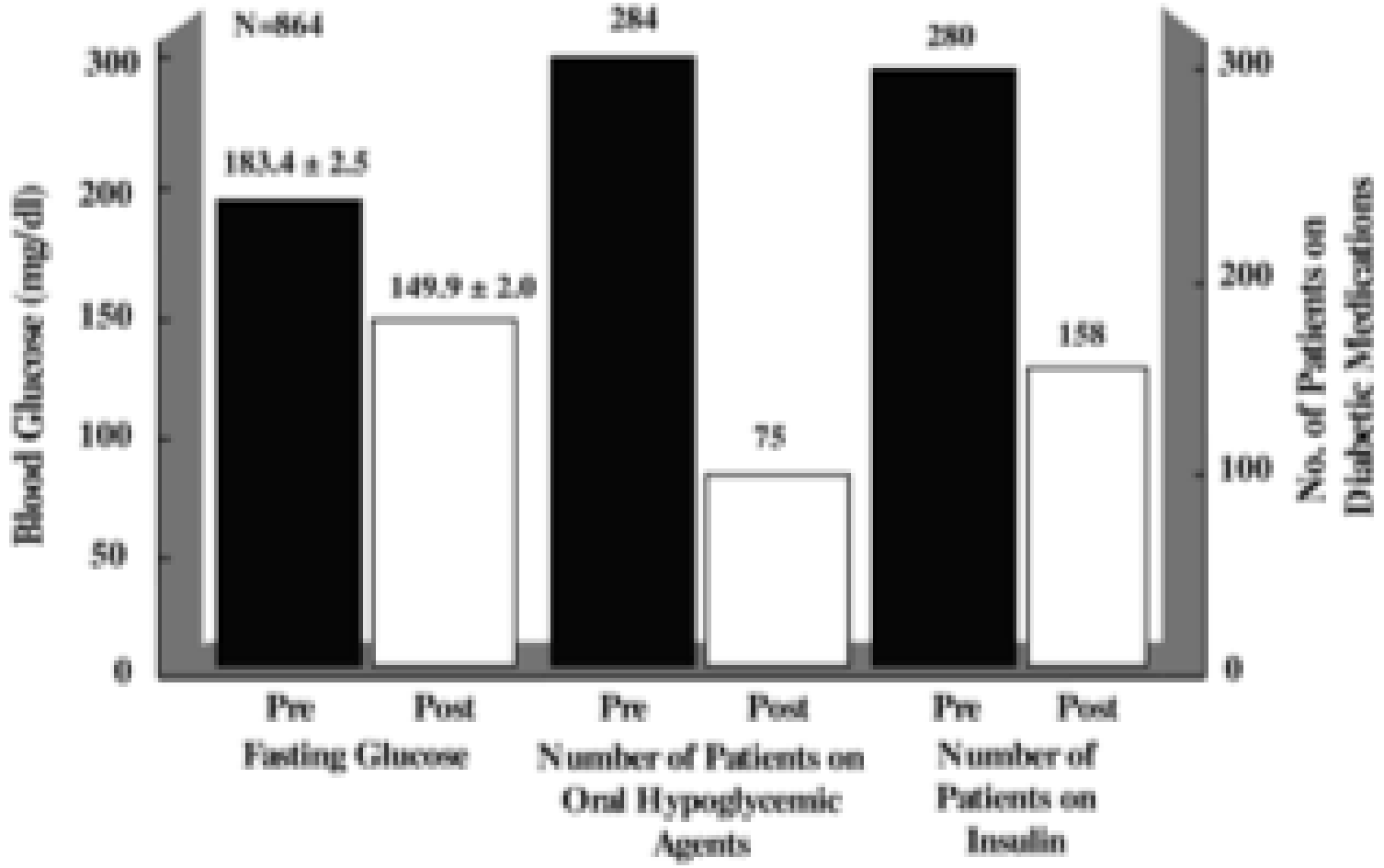
"…a potential diabetic can be transformed into a completely diabetic individual merely by administration of the time honoured carbohydrate-free diet of meat and fat."

"Fat-protein diets from which carbohydrates are excluded find no logical place in the present day management of a diabetic."

"…the diets are sufficiently attractive so that when given the option of being sufficiently underweight or taking insulin, the majority of patients select the former course."

Can Med Assoc J 1930; 24: 489-498

Pritikin Longevity Center



J Appl Physiol. 2005 Jan;98(1):3-30.

James Anderson, MD
University of Kentucky, College of Medicine

Metabolic Ward Study
Weight Maintaining Diet

Insulin Usage:
Average reduction
26 to 11 units daily

11 of 20 lean patients
discontinued insulin

CHO Initially = 43%
7 days average
CHO intervention = 70%
16 days average

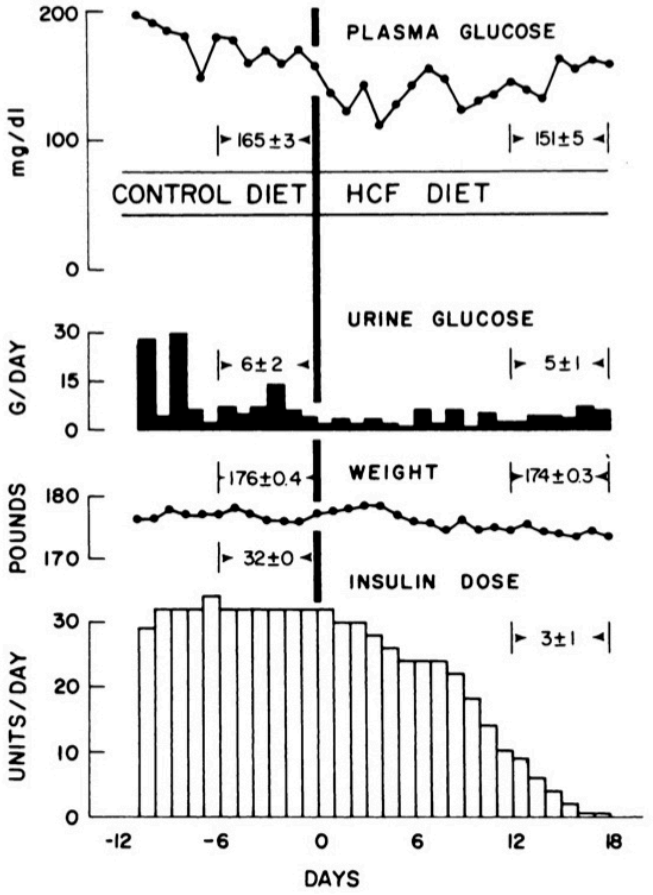


FIG. 1. Glucose metabolism on control and HCF diets. Values between *arrows* are mean ± SEM for the last 6 days on each diet. Reproduced with permission from Anderson (28).

Am J Clin Nutr. 1979 Nov;32(11):2312-21.

Neal Barnard, MD

Randomized Clinical Trial in Individuals With Type 2 Diabetes

	Vegan	ADA	
Reduced Medication	21/49	13/50	
HgB A1c*	-1.23	0.38	P=.01
Weight (Kg)	6.5	3.1	P=.001
LDL (% change)*	21.2	10.7	P=.02
Urine protein	15.9	10.9	P=.013

Vegan diet = (10% of energy from fat, 15% protein, and 75% carbohydrate)
ADA diet = (40 % fat, 20% protein, 40% carbohydrate, < 200 mg cholesterol

*No medication changes

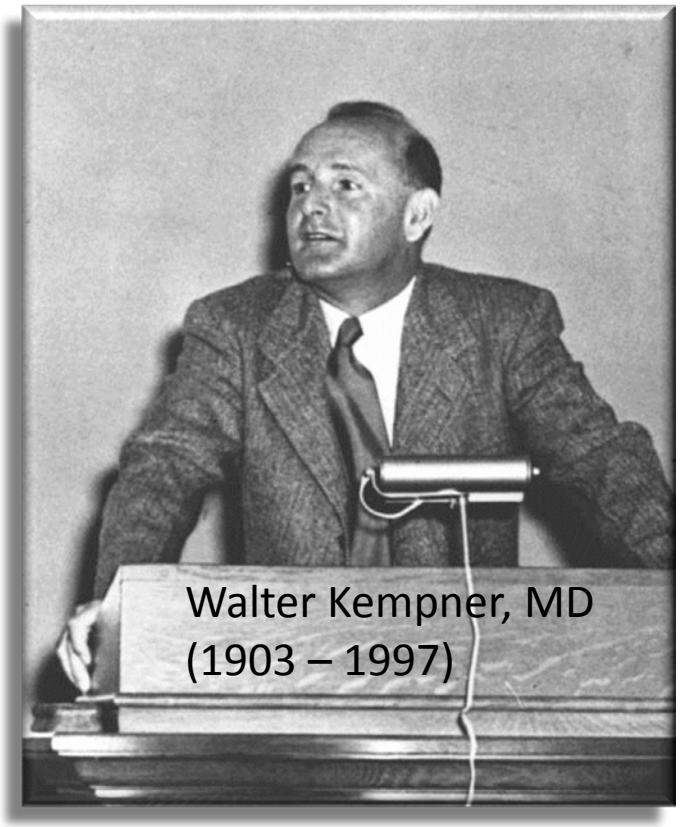
Diabetes Care. 2006 Aug;29(8):1777-83.

Walter Kempner, MD

Classical diabetic retinopathy,

Average observation 22 months,

20 of 44 showed improvement



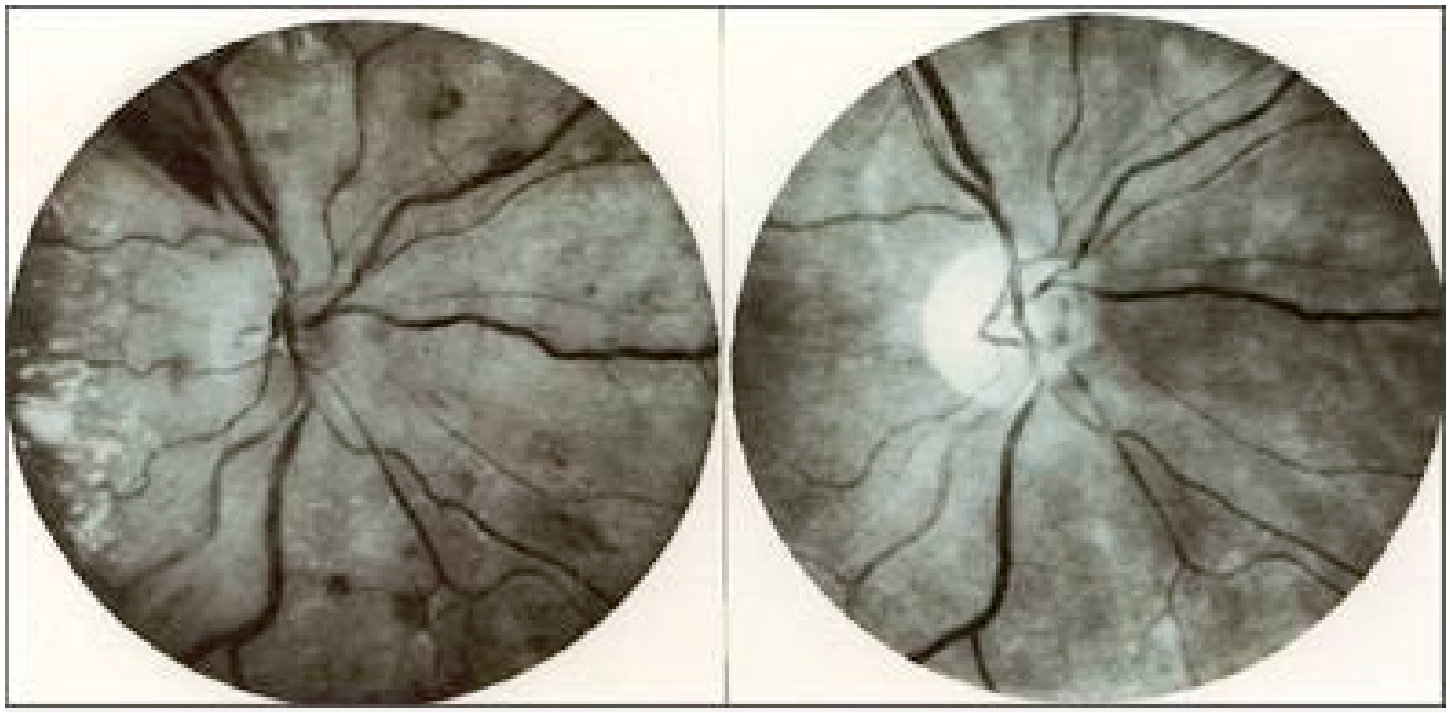
Decrease in heart size, improved kidney function, and hypertensive retinopathy reversal

Reversal of obesity, diabetes, hypertension, and heart failure

Retinal Physician April 2008

Retinopathy Rx Low-fat Diet

42-year-old male with an 18-year history of diabetes mellitus. Dietary compliance for 26 months.



Classical diabetic retinopathy: aneurysms, punctuate, preretinal or vitreous hemorrhage, waxy exudates, neovascularization, and retinitis proliferans.

Postgrad Med. 1958 Oct;24(4):359-71.
Am J Med. 1959 Aug;27:196-211.

Retinopathy Rx Low-fat Diet

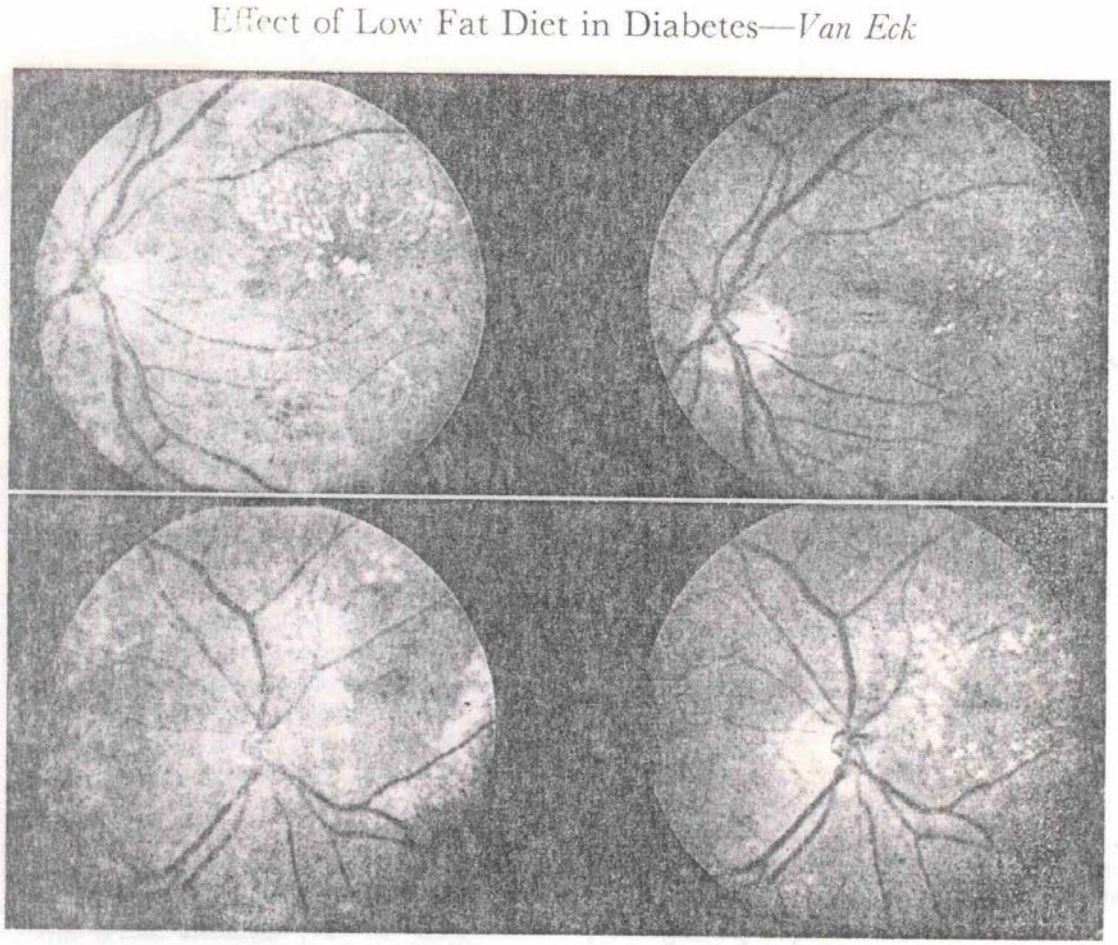


Fig. 4. Case III. Fundi of right and left eye before institution of a low fat diet (left) and five months later (right).

Postgrad Med. 1958 Oct;24(4):359-71.
Am J Med. 1959 Aug;27:196-211.

Diabetic Management

"…it is important to remember that 'diabetic control' means a lot more than 'blood sugar control.'" T.D.R Hockaday, 1987

Mortality and Morbidity
Heart disease
Eye disease
Kidney disease

Scand J Gastroenterol Suppl. 1987;129:124-31.

Diet Therapy Cardiovascular Disease

Avoid Tragedy: A Heart Attack

Keep this room

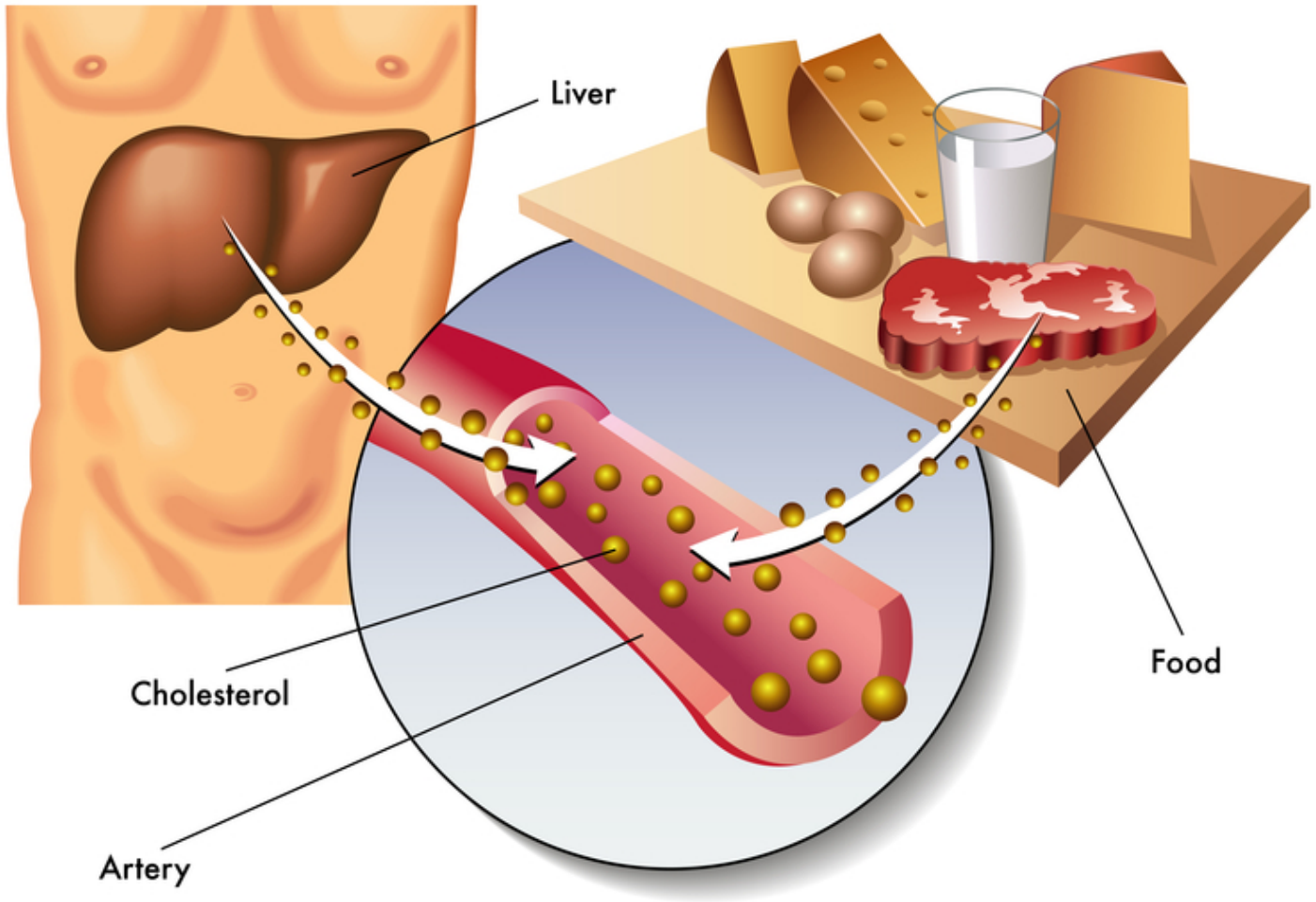
empty by eating

and living right!

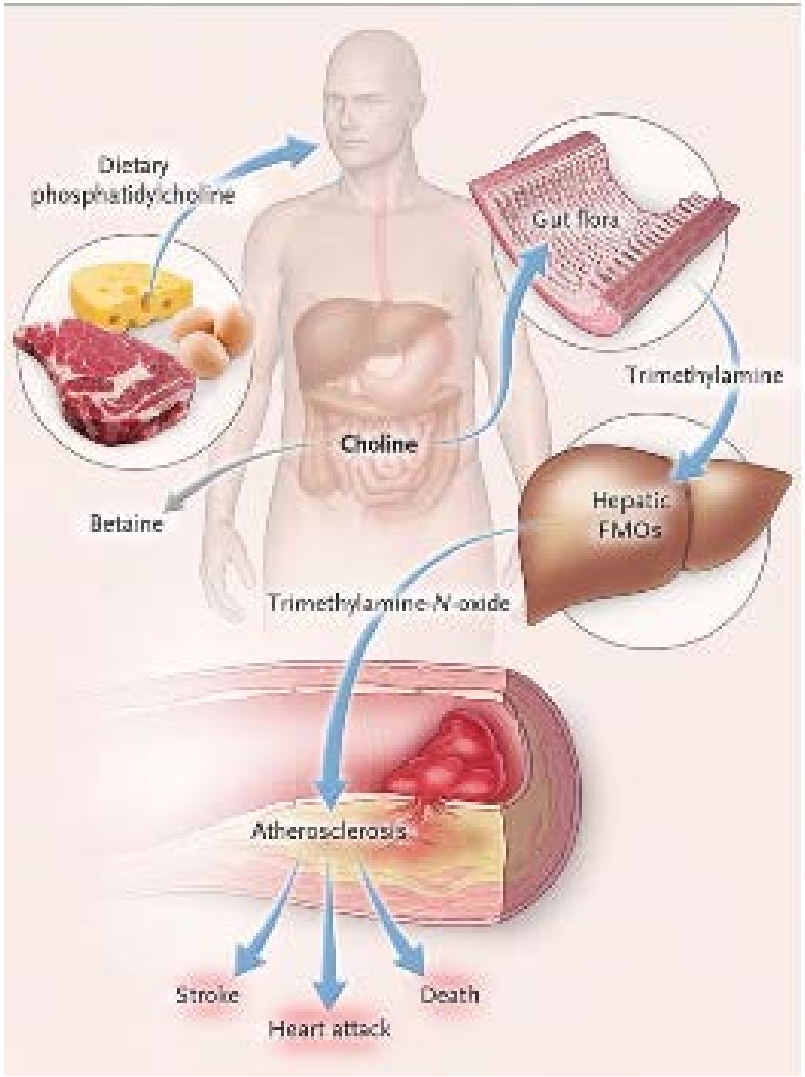
Diseases of Closed Arteries

- ✓macular degeneration
- ✓hearing loss
- ✓strokes
- ✓heart attacks
- ✓aneurysms
- ✓kidney failure
- ✓bowel infarction
- ✓degenerative disks
- ✓claudication
- ✓gangrene
- ✓impotence
- ✓other infarctions

Cholesterol Hypothesis

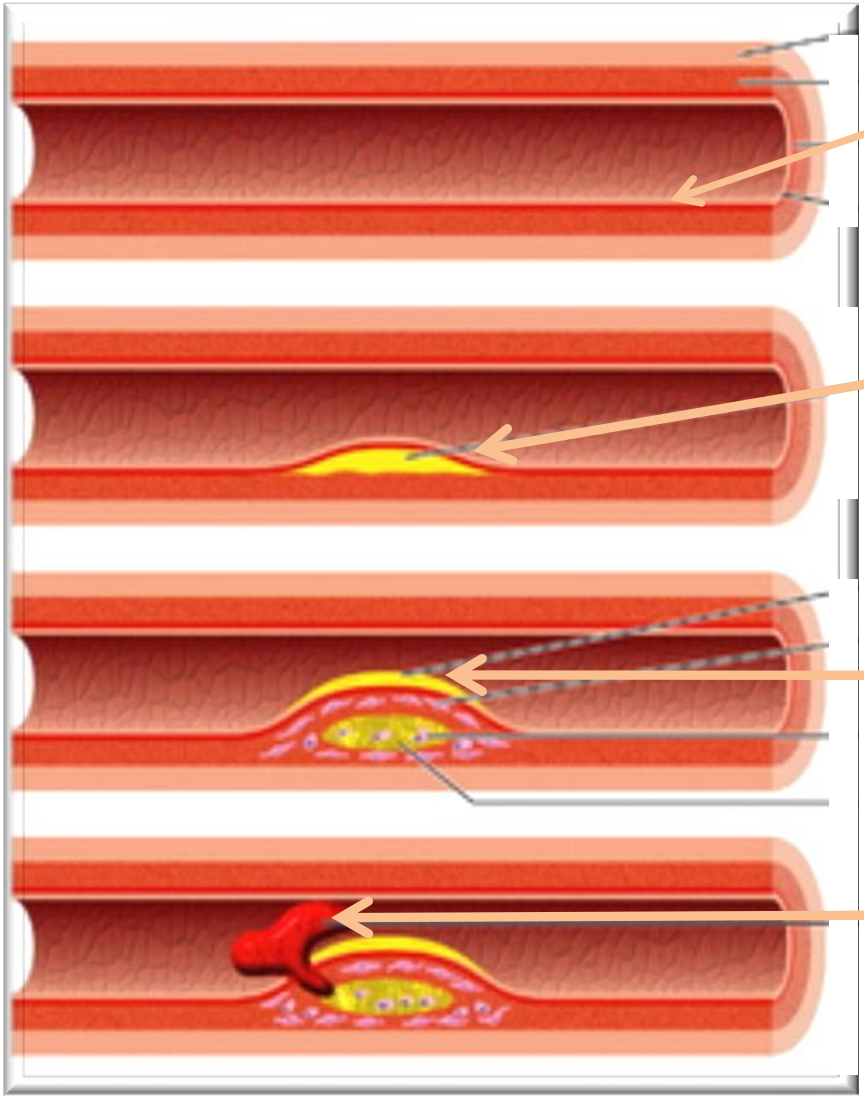


Intestinal microbial with carnitine/choline cause cardiovascular risk

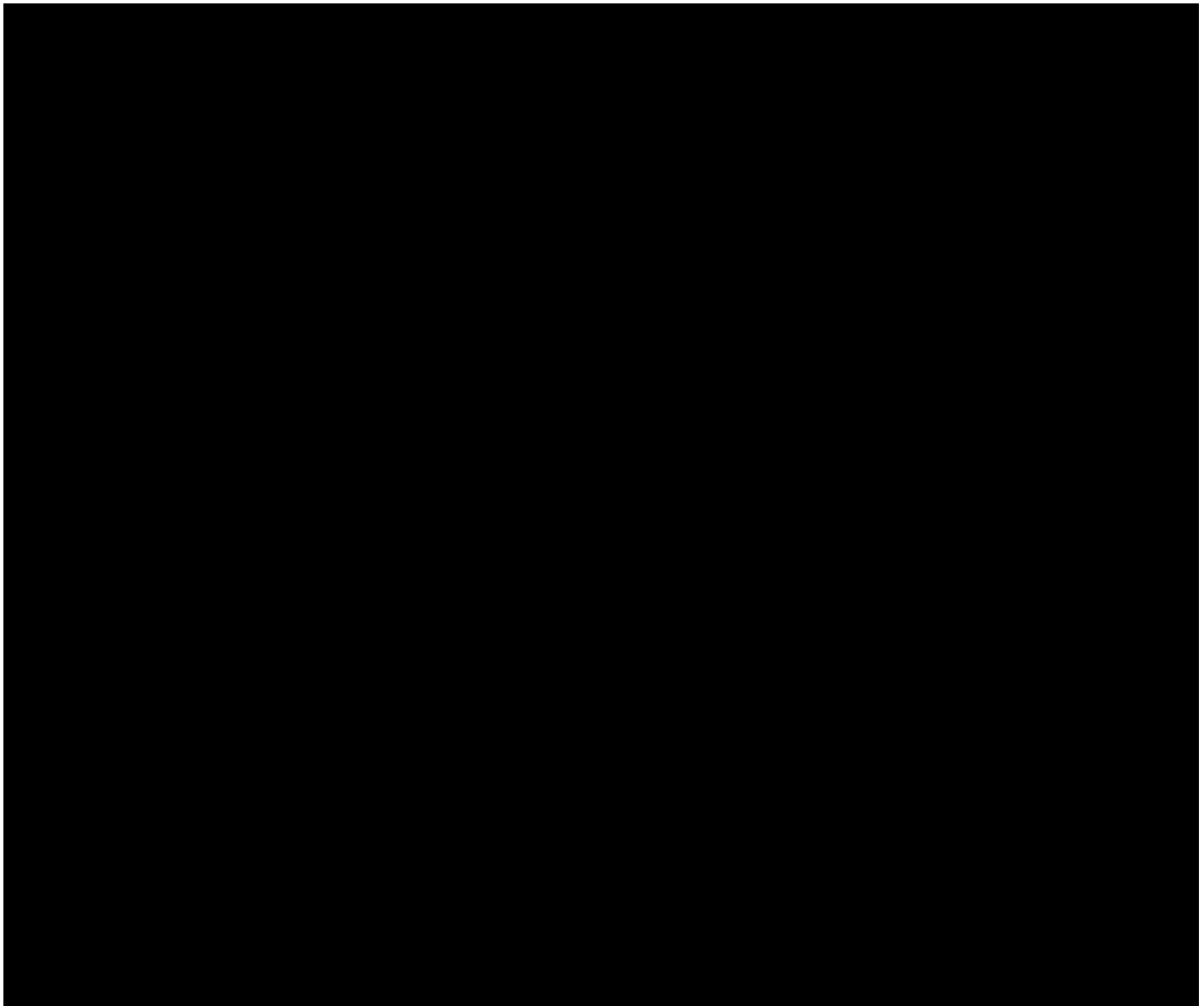


N Engl J Med
2013 Apr 25;368(17):1575-84

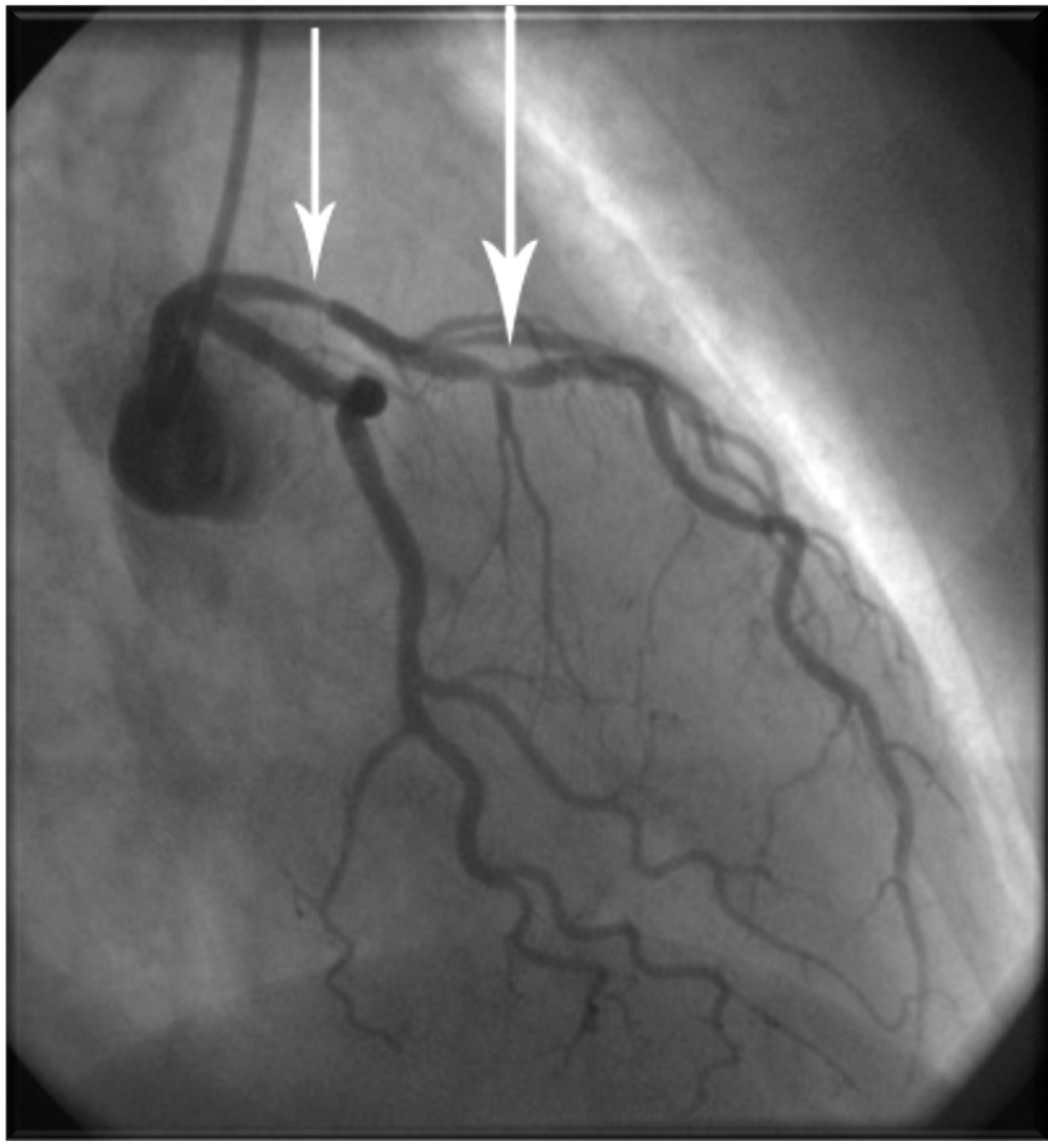
Plaque Rupture



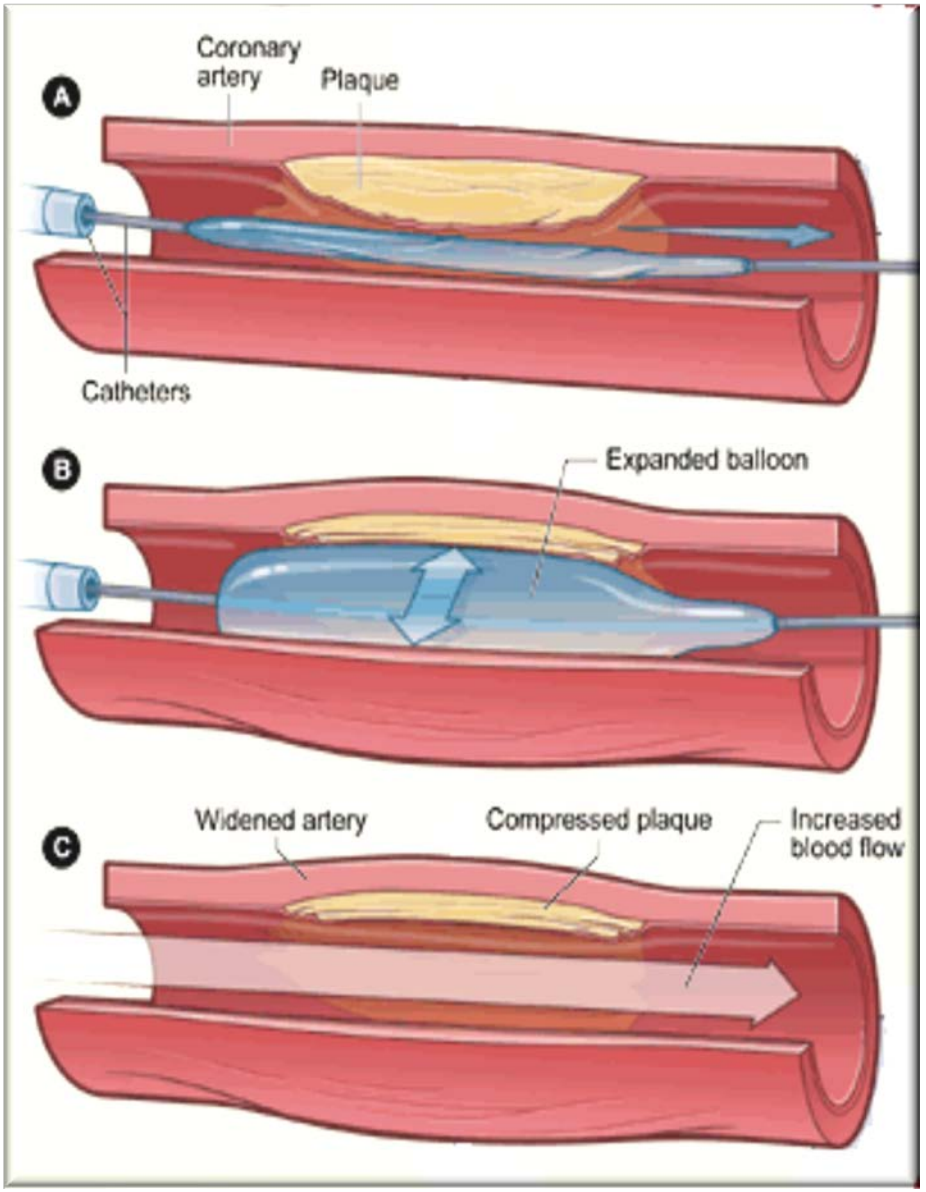
Impressive Video



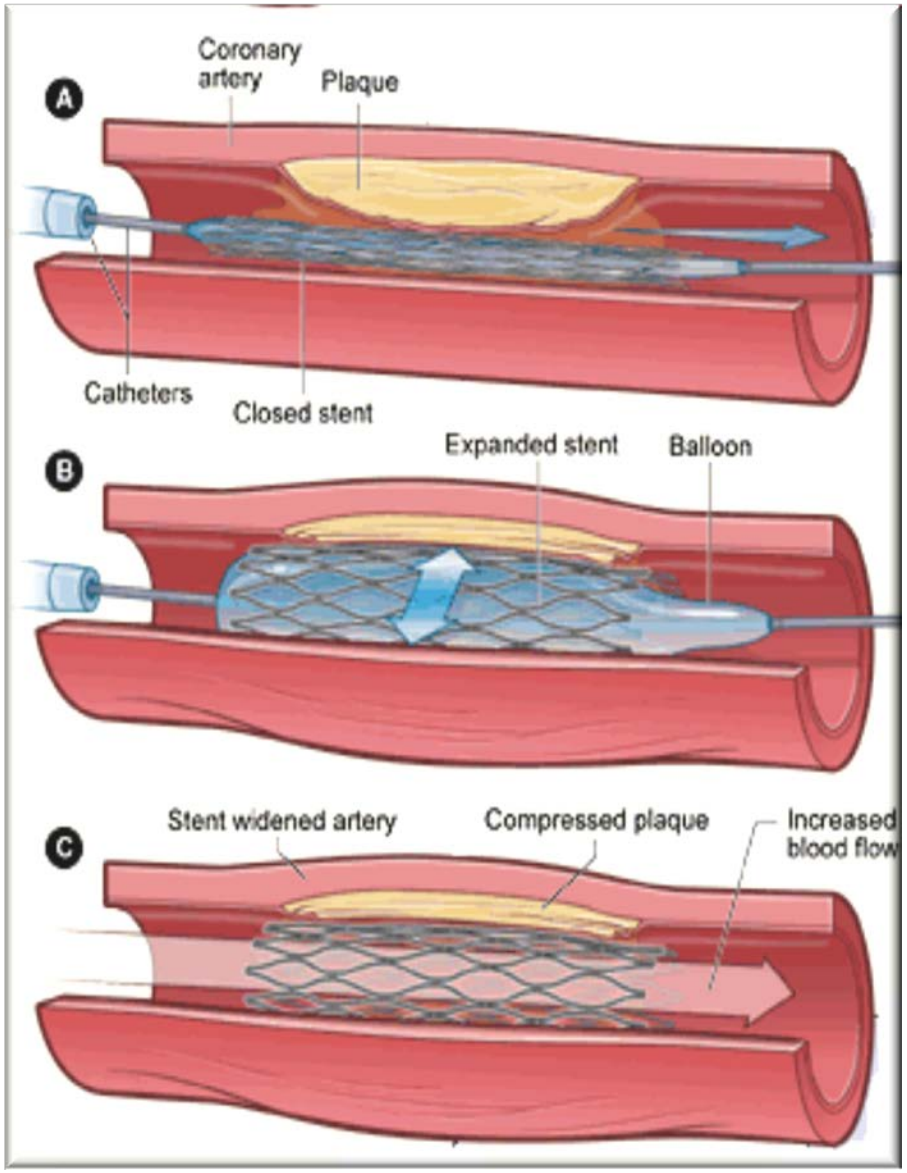
Shadows of Old Disease



Angioplasty to Dilate Artery



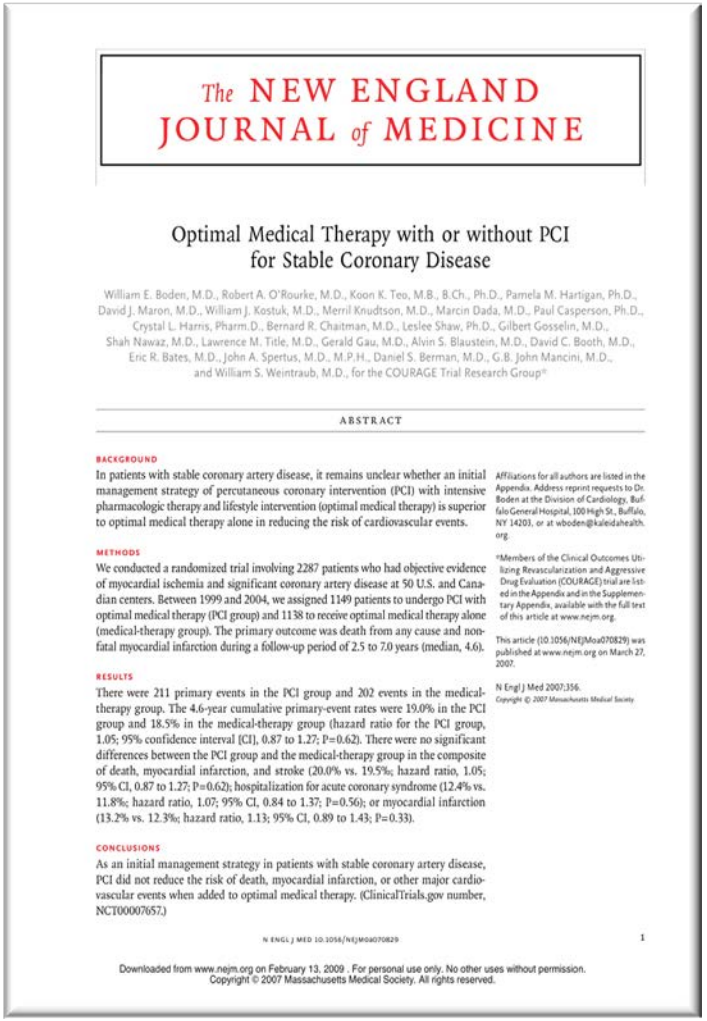
Stents to Keep Artery Open—Maybe?



Angioplasty Fails

2287 patients who had objective evidence of myocardial ischemia and significant coronary artery disease

PCI did not reduce the risk of death, myocardial infarction, or other major cardiovascular events when added to optimal medical therapy.



The NEW ENGLAND JOURNAL of MEDICINE

Optimal Medical Therapy with or without PCI for Stable Coronary Disease

William E. Boden, M.D., Robert A. O'Rourke, M.D., Koon K. Teo, M.B., B.Ch., Ph.D., Pamela M. Hartigan, Ph.D., David J. Maron, M.D., William J. Kostuk, M.D., Merril Knudtson, M.D., Marcin Dada, M.D., Paul Casperson, Ph.D., Crystal L. Harris, Pharm.D., Bernard R. Chaitman, M.D., Leslee Shaw, Ph.D., Gilbert Gosselin, M.D., Shah Nawaz, M.D., Lawrence M. Title, M.D., Gerald Gau, M.D., Alvin S. Blaustein, M.D., David C. Booth, M.D., Eric R. Bates, M.D., John A. Spertus, M.D., M.P.H., Daniel S. Berman, M.D., G.B. John Mancini, M.D., and William S. Weintraub, M.D., for the COURAGE Trial Research Group*

ABSTRACT

BACKGROUND

In patients with stable coronary artery disease, it remains unclear whether an initial management strategy of percutaneous coronary intervention (PCI) with intensive pharmacologic therapy and lifestyle intervention (optimal medical therapy) is superior to optimal medical therapy alone in reducing the risk of cardiovascular events.

METHODS

We conducted a randomized trial involving 2287 patients who had objective evidence of myocardial ischemia and significant coronary artery disease at 50 U.S. and Canadian centers. Between 1999 and 2004, we assigned 1149 patients to undergo PCI with optimal medical therapy (PCI group) and 1138 to receive optimal medical therapy alone (medical-therapy group). The primary outcome was death from any cause and nonfatal myocardial infarction during a follow-up period of 2.5 to 7.0 years (median, 4.6).

RESULTS

There were 211 primary events in the PCI group and 202 events in the medical-therapy group. The 4.6-year cumulative primary-event rates were 19.0% in the PCI group and 18.5% in the medical-therapy group (hazard ratio for the PCI group, 1.05; 95% confidence interval [CI], 0.87 to 1.27; P=0.62). There were no significant differences between the PCI group and the medical-therapy group in the composite of death, myocardial infarction, and stroke (20.0% vs. 19.5%; hazard ratio, 1.05; 95% CI, 0.87 to 1.27; P=0.62); hospitalization for acute coronary syndrome (12.4% vs. 11.8%; hazard ratio, 1.07; 95% CI, 0.84 to 1.37; P=0.56); or myocardial infarction (13.2% vs. 12.3%; hazard ratio, 1.13; 95% CI, 0.89 to 1.43; P=0.33).

CONCLUSIONS

As an initial management strategy in patients with stable coronary artery disease, PCI did not reduce the risk of death, myocardial infarction, or other major cardiovascular events when added to optimal medical therapy. (ClinicalTrials.gov number, NCT00007657.)

Affiliations for all authors are listed in the Appendix. Address reprint requests to Dr. Boden at the Division of Cardiology, Buffalo General Hospital, 100 High St., Buffalo, NY 14203, or at wboden@kaleidahealth.org.

*Members of the Clinical Outcomes Utilizing Revascularization and Aggressive Drug Evaluation (COURAGE) trial are listed in the Appendix and in the Supplementary Appendix, available with the full text of this article at www.nejm.org.

This article (10.1056/NEJMoa070829) was published at www.nejm.org on March 27, 2007.

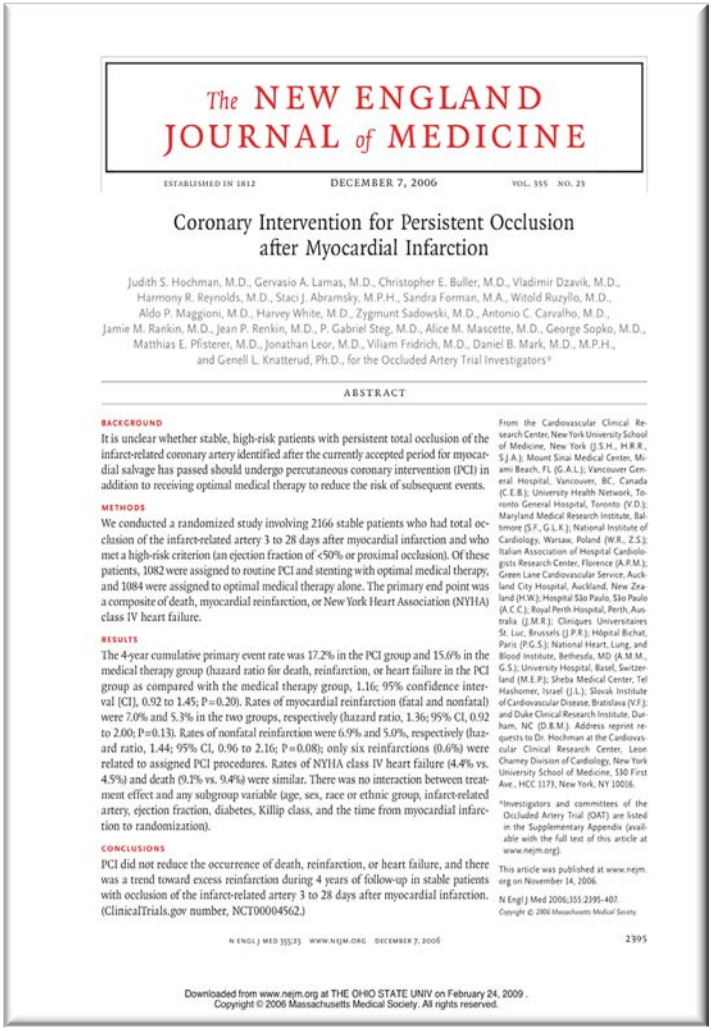
N Engl J Med 2007;356.

N Engl J Med. 2007 Apr 12;356(15):1503-16.

Angioplasty Fails

2166 stable patients, total occlusion 3 to 28 days after myocardial infarction high-risk criterion.

PCI did not reduce the occurrence of death, reinfarction, or heart failure, and there was a trend toward excess reinfarction during 4 years of follow-up.



The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 DECEMBER 7, 2006 VOL. 355 NO. 23

Coronary Intervention for Persistent Occlusion after Myocardial Infarction

Judith S. Hochman, M.D., Gervasio A. Lamas, M.D., Christopher E. Buller, M.D., Vladimir Dzavik, M.D., Harmony R. Reynolds, M.D., Staci J. Abramsky, M.P.H., Sandra Forman, M.A., Witold Ruzyllo, M.D., Aldo P. Maggioni, M.D., Harvey White, M.D., Zygmunt Sadowski, M.D., Antonio C. Carvalho, M.D., Jamie M. Rankin, M.D., Jean P. Renkin, M.D., P. Gabriel Steg, M.D., Alice M. Mascette, M.D., George Sopko, M.D., Matthias E. Pfisterer, M.D., Jonathan Leor, M.D., Viliam Fridrich, M.D., Daniel B. Mark, M.D., M.P.H., and Genell L. Knatterud, Ph.D., for the Occluded Artery Trial Investigators*

ABSTRACT

BACKGROUND

It is unclear whether stable, high-risk patients with persistent total occlusion of the infarct-related coronary artery identified after the currently accepted period for myocardial salvage has passed should undergo percutaneous coronary intervention (PCI) in addition to receiving optimal medical therapy to reduce the risk of subsequent events.

METHODS

We conducted a randomized study involving 2166 stable patients who had total occlusion of the infarct-related artery 3 to 28 days after myocardial infarction and who met a high-risk criterion (an ejection fraction of <50% or proximal occlusion). Of these patients, 1082 were assigned to routine PCI and stenting with optimal medical therapy, and 1084 were assigned to optimal medical therapy alone. The primary end point was a composite of death, myocardial reinfarction, or New York Heart Association (NYHA) class IV heart failure.

RESULTS

The 4-year cumulative primary event rate was 17.2% in the PCI group and 15.6% in the medical therapy group (hazard ratio for death, reinfarction, or heart failure in the PCI group as compared with the medical therapy group, 1.16; 95% confidence interval [CI], 0.92 to 1.45; P=0.20). Rates of myocardial reinfarction (fatal and nonfatal) were 7.0% and 5.3% in the two groups, respectively (hazard ratio, 1.36; 95% CI, 0.92 to 2.00; P=0.13). Rates of nonfatal reinfarction were 6.9% and 5.0%, respectively (hazard ratio, 1.44; 95% CI, 0.96 to 2.16; P=0.08); only six reinfarctions (0.6%) were related to assigned PCI procedures. Rates of NYHA class IV heart failure (4.4% vs. 4.5%) and death (9.1% vs. 9.4%) were similar. There was no interaction between treatment effect and any subgroup variable (age, sex, race or ethnic group, infarct-related artery, ejection fraction, diabetes, Killip class, and the time from myocardial infarction to randomization).

CONCLUSIONS

PCI did not reduce the occurrence of death, reinfarction, or heart failure, and there was a trend toward excess reinfarction during 4 years of follow-up in stable patients with occlusion of the infarct-related artery 3 to 28 days after myocardial infarction. (ClinicalTrials.gov number, NCT00004562.)

From the Cardiovascular Clinical Research Center, New York University School of Medicine, New York (J.S.H., H.R.R., S.J.A.); Mount Sinai Medical Center, Miami Beach, FL (G.A.L.); Vancouver General Hospital, Vancouver, BC, Canada (C.E.B.); University Health Network, Toronto General Hospital, Toronto (V.D.); Maryland Medical Research Institute, Baltimore (S.F., G.L.K.); National Institute of Cardiology, Warsaw, Poland (W.R., Z.S.); Italian Association of Hospital Cardiologists Research Center, Florence (A.P.M.); Green Lane Cardiovascular Service, Auckland City Hospital, Auckland, New Zealand (H.W.); Hospital São Paulo, São Paulo (A.C.C.); Royal Perth Hospital, Perth, Australia (J.M.R.); Cliniques Universitaires St. Luc, Brussels (J.P.R.); Hôpital Bichat, Paris (P.G.S.); National Heart, Lung, and Blood Institute, Bethesda, MD (A.M.M., G.S.); University Hospital, Basel, Switzerland (M.E.P.); Sheba Medical Center, Tel Hashomer, Israel (J.L.); Slovak Institute of Cardiovascular Disease, Bratislava (V.F.); and Duke Clinical Research Institute, Durham, NC (D.B.M.). Address reprint requests to Dr. Hochman at the Cardiovascular Clinical Research Center, Leon Charney Division of Cardiology, New York University School of Medicine, 530 First Ave., HCC 1173, New York, NY 10016.

*Investigators and committees of the Occluded Artery Trial (OAT) are listed in the Supplementary Appendix (available with the full text of this article at www.nejm.org).

This article was published at www.nejm.org on November 14, 2006.

N Engl J Med 2006;355:2395-407.

N Engl J Med. 2006 Dec 7;355(23):2395-407.

Cardiologists Doing Business

ORIGINAL INVESTIGATION

ONLINE FIRST | LESS IS MORE

Impact of National Clinical Guideline Recommendations for Revascularization of Persistently Occluded Infarct-Related Arteries on Clinical Practice in the United States

Marc W. Deyell, MD; Christopher E. Buller, MD; Louis H. Miller, MD; Tracy Y. Wang, MD; David Dai, MS; Gervasio A. Lamas, MD; Vankeepuram S. Srinivas, MD; Judith S. Hochman, MD

Arch Intern Med. 2011 Jul 11.

Cardiologists Doing Business

"…no change in the adjusted rate of PCI for total occlusions identified at least 24 hours after MI following the publication of the OAT or the revision of the major guidelines."*

*American College of Cardiology and the American Heart Association

Cardiologists Doing Business

“The results of this study are a cause for concern on two levels.

First, they imply that many stable patients with recent MI and persistent infarct artery occlusion continue to undergo a costly and ineffective procedure.

Second, a large public, scientific, and human patient investment in the generation of robust clinical evidence has yet to broadly influence US practice.”

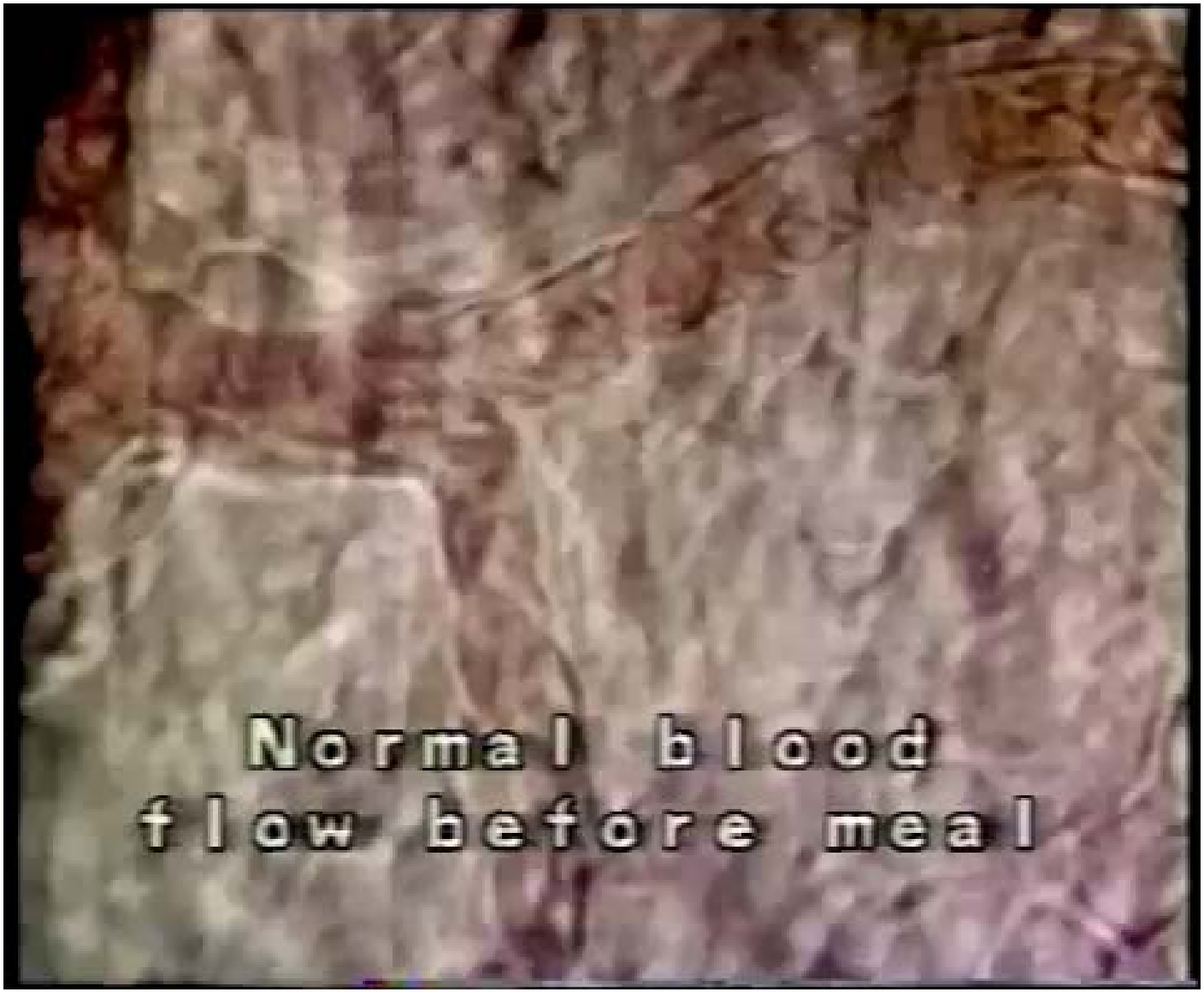
Cardiologists Doing Business

Editorial:

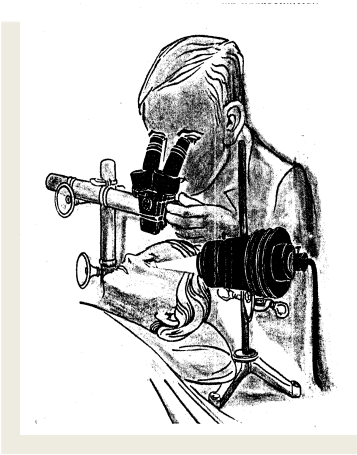
"In addition, in a fee-for-service health system and in an environment in which more and more physicians are being compensated on the basis of relative value unit productivity, it remains to be determined whether **personal financial gain** might play a role in continuing old practices and in performing procedures shown to be of **no benefit**."

Arch Intern Med. 2011 Jul 11.

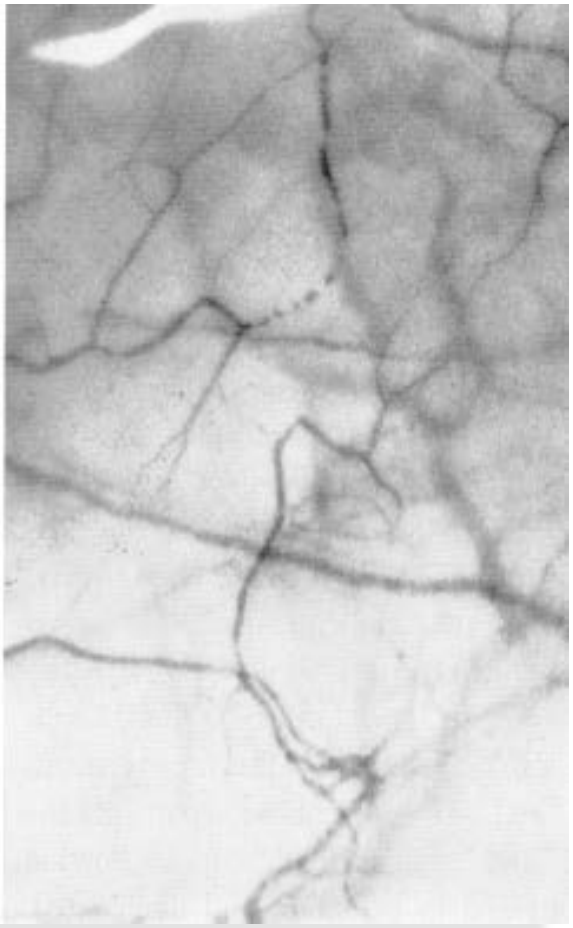
Sludging after Fatty Meal



Fat Sludges Blood



Before and
4 hours after
67% fat meal



(2 eggs, 4 strips bacon, milk, cream, bread, 2 pats butter)

Nathan Pritikin

(1915 – 1985)

History of Severe Heart Disease

In February 1958, the diagnosis of asymptomatic coronary insufficiency was made during a comprehensive medical evaluation. In a Master's two-step test, while Mr. Pritikin's heart rate was 98 beats per minute (56 per cent of the age-predicted maximum), the electrocardiogram showed a 2-mm horizontal ST-segment depression in leads II, aVF, and V5 and a 1.5-mm ST depression in V3. The diagnosis was confirmed by another Master's test in December 1959.

Mr. Pritikin's fasting serum cholesterol level was 280 mg per deciliter in December 1955, and at that time he started to modify his diet. At the time of diagnosis of coronary insufficiency (1958), he formulated and began to follow the Pritikin high-complex-carbohydrate, low-fat, and low-cholesterol diet. A summary of his serum cholesterol levels at various dates follows: 12/55, 280 mg per deciliter; 2/58, 210; 7/58, 162; 9/58, 122; 8/59, 155; 6/60, 120; 12/63, 102; 3/66, 119; 9/68, 118; 1/69, 112; and 11/84, 94.

N Engl J Med. 1985 Jul 4;313(1):52.

Nathan Pritikin (October 1982)

Nathan Pritikin's Autopsy

Proving one last time that he was right!

Several systemic arteries showed some yellow, flat streaks. No elevated plaques were present, and no reduction of the lumen was found. No infarcts of any size, or other findings referable to vascular disease, were present in any organ.

In a man 69 years old, the near absence of atherosclerosis and the complete absence of its effects are remarkable.

N Engl J Med. 1985 Jul 4;313(1):52.

Diet and Lifestyle Benefits

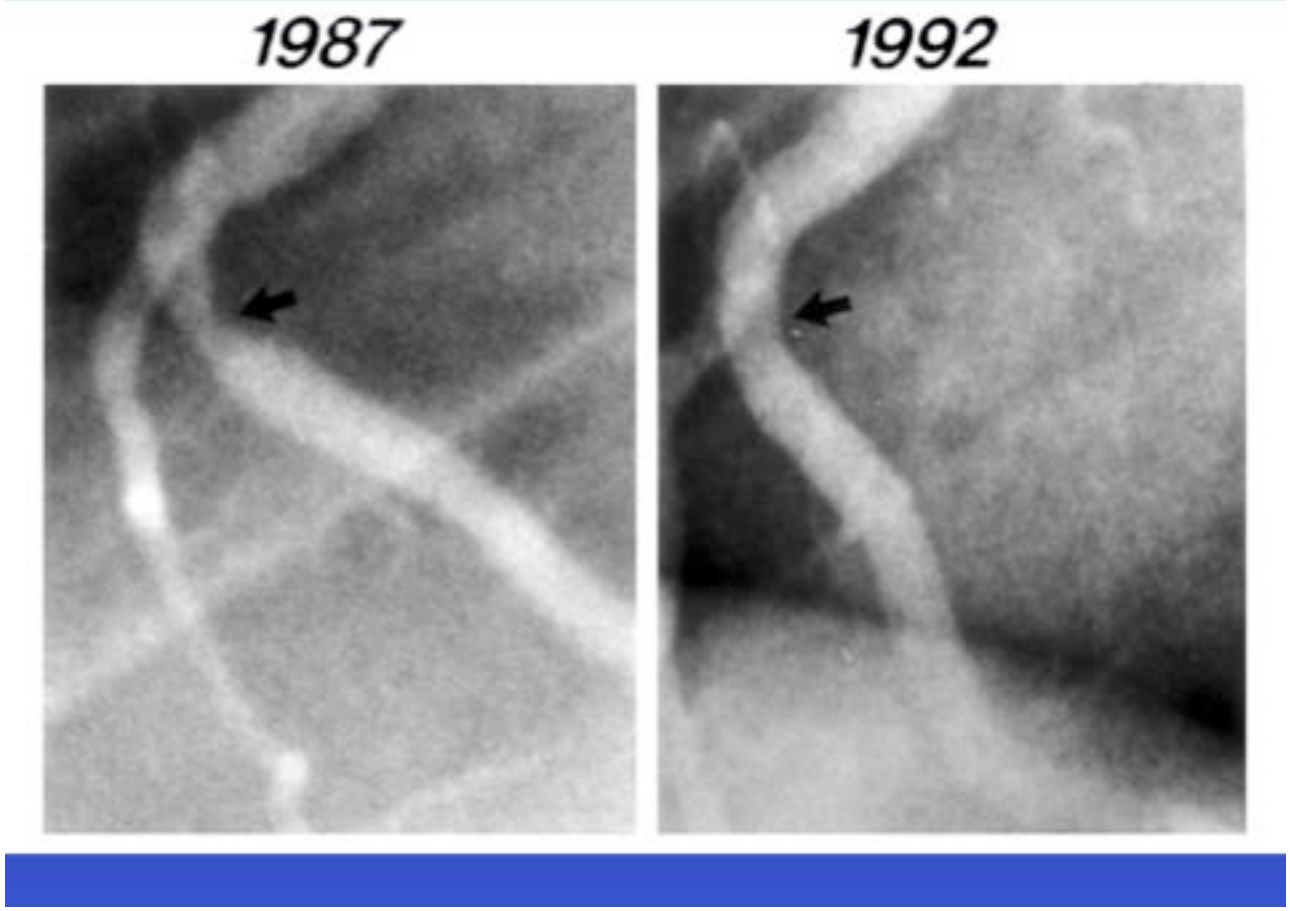
Reduces the major risk factor for heart disease:

cholesterol/triglycerides
hypertension
obesity
insulin resistance

Cures heart disease: “According to the PET scans, 99% of the patients stopped or reversed the progression of coronary heart disease.” Dean Ornish

Am J Cardiol. 2002 Aug 1;90(3):271-98.

Cardiovascular Disease



54 year old retired security guard
Courtesy of Caudwell Esselstyn, MD

Prev Cardiol. 2001 Autumn;4(4):171-177.

Robert Cross, Attorney

61 years old
High blood pressure, diabetes, cholesterol, recurrent kidney stones
250-pound, cholesterol 294 mg/dL (LDL cholesterol 210 mg/dL)
Indigestion, angina

Perfusion images (Jan. 2008): mild-to-moderate perfusion deficit along the inferior and lateral walls

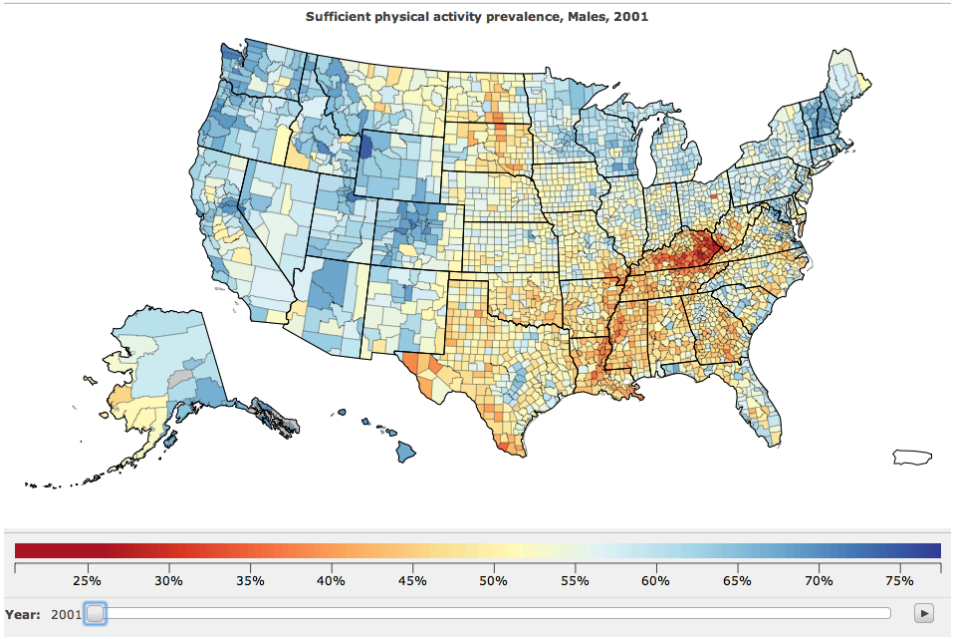
Robert Cross, Attorney

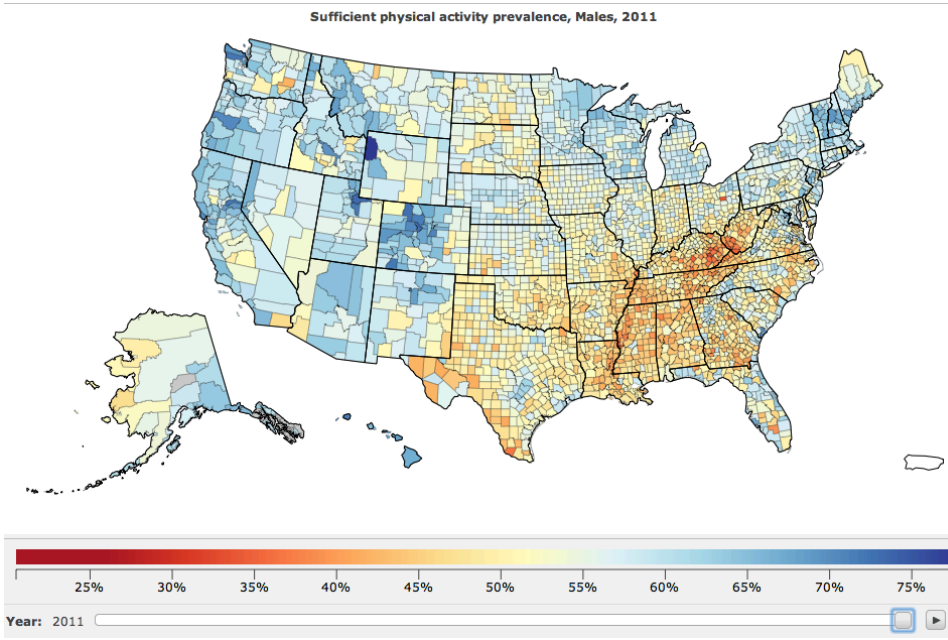
No angina
No medication:
Chol: 160 mg/dL
(LDL 60 mg/dL)

May 5, 2009:
Perfusion images:
Subtle inferior wall
perfusion defect

Exercise

Changes in Physical Activity



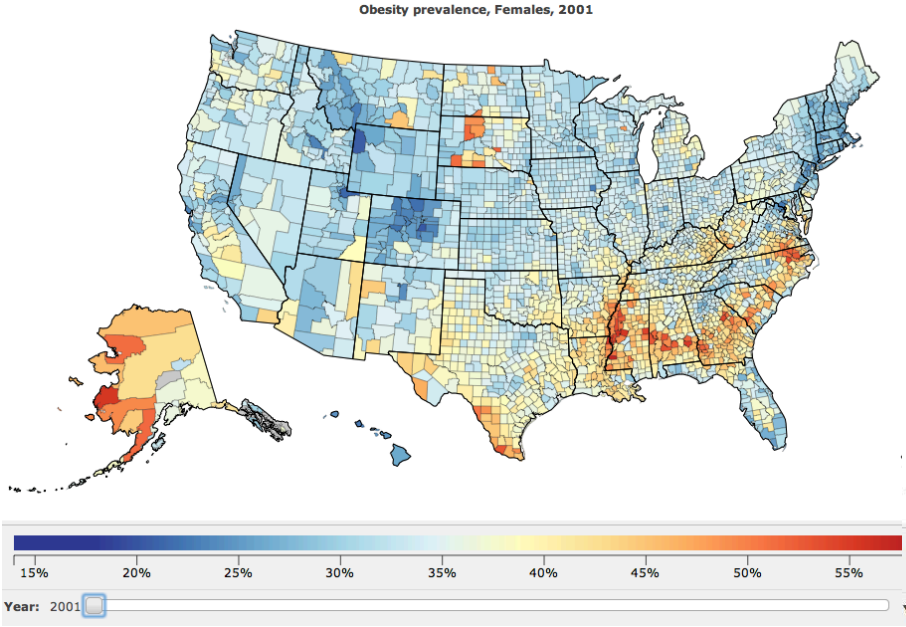


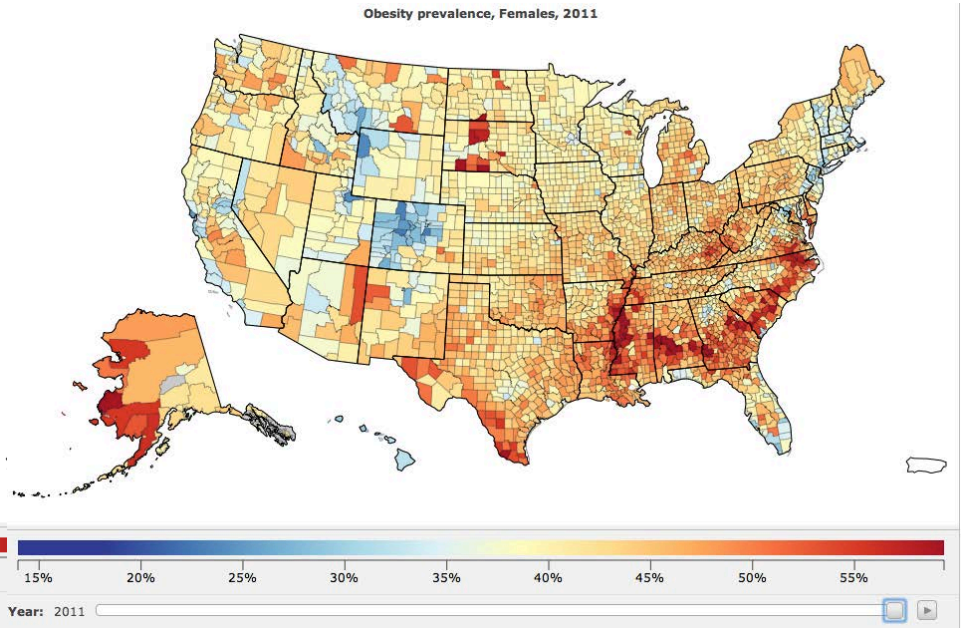
2001

2011

http://www.healthmetricsandevaluation.org/tools/data-visualization/us-health-map

Changes in Obesity Female



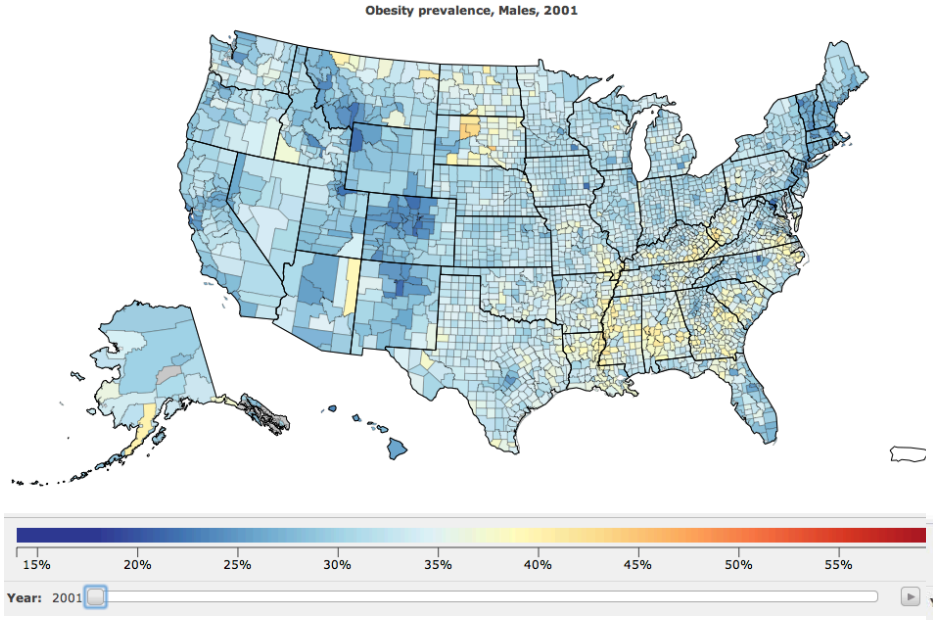


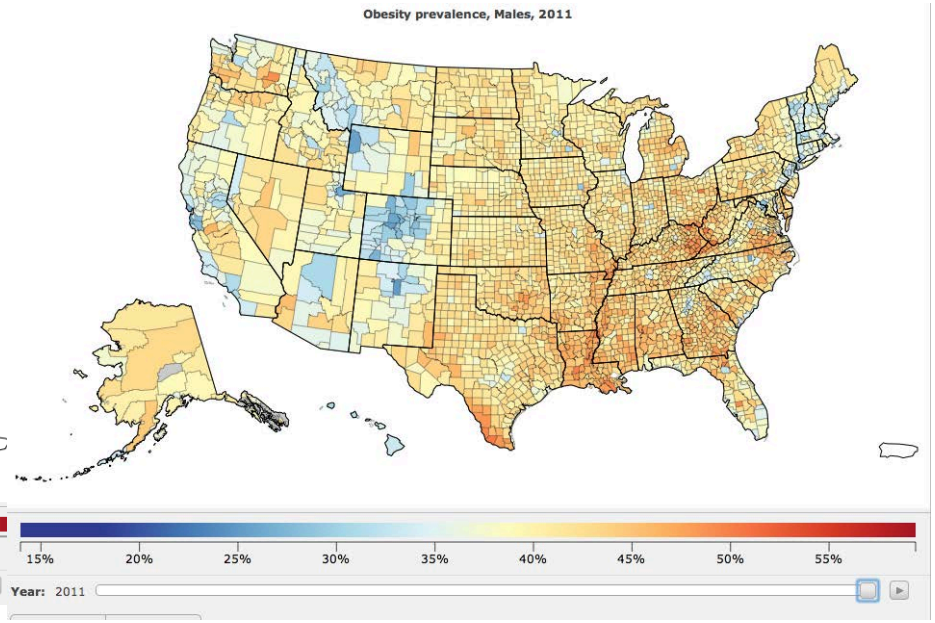
2001

2011

http://www.healthmetricsandevaluation.org/tools/data-visualization/us-health-map

Changes in Obesity Male





2001

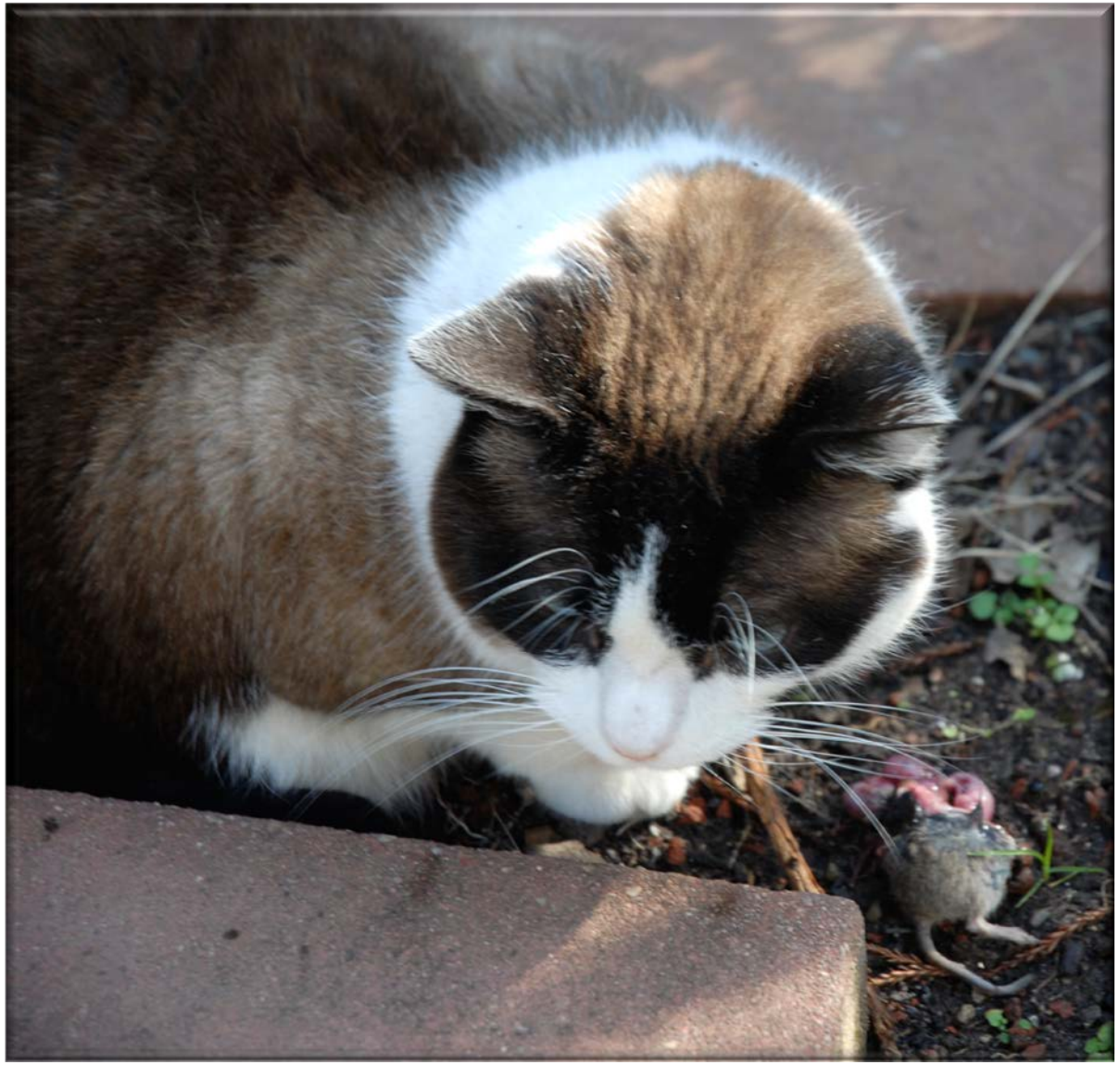
2011

http://www.healthmetricsandevaluation.org/tools/data-visualization/us-health-map

Smoker

Sunshine

It’s the Food



Virtually No Nutrition Education

✓"Nutrition education" means students memorize obscure facts about biochemical pathways and cellular metabolism.

✓More than half of students surveyed report that nutrition education is inadequate.

✓The American Medical Association has recognized the need for improvement in this area.

Possible actions for the first SB 380 Working Group Meeting

- ✓1) Requiring continuing medical education (CME) requirements for all newly licensed and relicensed physicians,
- ✓2) Requiring California's eleven medical schools to teach diet therapy,
- ✓3) Requiring the 393 general acute care hospitals in California to dedicate significant time to diet therapy at ongoing educational meetings held for their doctors,
- ✓4) Auditing medical practices for the appropriate use of diet therapy (as opposed to drugs and surgery),
- ✓5) Sending nutritional education materials to physicians.

Industry Knows CME is effective

The total $2.4 billion spent (US) on CME in 2006,

60% came from the industry.

http://www.ohsu.edu/xd/about/services/integrity/coi/gifts/upload/Financial-Support-of-Continuing-Medical-Education.pdf

Nationwide Laws Requiring CME

✓California requires a one-t

http://www.medscape.org/public/staterequirements]

Section 2 of SB 380

"In order to ensure the continuing competence of licensed physicians and surgeons, the board shall adopt and administer standards for the continuing education of those licensees. **The board may also set content standards for any educational activity concerning a chronic disease that includes appropriate information on prevention of the chronic disease, and on treatment of patients with the chronic disease, by the application of changes in nutrition and lifestyle behavior.** The board shall require each licensed physician and surgeon to demonstrate satisfaction of the continuing education requirements at intervals of not less than four nor more than six years."

BUSINESS AND PROFESSIONS CODE: 2004

(a) The enforcement of the disciplinary and criminal provisions of the Medical Practice Act.

(b) The administration and hearing of disciplinary actions.

(c) Carrying out disciplinary actions appropriate to findings made by a panel or an administrative law judge.

(d) Suspending, revoking, or otherwise limiting certificates after the conclusion of disciplinary actions.

http://www.leginfo.ca.gov/cgi-bin/displaycode?section=bpc&group=01001-02000&file=2000-2029

BUSINESS AND PROFESSIONS CODE: 2004

(e) Reviewing the quality of medical practice carried out by physician and surgeon certificate holders under the jurisdiction of the board.

(f) Approving undergraduate and graduate medical education programs.

(g) Approving clinical clerkship and special programs and hospitals for the programs in subdivision.

(i) Administering the board's continuing medical education program.

http://www.leginfo.ca.gov/cgi-bin/displaycode?section=bpc&group=01001-02000&file=2000-2029

The Future Is Ours to Create

Medical Board's first SB 380 Working Group Meeting
July 17, 2013 in Sacramento, CA

Institute for Medical Quality

CME in California

Julie L. Hopkins, MA, MBA
Vice President, Hospital & CME Programs
Institute for Medical Quality

What and Why of CME

- CME refers specifically to physician education that complies with rules set by an accrediting or certifying organization

- CME is required for:
  - Board certification – may mandate number of credits, courses relevant to specialty of practice
  - Some hospital medical staff mandate CME courses
  - Licensure

CME Requirements in California

- MBC mandate for CME licenses
  - Minimum of 50 credits every two years
  - 12 hours in pain management, end-of-life care courses
- Law defines what qualifies as CME
  - Continuing medical education activities that serve to maintain, develop or increase the knowledge, skills, and professional performance that a physician or surgeon uses to provide care, or improve the quality of care provided for patients, including, but not limited to, educational activities that meet any of the following criteria:
    1. Have a scientific or clinical content with a direct bearing on the quality or cost-effective provision of patient care, community or public health, or preventive medicine
    2. Concern quality assurance or improvement, risk management, health facility standards, or the legal aspects of clinical medicine
    3. Concern bioethics, professional ethics
    4. Designed to improve the physician/patient relationship
- And what is excluded

  Educational activities that are not directed toward the practice of medicine, or are directed toward the business aspects of medical practice, including, but not limited to, medical office management, billing and coding, and marketing.

Who Accredits CME?

- Common Accreditors/Types of Credit
  - American Medical Association/*AMA PRA Category 1 Credits ™*
    - Accreditation Council for Continuing Medical Education/American Medical Association Physician Recognition Award –
    - Institute for Medical Quality/California Medical Association/*AMA PRA Category 1 Credits ™*
  - American Academy of Family Physicians/Prescribed and Elective credit
  - American Osteopathic Association/AOA *Categories 1-A, 1-B, 2-A, 2-B*

What is the Accreditation Process?

- For *AMA PRA Category 1 Credit™*
  - Organizations must apply/reapply at end of term, submit documents to demonstrate compliance and undergo a survey
  - Criteria and policies cover:
    - Planning, conducting and evaluating educational activities
    - Organizing and improving overall CME program
  - Accreditation term: 2, 4, or 6 years

Snapshot of Organizations Accredited for *AMA PRA Category 1™* in California

- Organizations accredited by ACCME: 60
  - Teaching hospitals/medical centers, national medical societies, education and publishing companies
- Organizations accredited by IMQ/CMA: 227
  - Hospitals, medical groups, state or regional societies, health systems, insurers, education and publishing companies

Sample of Widely Available, Evidence-based Sources for CME on Preventive Health Topics

- Foundations
  - California Healthcare Foundation: *Helping Patients Manage Their Chronic Conditions*
  - California Medical Association (CMA) Foundation's *Diabetes Quality Improvement Project Clinical Education Program*
- Government Agencies
  - CDC: Chronic Disease Prevention and Health Promotion
  - AHRQ (source materials for CME)
  - HRSA
- Medical Professional Societies
  - CME relevant to their members' practice
- Medical Schools
  - Online Harvard CME Courses
  - Online Mayo Clinic CME Courses
- Hospitals and Medical Groups
- Medical education and publishing companies

Snapshot of CME on healthy life styles and disease prevention from IMQ/CMA Providers

- 2nd Quarter 2013
- 23 organizations reaccredited by IMQ/CMA reported 4 years of activities
- 17 reported courses related to healthy lifestyles, disease prevention and management
  - 110 courses offered for 298 credits
  - MD/DO learners: 2397
  - Non physician learners: 2413

Synopsis

Wide variety of CME available to physicians for self education about disease prevention and disease management and to assist in treating and educating patients about healthy life styles.

Questions?

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