

Fitness Vs Fatness: *What's More Important to Your Health In The New Year?*



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Every Body **WALK!**
The Campaign to Get America Walking

Exercise
is Medicine™

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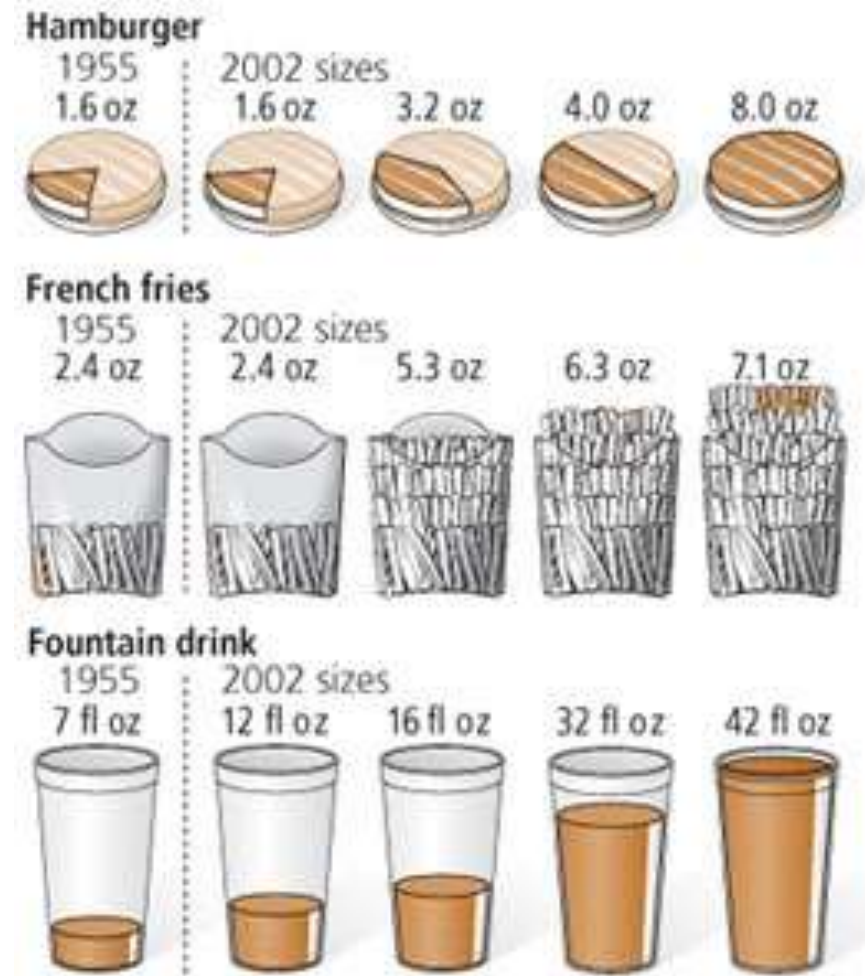
Past century has seen paradigm shift in our diet and activity level

- Over the same period of time.
 - Portion sizes have dramatically increased.
 - Activity levels have dramatically decreased
- Resulting in unintended but predictable consequences that are gravely affecting our health and longevity.



The Growth of Fast Food Portion Sizes Over 30 yrs

- Between 1971 and 2002:
 - Average man added 168 calories to his daily diet.
 - Average woman added 335 calories a day.



The Growth of Portion Sizes; 20 years & 210 calories later

- The Average Bagel:



**3-inch
diameter
140 calories**



**6-inch
diameter
350 calories**

The Growth of Portion Sizes; 20 years & 360 calories later

- The Average Large Size Theatre Popcorn:



5 cups
270 calories



11 cups
630 calories

The Growth of Portion Sizes; 20 years & 270 calories later

- The Average Hamburger:



**333
calories**



**590
calories**

Changes to the US Labor Force

- Over past century, shift from industries dominated by primary production
- 1900 Most Common Occupations:
 - Farm workers
 - Forrest workers
 - Mine workers
- 2000 Most Common Occupations:
 - Professional workers
 - Technical workers
 - Service workers



Then Exercise Didn't Matter: Unintended Consequences of Technology

**Lumberjack;
Then**



Now Exercise Matters: Unintended Consequences of Technology

**Lumberjack;
Now**



Then Exercise Didn't Matter: Unintended Consequences of Technology

**Farmer;
Then**



Now Exercise Matters: Unintended Consequences of Technology

**Farmer;
Now**



Then Exercise Didn't Matter: Unintended Consequences of Technology

**Play time;
Then**



Now Exercise Matters: Unintended Consequences of Technology

**Play time;
Now**



Everywhere We Look; Now Exercise Matters!

At home and at work;
Now

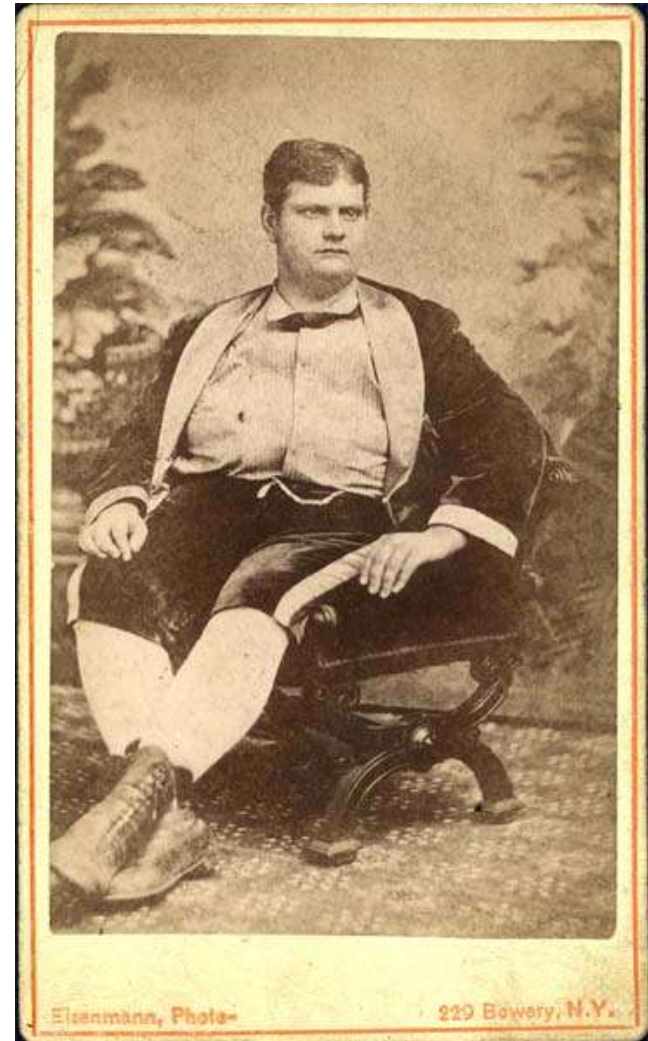


Bottom Line – We have systematically worked physical activity out of our daily routine



The results have been catastrophic

- Can you guess the early 1900's occupation of these people?
 - They are circus performers.
 - Often called “fat folks”, who were so unusually large that people actually paid to see them!



Are you kidding? Compare with today's standards



This is NOT a genetic problem

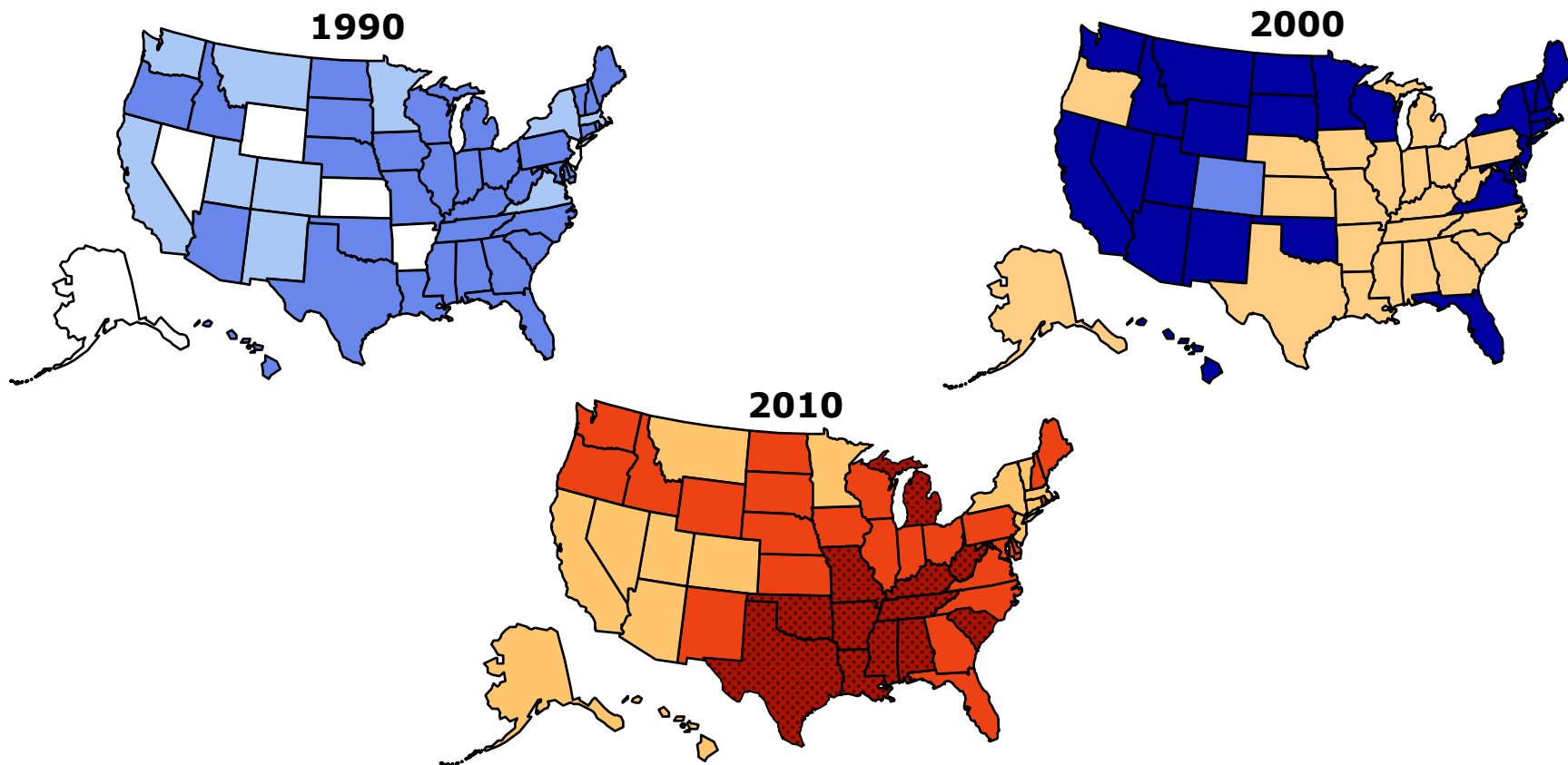
- Look at “old” pictures!
- Humans have not experienced significant genetic change in the past 50 years.
- Basic Law of Thermodynamics
 - To maintain metabolic balance:
 $\text{kcal in} = \text{kcal burned}$



Obesity Trends* Among U.S. Adults

BRFSS, 1990, 2000, 2010

(*BMI ≥ 30 , or about 30 lbs. overweight for 5'4" person)

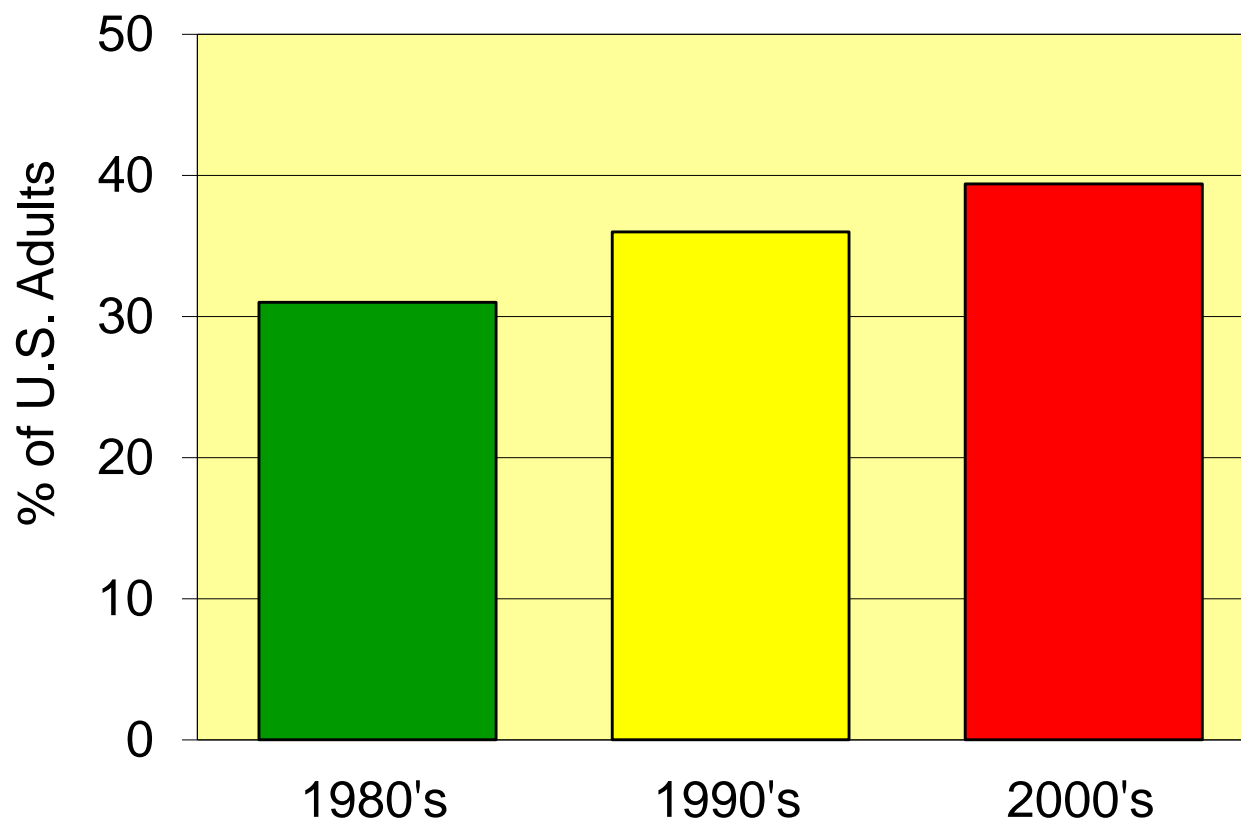


No Data <10% 10%–14% 15%–19% 20%–24% 25%–29% ≥30%



Source: Behavioral Risk Factor Surveillance System, CDC.

Prevalence of Weight Loss Attempts 1980's – 2000's



Yaesmiri et al, *Int J Obes* 2011; Bish et al, *Obes Res* 2005;
Serdula et al, *JAMA* 1999; Serdula et al, *Am J Publ Health* 1994



Comeback Kids:
Clinton Brings
Them Home

**Why Health Care
Reform Is
A Hard Sell**



**The White House's
Race to Stop
A Flu Pandemic**

TIME



The Myth About Exercise

Of course it's good for you,
but it won't make you
lose weight. Why it's
what you eat that
really counts.

BY JOHN CLOUD

Physical activity, obesity and health



It is time to bust the myth of physical inactivity and obesity: you cannot outrun a bad diet

A Malhotra, T Noakes and S Phinney

Br J Sports Med 2015 49: 967-968 originally published online April 22, 2015

doi: 10.1136/bjsports-2015-094911

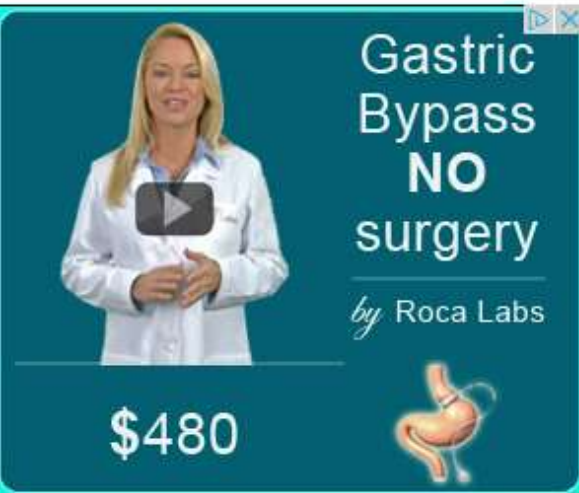
- Written by folks trying to sell diet books about virtues of a low carb – high fat diet.
- We have heard this for years – obviously you can eat more calories in 10 minutes than you can burn off in 2 days.
- But can you diet away the risks of being sedentary?

AMA Votes that Obesity is a Disease

June 18, 2013

Los Angeles Times LOCAL SPORTS ENTERTAINMENT NATION WORLD BUSINESS OPINION LIFESTYLE MORE

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Gastric Bypass
NO
surgery
by Roca Labs
\$480

AMA declares obesity a disease

The move by the American Medical Assn. board means that one-third of adults and 17% of children in the U.S. have a medical condition that requires treatment.

June 18, 2013 | By Melissa Healy and Anna Gorman, Los Angeles Times



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96



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0



Recommend

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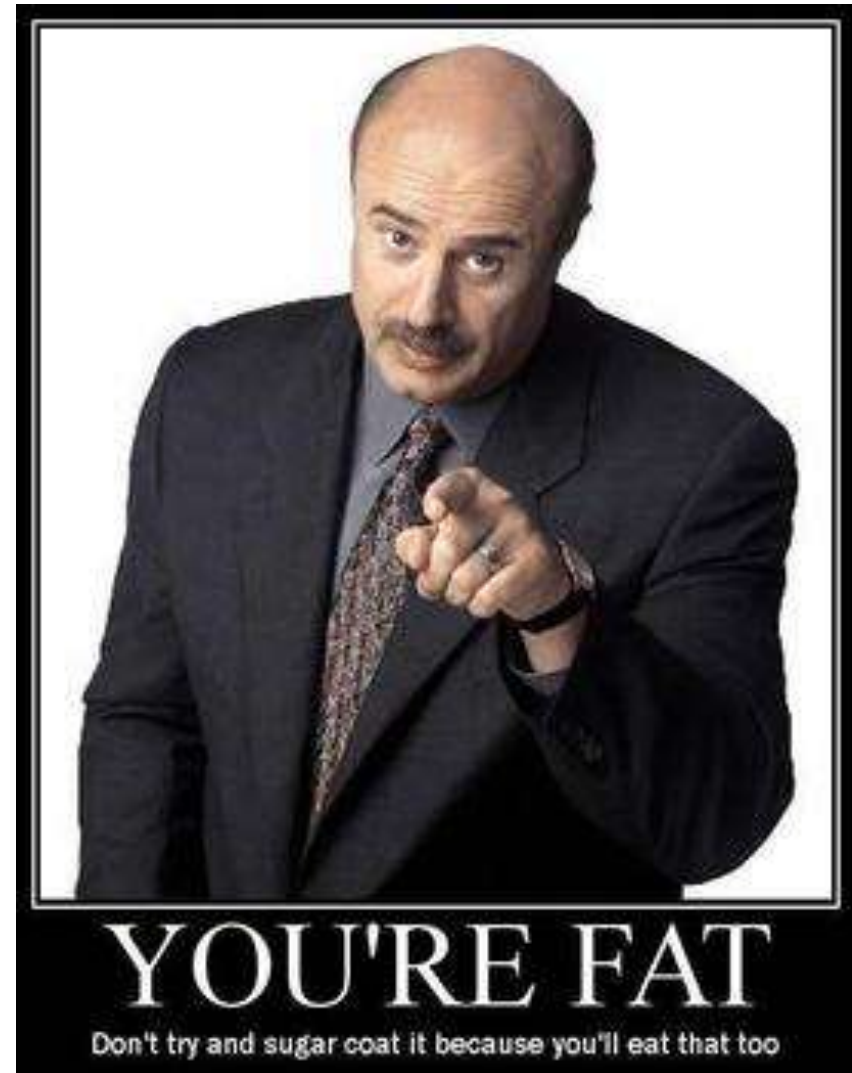
The American Medical Assn. voted Tuesday to declare obesity a disease, a move that effectively defines 78 million American adults and 12 million children as having a medical condition requiring treatment.



The move by the American Medical Assn. board means that one-third of adults and 17% of children in the U.S. have a medical condition that requires treatment.

Obesity Hysteria

- The world has now been sufficiently alerted to the global problem of obesity.
- Patients have been labeled and stigmatized.
- Assigned lots of blame.
- Spent lots of money.
- ...and gotten nowhere.



Are patients and their physicians giving up?

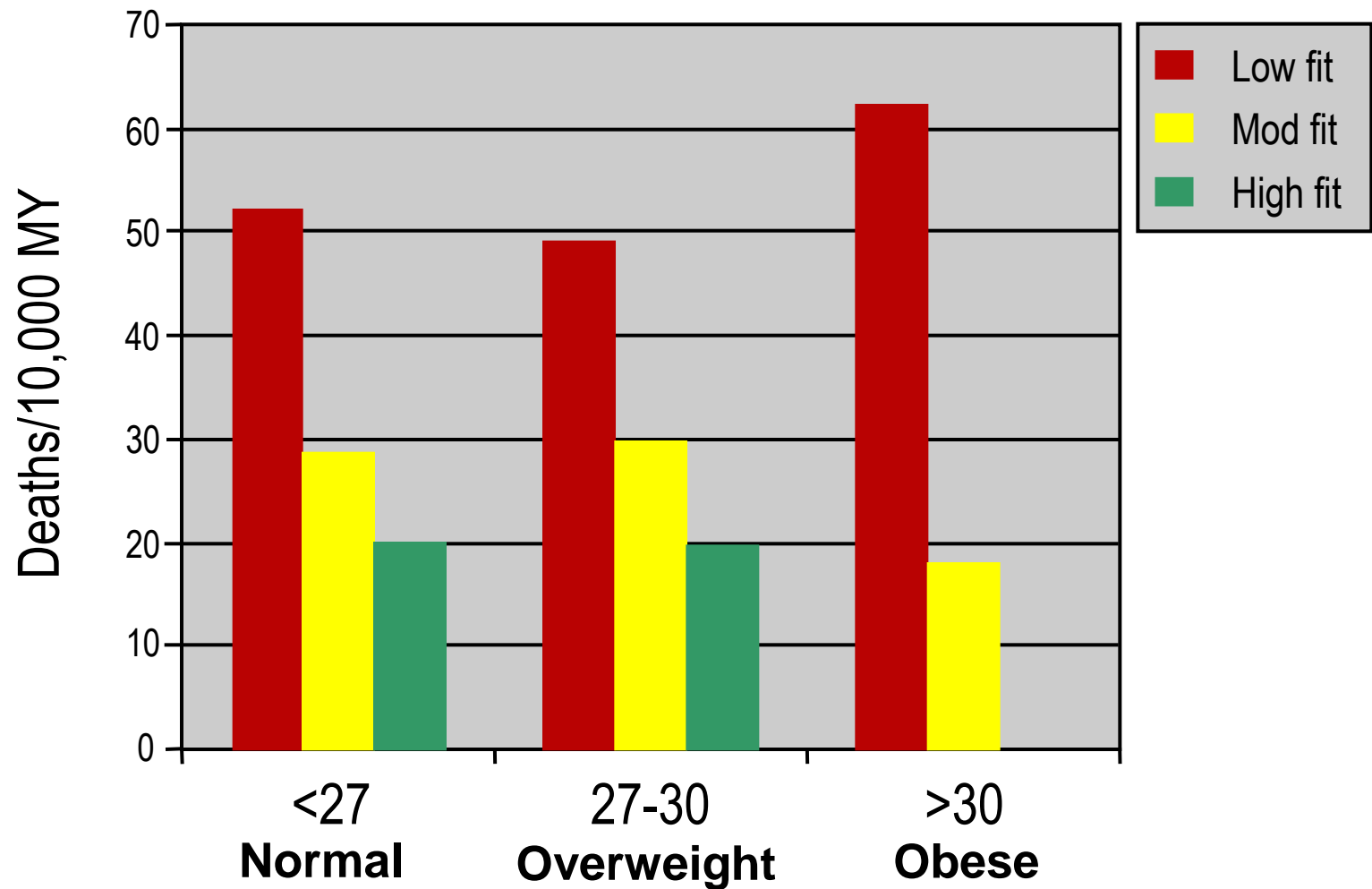
- Data from National Ambulatory Medical Care Survey for 1995-96' and 2007-08' showed:
 - During this period, adults who were overweight or obese increased from 52.1% in 95' to 63.3% in 08".
 - Patients seen in 2007-08; had 46% lower odds of receiving weight counseling than 95-96'.
 - Patients with hypertension 46% less likely and diabetics 59% less likely to receive counseling.
- The campaign on obesity is not working!
- What's the definition of insanity?

We need a new (and fresh) approach!

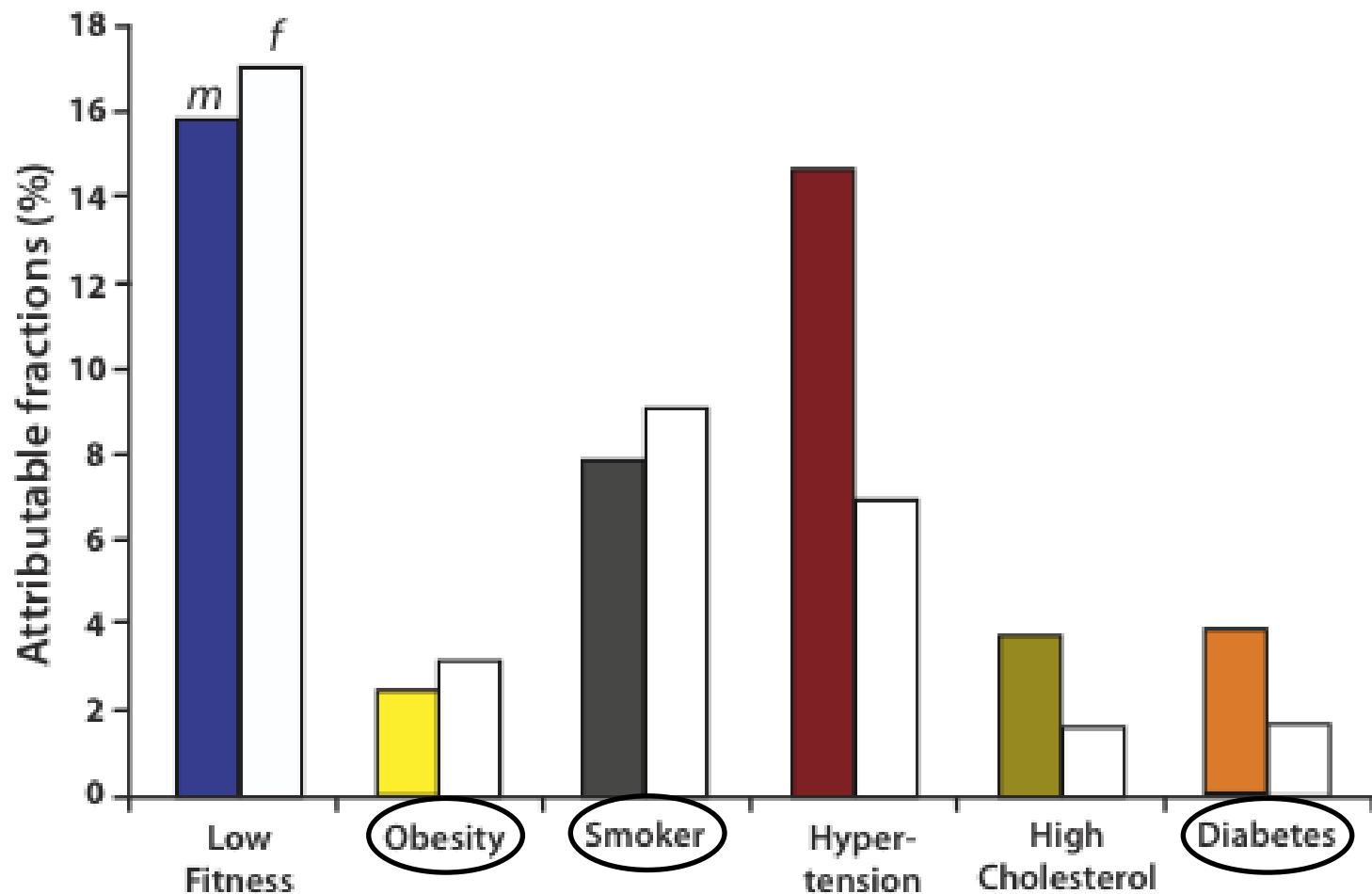
- We need to give patients permission to be fat; And still be healthy!
- Shift focus off of BMI and onto physical activity.
- Health At Every Size (HAES)
 - Focus on broader health.
 - 95% regain lost wt. in 3-5 yrs.
 - Change in BMI is not a success measure for an exercise program.



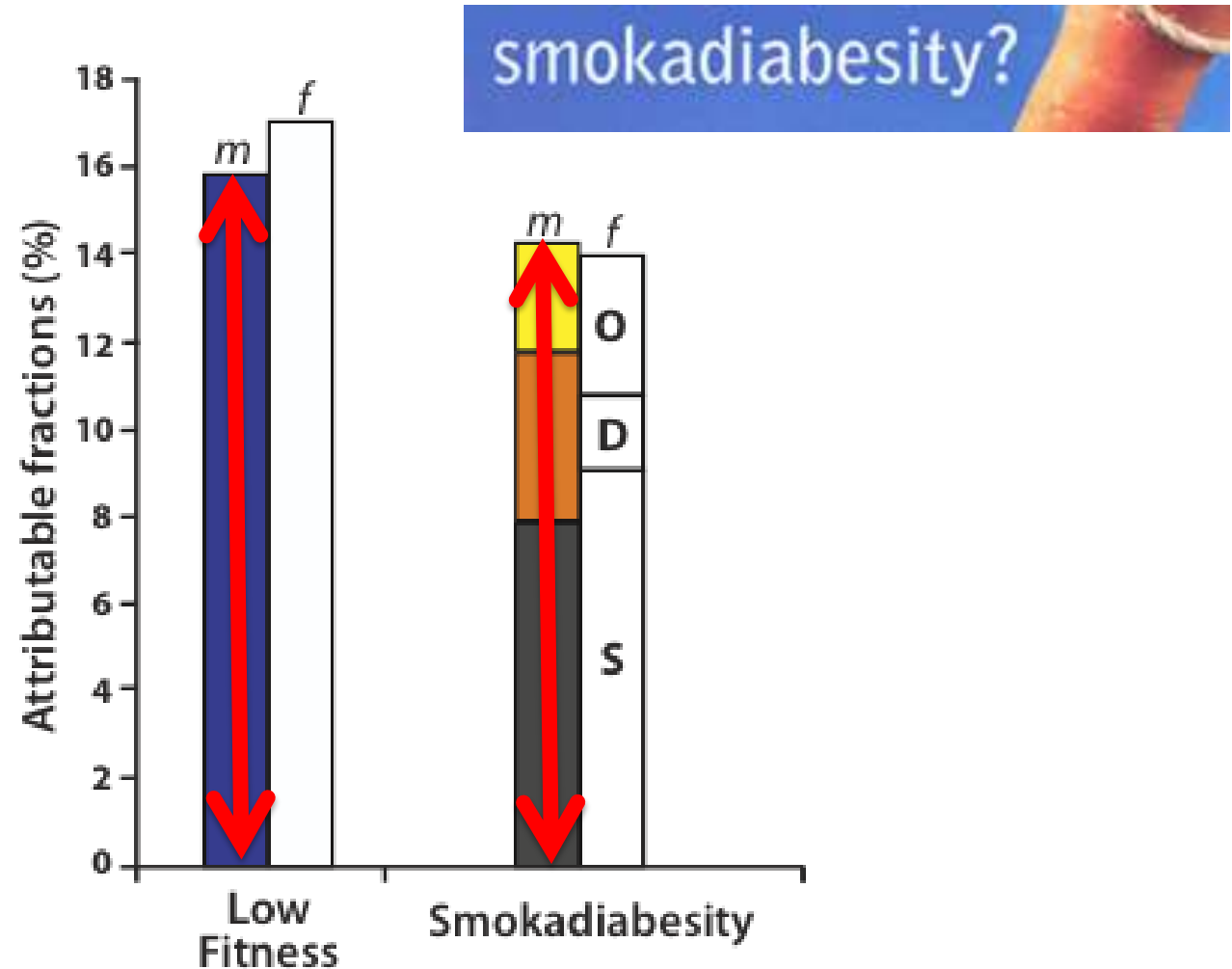
Death Rates by Fitness & BMI Categories



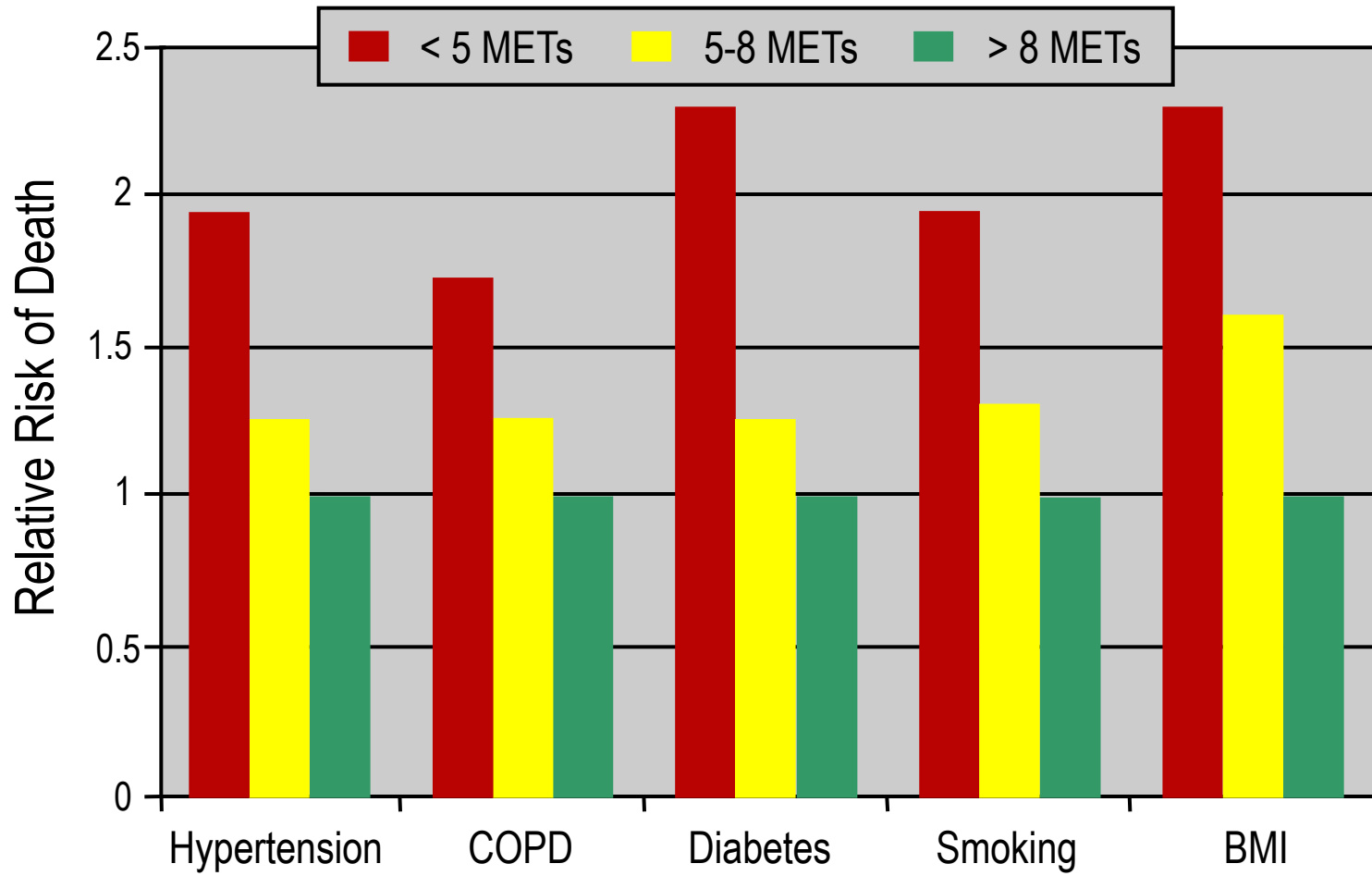
Which kills more *people*?



Low Fitness Kills More *People than* Smokadiabesity!



Exercise & Chronic Disease Mortality



The Classification of Risk Factors for Cardiovascular Disease

- Surrogate outcomes of poor lifestyle choices and stress (hypertension, obesity, cholesterol and diabetes), along with smoking are given “causal” risk factor status for CVD disease.
- Physical inactivity is generally referred to as a “predisposing” risk factor.
 - Suggesting its influence on disease is entirely due to intensification of the causal factors.
 - Result has been disproportionate focus on drugs (mainly lipid and BP) to treat disease.
 - Research has proven this is incorrect.

The Effect of Exercise on CVD Risk

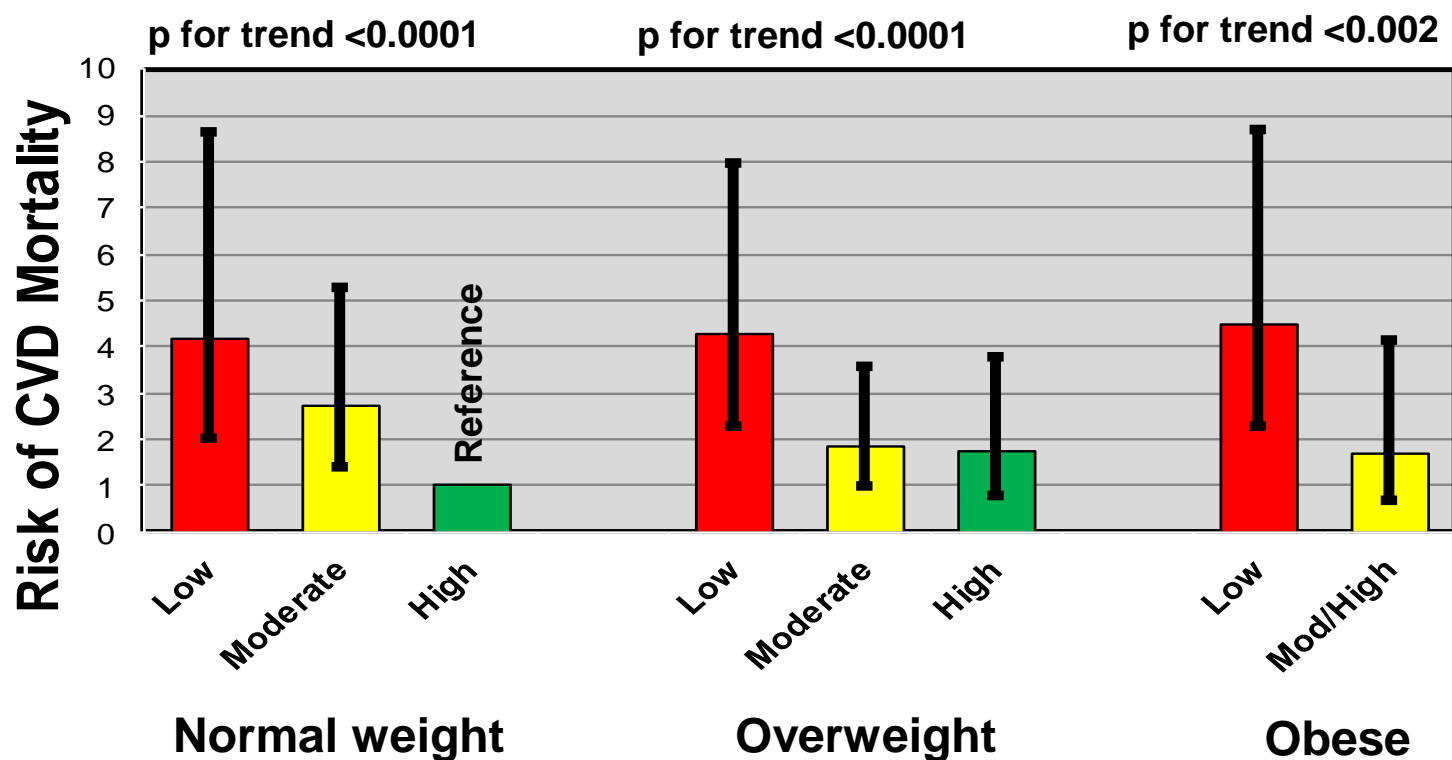
- Even after accounting for traditional CVD risk factors (BP, DM, lipids, weight), the inverse relationship between PA & CVD risk persists.
 - ~59% of the reduction in CVD risk with exercise is due to reducing Inflammation & Clotting (32.6%), BP (27.1%), lipids (19.1%), BMI (10.1%), A1C (8.9%).
 - *41% of risk reduction due to other unknown mechanisms* (perhaps endothelium function and remodeling or LV structure and function).
 - Effect of *weight loss* is only on traditional risk factors.

The Effect of Exercise on CVD Risk

- Even after accounting for traditional CVD risk factors (BP, DM, lipids, weight), the inverse relationship between PA & CVD risk persists.
- ~59% of the reduction in CVD risk with exercise is due to reducing Inflammation & Clotting (32.6%), BP (27.1%), lipids (19.1%), BMI (10.1%), A1C (8.9%).
- 41% of risk reduction due to other unknown mechanisms (perhaps endothelium function and remodeling or LV structure and function).
- Effect of *weight loss* is only on traditional risk factors.

Fitness Correlates with CVD Mortality Risk* Regardless of BMI

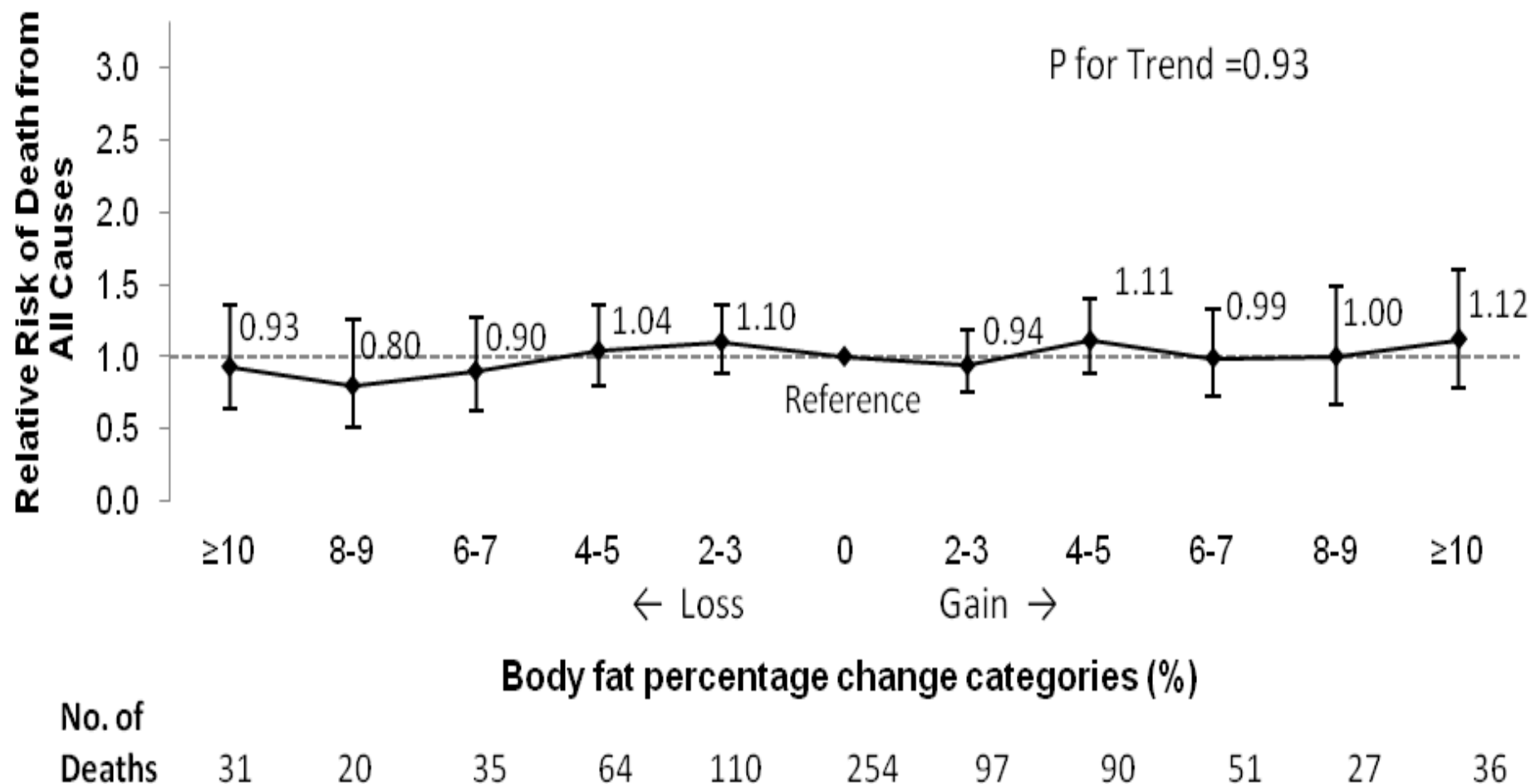
***2316 Men with Diabetes; 179 CVD Deaths
Adjusted for age and examination year**



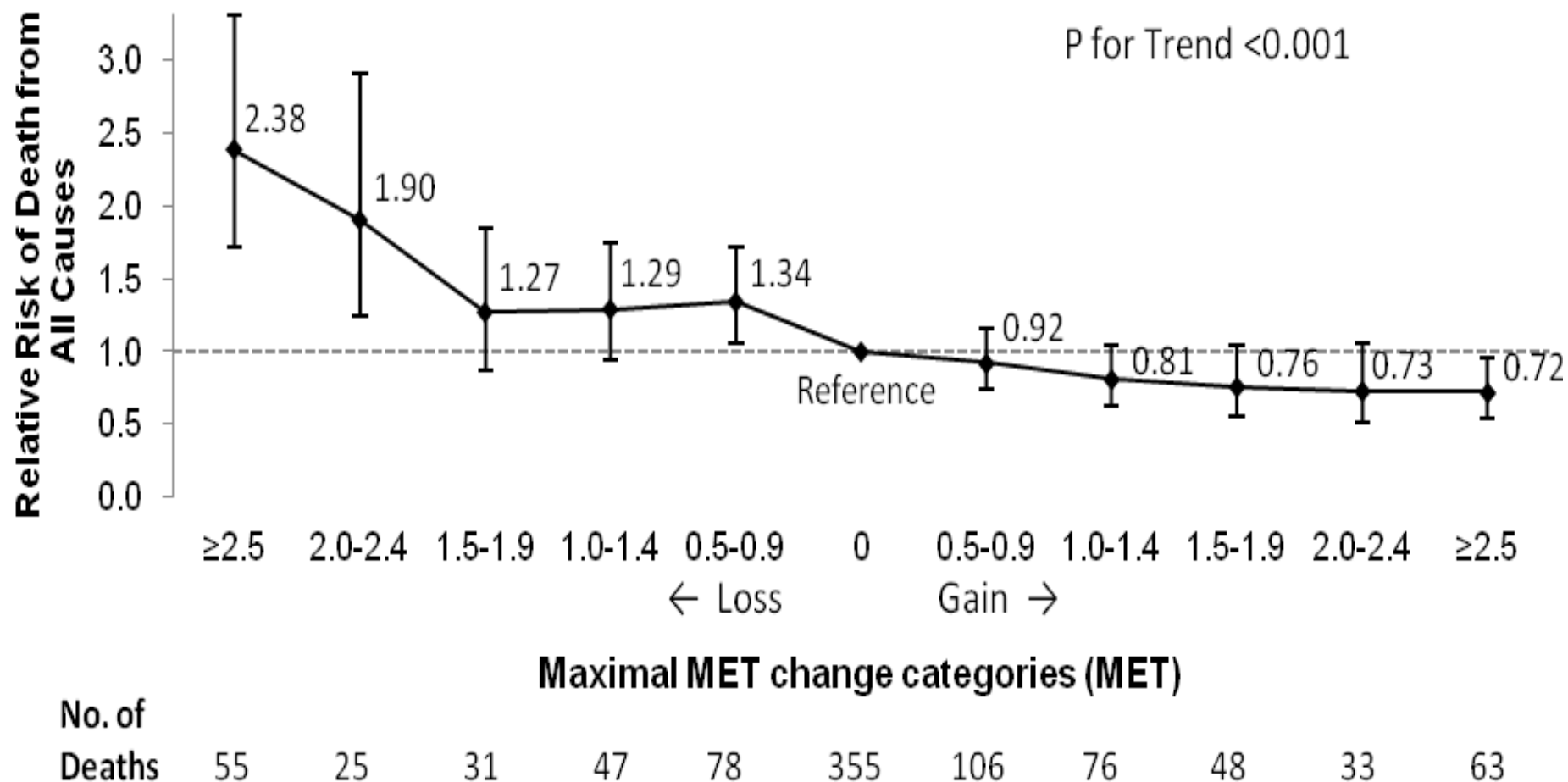
Is mortality risk reduced more by weight loss or increasing fitness?

- 14,345 middle aged men (>19 years of age), All had 2 or more exams
- 914 all cause deaths (300 CV deaths) in 11.4 years of follow-up, 165,186 man-years
- Excluded those with chronic disease, <1 year of follow-up, or BMI <18.5 BMI
- Evaluated changes in fitness and body composition in relation to all-cause mortality

Change in Percent Body Fat



Change in Fitness Level (Maximal METs)

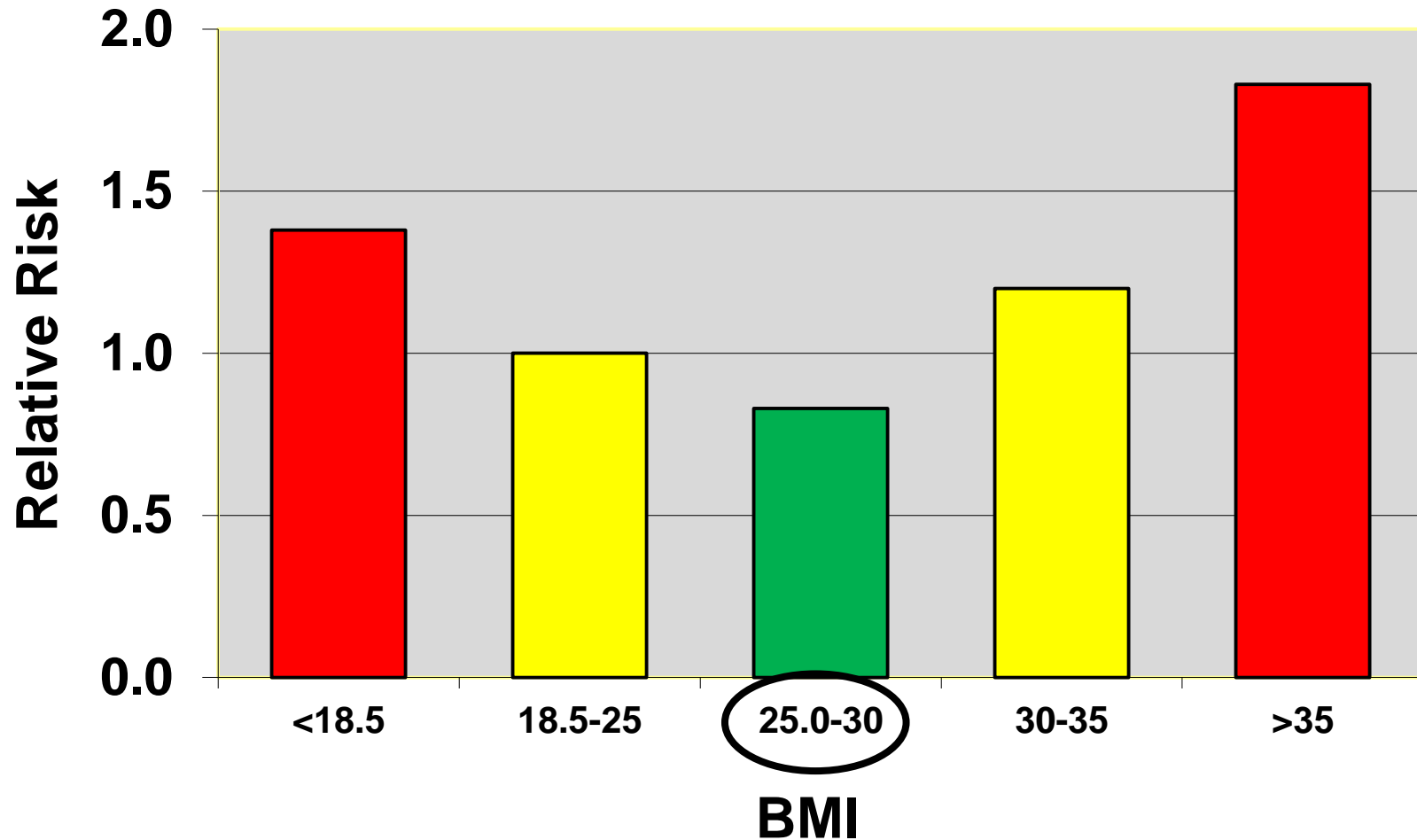


Where should our Focus be?

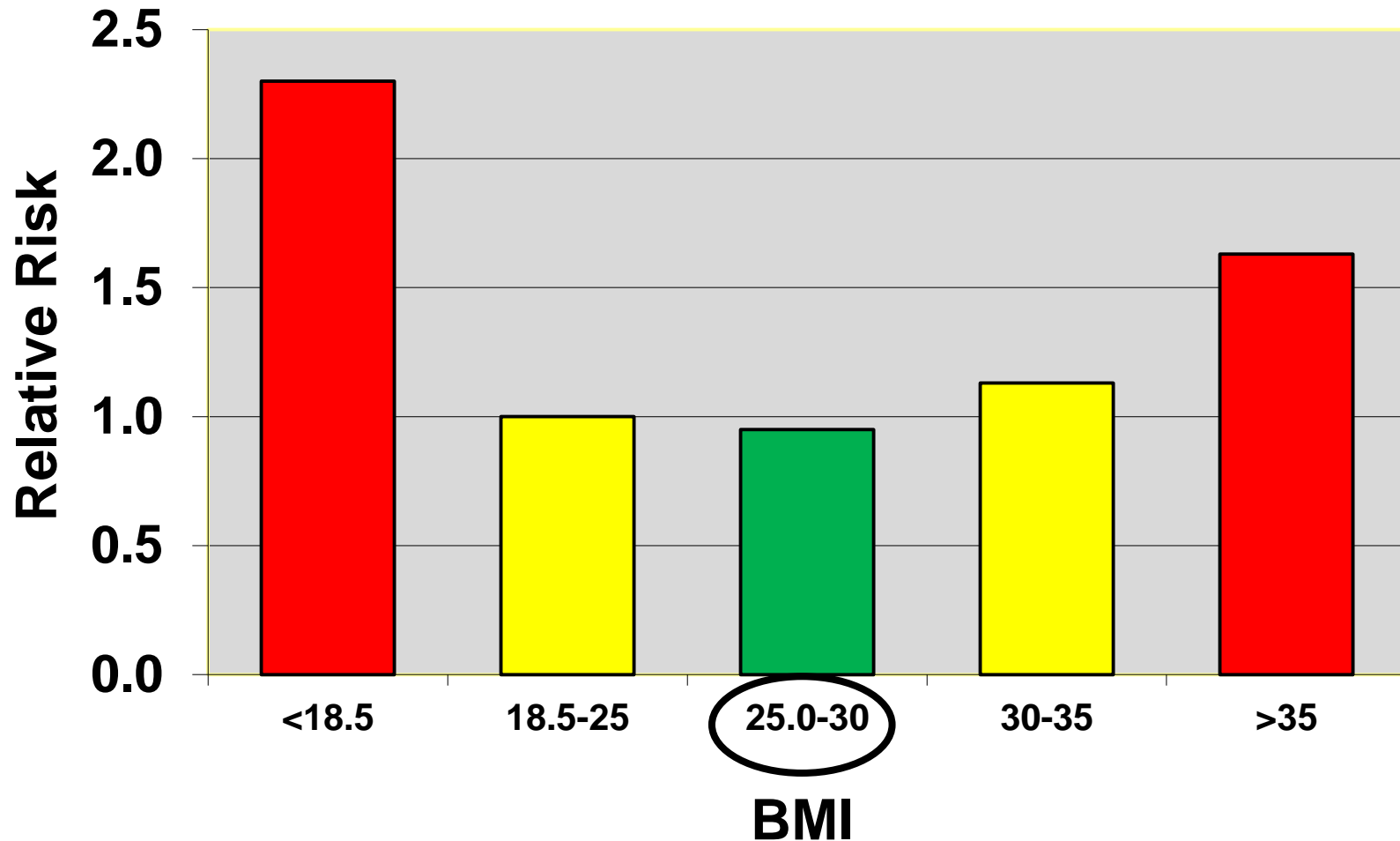
Fitness vs Fatness vs Smoking and Mortality

- Fit and normal BMI (non-smoker)
- Fit and elevated BMI (non-smoker)
- Fit, normal BMI, & smoker.
- Unfit and normal BMI (non-smoker)
- Unfit and abnormal BMI (non-smoker)
- Unfit, abnormal BMI, & smoker.

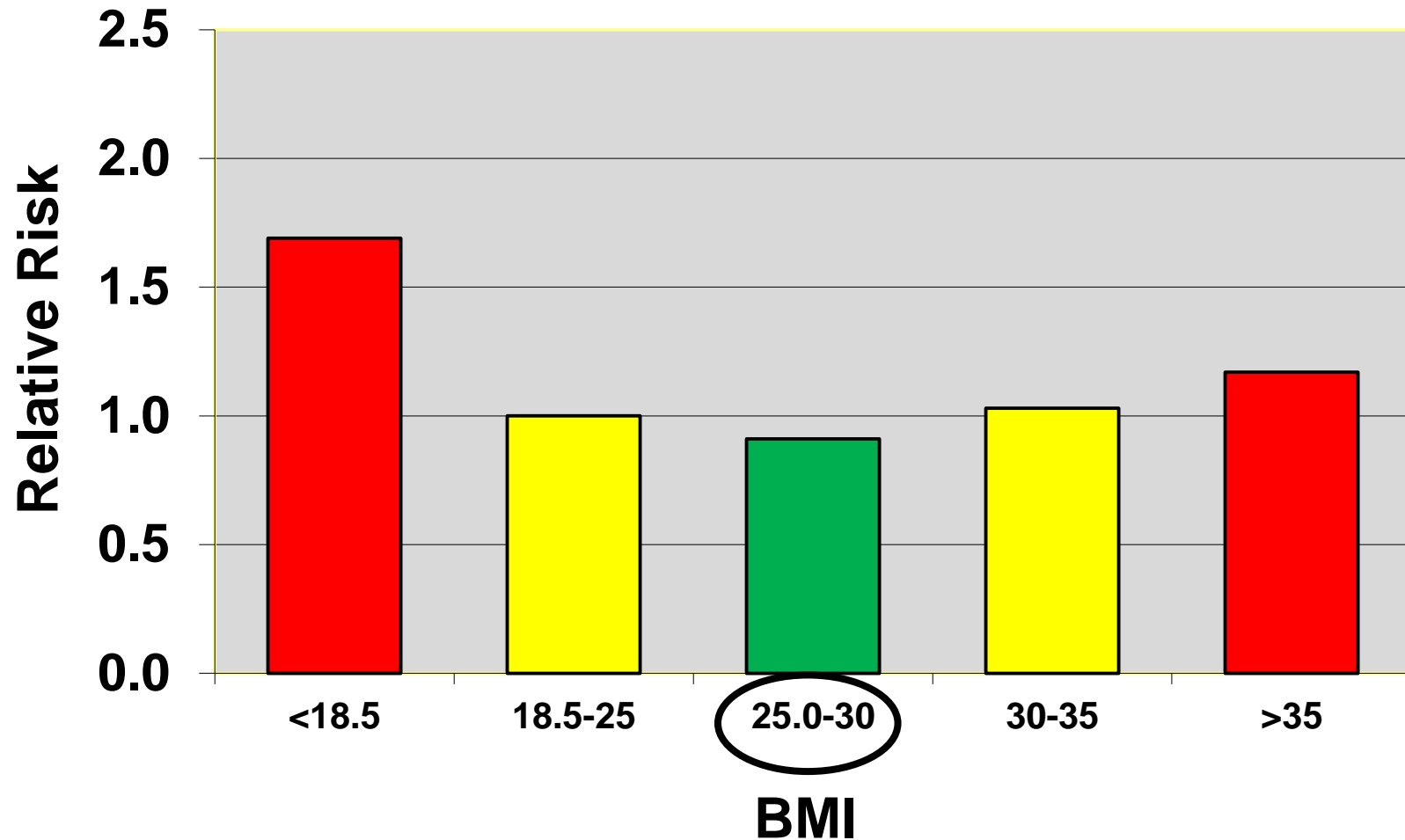
All-Cause Mortality, Relative Risk, Age 25-59 NHANES Data



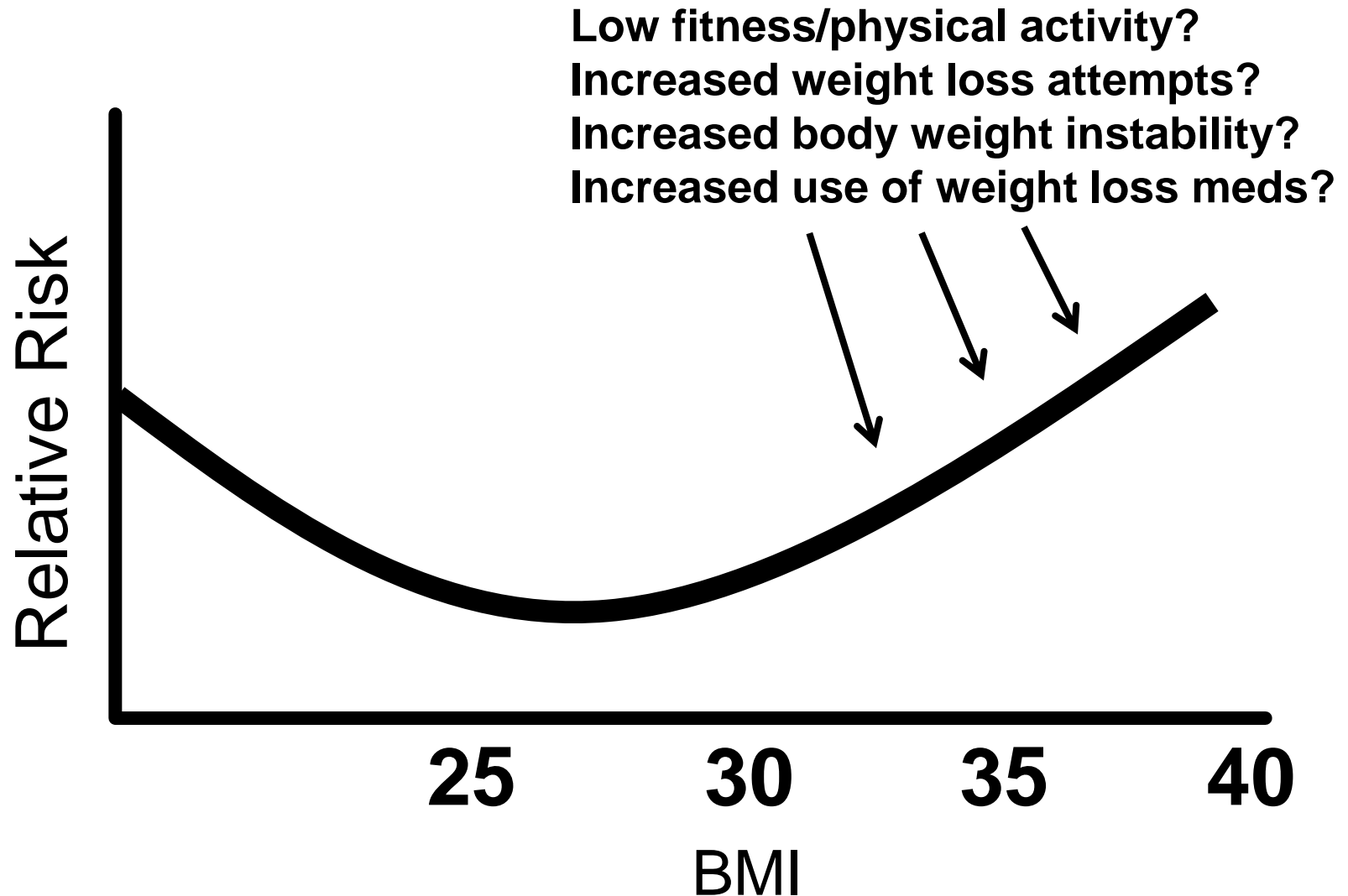
All-Cause Mortality, Relative Risk, Age 60-69 NHANES Data



All-Cause Mortality, Relative Risk, Age ≥ 70 NHANES Data



BMI and Mortality; The U-shaped Curve



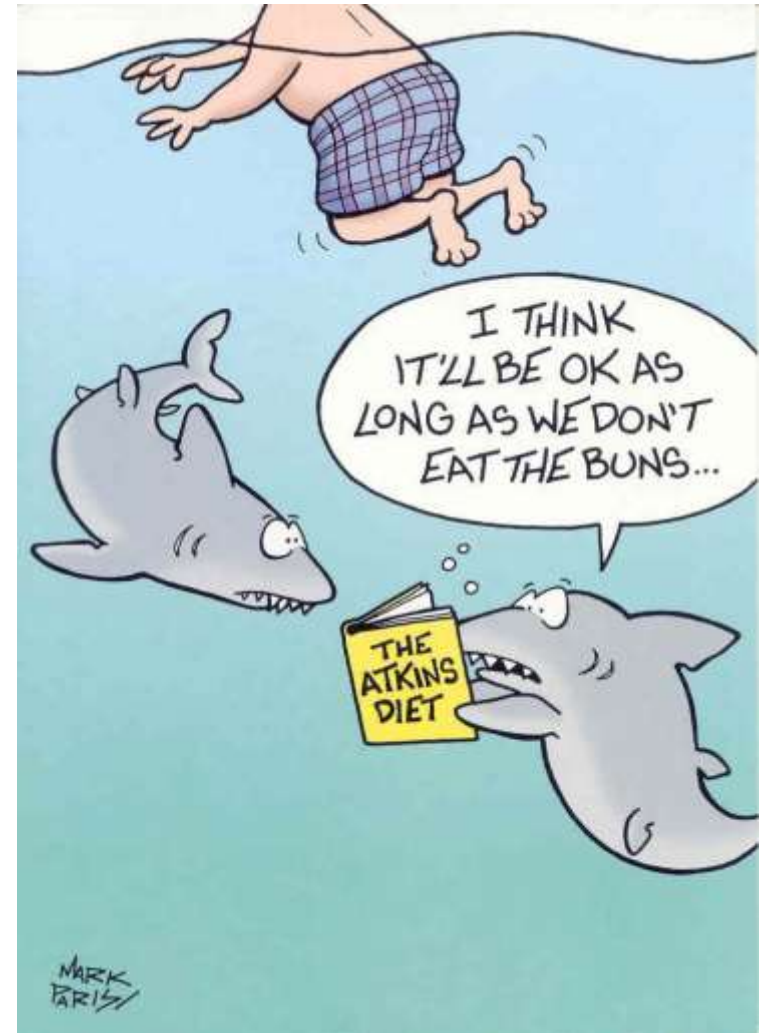
Losing Weight: An Ill-fated New Year's Resolution

“...data linking overweight and death, as well as the data showing the beneficial effects of weight loss, are limited, fragmentary, and often ambiguous.”

Kassirer and Angell, *New Engl. J. Med.* 338: 52-54, 1998

Fitness vs. Fatness

- Better to be fat and fit, than skinny and un-fit.
- Low level of fitness is a bigger risk factor for mortality, than mild to moderate obesity.
- Benefits of physical activity are the same, regardless of how much you weigh.



What Can We Do?

- World Wide Exercise Rx initiative:
 - Every patient; Every visit;
Every treatment plan.
- Physical activity should be recorded as a vital sign and patients advised to get 30 min of mod exercise, 5 days per wk.
- Message should be the same from every medical provider.
- We must begin to merge the healthcare industry with the fitness industry.



Smith, John W

MRN 000017701887 Age 30 year Sex M PCP Spero, Robert David (M.D.) Allergies Sulfa Class, Acarbose, 5-alpha Reductas* Alert Spec Feat kp.org Inactive

SnapShot

Chart Review

Flowsheets

Problem List

History

Letters

Demographics

Proactive Care

Order Entry

Imm/Injections

Allergies

Medications

Activity Rx/Forms

Forms

Enter/Edit Results

Doc Flowsheet

Visit Navigator

4/22/2009 visit with TEST DUMMY MD

Images Questionnaires Admin Benefits Inquiry References SmartSets Open Orders Preview AVS Print AVS

Allergies: Sulfa Class, Acarbose, 5-alpha Reductase Inhibitors, Acetaminophen + Propoxyphene Napsylate Reviewed on 2/27/2009

Last Vitals: BP: 120/80 P: 60 T: T Src: Resp: 22 W: 190 lbs (86.183 kg) H: 5' 10" (1.778 m)

BMI: 27.26 kg/m2, BSA: 2.06 m2 Exercise Vitals: 180 mins/wk

Height 5' 10" (1.778 m)

Peak Flow

Charting

Chief Complaint

Nursing Notes

Vitals

Exercise Vitals

Review Exercise VS

Med. Document

BestPractice

History

Progress Note

SmartSets

Dx and Orders

Pt. Instructions

LOS

Follow-up

Close Encounter

Exercise Vitals - Exercise Vitals (SHIFT+F6 to enter comments)

Instant Taken:

Date: 4/30/2009

Time: 1149

Exercise Level of Effort

Days per week of moderate to strenuous exercise (like a brisk walk)

0 1 2 3 4 5 6 7

On average, minutes per day of exercise at this level

10 20 30 40 50 60 90 120 150 or greater

Restore

Close

F9

Cancel

Previous F7

Next

F8

Review Exercise Vitals

Mark as Reviewed

Last Reviewed by SHARMA, PANKAJ on 4/24/2009 at 12:36:26 PM

Medication Documentation

Current Prescriptions

Taking?

Start

End Date

Date

ATENOLOL 100 MG ORAL TAB

TAKE 1 TABLET ORALLY DAILY

Provider: William Lewis (M.D.) Sperling

ATENOLOL 100 MG ORAL TAB

1 TAB PO DAILY

4/29/2009 5/29/2011


Provider: William Lewis (M.D.) Sperling

Hotkey List

Exit Workspace

Navigator Hotkeys

Write a walking Rx for patients!

 KAISER PERMANENTE®

Name: John W. Smith Age: 30

Walking Rx Date: _____

Recommended activity level: Moderate


Minutes per day: 30 minutes


Number of days per week: 5 or more

Intensity: Hard enough that you can't sing,
but not so hard you can't talk during exercise.

Stop: If you experience chest pain,
excessive shortness of breath or feel ill.

Signature: Robert Sallis, MD


www.everybodywalk.org

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Summary

- Strong evidence suggests that you CAN outrun a bad diet.
- Multiple studies have proven that you are better off being Fat & Fit than Skinny & Unfit
- For this reason, the promotion of PA should be placed on at least equal footing with weight mgmt.
- In the clinical setting, Exercise should be assessed and prescribed at every visit using a PA Vital Sign.

It's time to get off the couch...

