

**You can do
more good for
the health of
our nation**



Richard Joseph Jackson, MD MPH

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21st California Trails & Greenways Conference

May 5th-7th, 2006



**Renaissance of Agoura Hills, California
welcomes you to the 2006 Trails &
Greenways Conference**

**Than all the
doctors...**

The New Patient

- 42 year old male in for check up
- Complains of low energy.
- 28 pounds overweight
- BP 145/92
- Blood glucose elevated, urine normal
- Cholesterol 270

You Learn

- He is married with two children
- He commutes from Tracy to Silicon Valley
- Works 60 hours a week (plus 15 to 20 hours of driving commute)
- Last vacation 18 months ago, for one week.
(linked to a business trip)

You recommend

- Meeting with Nutritionist
- Name of a good psychotherapist
- Weight loss program
- Exercise club membership
- Pedometer: 10,000 steps a day
- Easing back on work and life commitments

Insurance Plan Partially Covers

- One meeting with a nutritionist
- Short term outpatient psychotherapy

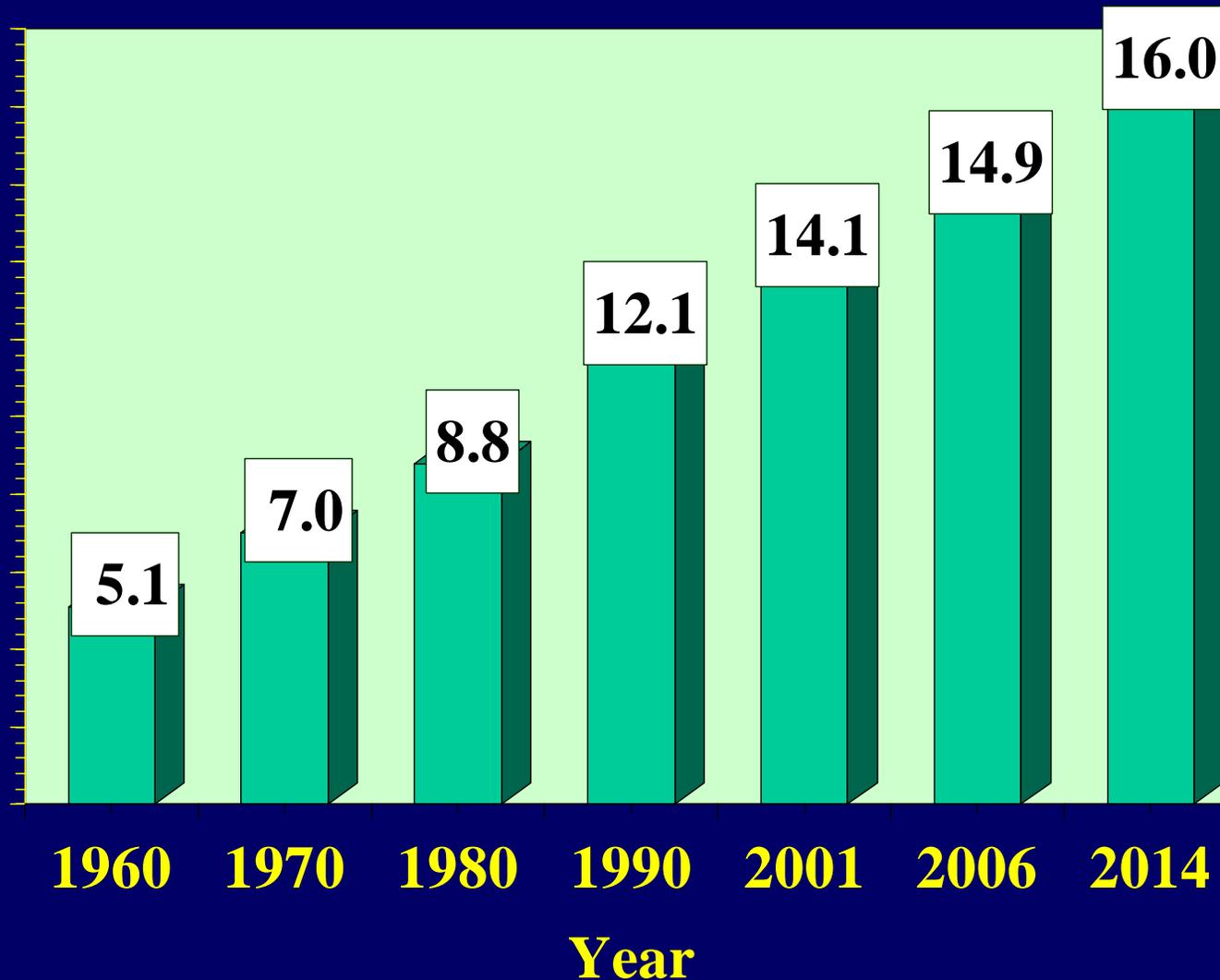
Two Months Later Patient tells you

- No place to Walk
- No Time for exercise
- Day is already too full
- Marriage is on the rocks

One year later patient is being medicated with:

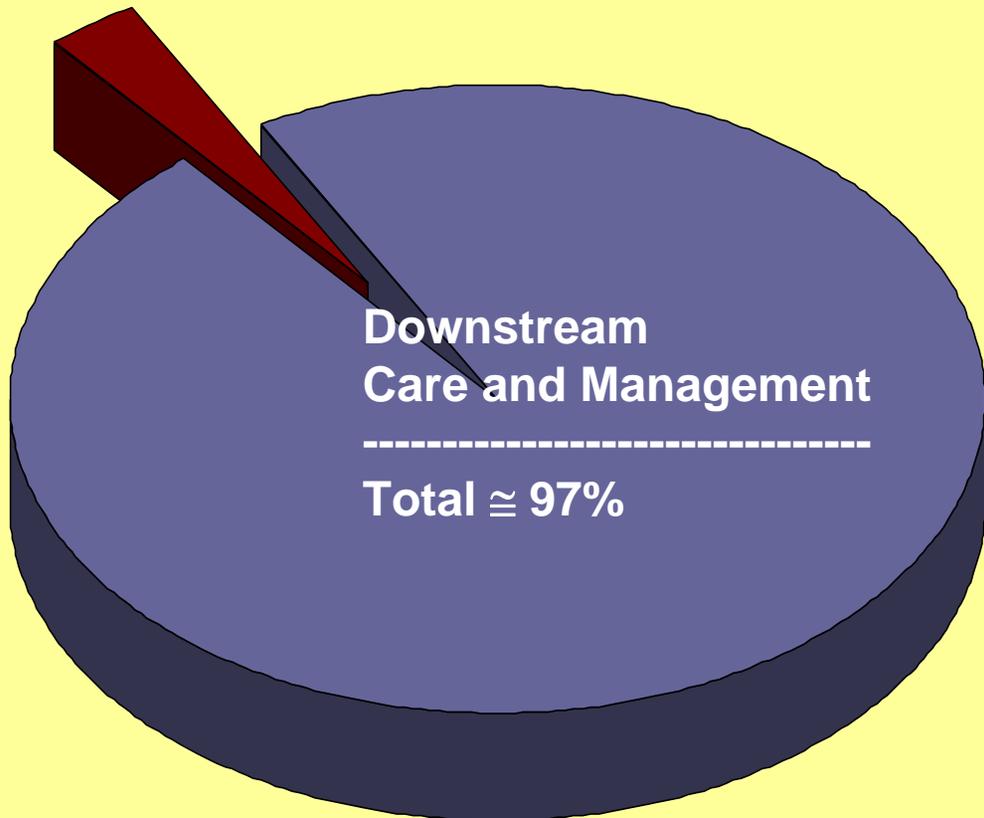
- Antihypertensive medication
- Oral Hypoglycemic agent
- Antidepressant
- Cholesterol lowering agent
- Monthly medication costs:
 - \$385

US Health Care Expenditures as Percent of GDP Projections



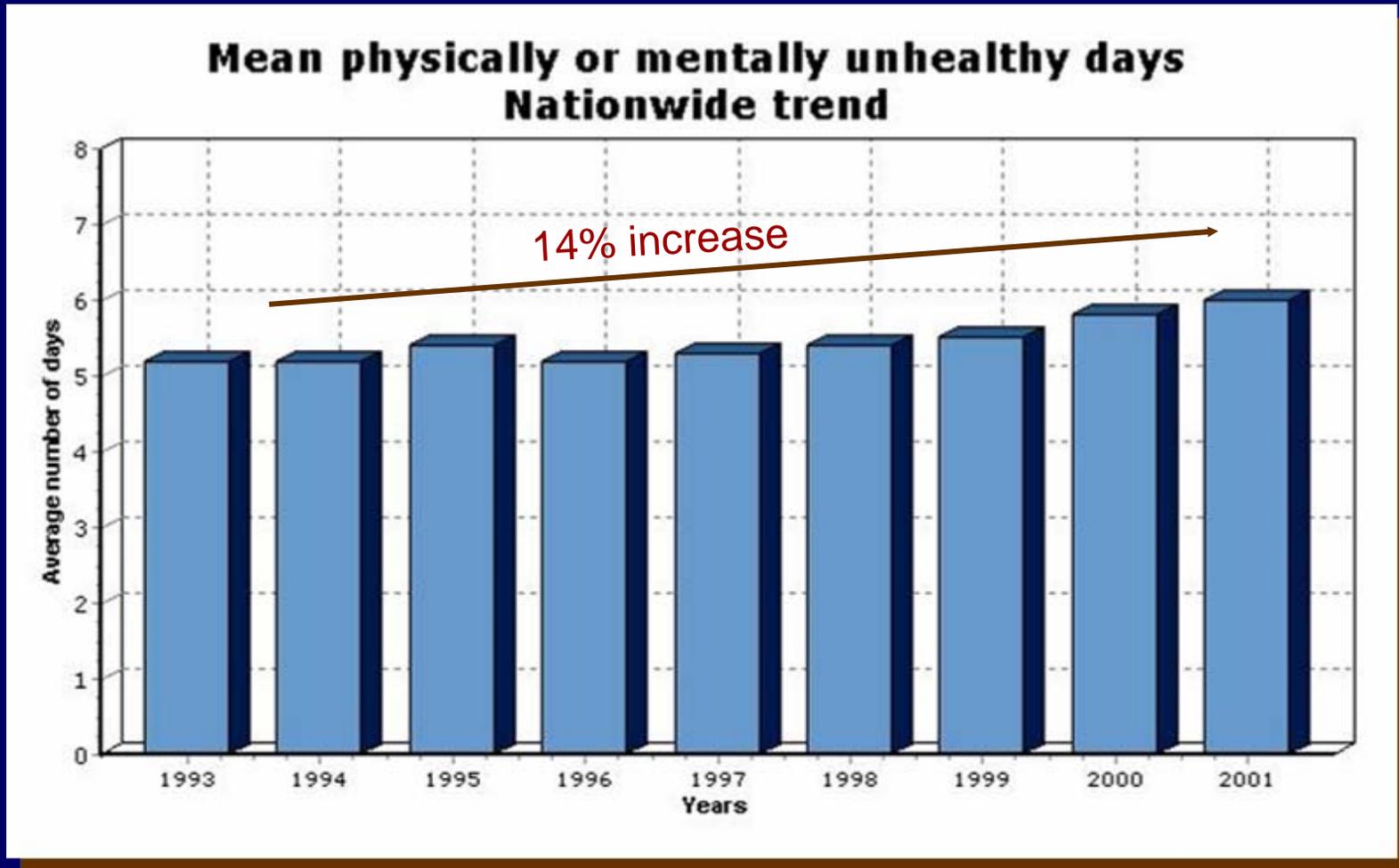
Investment in Public Health, Protection and Prevention

Upstream
Prevention --
Total < 3%



Number of Days per Month Americans Feel Unwell

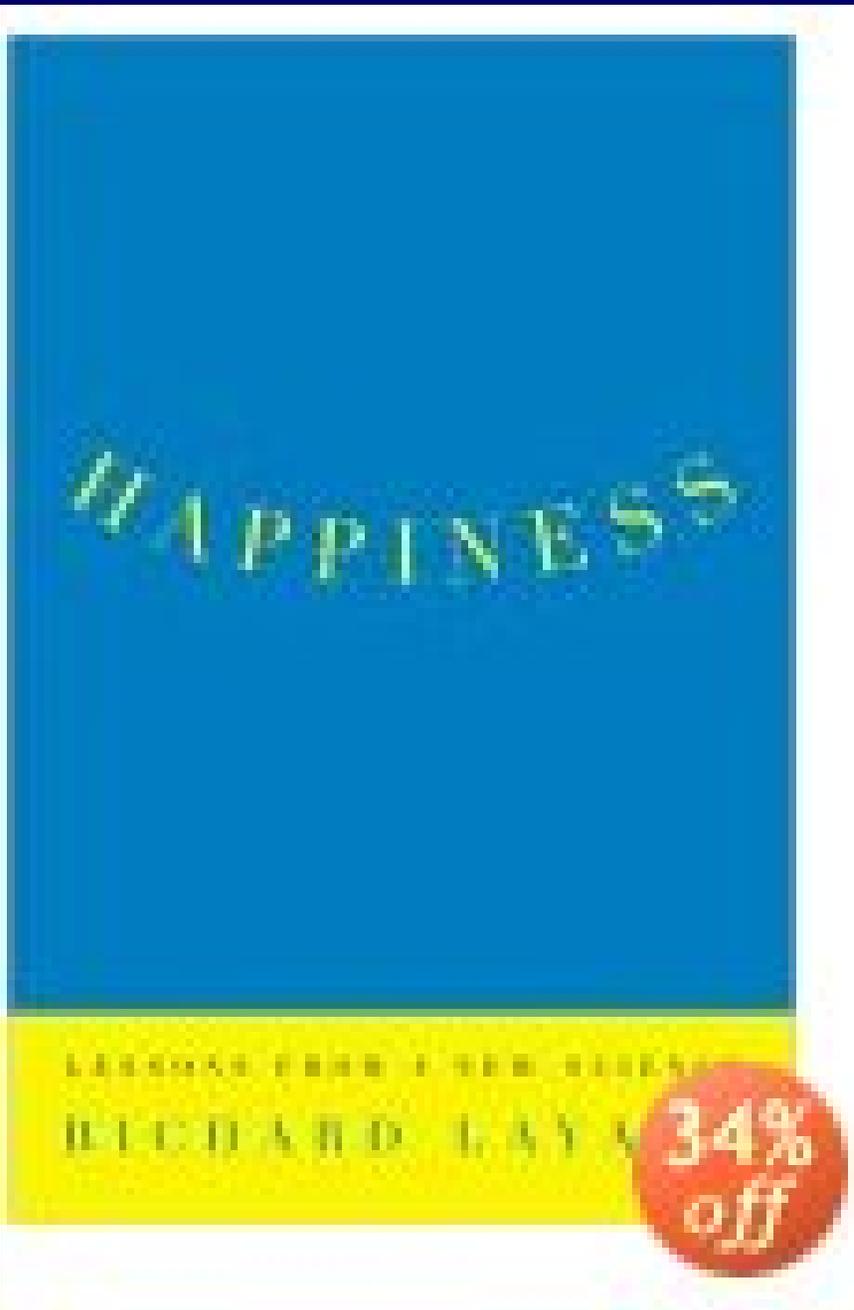
Quality of Life Prevalence Data



Source: Centers for Disease Control and Prevention. Health-related quality of life: prevalence data. National Center for Chronic Disease Prevention and Health Promotion, 2003. Accessed March 21 at <<http://apps.nccd.cdc.gov/HRQOL/>>.

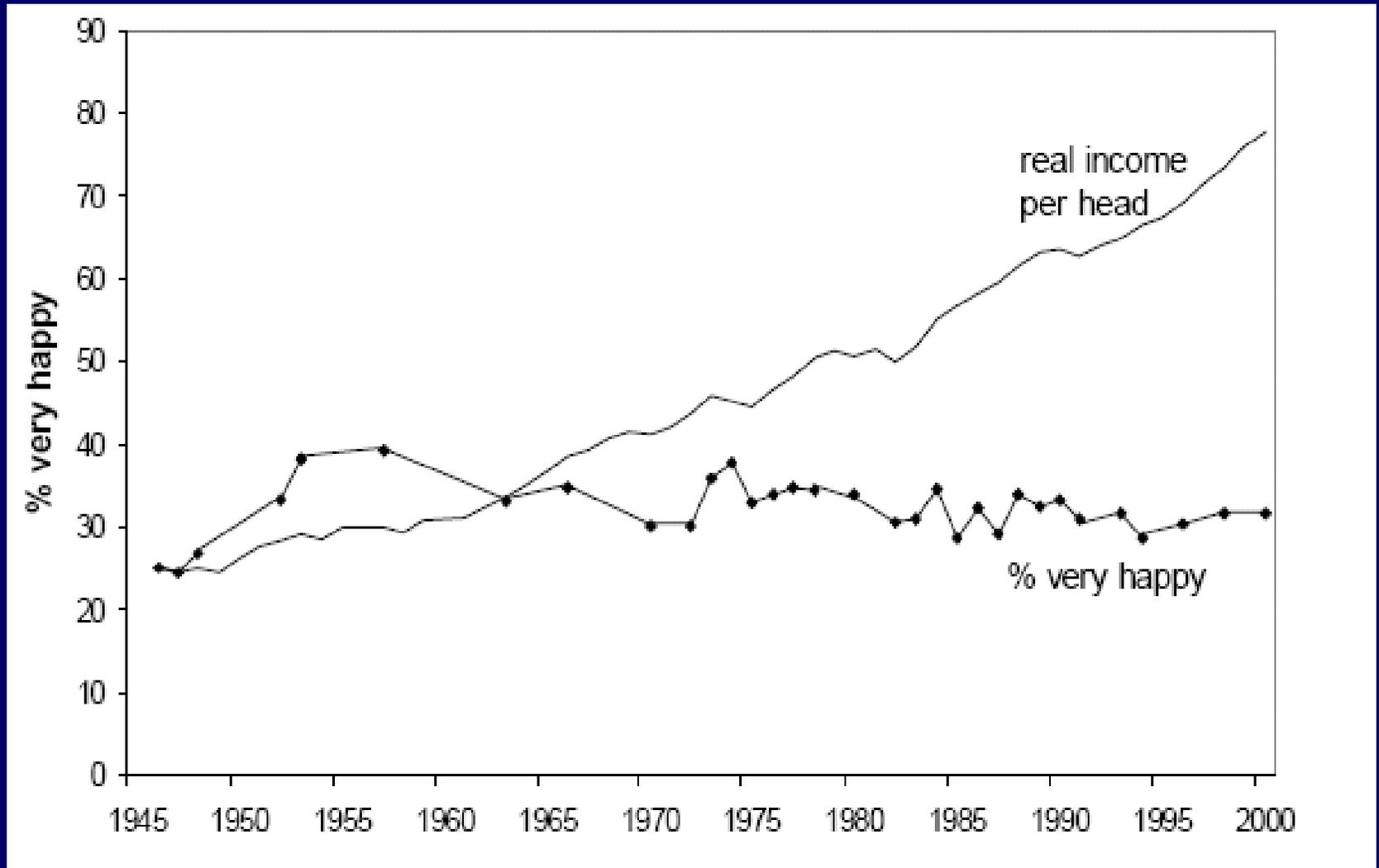
Richard Layard

London School of Economics



Income and Happiness- USA

1945 to 2000



July 6, 1999



Disease in the 21st Century

- Diseases and costs of care for Aging Populations.
- Overweight: Diabetes II, Heart Disease
- Mental Disorders: Depression, Anxiety, Developmental, Substance Abuse
- Macro-environment: Climate, Conflict

Asthma outbreak hits kids

RISKS OF THE 'RED ZONE'



JENNI GIRTMAN / Staff

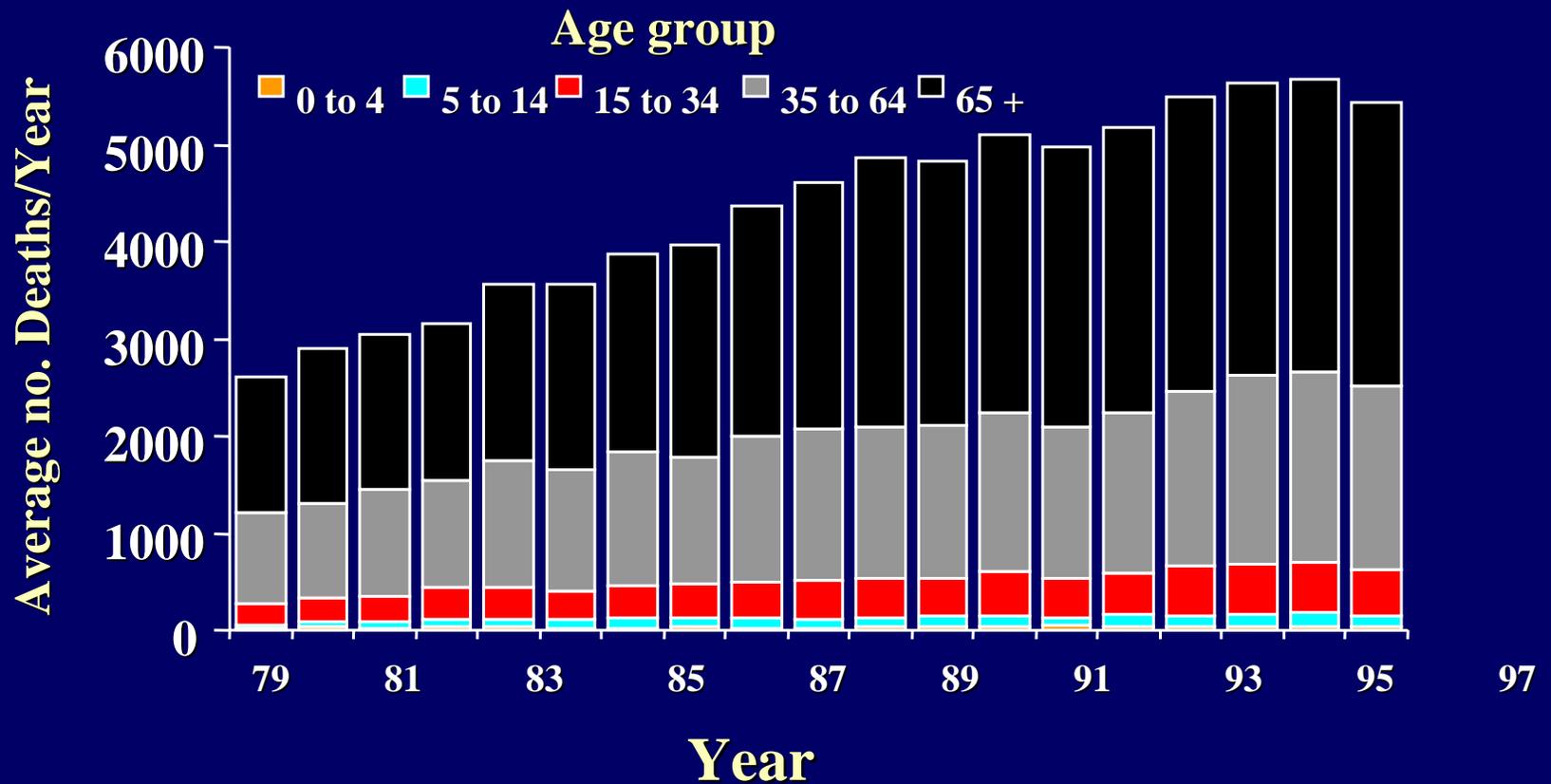
Asthma sufferer Tyrone Johnson, 2, breathes fresh air Friday as his aunt Susan Thomas tends him at Atlanta's Hughes Spalding Children's Hospital. Sky-high smog readings in metro Atlanta have produced a flare-up of asthma cases, especially among children.

The Atlanta Journal-Constitution

SATURDAY, AUG. 19, 2000

Deaths Due to Asthma

United States, 1979-1997





Impact of Changes in Transportation and Commuting Behaviors During the 1996 Summer Olympic Games in Atlanta on Air Quality and Childhood Asthma

Michael S. Friedman, MD

Kenneth E. Powell, MD, MPH

Lori Hutwagner, MS

LeRoy M. Graham, MD

W. Gerald Teague, MD

DESPITE ADVANCES IN ASTHMA therapy, asthma remains a substantial public health problem. In the United States, asthma is a leading cause of childhood morbidity, with an estimated prevalence of 6.9% in children and youth younger than 18 years.¹ Numerous studies have documented a rise in the morbidity, mortality, and prevalence of asthma in different populations.²⁻⁸ The cause or causes of this trend remain controversial.⁹⁻¹¹

Experimental, laboratory, and epidemiologic studies in the last several years have linked high concentrations of known air pollutants to respiratory health problems, most notably exacerbations of asthma.¹²⁻²³ However, opportunities to study the health effects of anthropogenic improvements in air quality are rare. One study found a decrease in particulate pollution and respiratory hospital admissions associated with the closure of an industrial factory in that community.²⁴ To our knowledge, no study has examined the impact of improved ozone pollution for an extended period of time on asthma exacerbations or other markers of asthma morbidity. Also, the extent to which moderate concentrations of

Context Vehicle exhaust is a major source of ozone and other air pollutants. Although high ground-level ozone pollution is associated with transient increases in asthma morbidity, the impact of citywide transportation changes on air quality and childhood asthma has not been studied. The alternative transportation strategy implemented during the 1996 Summer Olympic Games in Atlanta, Ga, provided such an opportunity.

Objective To describe traffic changes in Atlanta, Ga, during the 1996 Summer Olympic Games and concomitant changes in air quality and childhood asthma events.

Design Ecological study comparing the 17 days of the Olympic Games (July 19–August 4, 1996) to a baseline period consisting of the 4 weeks before and 4 weeks after the Olympic Games.

Setting and Subjects Children aged 1 to 16 years who resided in the 5 central counties of metropolitan Atlanta and whose data were captured in 1 of 4 databases.

Main Outcome Measures Citywide acute care visits and hospitalizations for asthma (asthma events) and nonasthma events, concentrations of major air pollutants, meteorological variables, and traffic counts.

Results During the Olympic Games, the number of asthma acute care events decreased 41.6% (4.23 vs 2.47 daily events) in the Georgia Medicaid claims file, 44.1% (1.36 vs 0.76 daily events) in a health maintenance organization database, 11.1% (4.77 vs 4.24 daily events) in 2 pediatric emergency departments, and 19.1% (2.04 vs 1.65 daily hospitalizations) in the Georgia Hospital Discharge Database. The number of nonasthma acute care events in the 4 databases changed –3.1%, +1.3%, –2.1%, and +1.0%, respectively. In multivariate regression analysis, only the reduction in asthma events recorded in the Medicaid database was significant (relative risk, 0.48; 95% confidence interval, 0.44–0.86). Peak daily ozone concentrations decreased 27.9%, from 81.3 ppb during the baseline period to 58.6 ppb during the Olympic Games ($P < .001$). Peak weekday morning traffic counts dropped 22.5% ($P < .001$). Traffic counts were significantly correlated with that day's peak ozone concentration (average $r = 0.36$ for all 4 roads examined). Meteorological conditions during the Olympic Games did not differ substantially from the baseline period.

Conclusions Efforts to reduce downtown traffic congestion in Atlanta during the Olympic Games resulted in decreased traffic density, especially during the critical morning period. This was associated with a prolonged reduction in ozone pollution and significantly lower rates of childhood asthma events. These data provide support for efforts to reduce air pollution and improve health via reductions in motor vehicle traffic.

JAMA. 2001;285:897-905

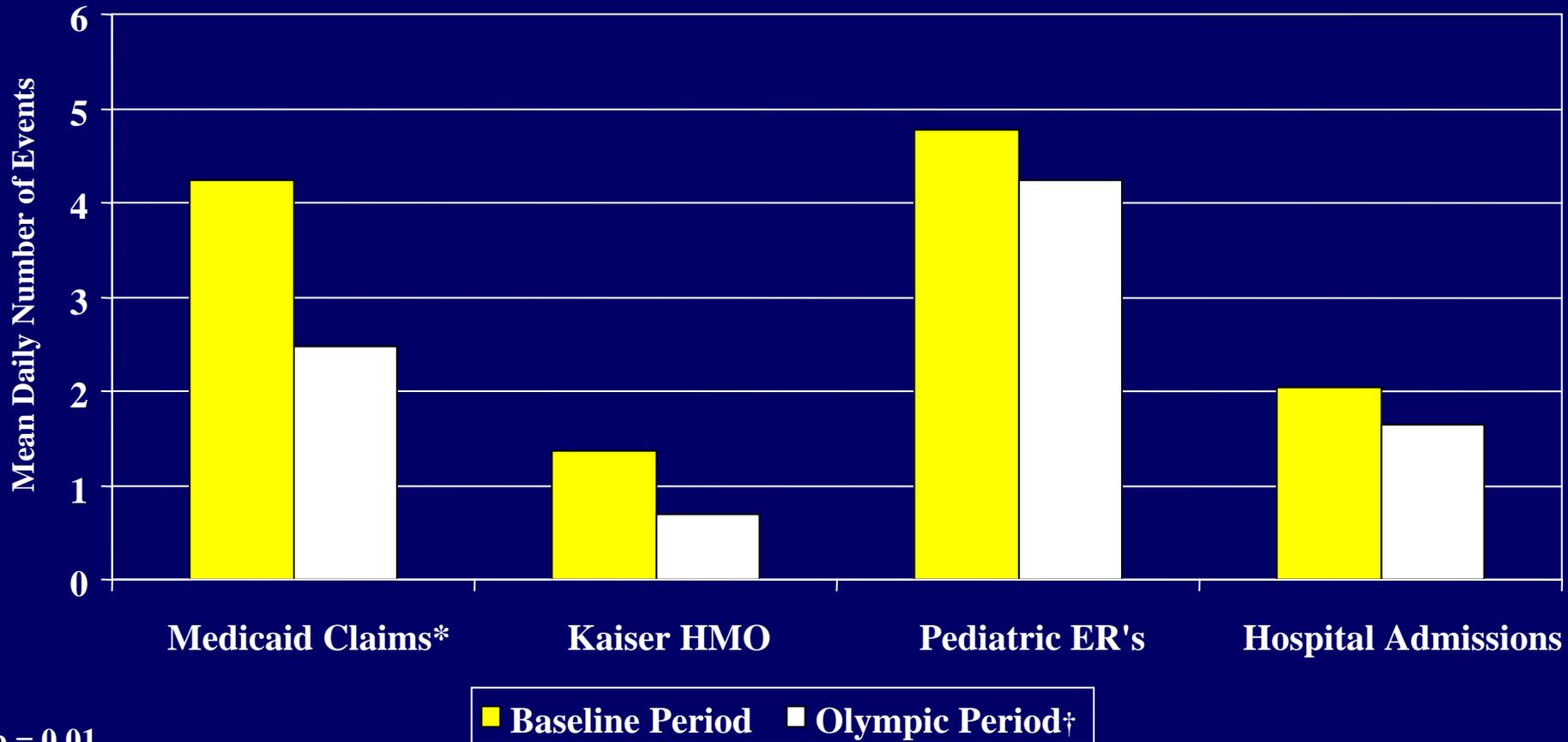
www.jama.com

ozone (ie, daily peak of 50–100 ppb) during various exposure lengths affects asthma morbidity remains controversial.¹²⁻¹⁶

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Results: Acute Care Visits for Asthma 1-16 year old residents of Atlanta

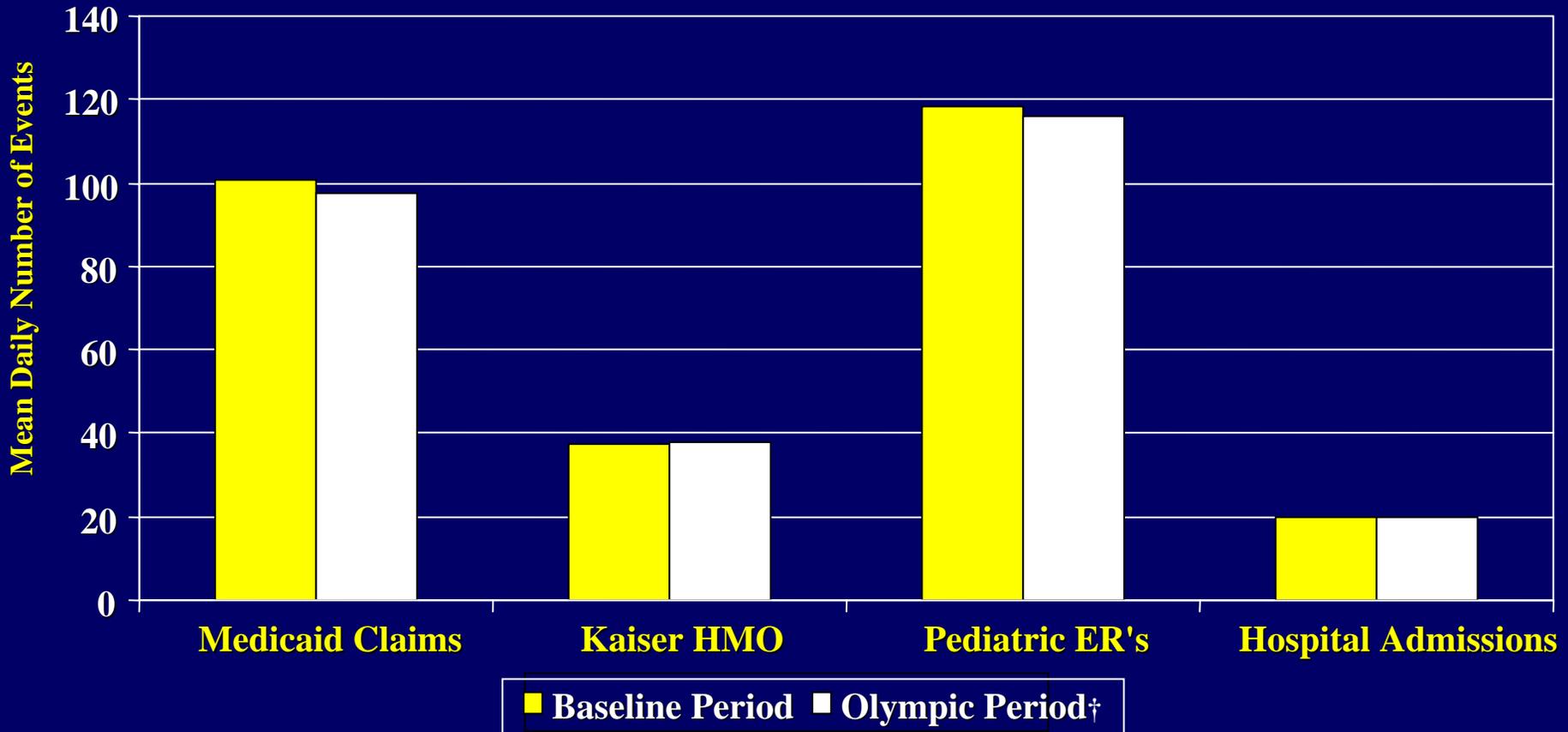


•p = 0.01

† July 19 –August 4, 1996

Source: Friedman, et al, *JAMA*, 2001

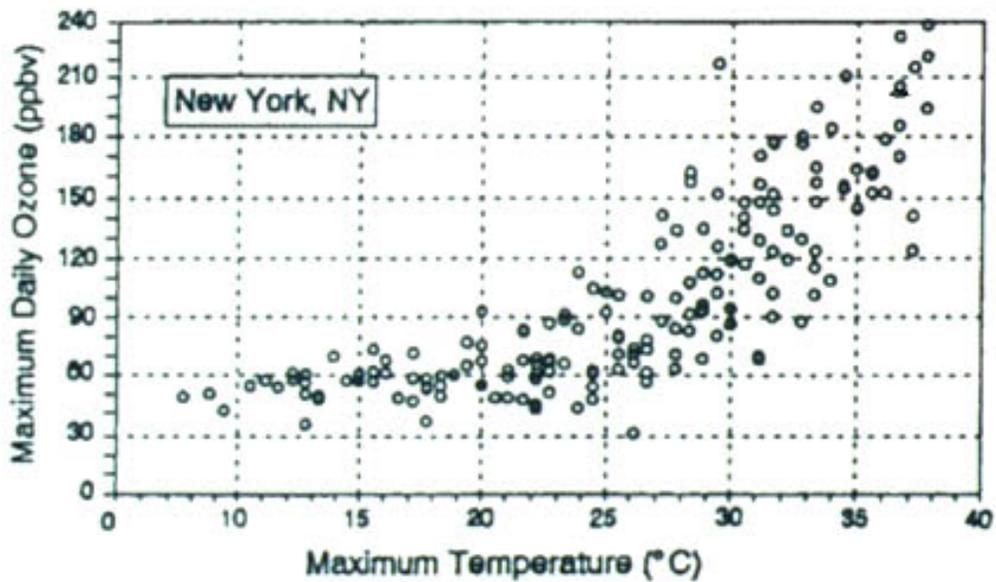
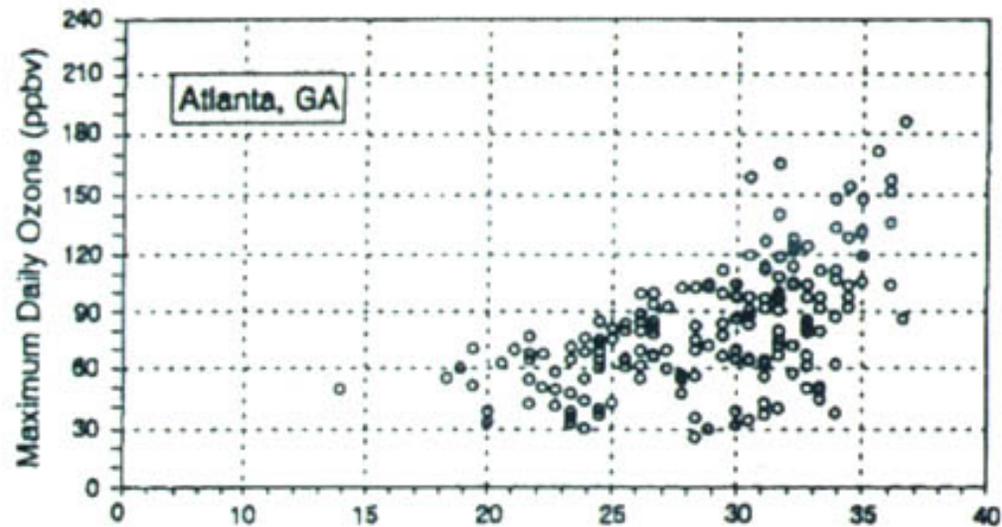
Results: Total Non-Asthma Related Acute Care Visits 1-16 year old residents of Atlanta



† July 19 –August 4, 1996

Source: Friedman, et al, *JAMA*, 2001

Maximum Daily Ozone Concentrations and Maximum Daily Temperature - Atlanta & New York



Atlanta

Temperature Effects of Asphalt “Meadows” Atlanta: May 11-12, 1997

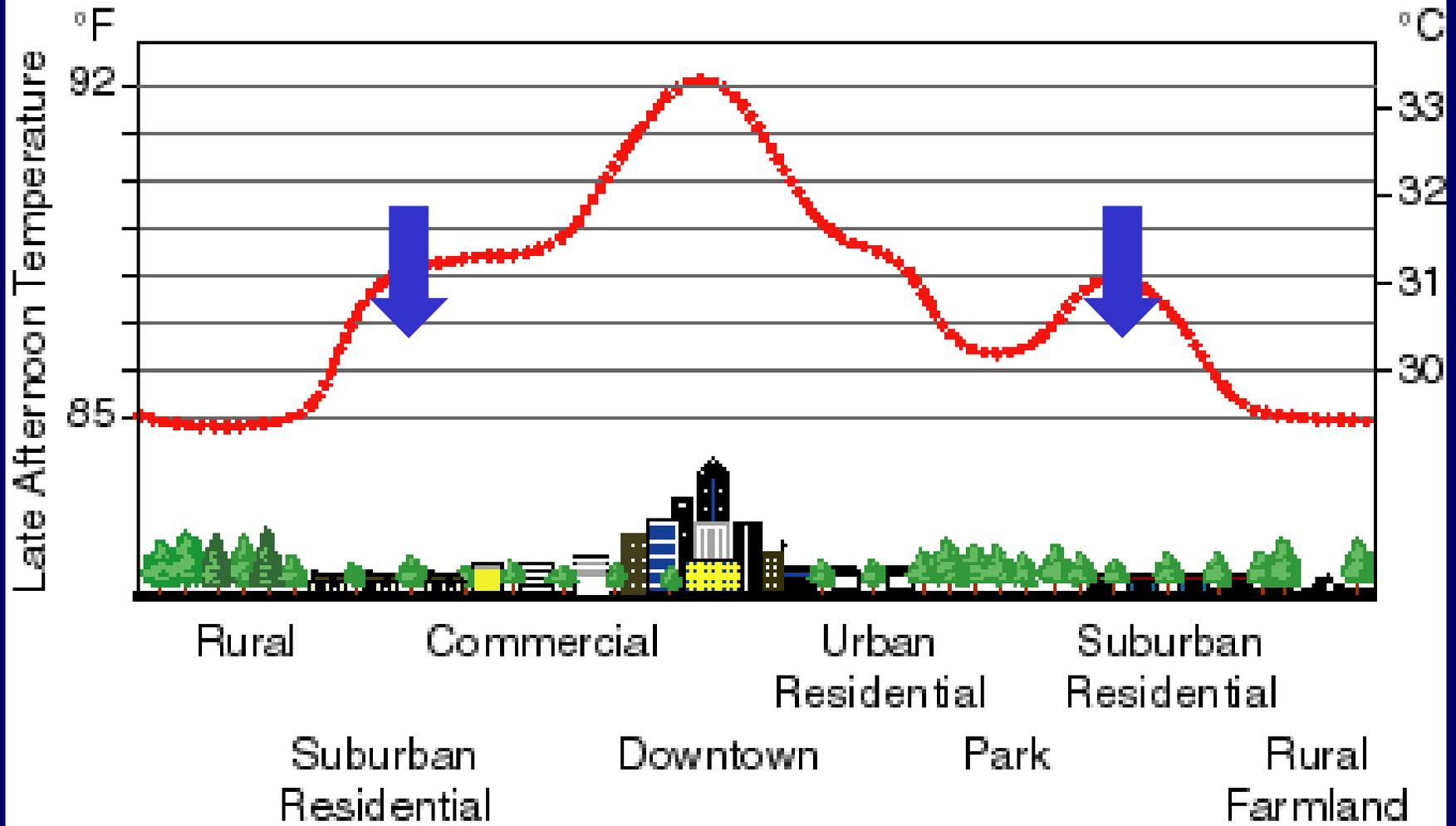
Remote Sensing Target	Temperature
Hartsfield Airport, Concrete Runway	84.2°
Turner Field, Aged Asphalt Parking Lot	98.6°
Turner Field, New Asphalt Parking Lot	102.2°



Source: Quattrochi DA, Luvall JC, Rickman DL, et al.
NASA Thermal and Land Application Sensor.

The Heat Island

Sketch of an Urban Heat-Island Profile



60,000 square miles



**And Photosynthesis
is our friend!**



**The United States has
now paved over the
equivalent area of the
entire state of Georgia**

Heat Islands Affect Energy Use, the Environment, and Health

Higher Temperatures:

- Increase Electricity Demand
- Increase Emissions of CO₂ and other pollutants
- Increase production of ground level ozone



Top 10 Most Ozone-Polluted Cities in US



Source: American Lung Association State of the Air 2003

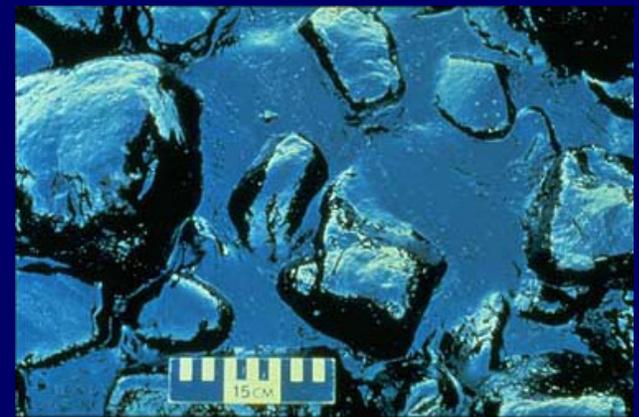




Chamblee, GA Runoff to North Peachtree Creek

Urban Runoff -- Nonpoint Source Pollution

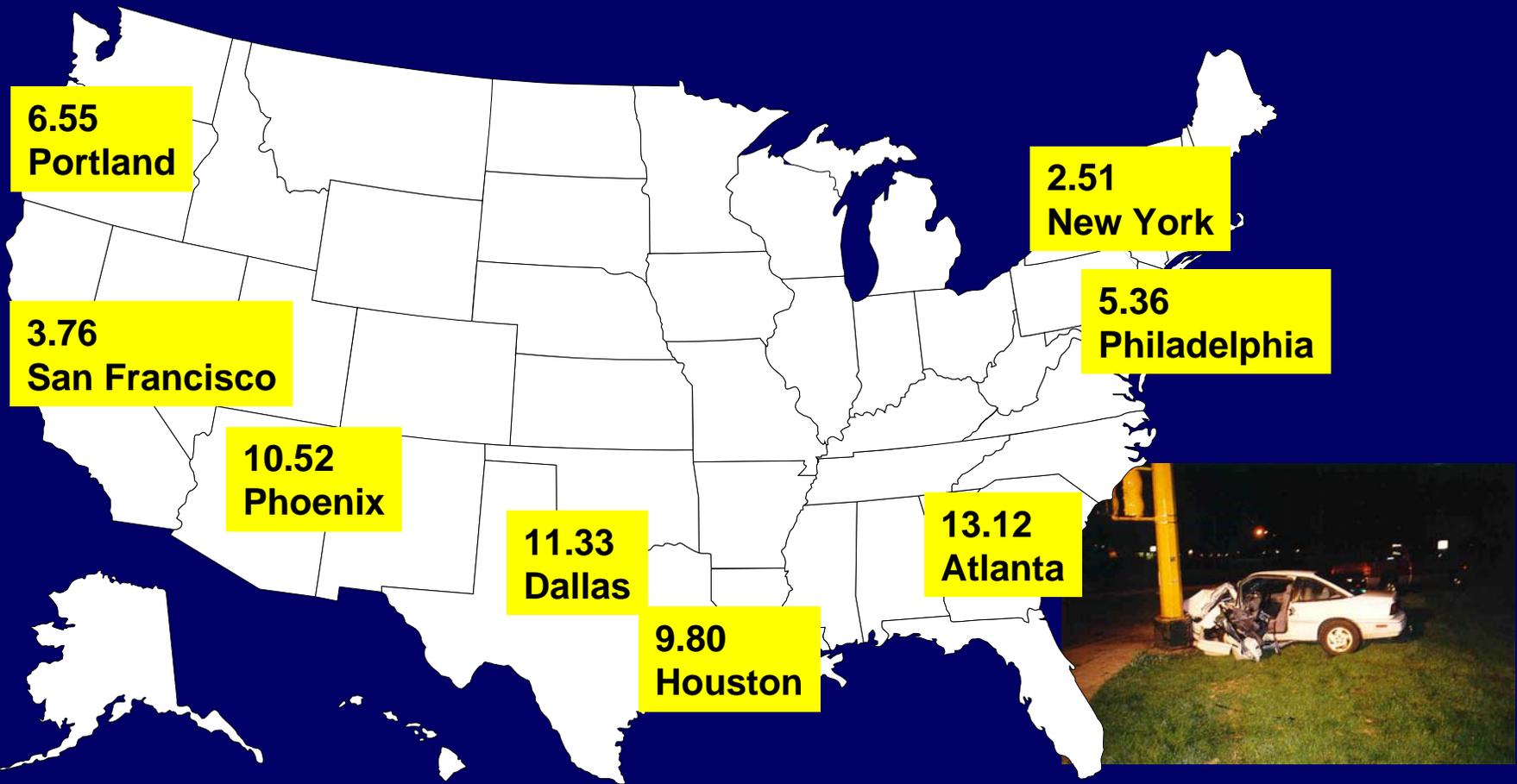
- Every eight months, runoff from US roads and parking lots carries as much oil into the oceans as did the spill from the Exxon Valdez -- 10.9 million gallons



NRC “Oil in the Sea III” 2002

Automobile fatality rates by city, 1998

(excluding pedestrian fatalities; deaths/100,000/year)



Source: NHTSA

Motor Vehicle Crashes

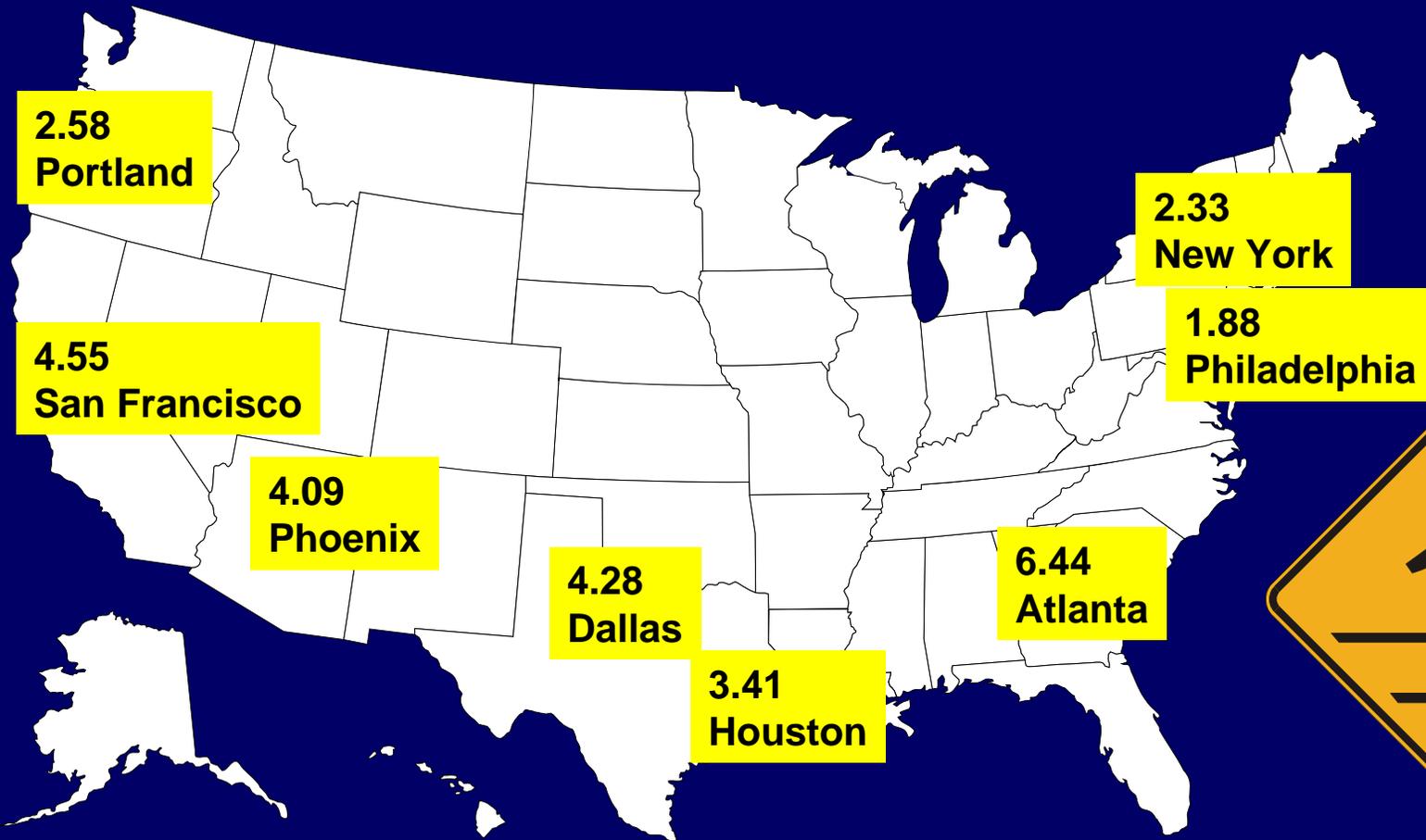
- **Leading cause of deaths among persons 1-24 years old**
- **Each year in the United States, motor vehicle crashes account for:**
 - **42,000 deaths**
 - **3.4 million nonfatal injuries**
 - **24 million vehicles**
 - **estimated \$200 billion in costs**



Source: NHTSA

Pedestrian fatality rates by city, 1998

(deaths/100,000/year)



Source: NHTSA

The Epidemic of Obesity and Inactivity

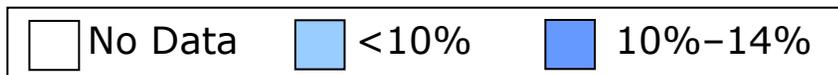
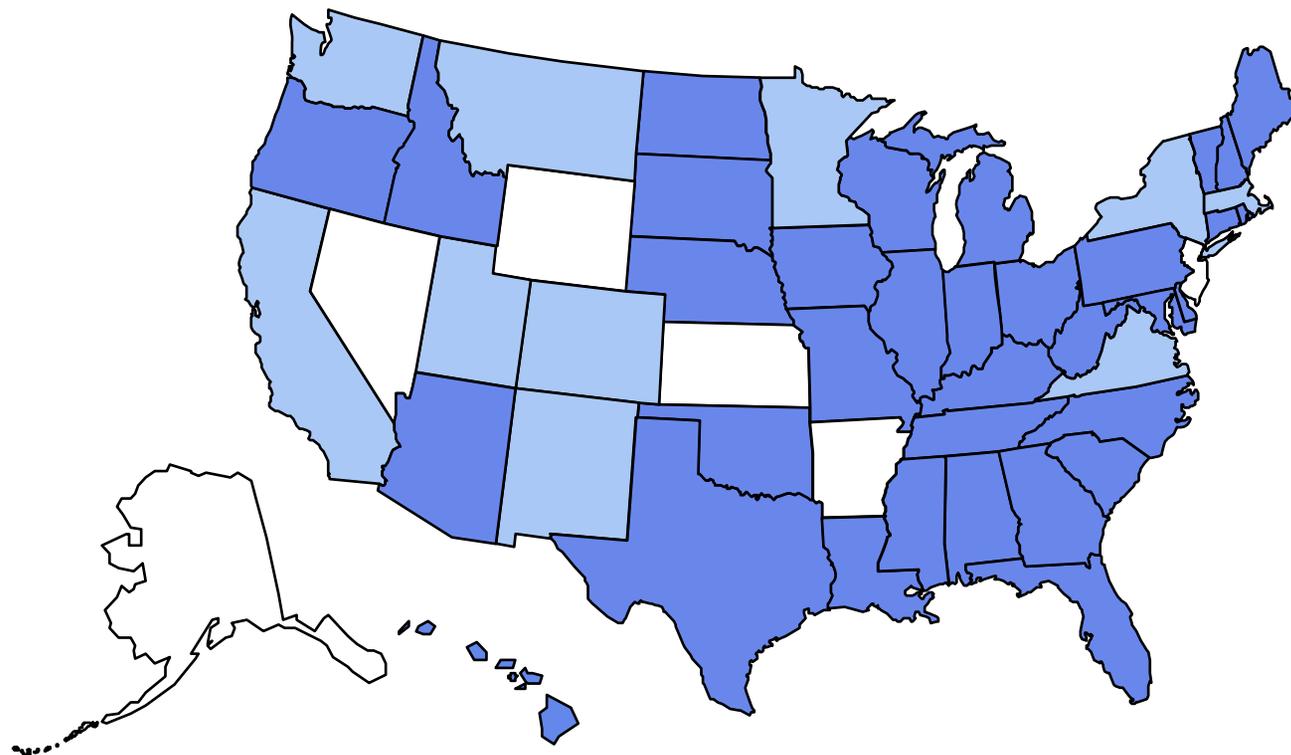


"Remember when we used to have to fatten the kids up first?"

Obesity Trends* Among U.S. Adults

BRFSS, 1990

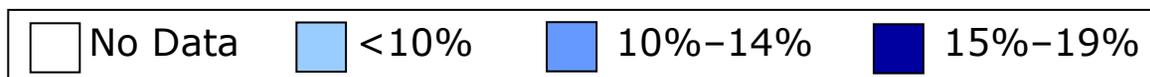
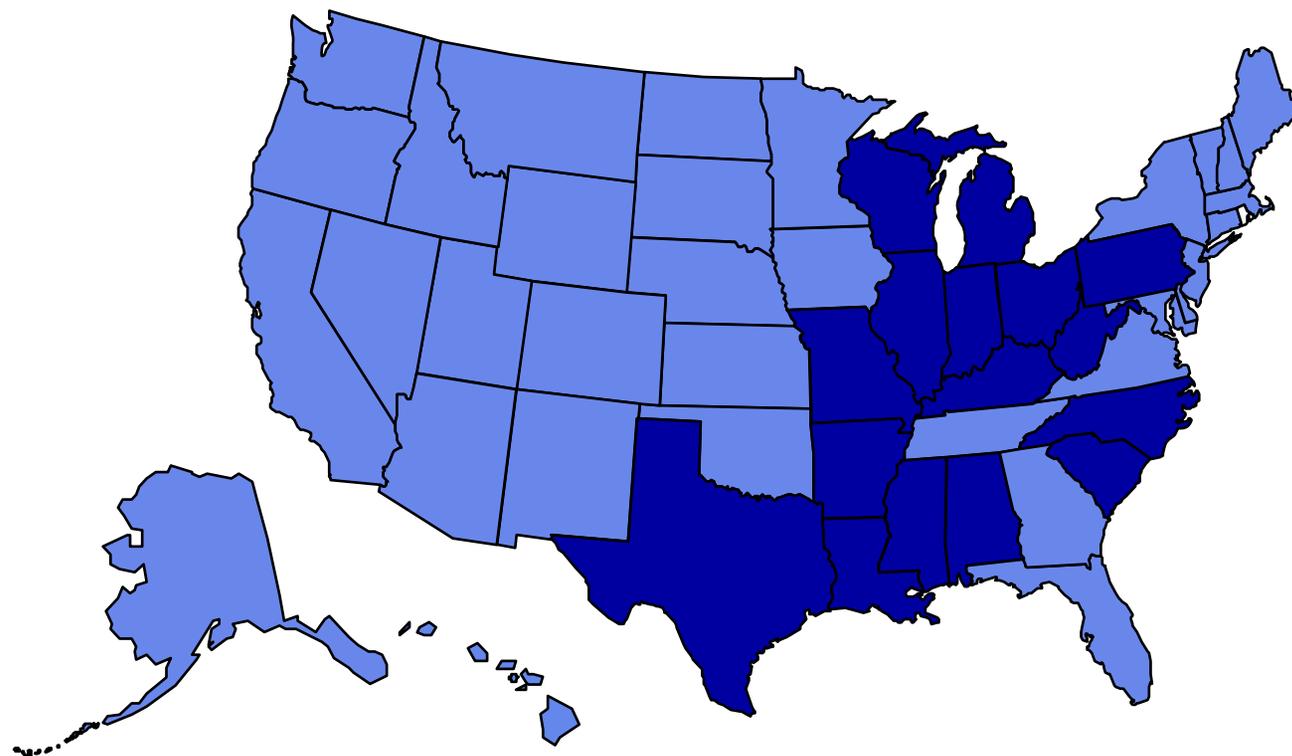
(*BMI ≥ 30 , or ~ 30 lbs overweight for 5' 4" person)



Obesity Trends* Among U.S. Adults

BRFSS, 1994

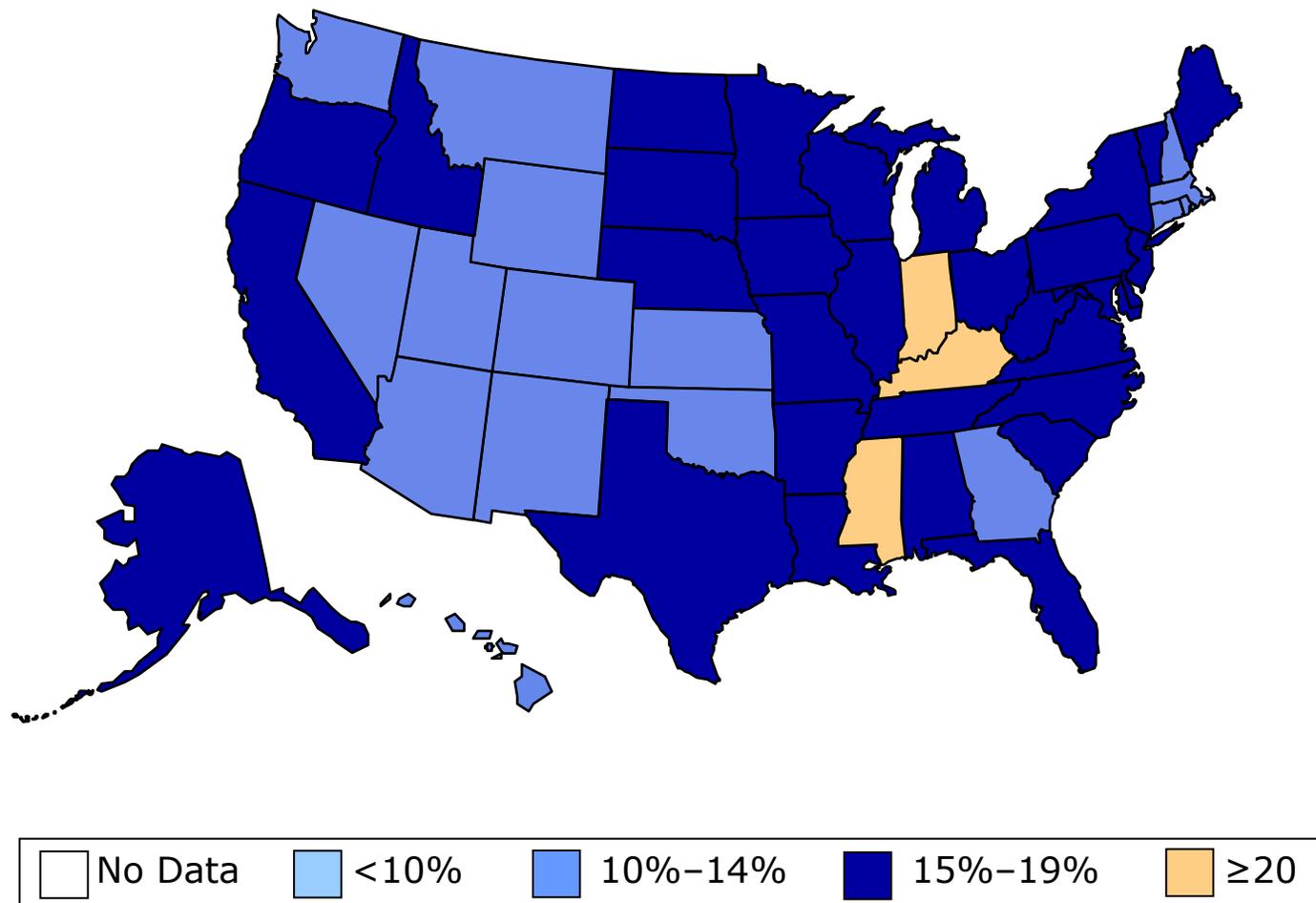
(*BMI ≥ 30 , or ~ 30 lbs overweight for 5' 4" person)



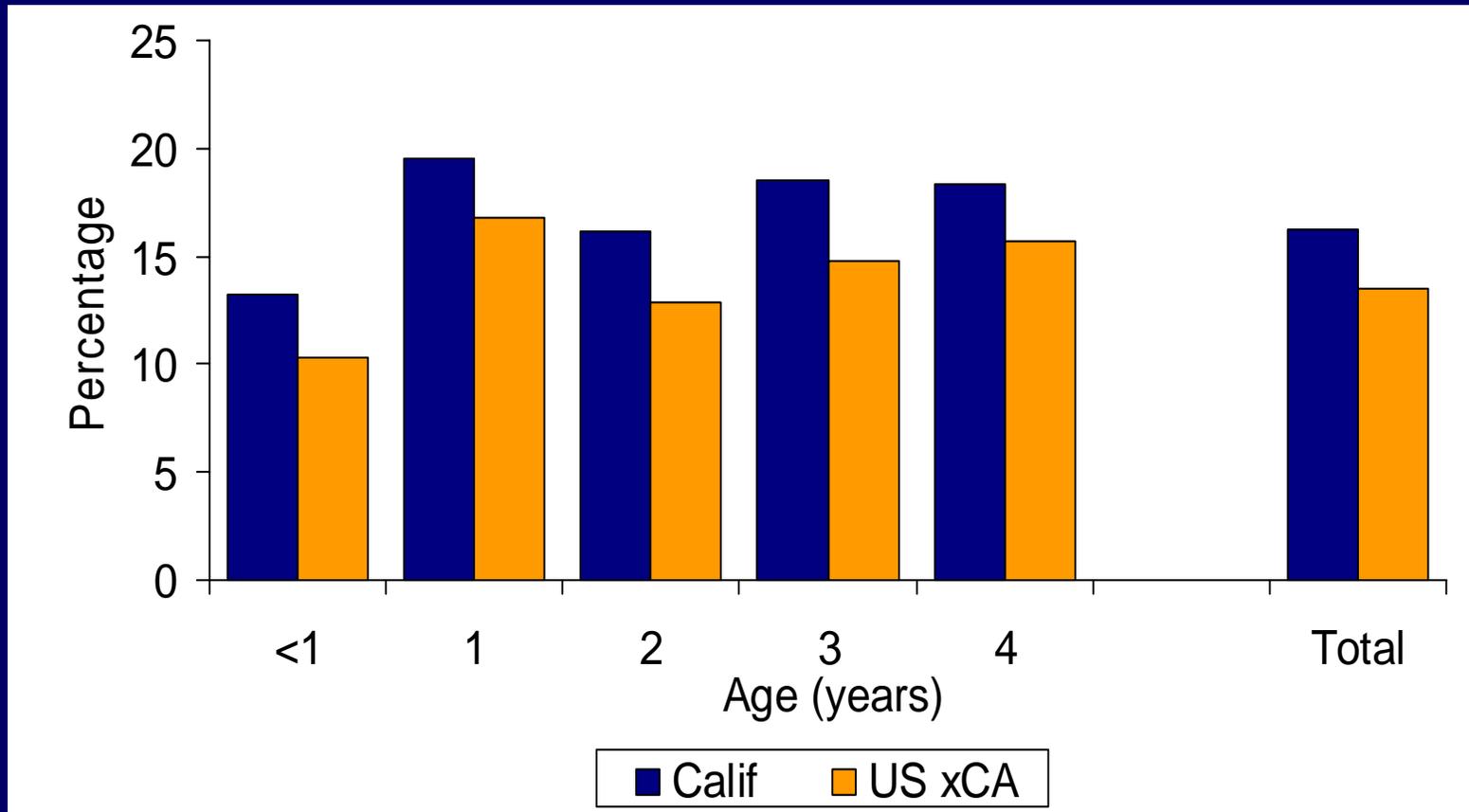
Obesity Trends* Among U.S. Adults

BRFSS, 1997

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

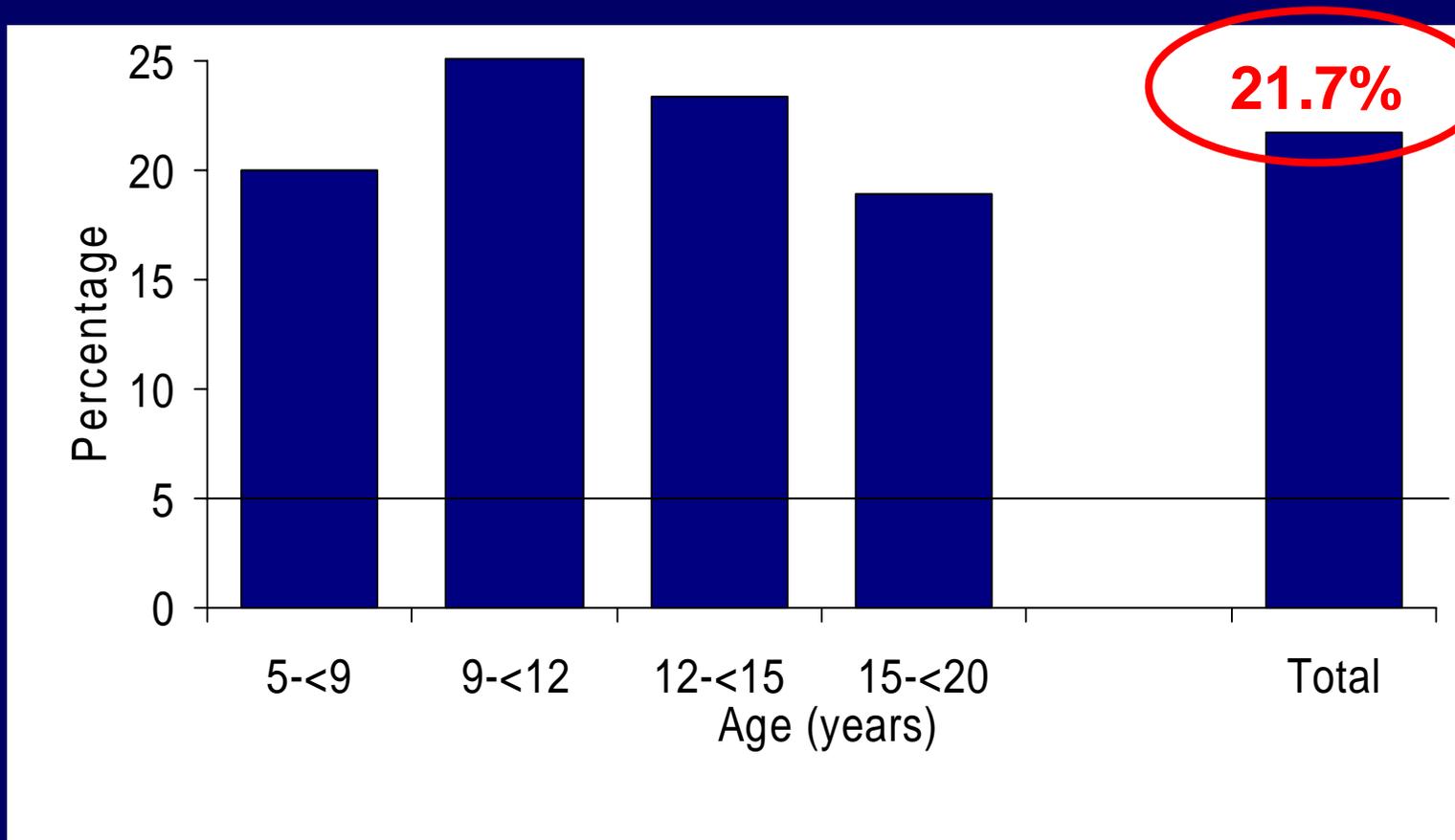


USA vs. California--Prevalence of overweight* Children Under Age 5



* \geq 95th percentile weight-for-length or BMI-for-age, CDC Growth Charts, 2000.
5% of children are expected to fall above the 95th percentile.

California Prevalence of Overweight* Children aged 5 to <20 years by age



* \geq 95th percentile BMI-for-age, CDC Growth Charts, 2000.

** Year 2010 target: reduce the proportion of children and adolescents aged 6 to 19 years who are overweight to 5%.

US Obesity Woes Put a Strain on Hospitals



May 1, 2002

HEALTH

FROM THE ARCHIVES: May 1, 2002

U.S.'s Obesity Woes Put a Strain On Hospitals in Unexpected Ways

By RHONDA L. RUNDLE
Staff Reporter of THE WALL STREET JOURNAL

When an extremely heavy man spent several weeks at a Kaiser Permanente hospital in Fresno, Calif., two years ago, employees suffered a string of injuries providing routine care for the nearly 500-pound patient.

"We can document five injuries, but there may have been as many as 11 from anecdotal evidence," says Barbara Smisko, director of Western environmental health and safety services at Kaiser, the Oakland, Calif., health-maintenance organization. "It's a dramatic story, but it characterizes the kinds of things that happen to patients and staff every day."

The fact that more Americans are obese is putting a new strain on the nation's health-care system in

OBESITY IN AMERICA

- Health-Care Costs for Obesity Top Those Related to Smoking¹ 03/12/02
- Obesity May Soon Kill More Americans Than Cigarettes, Surgeon General Says² 12/13/01

Adjusting for Special Needs

A sampling of hospital products for obese patients:

Product/Company	Features	List Price
Bariatric wheelchairs Gendron	Up to 32-inch wide seat and weight capacity up to 850 lbs.; can be custom-built to any patient requirement	From \$680 to \$4,130
Burke Tri-Flex bed Burke	1,000 pound patient capacity; fully electric; clears 43-inch doorways	\$11,995
First Step Select Pressure Relief Mattress Overlay Kinetic Concepts	Adjustable air pressure in mattress; non-skid material; weight capacity up to 650 lbs.	Not available
Magnum II Bariatric Patient Care System Hill-Rom	A bed that functions as a chair and transport vehicle; holds up to 600 lbs.	\$26,000 and up
UltraTwin	Lifting	\$11,000

Advocacy Center in San Diego. "I get calls and e-mails on an average of five to 10 a month" from people who "sought treatment at a hospital and were told that it couldn't take care of them," he says.

Certainly, some hospitals view the growing popularity of weight-loss surgery as an opportunity -- both to build business and to improve obesity treatment in their communities. They are setting up bariatric wings for gastric surgery, which reduces the capacity of a patient's stomach. The American Society for Bariatric Surgery estimates there were 57,200 procedures last year, a 29% increase from 2000. "We don't see it slowing down anywhere," says Georgeann Mallory, executive director of the Gainesville, Fla., association. The average hospital cost for bariatric surgery is about \$20,000, she says.

More commonly, though, hospitals worry about the safety of nurses, physical therapists, and other

Supersizing Jet Fuel Use

- Mean weight gain of Americans in 1990s:
10 pounds
- Airline distance flown in 2000 in US:
515 billion passenger-miles
- Weight transported 1 mile by 1 gallon of fuel:
7.3 tons (passengers or cargo)
- Jet fuel to transport added weight in 2000:
350 million gallons
- Cost of extra fuel: \$1.1 billion
 - (Oct 2005 prices)
- CO₂ emissions from extra fuel:
3.8 million tons



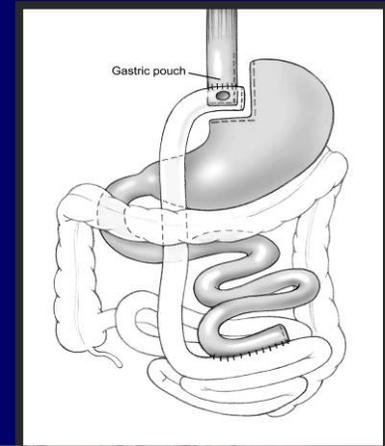
Data sources: NCHS; US Dept. of
Transportation

GI Surgery for Severe Obesity

Risk and Complications:

- 10-20% require follow-up surgery
- Abdominal hernia
- Break down of staple line
- Gallstones
- 30% develop nutritional deficiency

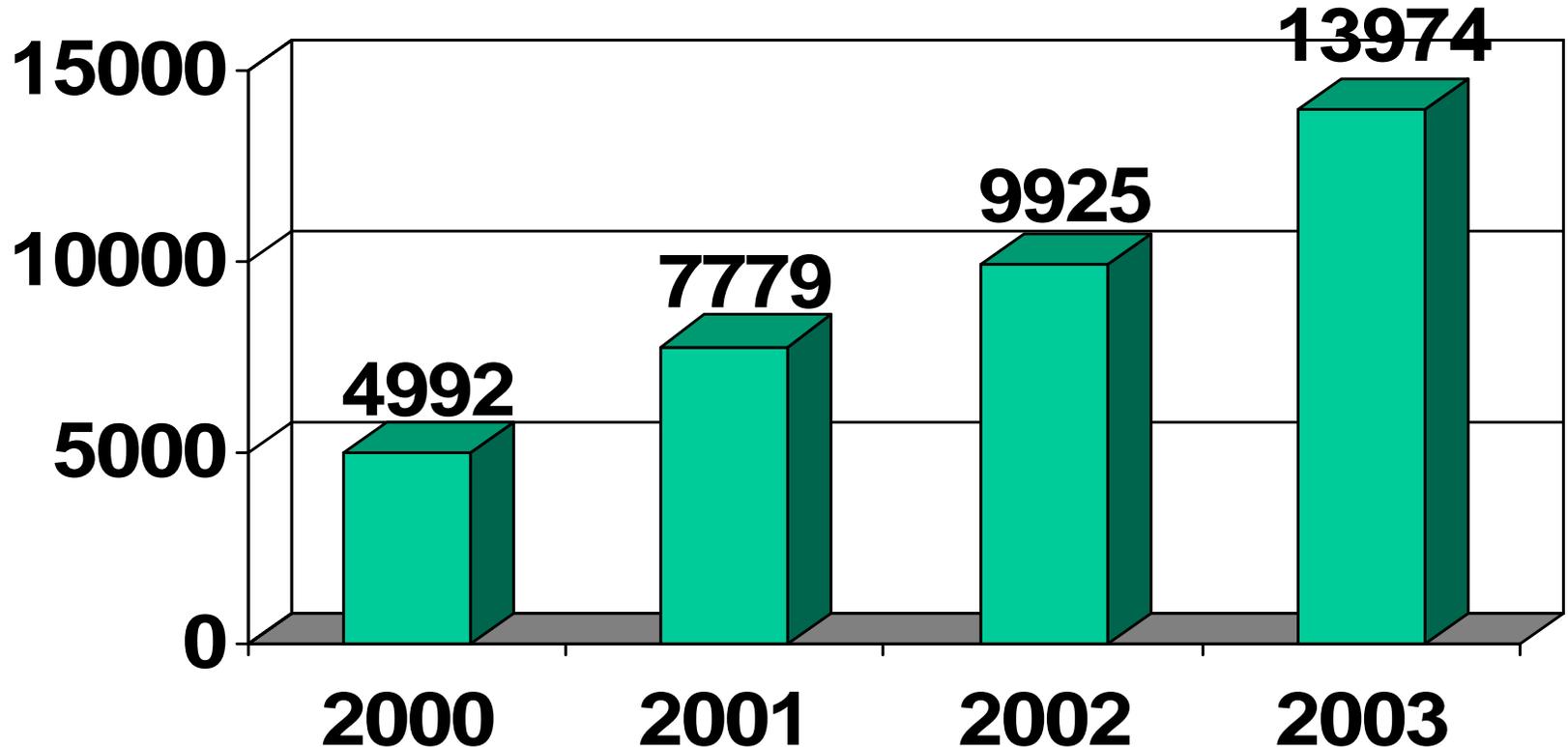
Cost: \$20,000 to \$50,000



Source: NIDDK

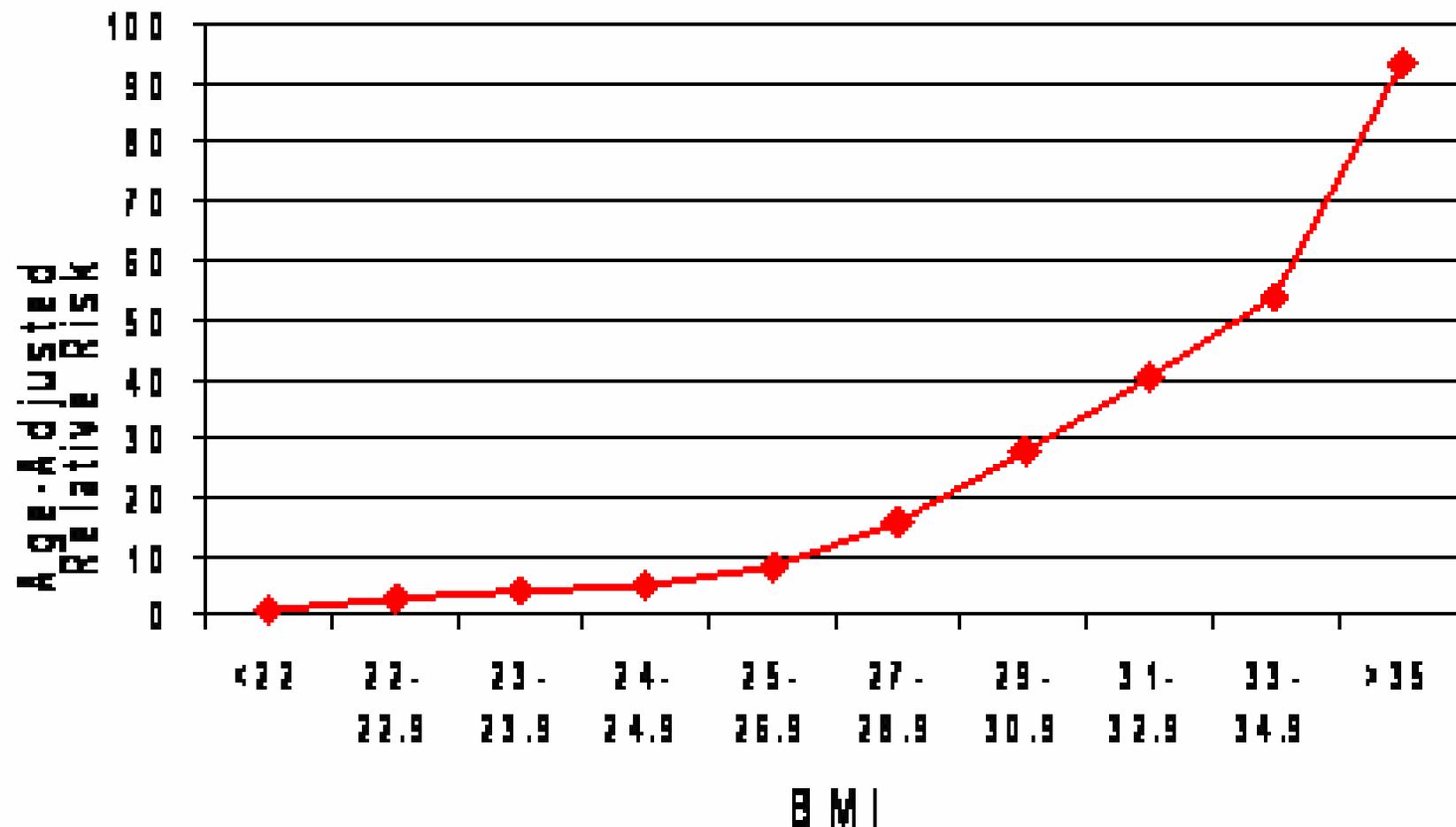
Highest Increase Rate of all Pediatric Surgeries

Bariatric Surgery Volume for California Hospitals



Average Cost per Surgery: \$20,000- \$50,000

Link Between Obesity and Type 2 Diabetes: Nurses Health Study



**TAX CUT
SMACKDOWN**
**SAINTLY
POPE**
**BEHIND
CNBC**

DIABETE

It Strikes
16 Million
Americans

Are You
at Risk?

Computer drawing of a human insulin molecule

SOCIETY

An American Epidemic

Diabetes

The silent killer: Scientific research shows a 'persistent explosion' of cases—especially among those in their prime

BY JERRY ADLER AND CLAUDIA KALB

SOMETHING TERRIBLE WAS HAPPENING TO YOLANDA BENTIZ's eyes. They were being poisoned; the fragile capillaries of the retina attacked from within and were leaking blood. The first symptoms were red lines, appearing vertically across her field of vision; the lines multiplied and merged into a haze that shut out light entirely. "Her blood vessels inside her eye were popping," says her daughter, Jannette Roman, a Chicago college student. Bentiz, who was in her late 40s when the problem began four years ago, was a cleaning woman, but she's had to stop working. After five surgeries, she has regained vision in one eye, but the other is completely useless. A few weeks ago, awakening one night in a hotel bedroom, she walked into a door, setting off a paroxysm of pain and nausea that hasn't let up yet. And what caused this catastrophe was nothing as exotic as pesticides or emerging viruses. What was poisoning Bentiz was sugar.

Diabetes prevalence, by age

Age Group	1990 Prevalence (%)	1998 Prevalence (%)
18-29	~1.5	~2.0
30-39	~2.5	~3.5
40-49	~3.5	~5.0
50-59	~5.5	~8.0
60-69	~8.5	~11.0
>70	~10.5	~12.5

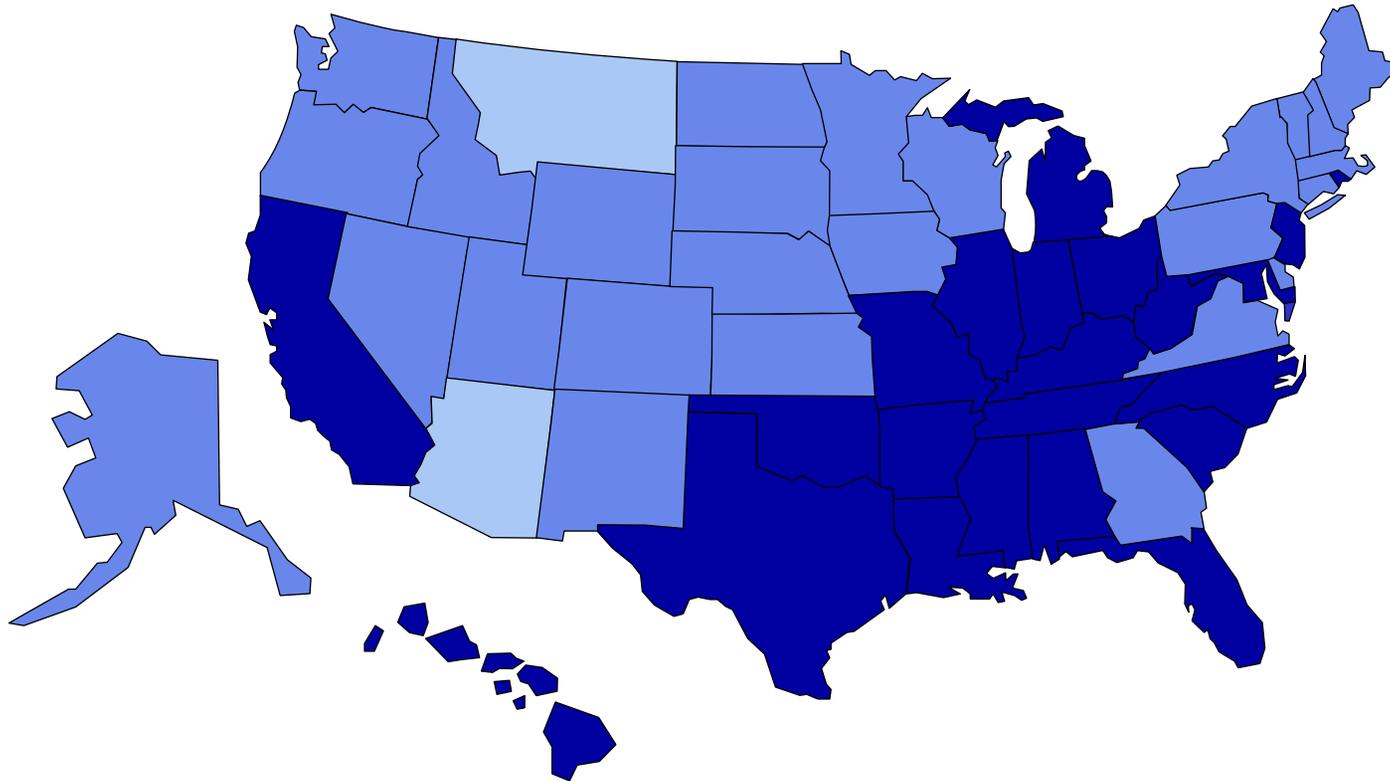
48 NEWSWEEK SEPTEMBER 4, 2000



Heredity
Genes help determine whether you'll get diabetes. In many families, multiple generations are struck. But heredity is not destiny—especially if you eat well and exercise.

FAMILY PLAZA: Bentiz (left) and Roman, Bentiz's mother and two brothers died from complications of the disease.

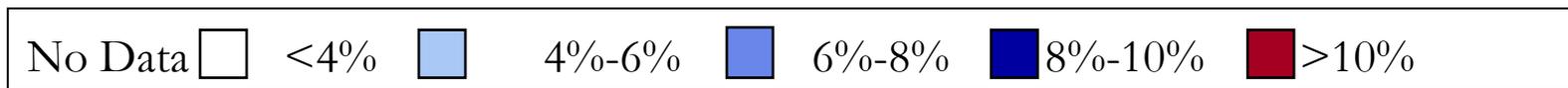
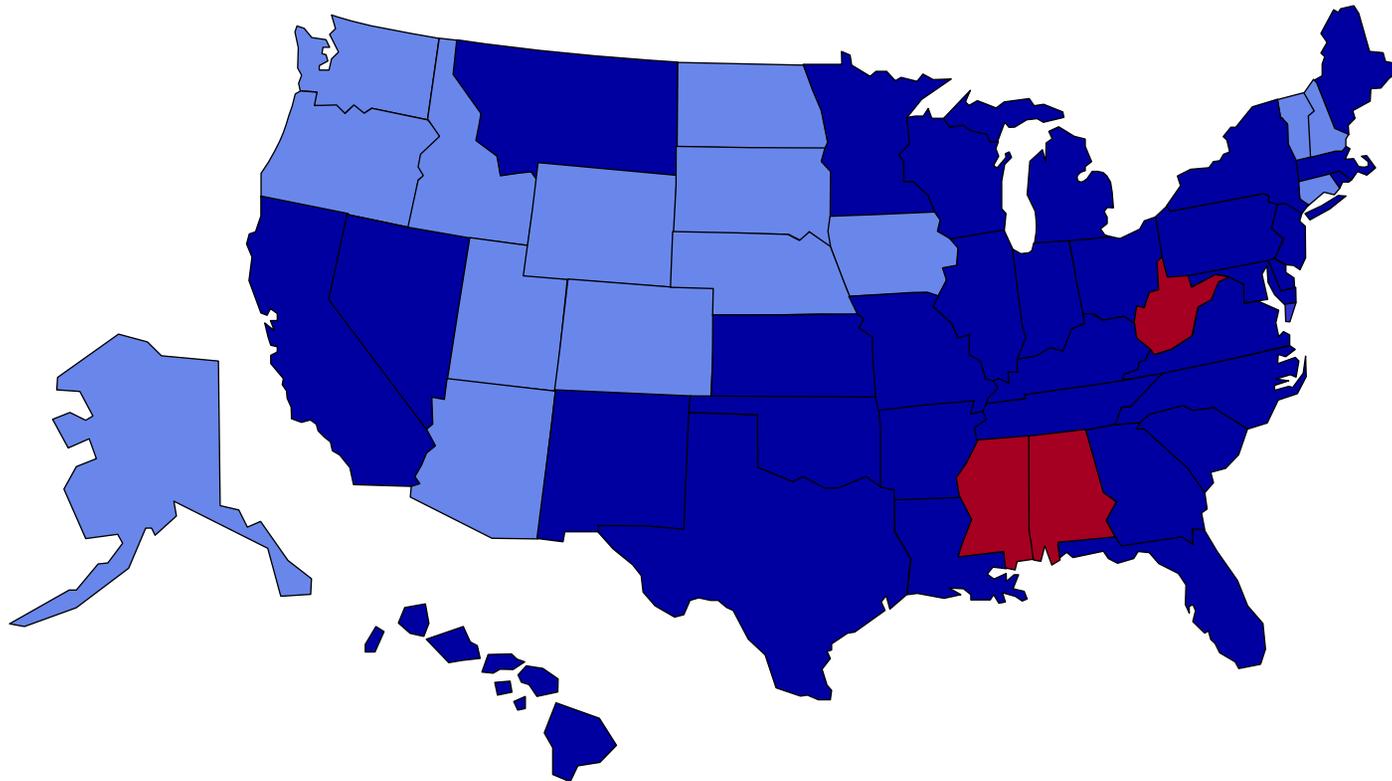
Diabetes and Gestational Diabetes Trends Among Adults in the U.S., BRFSS 1997-98



No Data <4% 4%-6% 6%-8% 8%-10% >10%

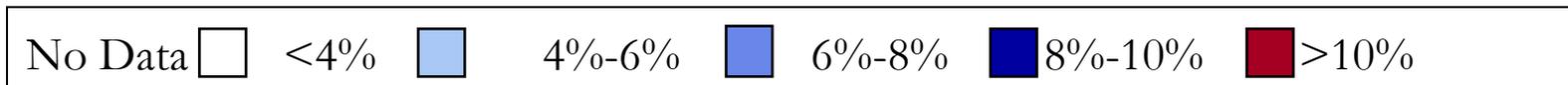
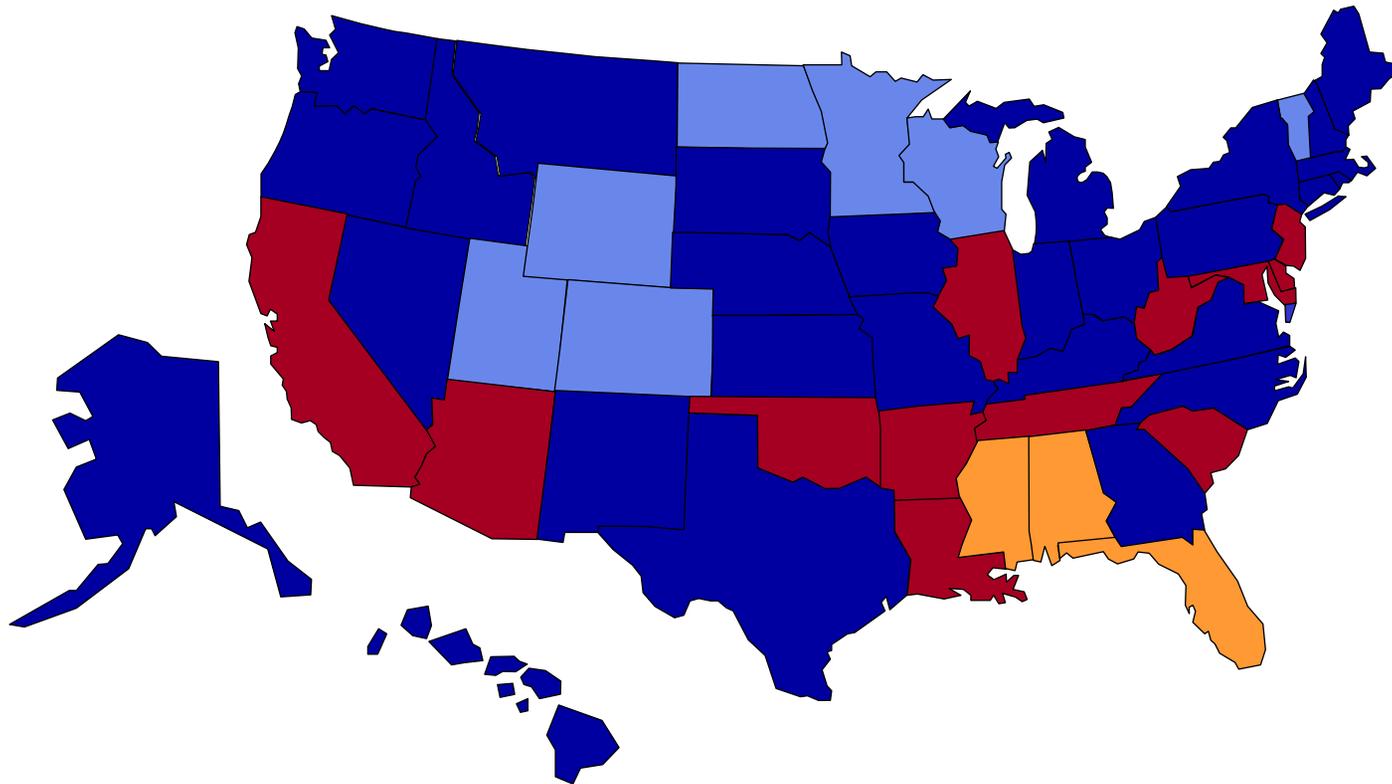
Mokdad AH, Ford ES, Bowman BA, et al. Prevalence of obesity, diabetes, and other obesity-related health risk factors, 2001. JAMA 2003 Jan 1;289(1).

Diabetes and Gestational Diabetes Trends Among Adults in the U.S., BRFSS 1999



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Diabetes and Gestational Diabetes Trends Among Adults in the U.S., BRFSS 2001



Mokdad AH, Ford ES, Bowman BA, et al. Prevalence of obesity, diabetes, and other obesity-related health risk factors, 2001. JAMA 2003 Jan 1;289(1).

Diabetes Projected Risks: For Babies Born in 2000

Girls: 38% lifetime risk

- If diabetic before age 40, Lifespan shortened by 14 years (Quality of life by 19 years)

Boys: 33% lifetime risk

If diabetic before age 40, Lifespan shortened by 12 years. (Quality of life by 22 years)

V Narayan et al: JAMA 8 Oct 2003

The Atlanta Journal-Constitution / Sunday, June 15, 2003

CDC: Diabetes to afflict 1 in 3 born in 2000

Scientist says kids must eat healthier, exercise more

By JANET McCONNAUGHEY
Associated Press

New Orleans — One in three U.S. children born in 2000 will become diabetic unless many more people start eating less and exercising more, a scientist with the Centers for Disease Control and Prevention warned Saturday.

The odds are worse for African-American and Latino children: Nearly half of them are likely to develop the disease, said Dr. K.M. Venkat Narayan, a diabetes epidemiologist at the CDC.

"I think the fact that the diabetes epidemic has been raging has been well-known to us for several years. But looking at the risk in these terms was very shocking to us," Narayan said.

The 33 percent lifetime risk is about triple the American Diabetes Association's current estimate.

by 2050, to 29 million, an earlier CDC study by Narayan and others found.

"These estimates I am giving you now are probably quite conservative," Narayan said in an interview before the diabetes association's annual scientific meeting here.

Narayan said it would be difficult to say whether undiagnosed cases would rise at the same rate.

If they did, that could push the 2050 figure to 40 million or more.

Doctors had known for some time that Type 2 diabetes — what used to be called adult-onset diabetes because it typically showed up in middle-aged people — is on the rise, and that patients are getting younger.

Nobody else had crunched the numbers to look at current odds of getting the disease, Narayan said.

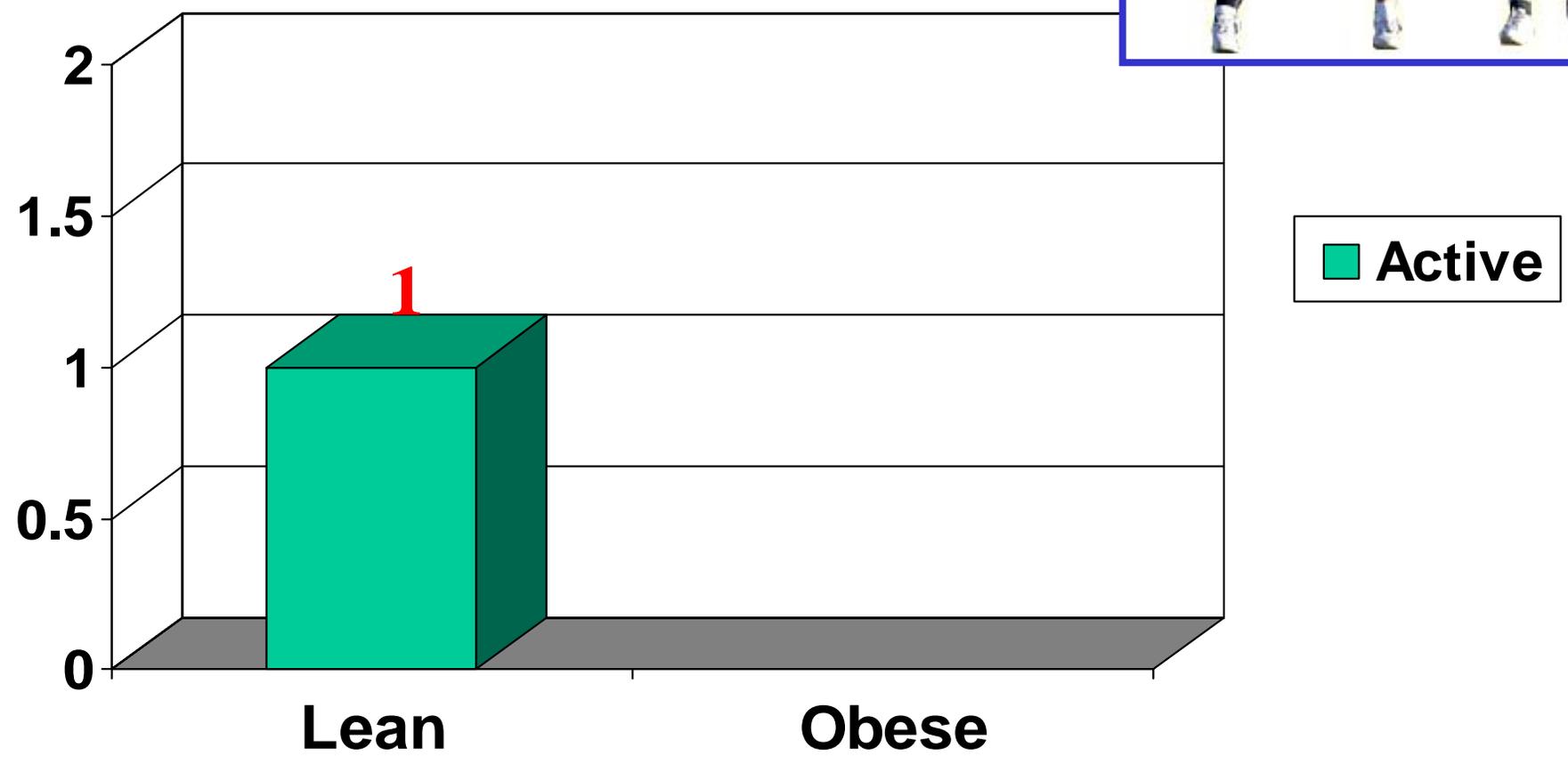
Overall, he said, 39 percent of the girls who now are healthy 2½- to 3-year-olds and 33 percent of the boys are likely to develop diabetes, he said.

For Latino children, the odds are closer to one in two: 53 percent of the girls and 45 percent of the boys. The numbers are about 49 percent and 40 percent for African-American girls

Nurse Study 1976-2000



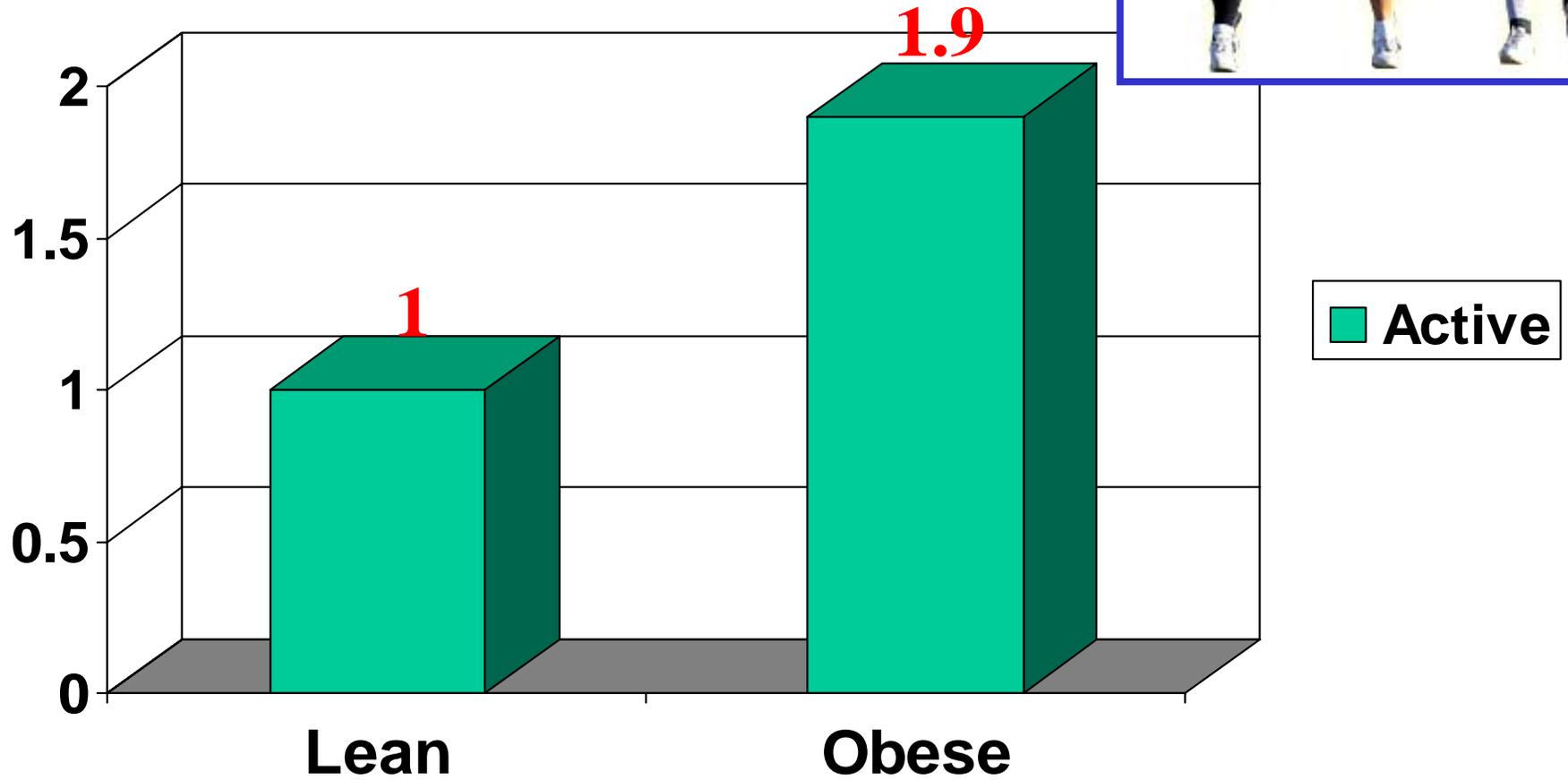
Risk of Death



Nurse Study 1976-2000



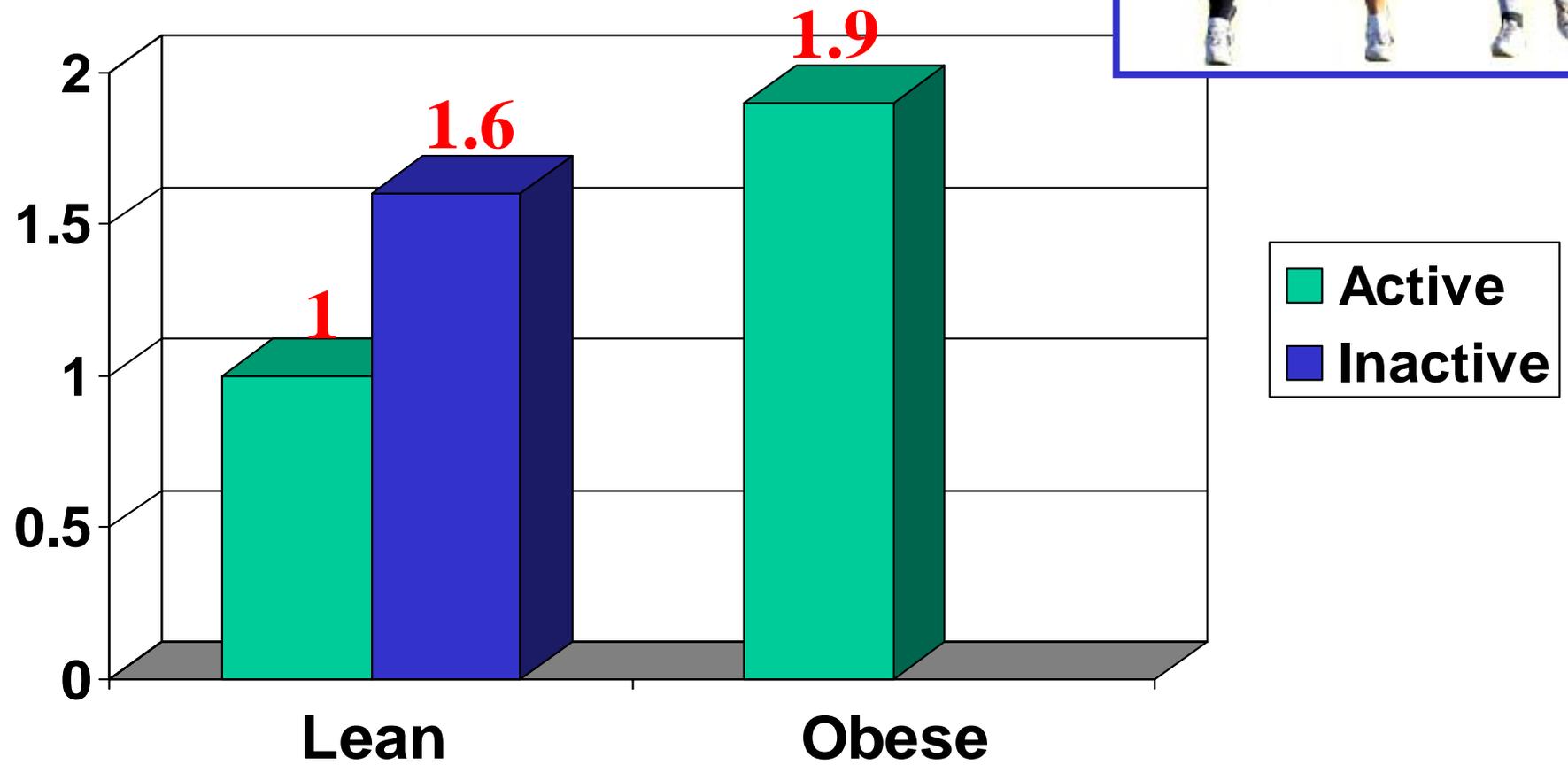
Risk of Death



Nurse Study 1976-2000



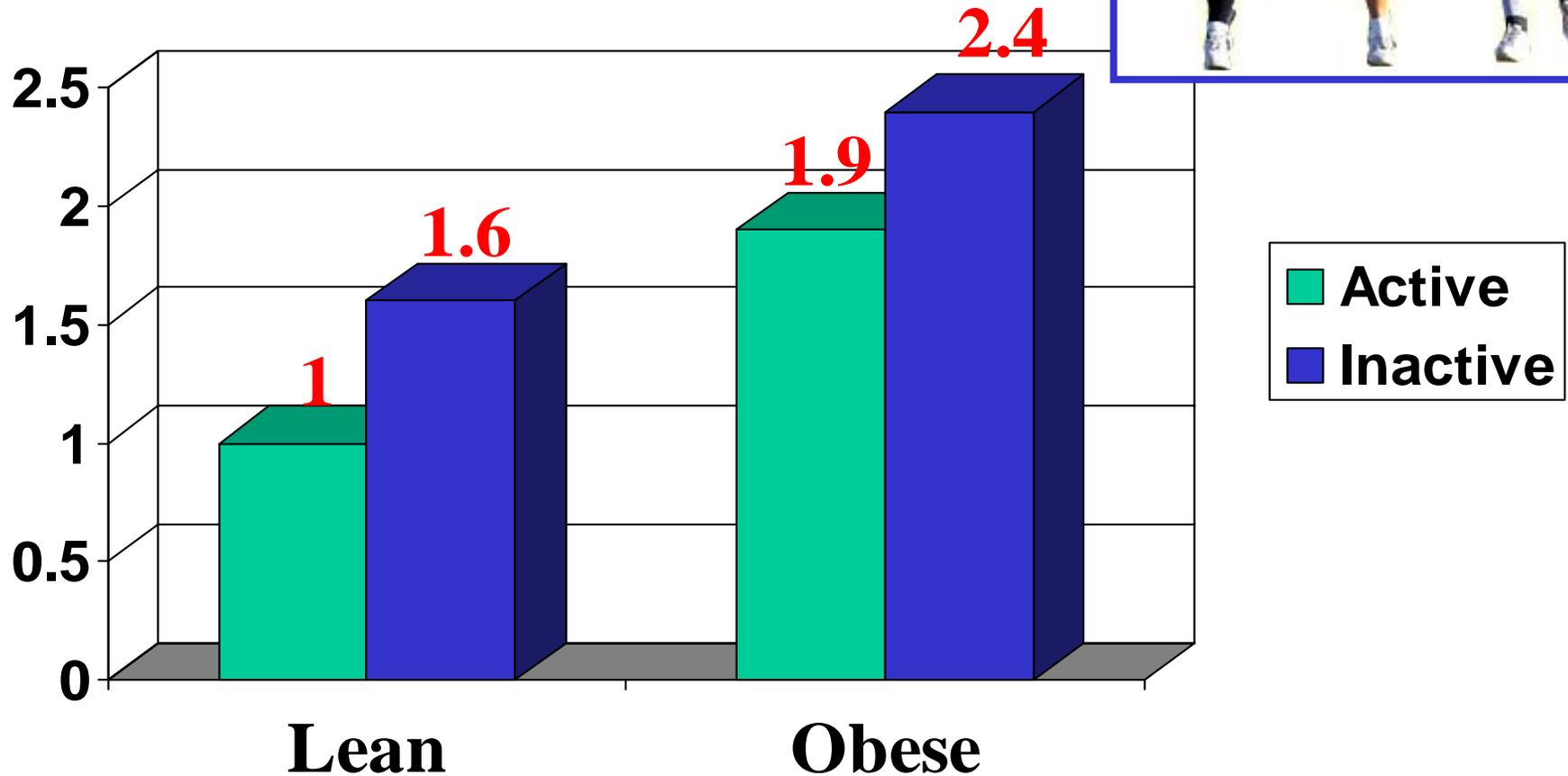
Risk of Death



Nurse Study 1976-2000

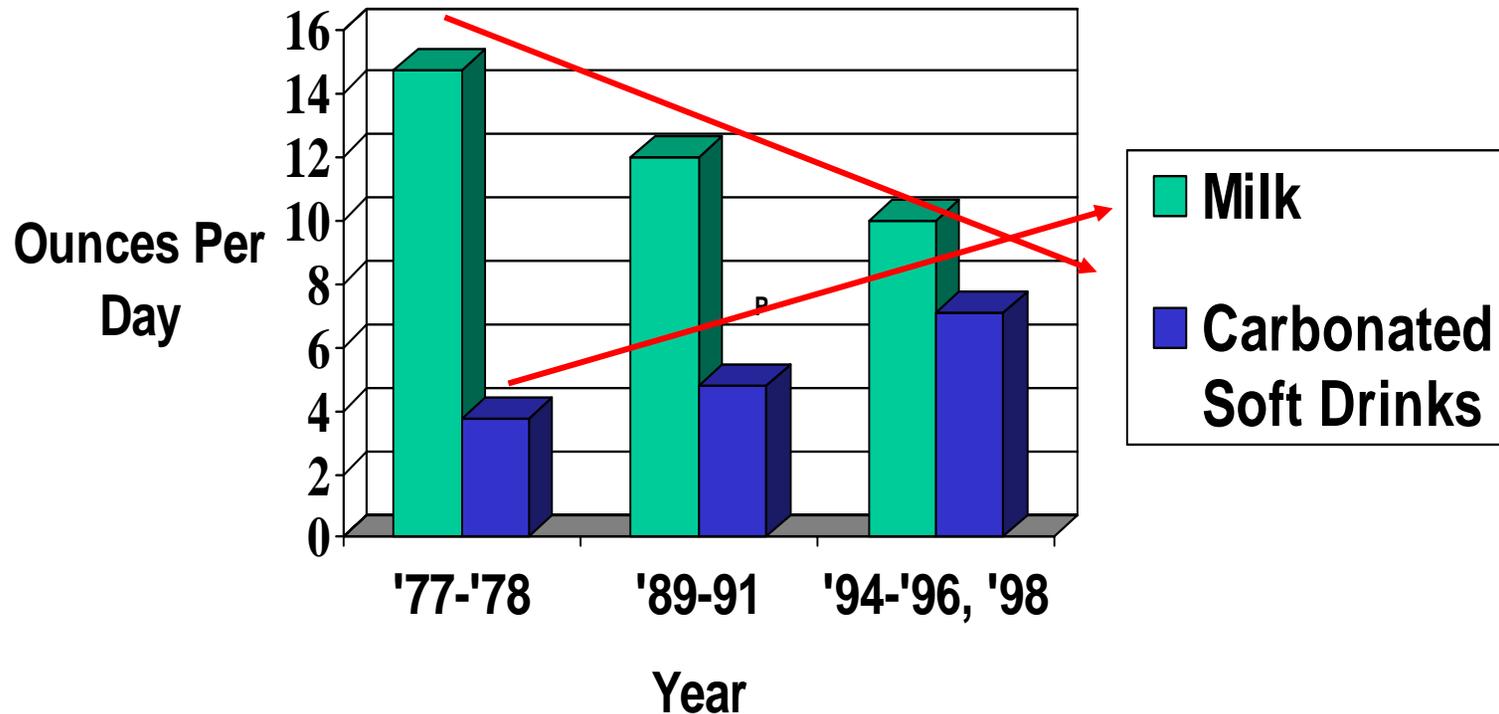


Risk of Death

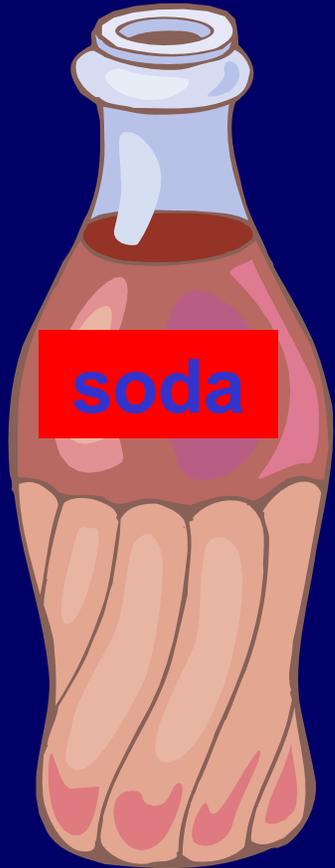


We have changed what we drink

Girls (6-11 years old)



ONE 20 oz SODA per day



- *17 teaspoons of SUGAR*
- *250 calories*
- *4 hrs bicycling*

**Two many calories
consumed, too few
burned**



**Hardee's introduces
new
Mega-Calorie
“Monster
Thickburger”**

- **1,420 calories**
- **107 grams of fat**
- **7.1 hours of moderate walking**

Fitness of California's Children

Annual California Fitnessgram

- **Conducted in Grades 5, 7, and 9**
- **Measures 6 major fitness areas**
(e.g. aerobic capacity, body composition, flexibility)
- **2004 Results: Who passed all standards?**
 - 25% → Grade 5**
 - 29% → Grade 7**
 - 26% → Grade 9**

Schools

- Since World War II
 - Number of Schools declined 70%
 - Average School Size
 - grew fivefold, from 127 to 653 students





Overall: Compared to 1969

Americans drive:

- **88% farther to shop**
- **137% farther for errands**



Mega-Mileage Moms

- **Family “chauffeur”**
- **Average minutes per day spent in car:**
 - **Women overall: 64 minutes**
 - **Single mothers: 75 minutes**

We have changed how much we walk or bike

- Percent of children who walk or bike to school:

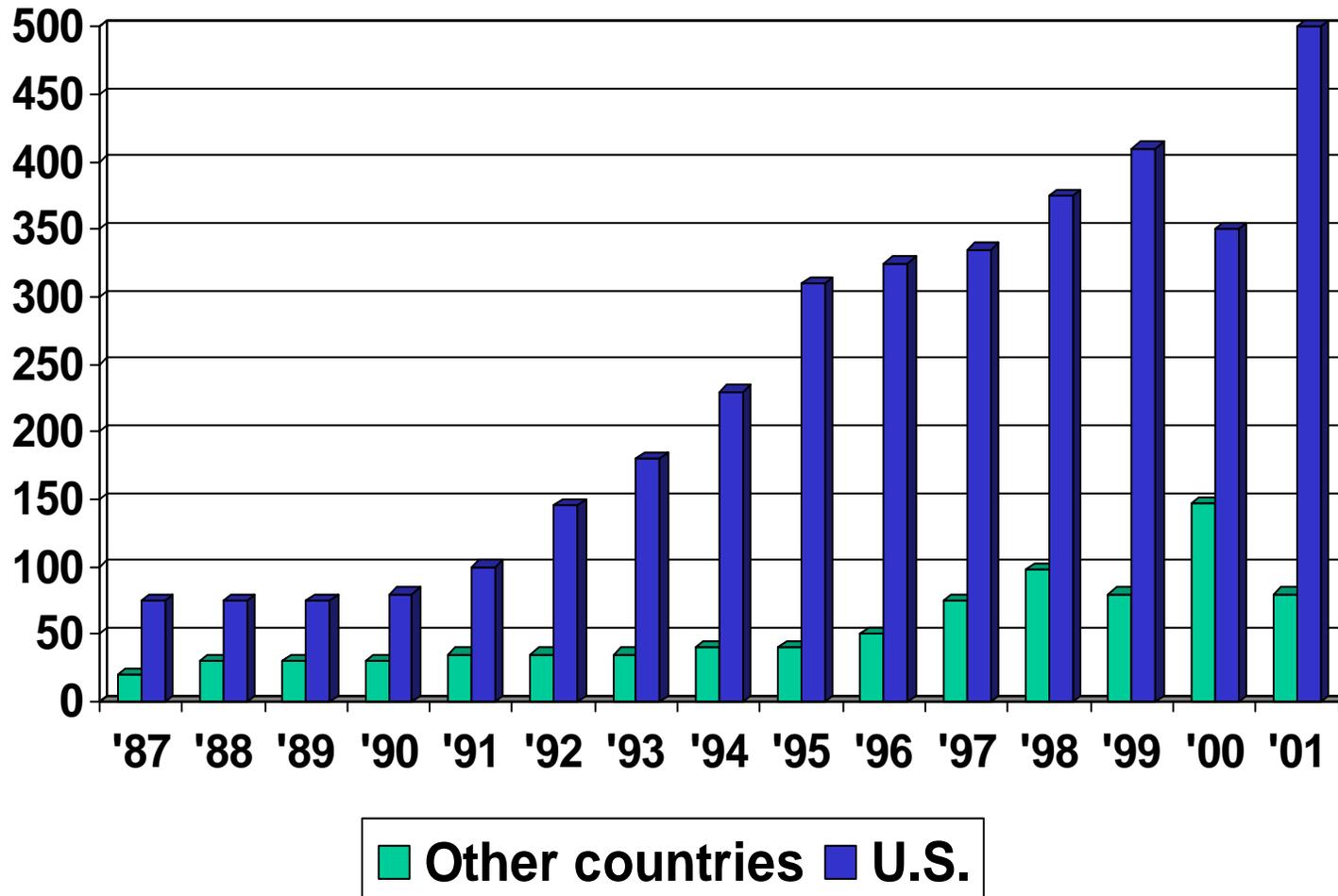
- 1974: **66%**

- 2000: **13%**

(CDC, 2000)



Methylphenidate (Ritalin) Consumption, United States and Elsewhere: 1987 - 2001



Source: Science, Vol. 289, 4 August 2000, p. 721 and International Narcotics Control Board, 2002

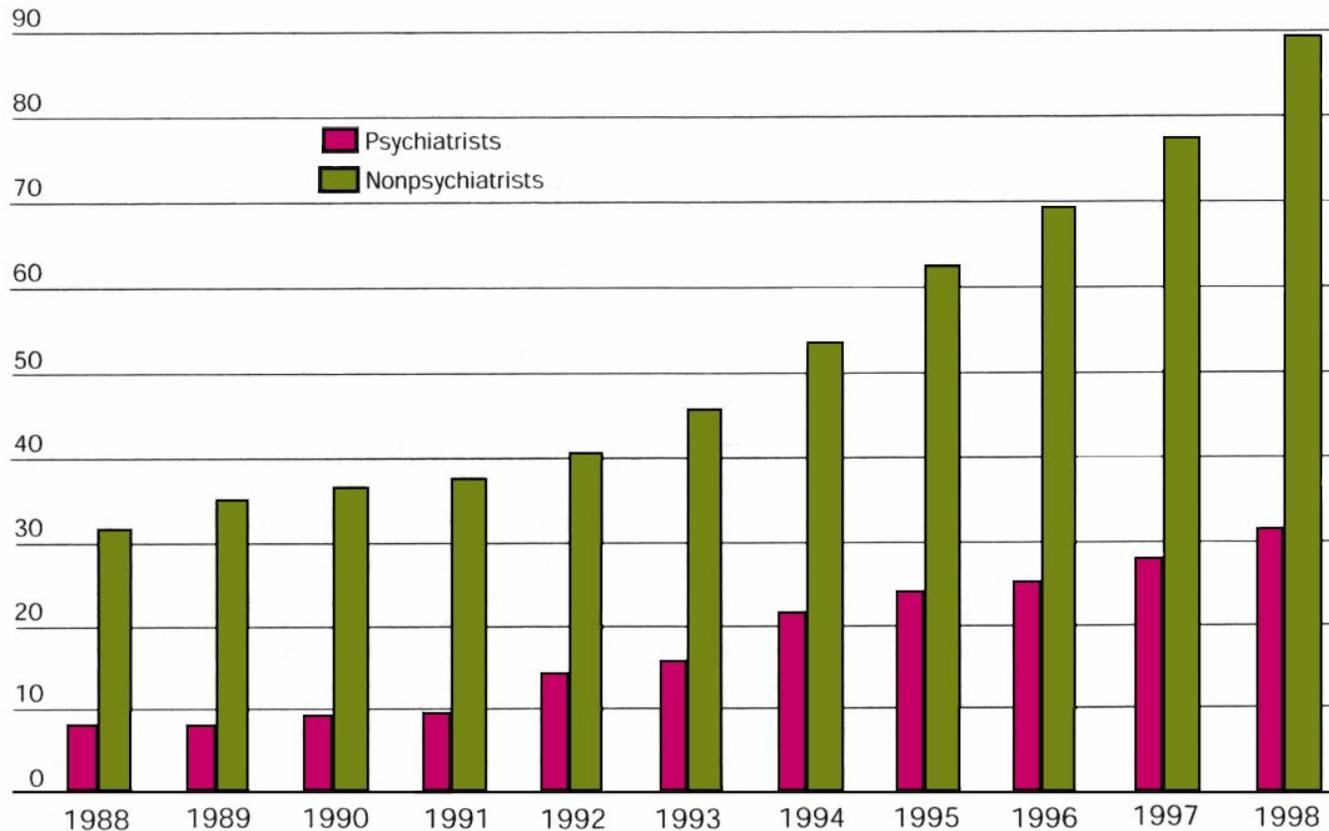
19 million
American
adults

Supersized Rates of Depression

- Leading cause of disability in the U.S. and worldwide

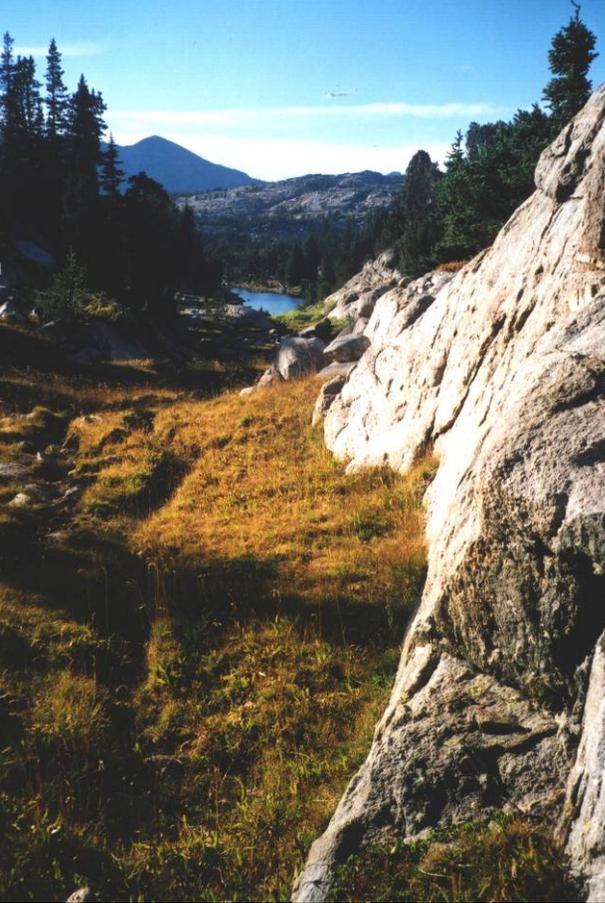
Antidepressant Prescriptions By Physician Specialty, 1988–1998

Millions of prescriptions



SOURCE: IMS Health, Inc.
HEALTH AFFAIRS - Volume 19, Number 4





Wind River Range

September 2001



Creating A Healthy Environment:

The Impact of the Built Environment on Public Health

In its broadest sense, environmental health comprises those aspects of human health, disease, and injury that are determined or influenced by factors in the environment. This includes not only the study of the direct pathological effects of various chemical, physical, and biological agents, but also the effects on health of the broad physical and social environment, which includes housing, urban development, land-use and transportation, industry, and agriculture.

*—Healthy People 2010,
U.S. Department of Health and Human Services¹*



Richard J. Jackson, MD, MPH
Chris Kochtitzky, MSP

Centers for Disease Control and Prevention

Sprawl Watch Monograph November 2001

United States: Carbon Dioxide Produced

- 1949 276
- 1965 390
- 1980 652
- 2004 1024

In Millions of Metric Tons

Mauna Loa CO₂ readings

- Pre-Industrial Revolution 275 ppm
- Late 1950s 315 ppm
- 2006 380 ppm



Carbon loading of Atmosphere: Traveling just one mile

- Walk: 1 gram
- A good car: 450 grams

1/6th of the CO₂ increase from Deforestation



Jeffrey S. Otto/Wilmington Star-News

A former swamp near Wilmington, N.C., has been drained and converted to a tree farm.

Sprawl Seen to Hurt South's Forests

Replacing Woods With Tree Farms

By KATHARINE Q. SEELYE

WASHINGTON, Nov. 26 — The Forest Service has concluded in a study released today that the biggest threat to Southern forests is urban sprawl, a finding that to some degree absolves the timber industry for the effects of a logging boom that has transformed the South in recent decades.

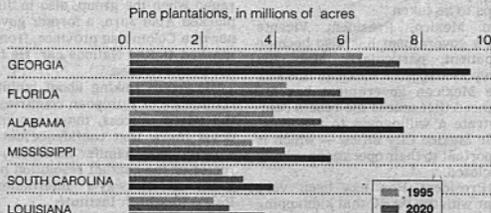
"Among forces of change, urbanization will have the most direct, immediate and permanent effects on the extent, condition and health of forests," the study found.

The study, an assessment of South-

AT ISSUE

In the South, More Pine Plantations

A report on forests in the South forecasts that the number of acres devoted to pine plantations will sharply increase over the next several decades in all of the states studied except Kentucky.



New York Times, Nov 27 2001

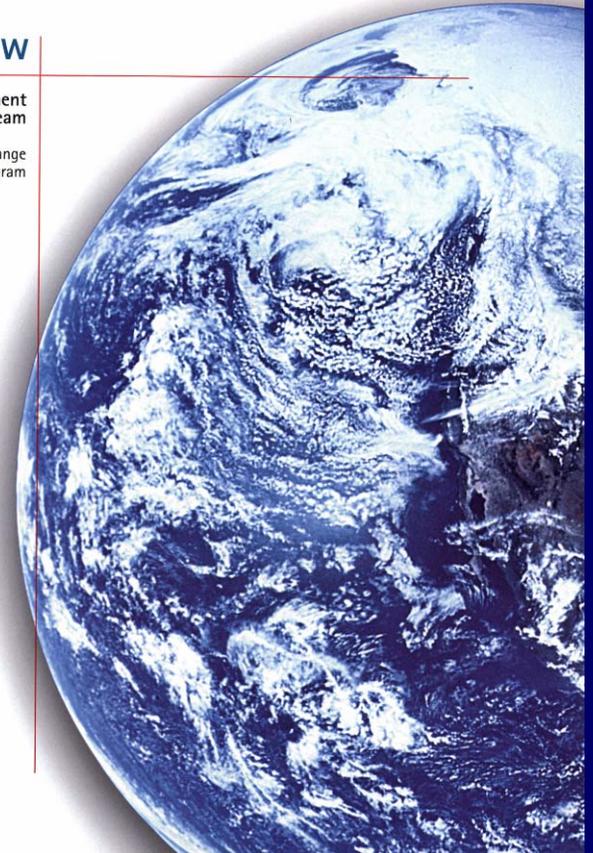
CLIMATE CHANGE IMPACTS ON THE UNITED STATES

THE POTENTIAL CONSEQUENCES OF CLIMATE VARIABILITY AND CHANGE

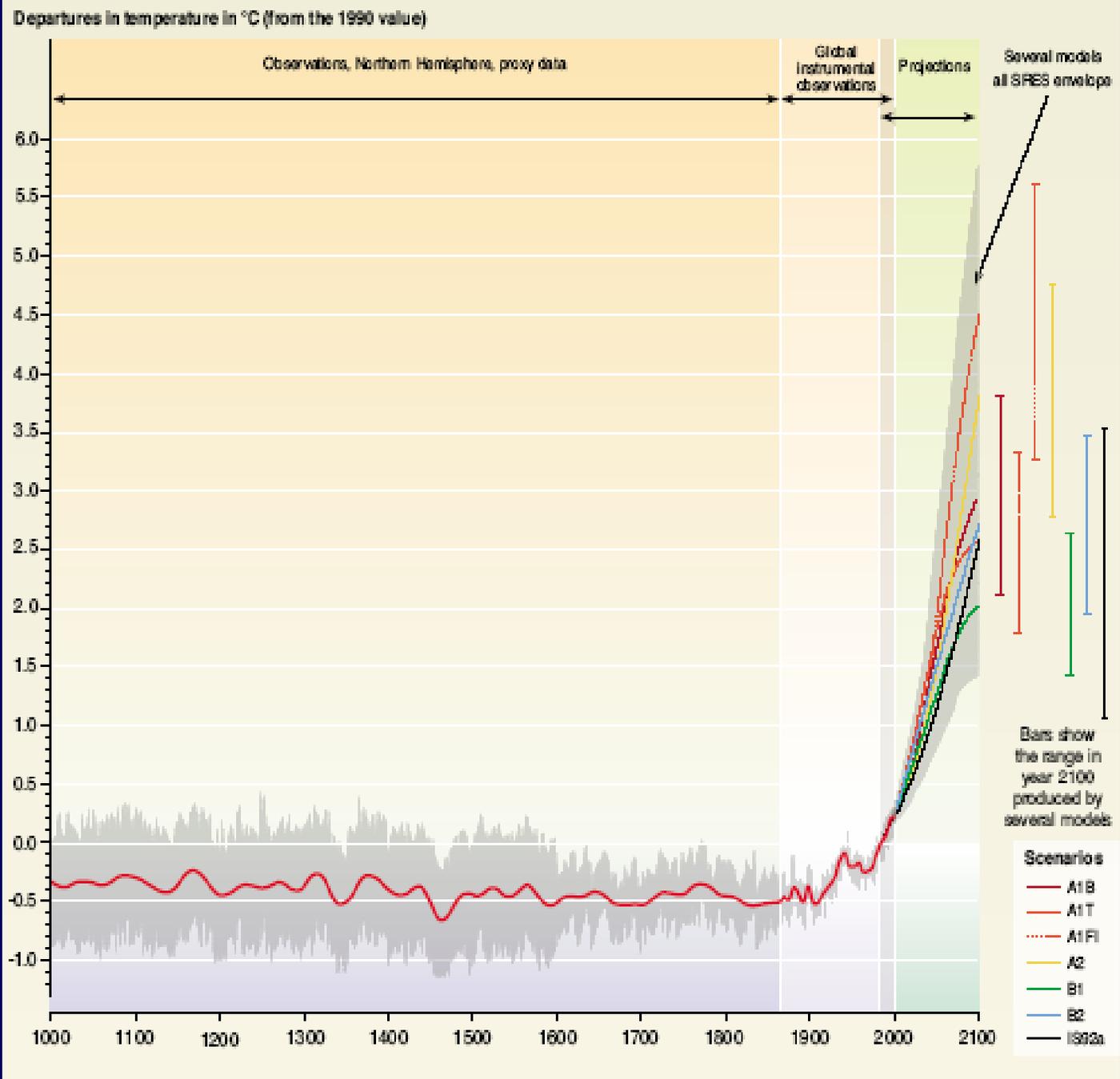
Overview

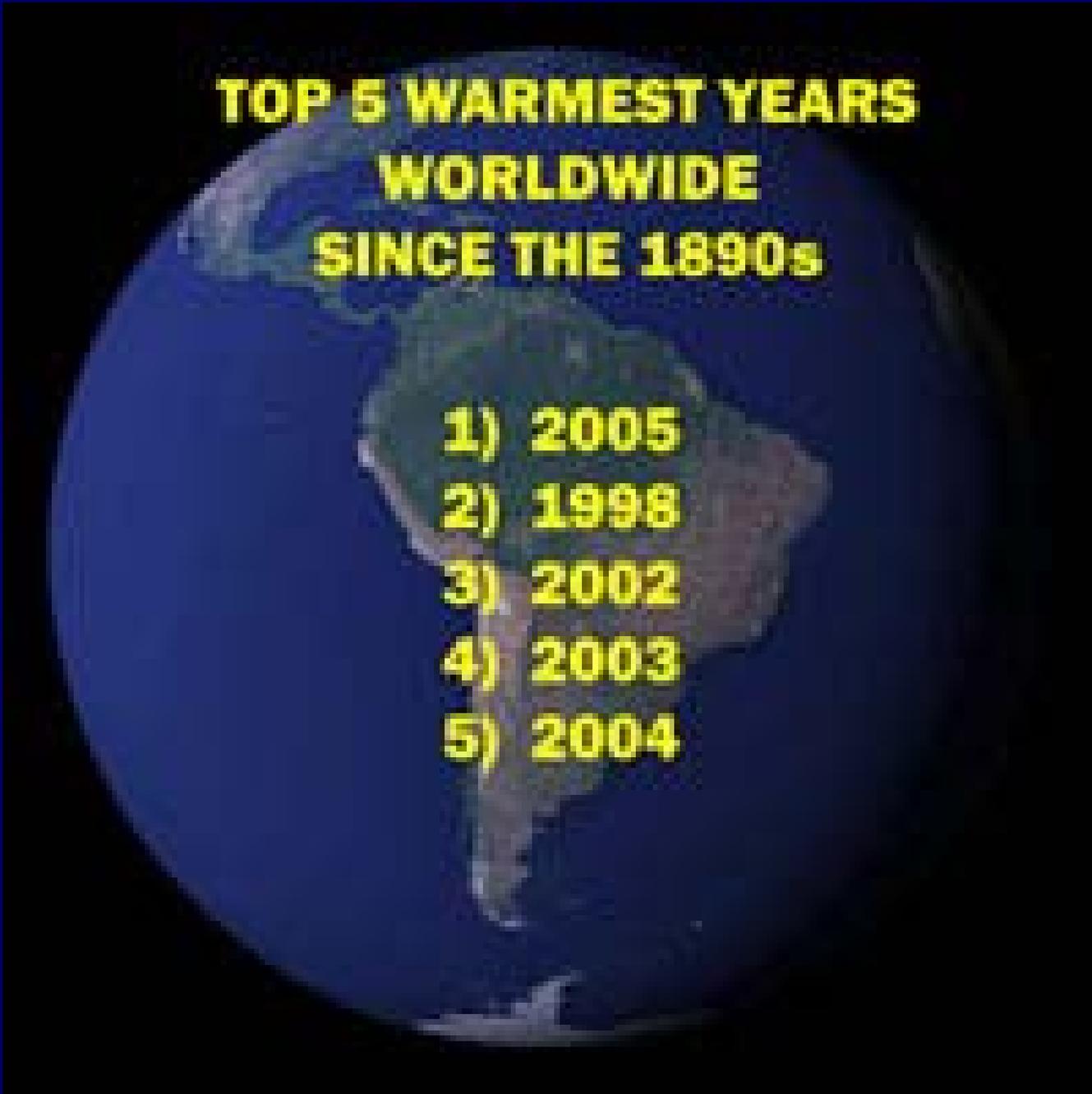
National Assessment Synthesis Team

US Global Change Research Program



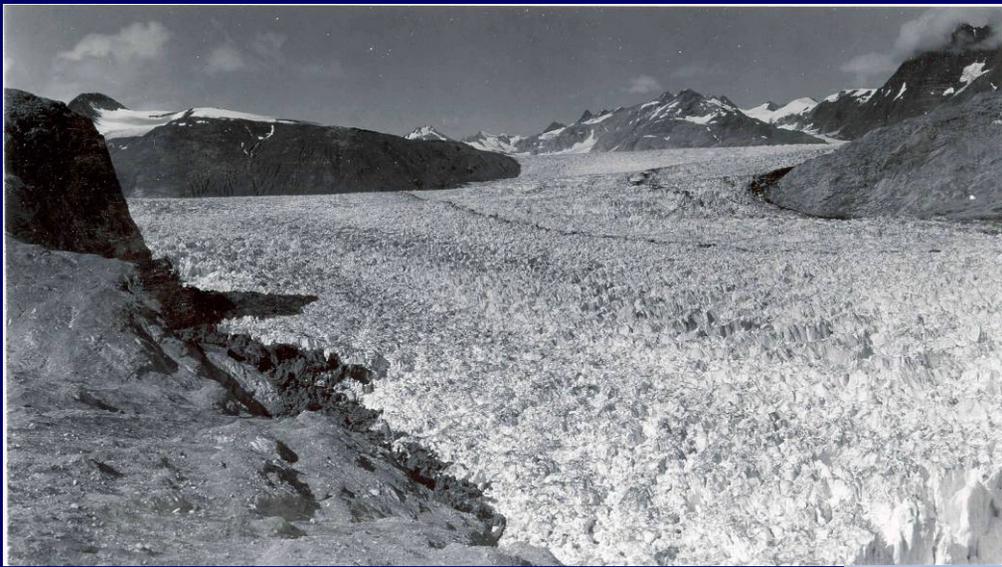
Earth's Surface Temp. Years 1000 to 2100





**TOP 5 WARMEST YEARS
WORLDWIDE
SINCE THE 1890s**

- 1) 2005**
- 2) 1998**
- 3) 2002**
- 4) 2003**
- 5) 2004**



Muir Inlet & Glacier - Riggs Glacier 1941-2004

We Supersize Our Climate Impact

Sierra Snowpack

% Remaining, Relative to 1961-1990

2020-2049

2070-2099

HadCM3 lower

HadCM3 higher

HadCM3 lower

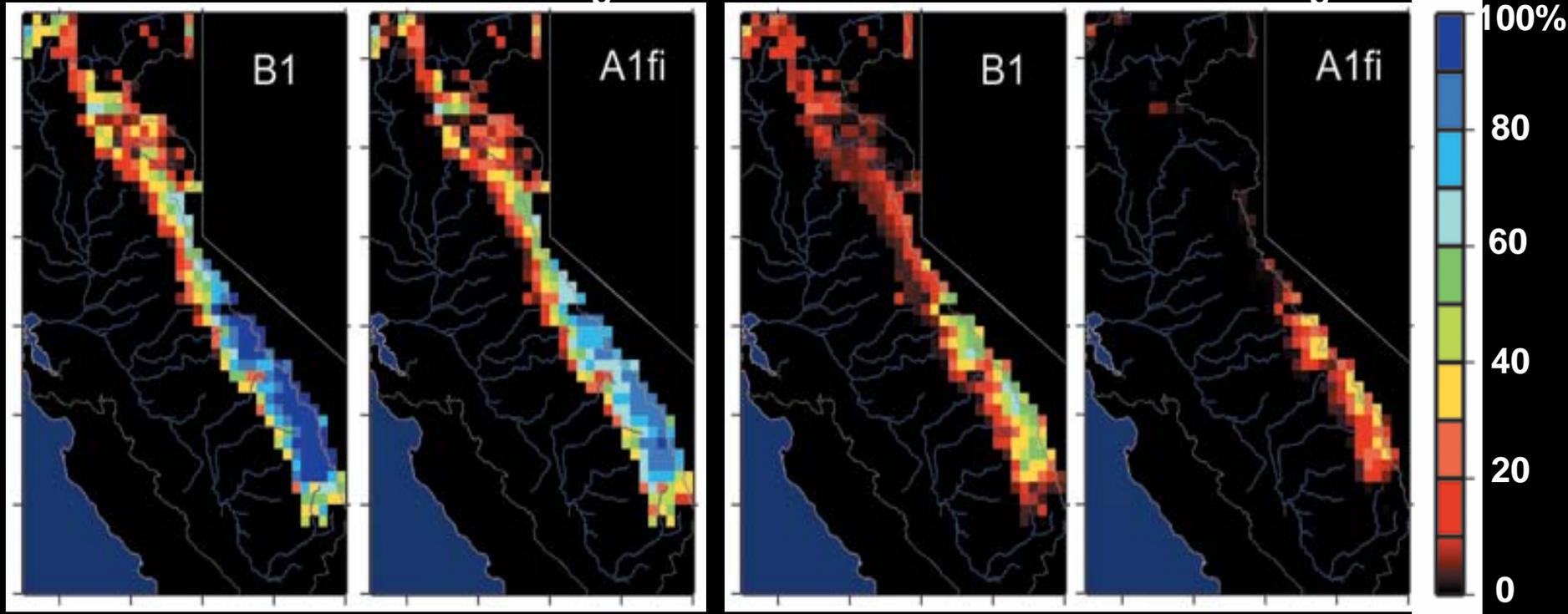
HadCM3 higher

B1

A1fi

B1

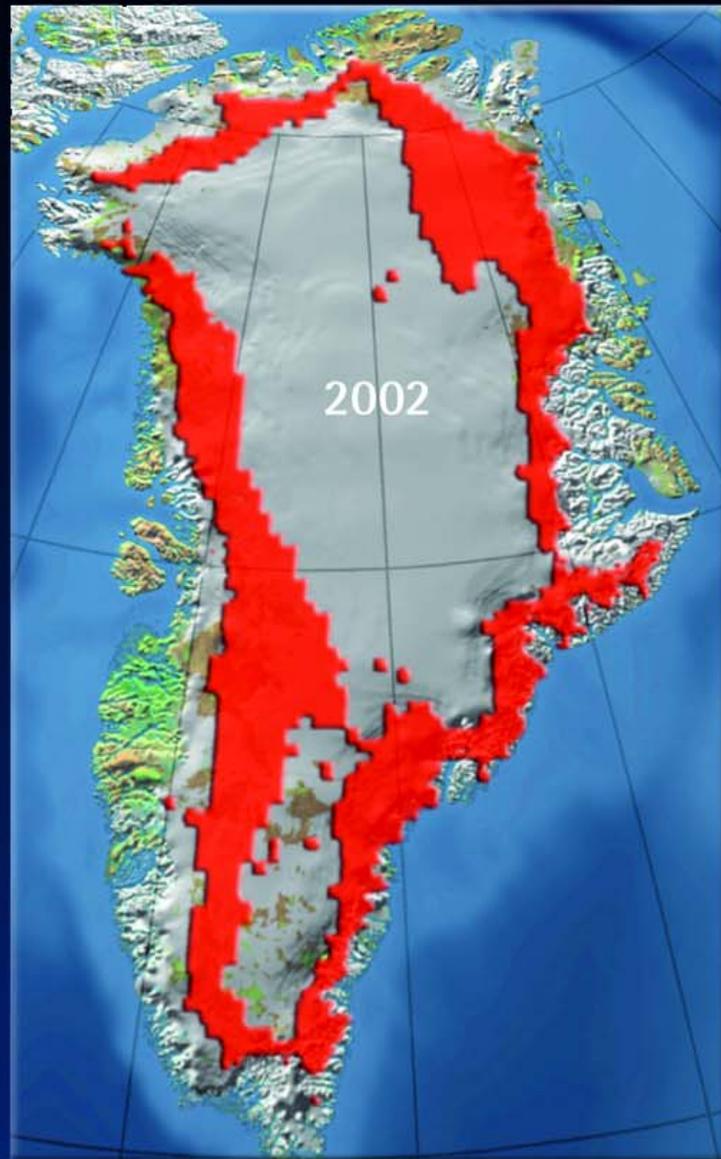
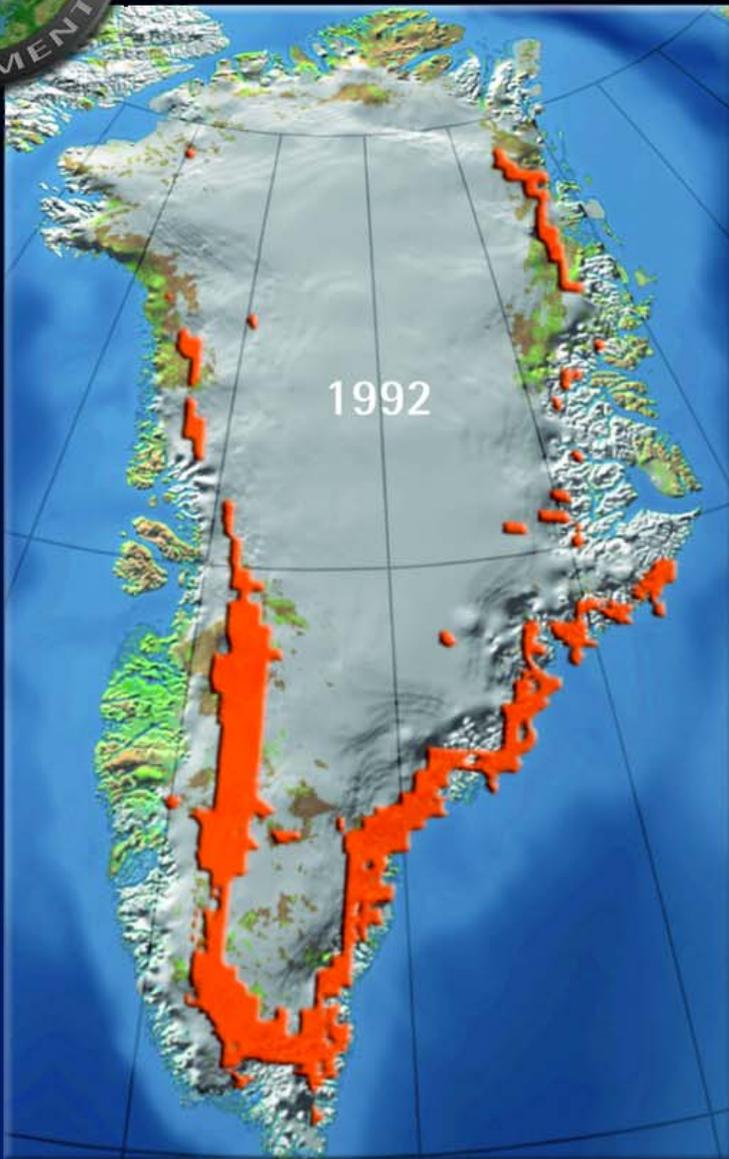
A1fi





IMPACTS OF A WARMING ARCTIC

Greenland Ice Sheet Melt Extent





Arctic Sea Ice

- The projection is that within about 60 years, there will be no summer ice at all on the Arctic Ocean.



Urban Sprawl, Physical Activity, Obesity, and Morbidity

“Those living in Sprawling counties were likely to walk less ($p=.004$), weigh more ($p<.001$), and have a greater prevalence of hypertension ($p=.018$) than those living in compact counties.” (average six pound difference)

Ewing R et al: American Journal of Health Promotion
18 (1) Sept/Oct 2003



LOUIE FAVORITE / Staff

Drs. Richard Jackson (from left) and Andrew Dannenberg of the Centers for Disease Control and Prevention and Dr. Howard Frumkin, a professor of public health at Emory University, have seen a connection between community design and public health.

Sprawl: Unwalkable suburbs have health pros concerned

“Health pros link sprawl with spread; Suburbs, obesity stir debate”

(headline)

Atlanta Journal Constitution

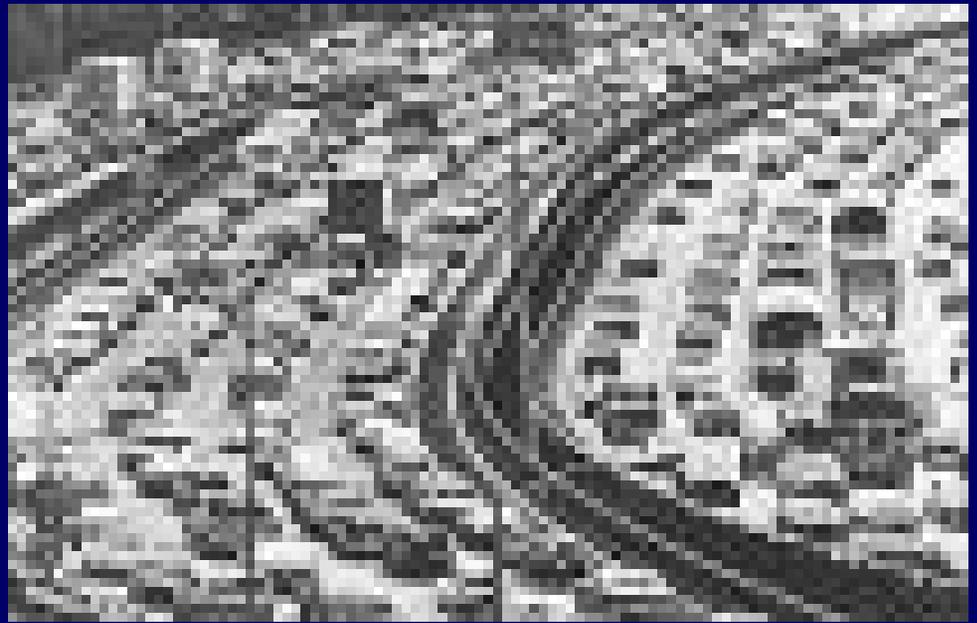
November 17, 2003 Reporter: Janet Frankston

"I think that the government's goal is to maximize our happiness --- usually by letting us freely make our own decisions --- not to force us to be healthier than we want to be"

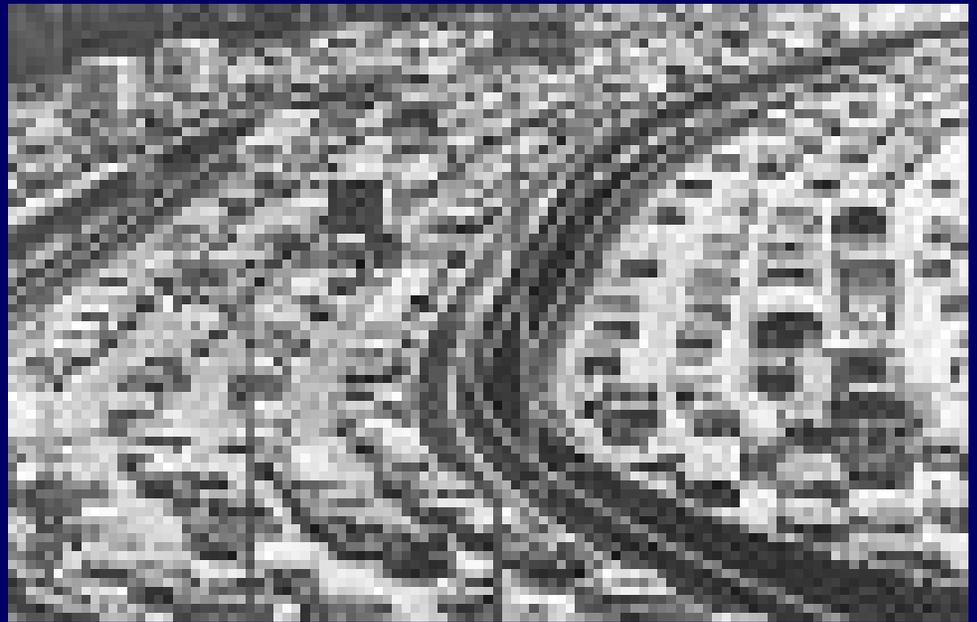


Edward L. Glaeser, an urban economist at Harvard University.

“Americans are so car-oriented that will be hard to return to a pedestrian world.”



“Americans are so car-oriented that will be hard to return to a pedestrian world.”



- "Unsurprisingly, the free market has come up with its own walking cities that are surely more popular than anything the smart-growth advocates are going to come up [with],"

"They are called shopping malls"



Edward L. Glaeser,
urban economist
Harvard University



Atlanta Journal Constitution

November 17, 2003

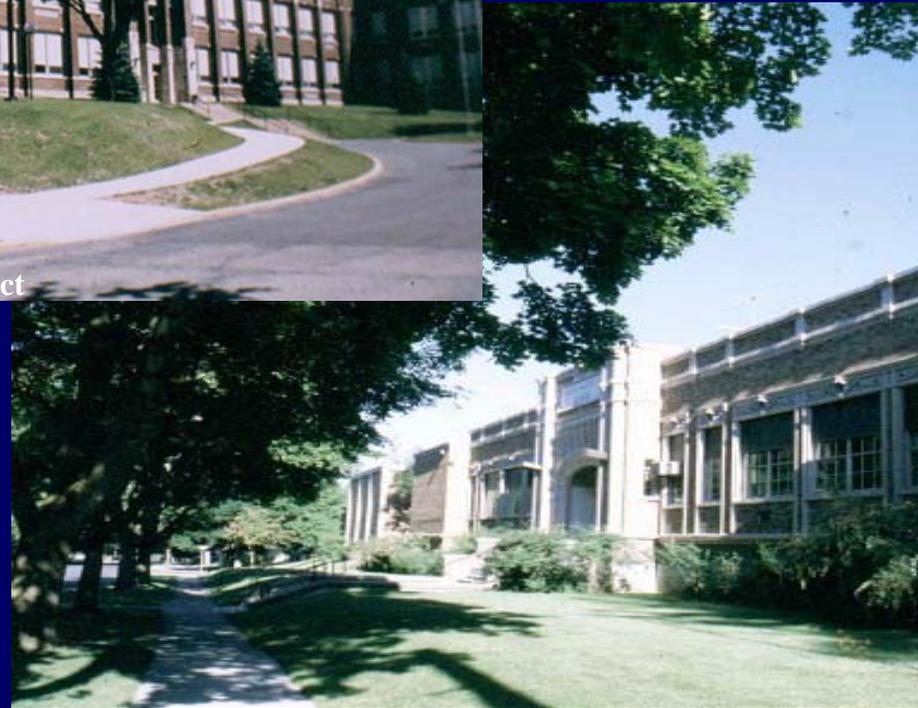
Pre-1940 Schools



Credit: Manitovic Public School District



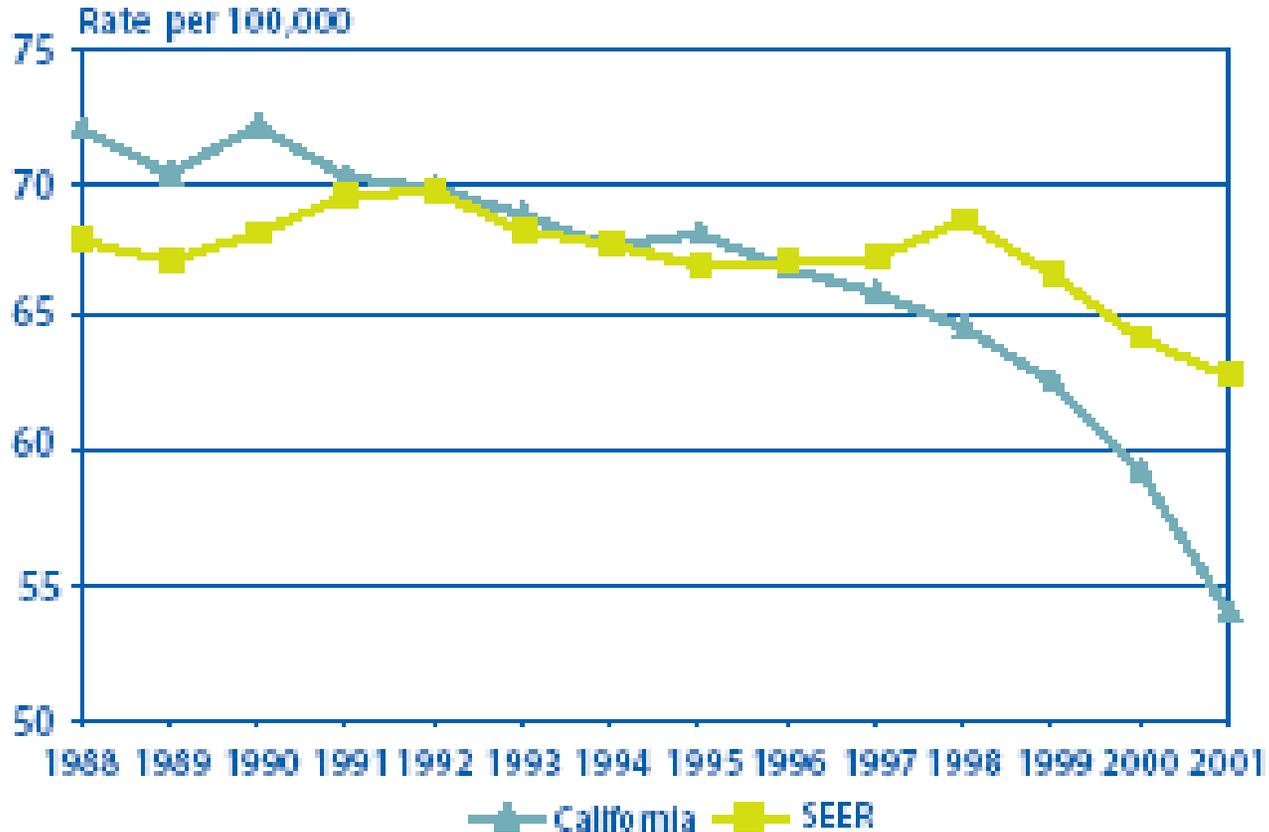
Credit: Hummel Architects, Boise, ID



Credit: Constance E. Beaumont, NTHP

Lung Cancer Incidence: California Vs. Rest of U.S.

1988-2001



U.S. minus CA
(SEER)*: ↓ **5.9%**

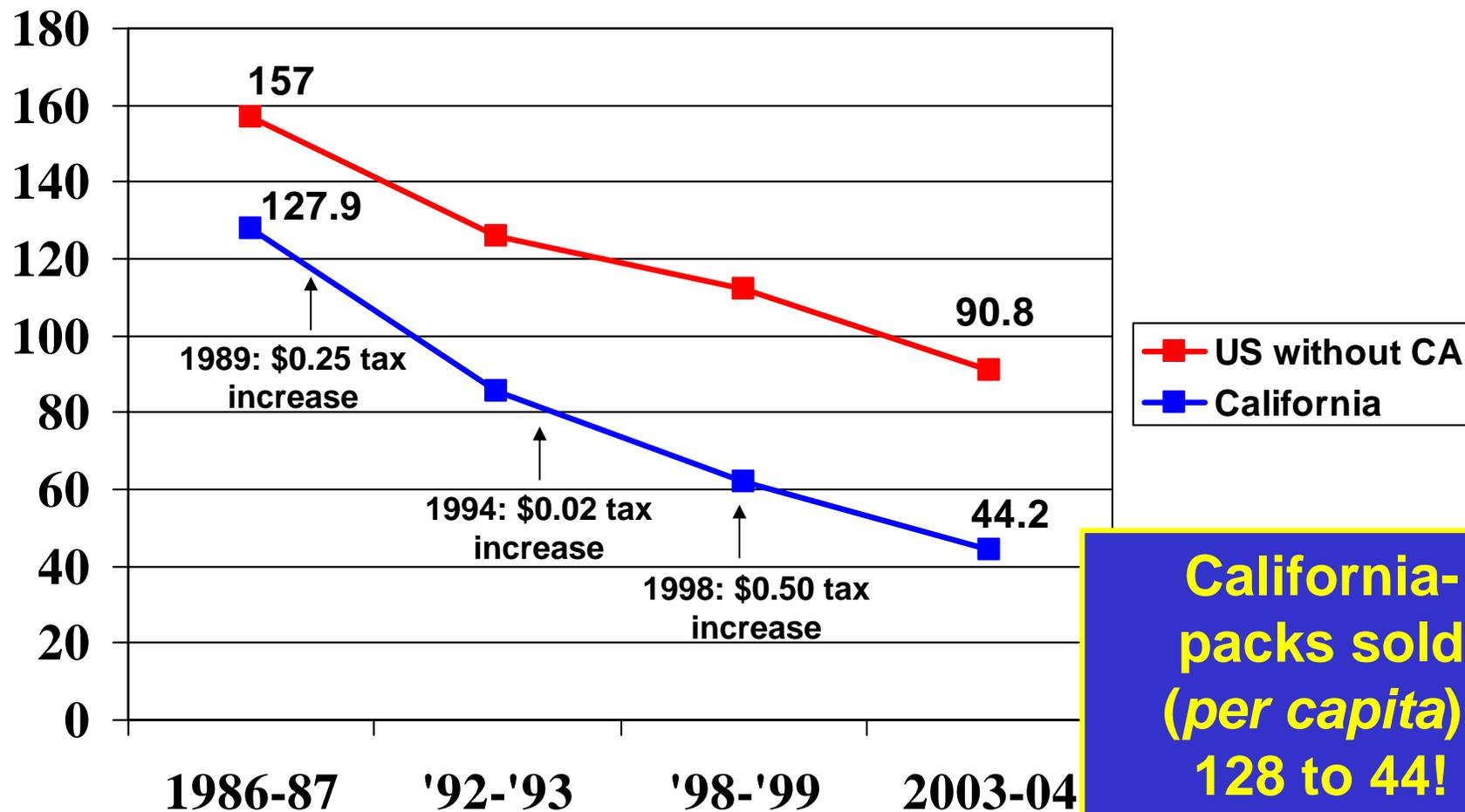
California: ↓ **19.5%!**

Note: Rates are age-adjusted to the 2000 US population.

Source: California Cancer Registry, California Department of Health Services.
Prepared by the California Department of Health Services, Cancer Surveillance Section.

***SEER includes 14 cancer registries from across U.S**

California vs. Rest of US: Adult Cigarette Consumption 1984 to 2004



We are at the Tipping Point

Institute of Medicine

*The purpose of public health is
to fulfill society's interest in*

..... ?

Institute of Medicine

*The purpose of public health is
to fulfill society's interest in
assuring the conditions in which
people can be healthy*

10,000 Steps a Day

Originated from Japanese: "Manpo-Kei"



10,000 steps

- 3234 people with IGT (Pre-Diabetes)
- walked or exercised five times a week for 30 minutes
- lost 5% to 7% of their body weight
- reduced their risk of diabetes by 58%

Benefits of Physical Activity

- Life span increase: 2 years
- Risk of Cardiovascular Disease: 40% less
- Rates of High Blood Pressure and Diabetes: Reduced
- Risk of breast & colon cancer: Reduced
- Mood and mental health status: Improved
- Body Mass Index (BMI): Reduced
- Health care costs: \$300-\$400 less per year
- Cost: minimal

Surgeon General's Report, 1996

The Effectiveness of Urban Design and Land Use and Transport Policies and Practices to Increase Physical Activity: A Systematic Review

**Gregory W. Heath, Ross C. Brownson, Judy Kruger,
Rebecca Miles, Kenneth E. Powell, Leigh T. Ramsey,
and the Task Force on Community Preventive Services**

Background: Although a number of environmental and policy interventions to promote physical activity are being widely used, there is sparse systematic information on the most effective approaches to guide population-wide interventions. *Methods:* We reviewed studies that addressed the following environmental and policy strategies to promote physical activity: community-scale urban design and land use

Increasing Physical Activity (PA) in Communities (Strength of Evidence)

- Creation of Places for PA and Info Outreach
- Urban Design and Land Use Changes—
 - Community Scale
 - Street Scale
- Strong Evidence
- Sufficient Evidence

Community Guide to Preventive Services 2006

STEPHEN A. McCURDY, M.D.
Occupational & Environmental Medicine
One Shields Ave.
DAVIS, CA 95616-8638
(530) 752-8051

Lic. # G48070
DEA # BM2226656

PRI040816136073 00001

THIS DOCUMENT CONTAINS VOID PANTOGRAPH, MICROPRINTED SIGN. LINE, REVERSE RX, SECURITY BACKPRINT
THERMOCHROMATIC INK FEATURE, NUMBERING, PRINTED ON SAFETY PAPER

Name Richard Jackson, MD MPH

Address _____

Date 10/17/04

Arise one hour earlier than usual.
Follow with 1/2 hour sweaty
exercise, with additional 10 min
stretching and calisthenics.
Enjoy day. Repeat 4-6 d/week

- 1-24
 25-49
 50-74
 75-100
 101-150
 151 and over

Units

Refill NR 1 2 3 4 5

unlimited

Void after _____

S. McCurdy, MD, MPH

Do Not Substitute-Dispense As Written

Signature

Prescription is void if more than one (1) controlled substance prescription is written per blank.



9th Annual California Health Care Leadership Academy

REENGINEERING HEALTH CARE

Meeting Future Expectations Without Breaking the Bank

MAY 5-7, 2006 INDIAN WELLS, CALIFORNIA



THE OBESITY EPIDEMIC: THE TIME TO ACT IS NOW!

Community Outreach Training for Physicians

Thursday, May 4: 1:00 – 4:00 pm

Obesity is the defining health issue of our time. Myriad social changes have combined to increase our intake of calories and lower our level of physical activity. The epidemic is having a major impact in California, which has experienced one of the fastest rates of increase of obesity of any state in the nation. The time to act is now—and physician leadership is urgently needed. Who better than a physician to describe for policy makers the ravages caused by obesity in their communities, or to get parents' attention about the damage caused to their children by too much time in front of the TV and too much fast food and empty calories?

Join us to learn, train and map out a plan to turn the tide on the obesity epidemic in your community. This workshop will teach best practices in physician-led efforts to increase access to healthy foods and physical activity at the community level; how to communicate in a clear and persuasive manner the key issues related to the obesity epidemic; how to influence local policy makers and the media to address the problem; how to identify community partners and resources for efforts to increase access to healthy foods and physical activity; and how to create workable plans that can impact the obesity epidemic in your community.

This program is presented free of charge by the California Medical Association Foundation. Approved for 3 hours of Category 1 CME credit.

California Medical Association Leadership Meeting -- Now

obesity epidemic in your community. This workshop will teach best practices in physician-led efforts to increase access to healthy foods and physical activity at the community level; how to communicate in a clear and persuasive manner the key issues related to the obesity epidemic; how to influence local policy makers and the media to address the problem; how to identify community partners and resources for efforts to increase access to healthy foods and physical activity; and how to create workable plans that can impact the obesity epidemic in your community.

An estimated 200,000 to 300,000 premature deaths occur each year in the US due to physical inactivity.¹⁻² Regular physical activity is associated with enhanced health and reduced risk for all-cause mortality.³⁻⁶ Beyond the effects on mortality, physical activity has many health benefits, including reduced risk of cardiovascular disease,^{7, 8} ischemic stroke,⁹⁻¹¹ non-insulin-dependent (type 2) diabetes,¹²⁻¹⁵ colon cancers,¹⁶⁻¹⁹ osteoporosis,²⁰⁻²² depression,²³⁻²⁶ and fall-related injuries.²⁷⁻³⁰

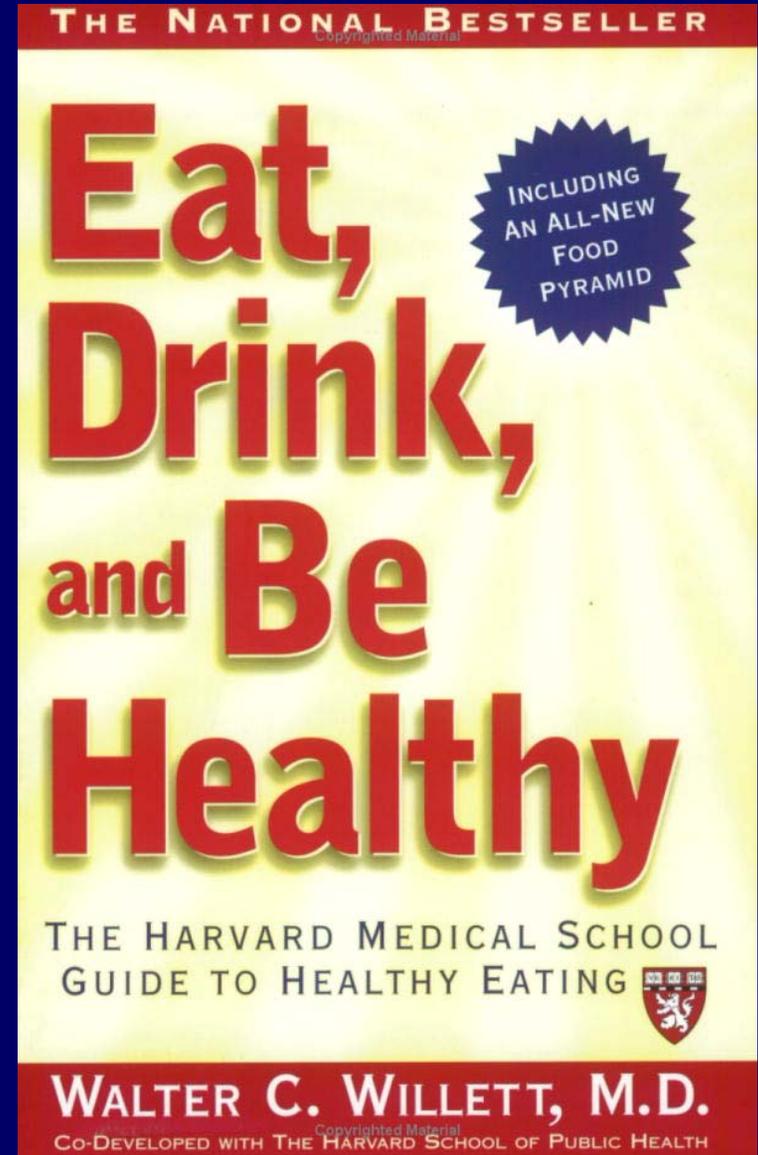
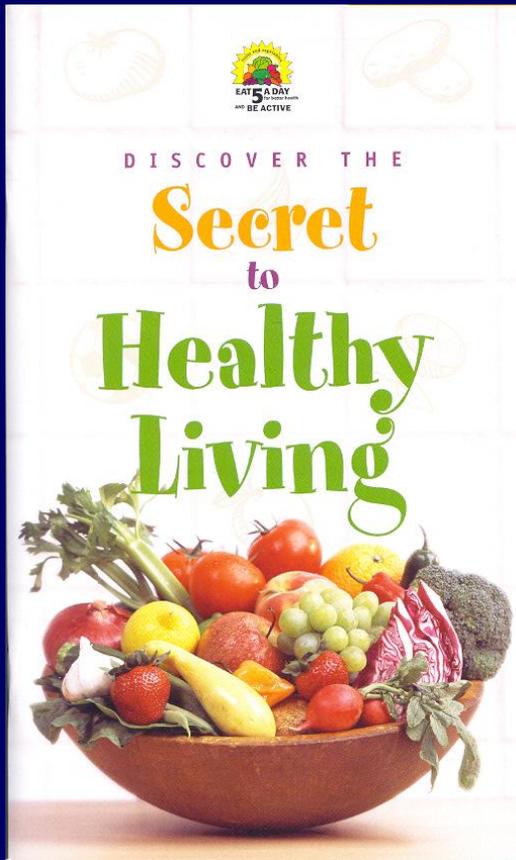
policy and practices to promote physical activity. *Conclusions:* Because community- and street-scale urban design and land-use policies and practices met the Community Guide criteria for being effective physical activity interventions, implementing these policies and practices at the community-level should be a priority of public health practitioners and community decision makers.

Challenges Ahead

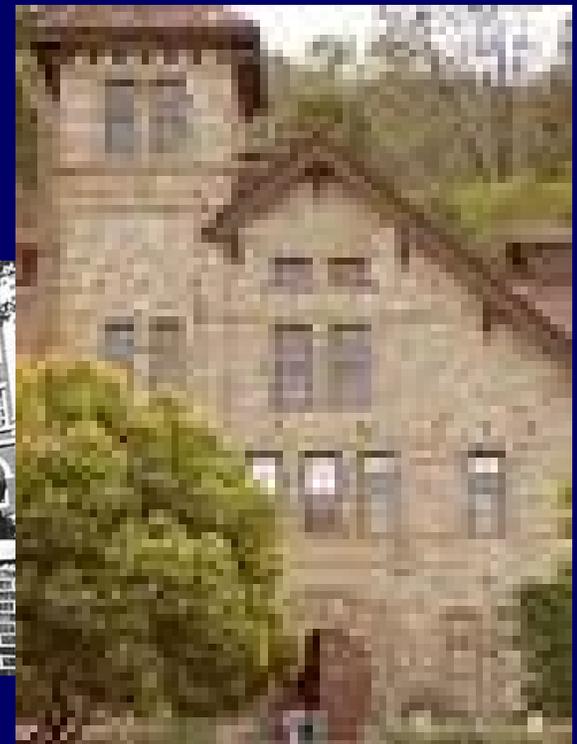
- Getting Americans to Eat Smarter

Personal Solutions: Diet

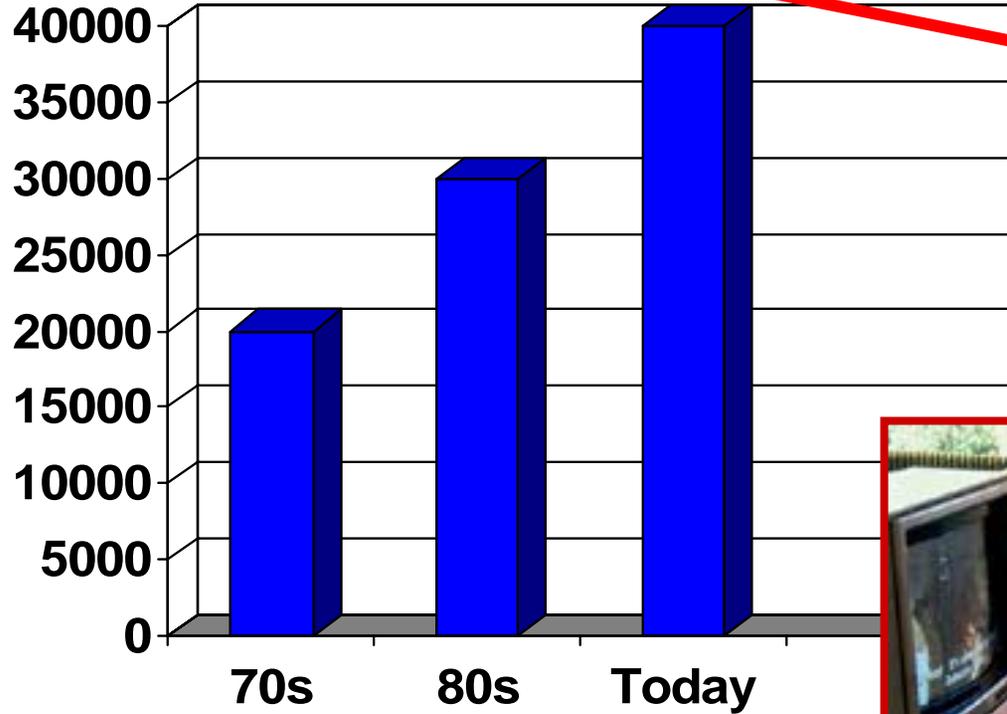
- What and how we eat



Culinary Institute of America

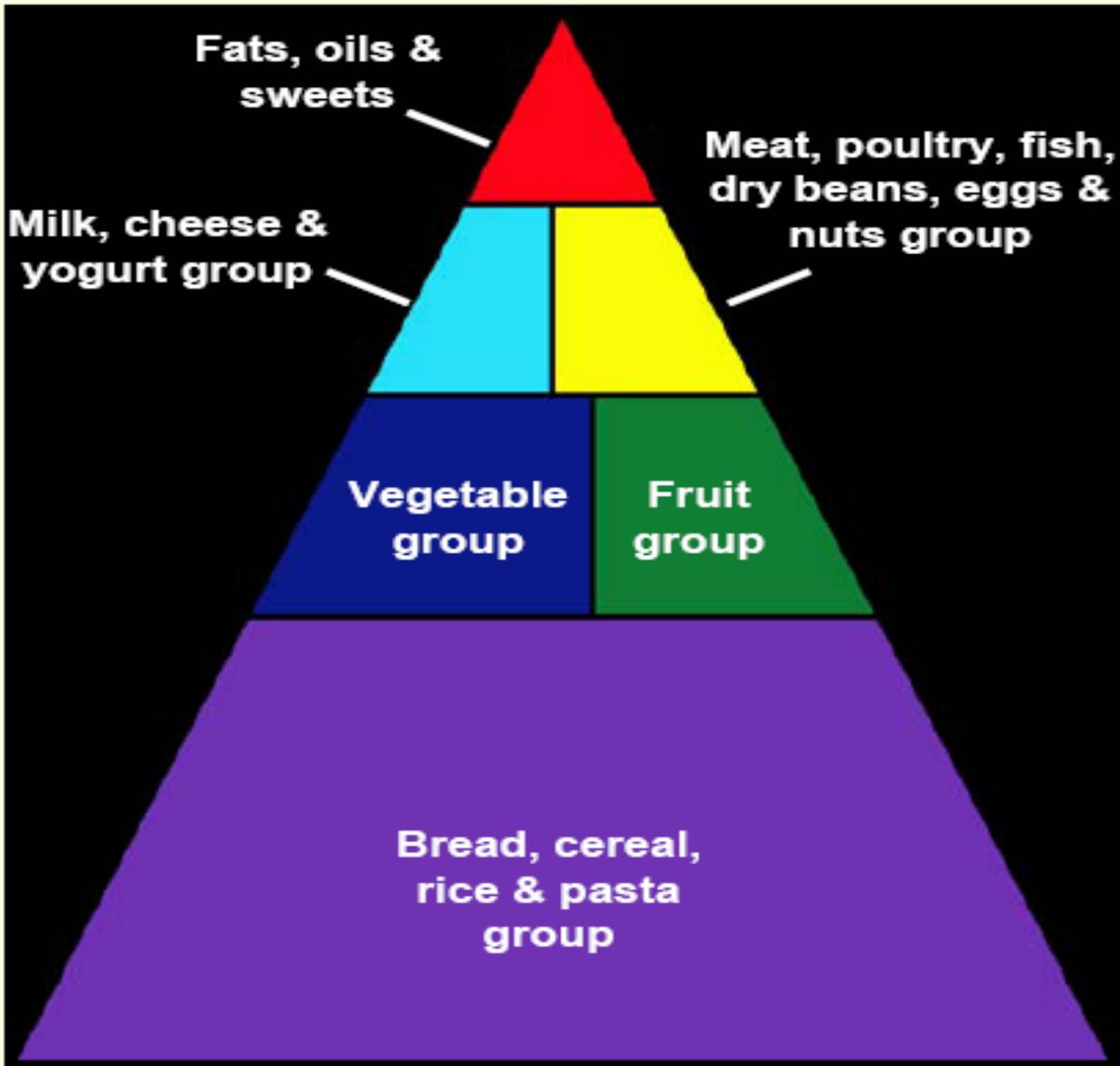


Supersizing Advertising :Number of TV Ads Seen By Children



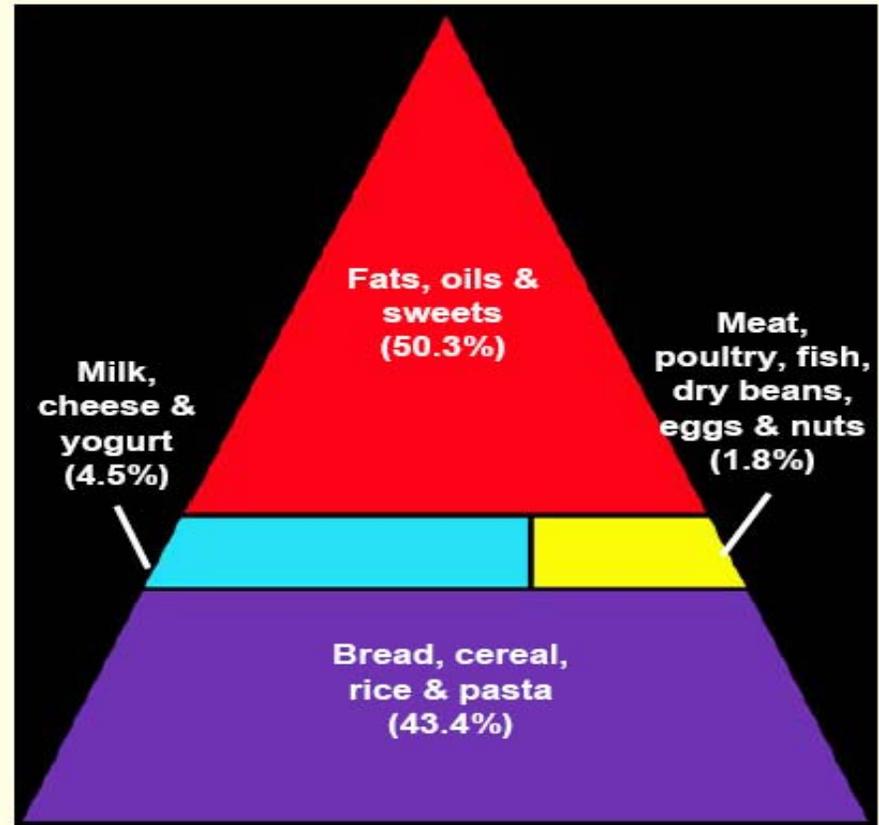
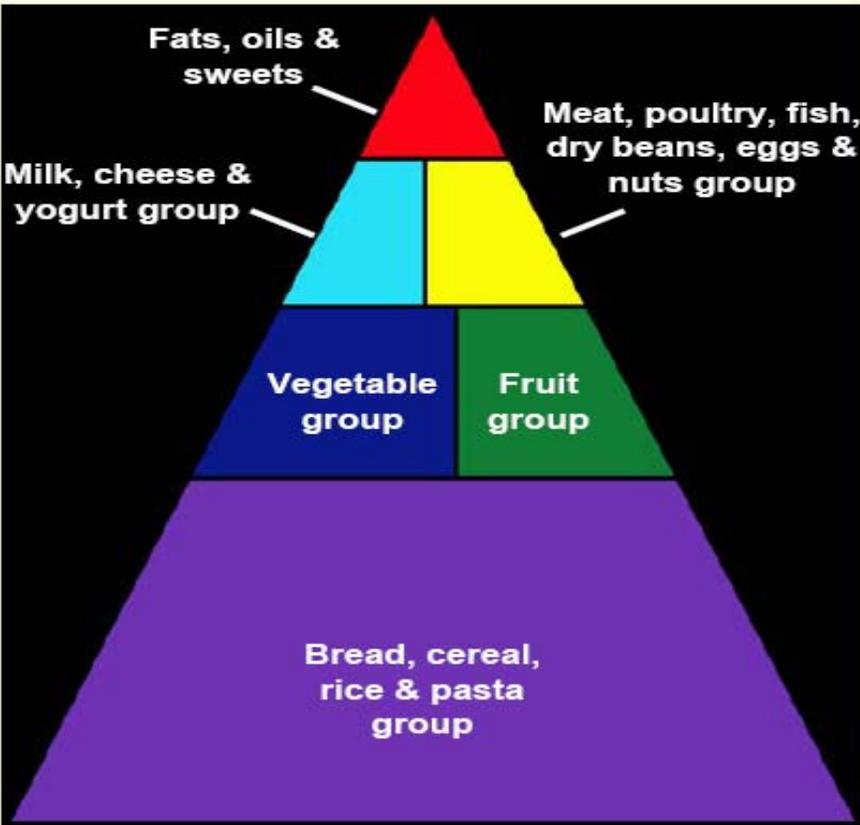
40,000 per year





The food pyramid for the last generation

The Food Pyramid for Advertising to America's children





"First of all, we in California this year are introducing legislation that would ban all the sale of junk food in the schools"

**-Gov. Arnold Schwarzenegger
March 6, 2005**

Food



Doof



High Fructose Corn Sugar

- US annual per capita consumption of HFCS
- 63 pounds



High Fructose Corn Sugar

- US annual per capita consumption of HFCS
 - 63 pounds
 - 114,545 calories
- Can convert to 28 pounds of body fat

High Fructose Corn Sugar

- **US annual per capita consumption of HFCS**
- **63 pounds**
- **114,545 calories**
 - **Can convert to 28 pounds of body fat**
- **You Can Burn this Off !**
 - **with 318 hours of Intense Exercise**
 - or**
 - **477 hours (12 work weeks) of Brisk Walking**

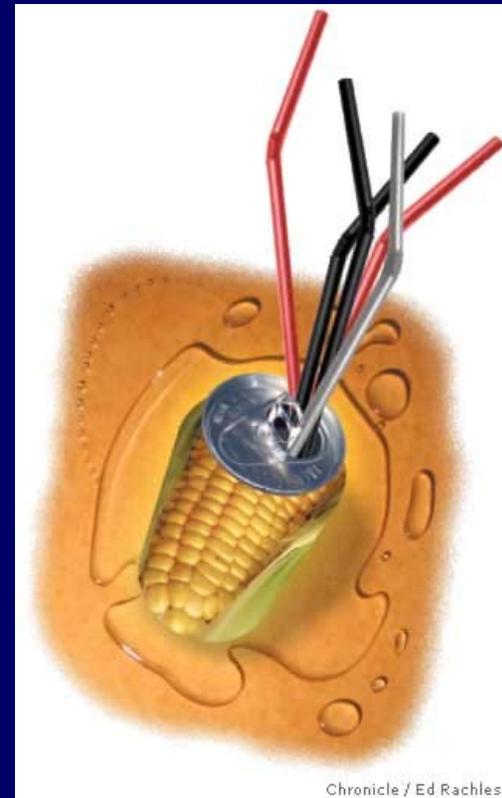
Institute of Medicine

*The purpose of public health is
to fulfill society's interest in
assuring the conditions in which
people can be healthy*

1 cent per teaspoon HFCS?

- Average American consumes 63 pounds of HFCS each year (6,048 teaspoons).
- CA population: 35.4 million
- \$0.01 per teaspoon HFCS would generate...

***\$2.1 billion a year in
California***



Challenges Ahead

- Getting Americans to Enjoy Life More

An Authors Guild **Backinprint.com** Edition

"Expands the common understanding of workaholism...will help many individuals recognize that they are not alone, that there may be more rewarding lifestyles."

—*Chicago Tribune*

Working Ourselves To Death

THE HIGH COST OF WORKAHOLISM AND THE REWARDS OF RECOVERY

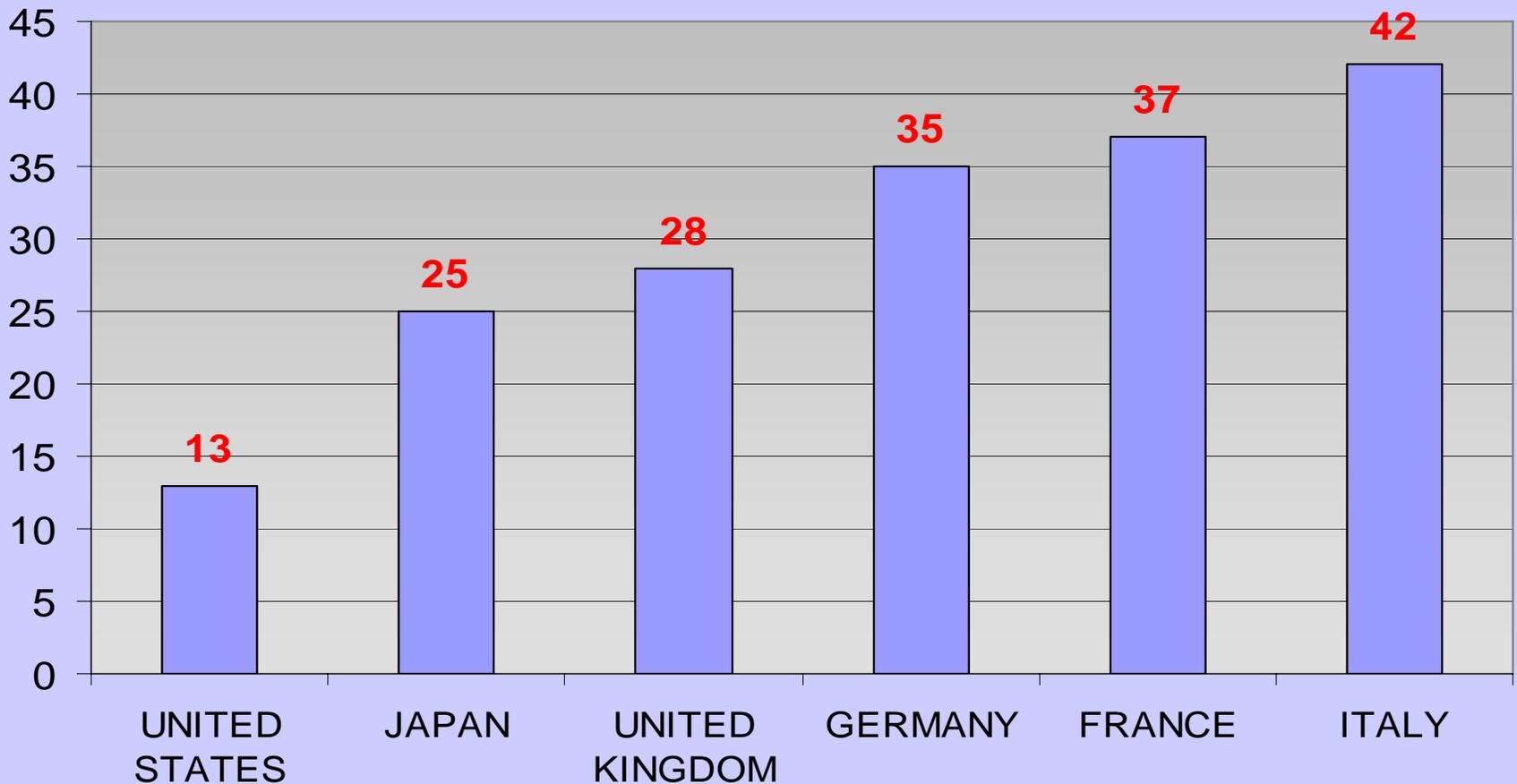


DIANE FASSEL

"Workers in the United States put in more hours than anyone else in the industrialized world."

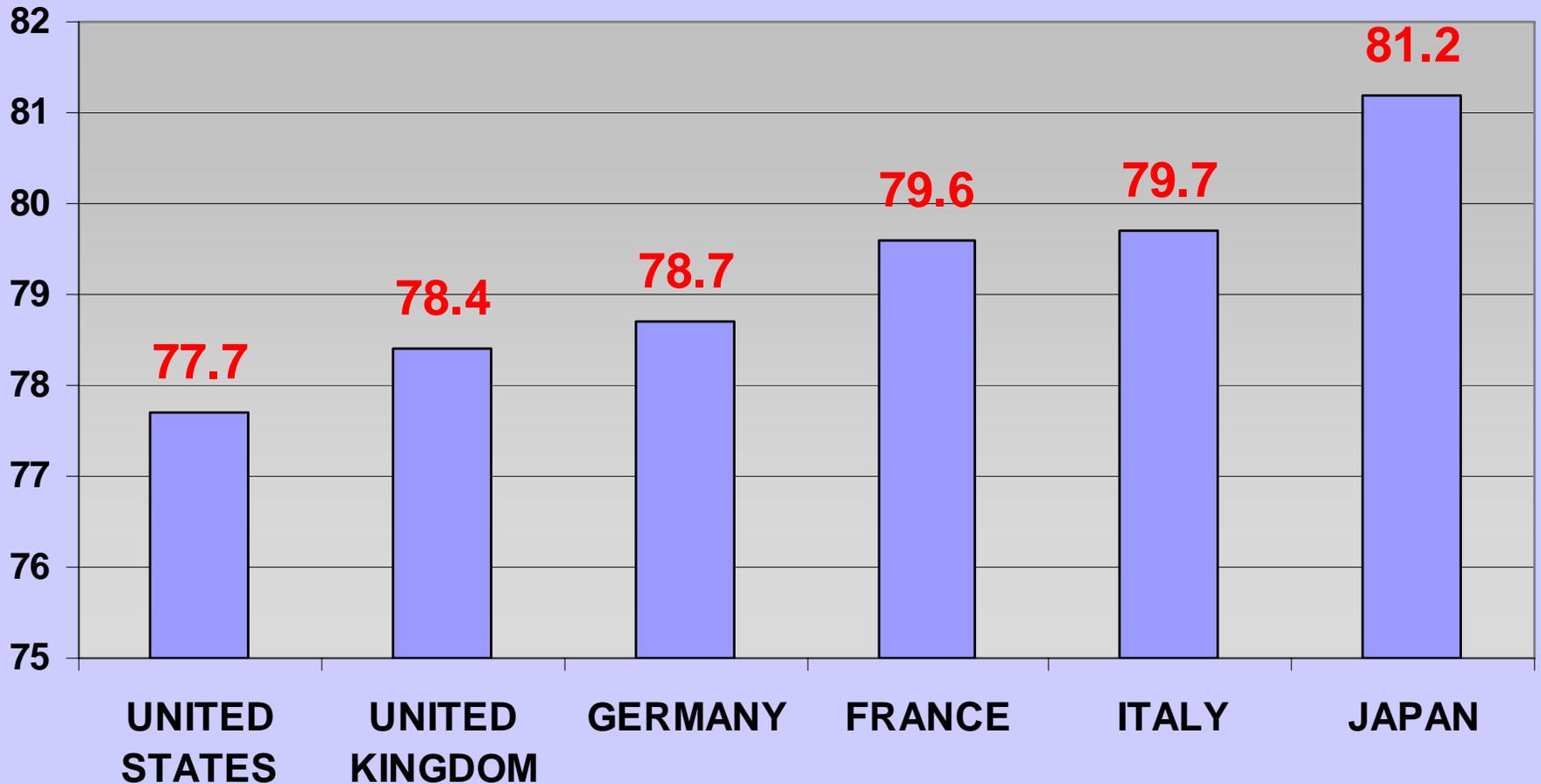
Compared to other industrialized nations, Americans take less vacation...

ANNUAL VACATION DAYS



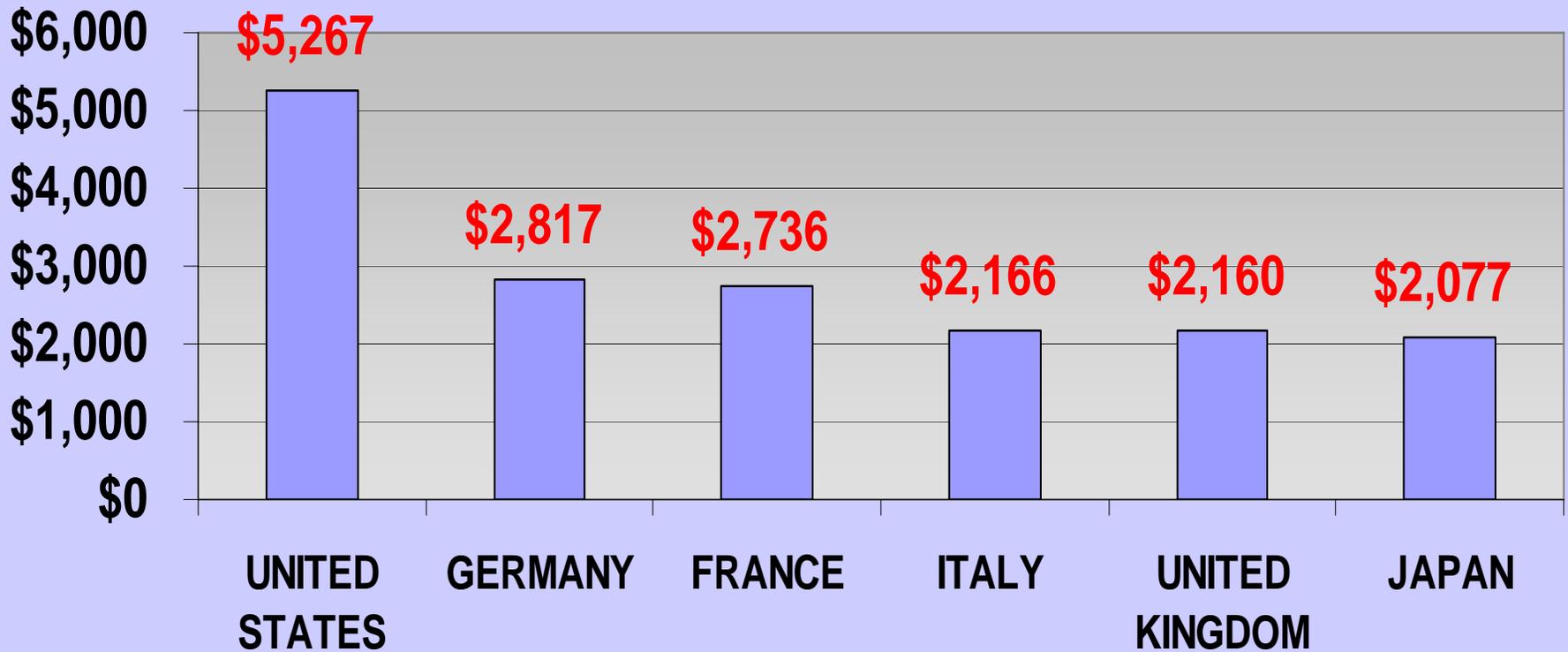
have shorter life expectancies...

LIFE EXPECTANCY (YEARS)

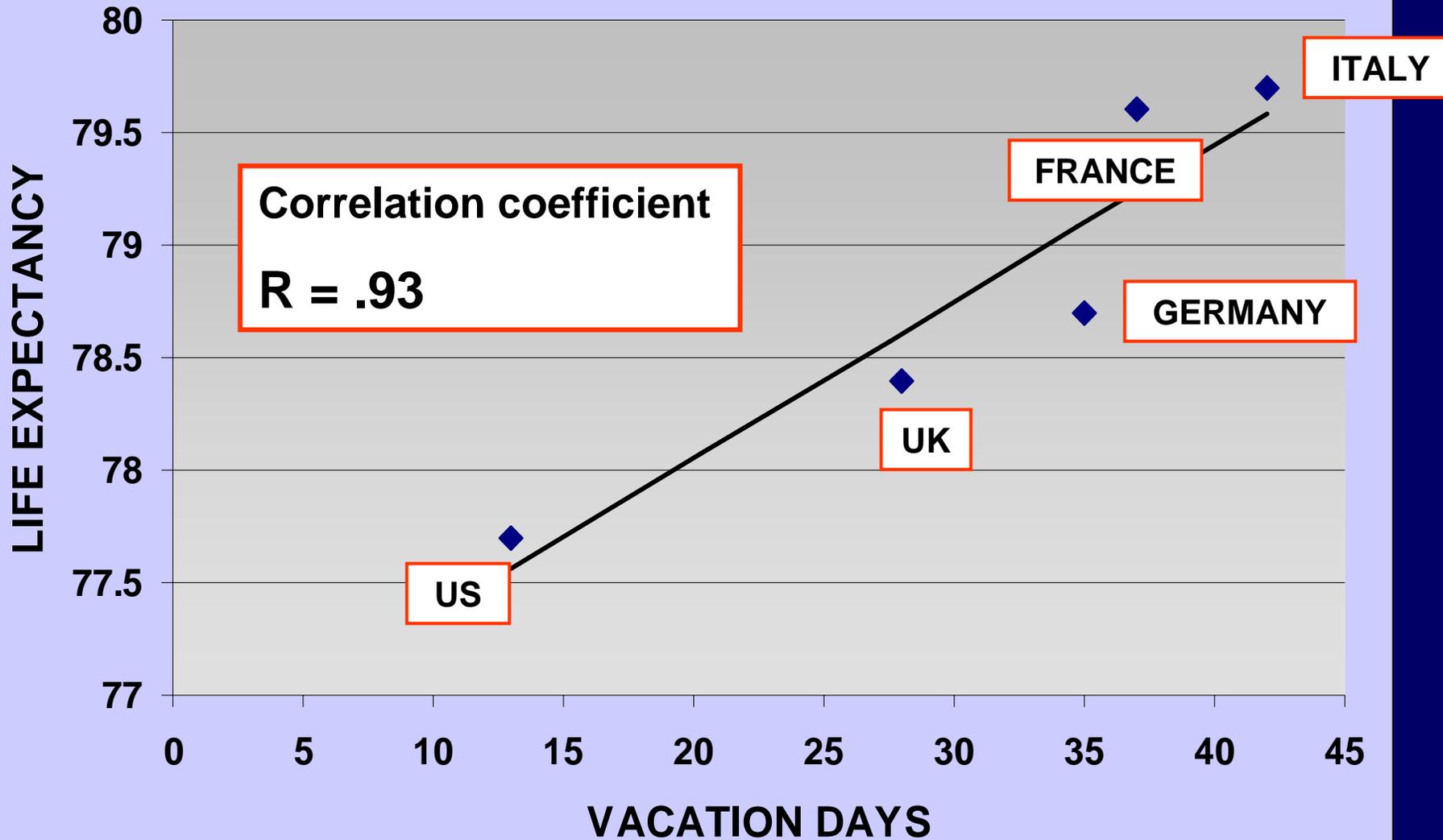


... and pay much more for health care.

HEALTH CARE SPENDING, PER CAPITA



People who vacation more live longer!



If Americans took 12 additional vacation days each year for 40 work years, we might live anywhere from 6 months to 1 year longer



Challenges Ahead

- Getting Americans to Exercise

* CANINE CONSTITUTIONAL



Jim Russell/Outpost

A brisk walk in the park keeps Macey B in shape between dog shows. His owner, Columbus resident Cathy Stumbo, got up early

to give her 3-year-old Doberman his regular workout. They typically jog 15 miles in Berliner Park.



San Diego, California



The Emerald Necklace is accessible on foot, by car, or by public transportation (MBTA 617-722-3200)

- T** MBTA Subway or Bus **---** Bicycle Path
- R** Restrooms **P** Parking Lot

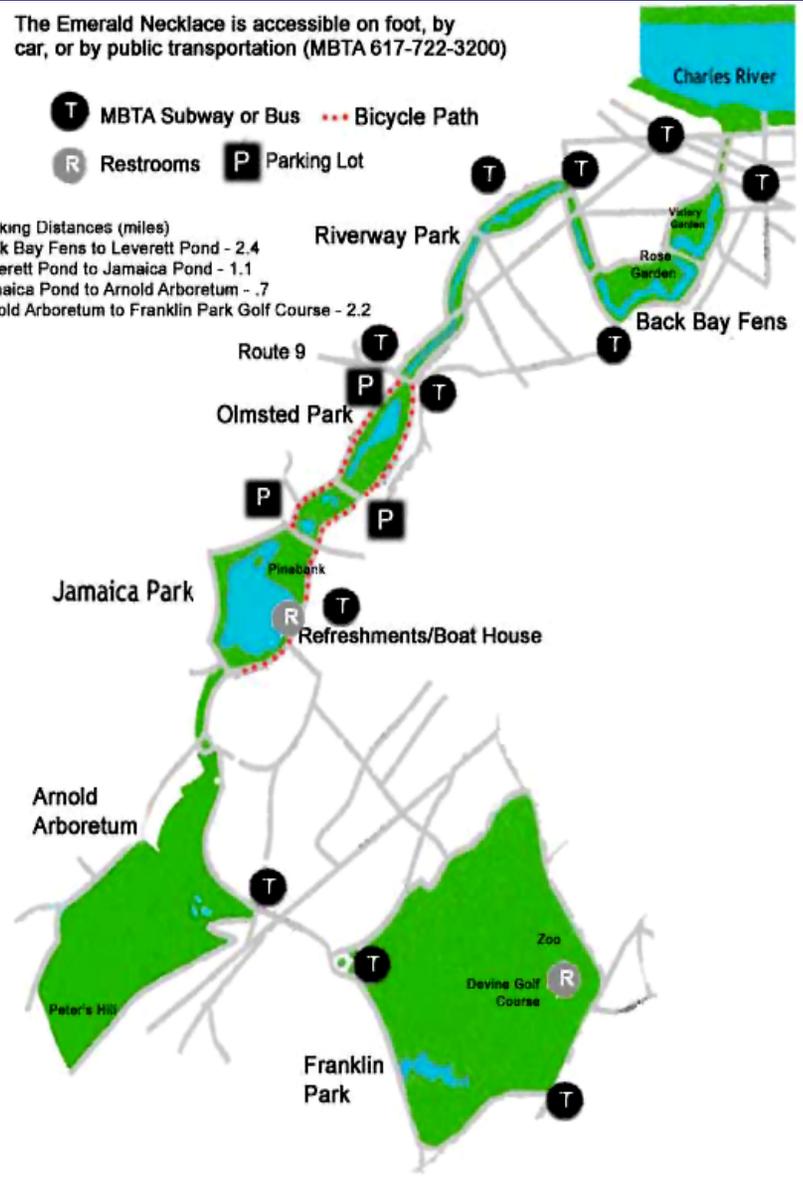
Walking Distances (miles)

Back Bay Fens to Leverett Pond - 2.4

Leverett Pond to Jamaica Pond - 1.1

Jamaica Pond to Arnold Arboretum - .7

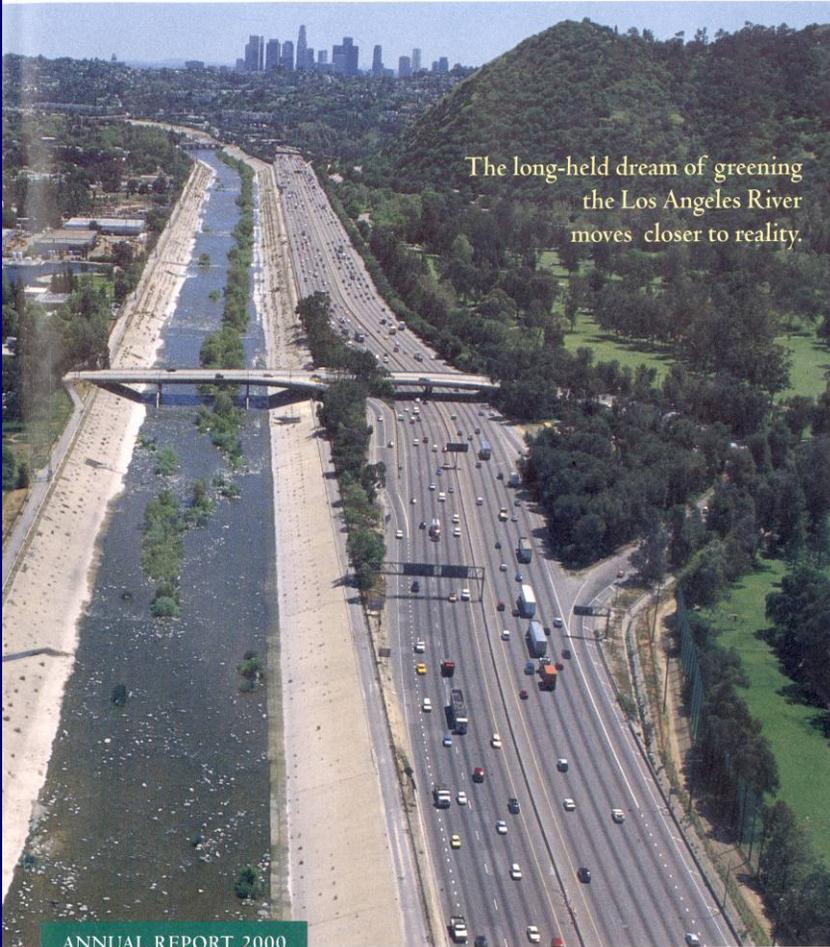
Arnold Arboretum to Franklin Park Golf Course - 2.2



Source: "Emerald Necklace Conservancy; H. Mattison"

A Goal? Every River in America Walkable

Land & People



The long-held dream of greening the Los Angeles River moves closer to reality.

ANNUAL REPORT 2000

Volume 12 Number 2 Fall 2000

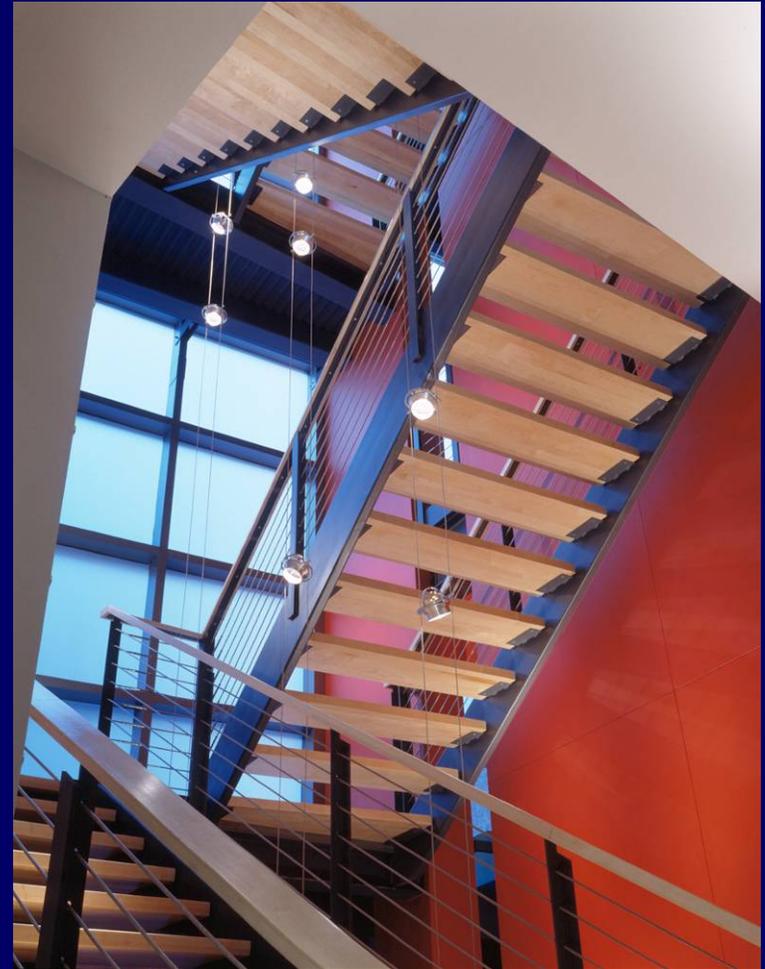


Source: LAND & PEOPLE Fall 2000



National **Vacant Properties** Campaign
CREATING OPPORTUNITY FROM ABANDONMENT

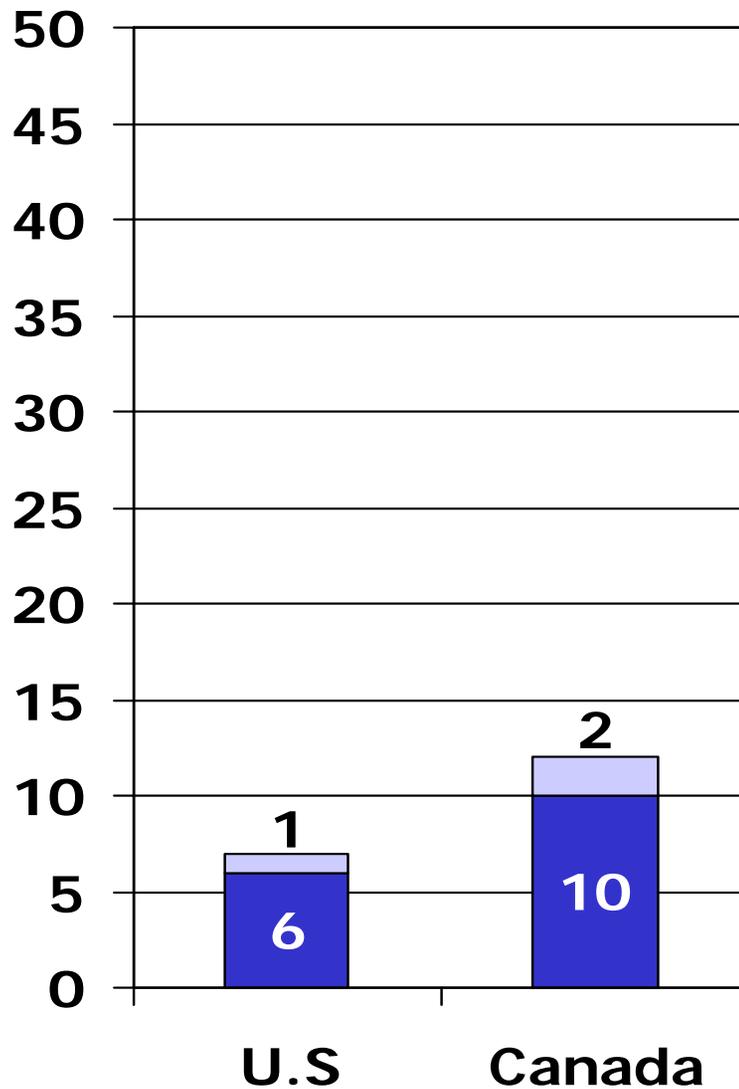
<http://www.vacantproperties.org>



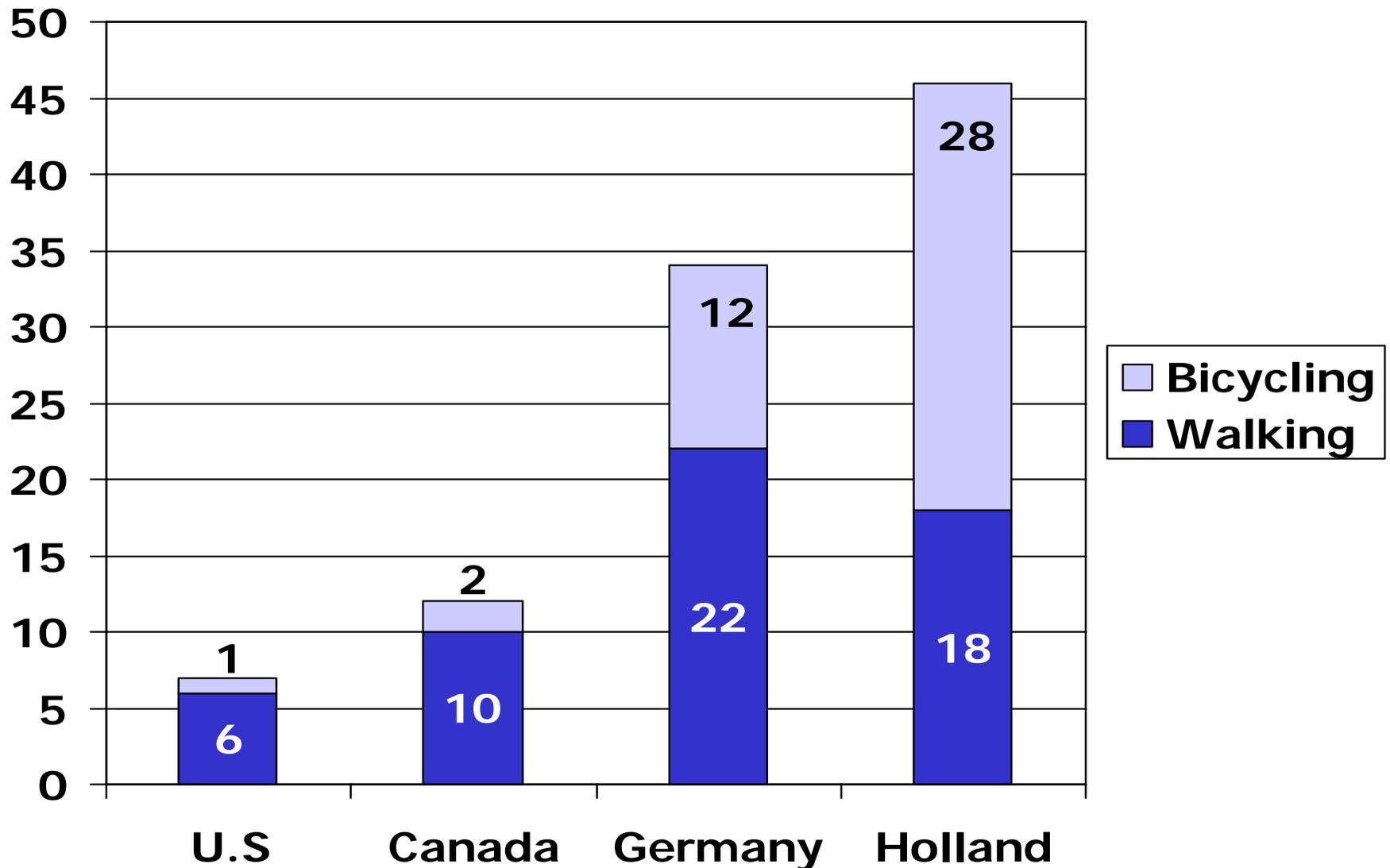
“These stairs have become a gathering, meet and greet space for us as well as a way to get from the first to the third floor. Since we moved into our new office with its convenient, attractive stair, almost no one uses the elevator.”

*Thompson E. Penney, FAIA
President/CEO
LS3P ASSOCIATES LTD.*

Percentage of Trips in Urban Areas Made by Walking and Bicycling: North America 995



Percentage of Trips in Urban Areas Made by Walking and Bicycling: North America and Europe 1995



Hut to Hut in the Bavarian Alps



Challenges Ahead

- Getting Americans Neighborhoods to be more for people and less for cars

UCLA Extension

Public Policy Program

uclaextension.edu/publicpolicy

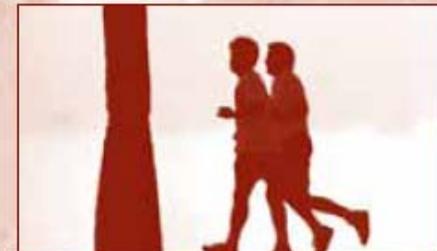


Presented by
UCLA Extension Public Policy Program and the
Los Angeles County Department of Health Services —
Public Health

Built Environment and Transportation: Impacts on Public Health Conference

Tuesday, May 23, 2006

Los Angeles County
Metropolitan Transportation Authority
Boardroom One, Gateway Plaza
Los Angeles, California



California County Officials Approve Healthy Lifestyles Initiative to Combat Inactivity, Overweight

- The San Bernardino County Board of Supervisors approved spending \$478,762 to create a healthy communities initiative that will include efforts to increase the region's walkability. The funding will pay for three new employees to oversee the program and allocate \$100,000 to local communities working to develop health promotion initiatives and coordinate health efforts between local officials, businesses and schools. Program staff will advise communities on how to include smart-growth elements, such as walkable neighborhoods and access to outdoor recreation spaces, when designing new developments or revamping existing communities.

•Horwitz, *San Bernardino County Sun*, 4/5/06

**Environmental Health****Healthy Places**

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- > [About Healthy Places](#)
- > [Related Articles](#)
- > [Terminology](#)
- > [Additional Resources](#)
- > [Events](#)

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- > [Children's Health](#)
- > [Elders' Health](#)
- > [Healthy Homes](#)
- > [Health Impact Assessment \(HIA\)](#)
- > [Injury](#)
- > [Mental Health](#)
- > [Physical Activity](#)
- > [Respiratory Health](#)
- > [Social Capital](#)
- > [Water Quality](#)

**Designing and Building Healthy Places**

As the leading public health agency in the United States, the Centers for Disease Control and Prevention (CDC) scientifically considers all factors that affect the health of the nation. As we embark into the 21st century, the interaction between people and their environments, natural as well as human-made, continues to emerge as a major issue concerning public health.

Health and Healthy Places

According to the World Health Organization, health is a state of complete physical, mental, and social well-being and not merely the absence of infirmity. A healthy community as described by the U.S. Department of Health and Human Services *Healthy People 2010* report is one that continuously creates and improves both its physical and social environments, helping people to support one another in aspects of daily life and to develop to their fullest potential. Healthy places are those designed and built to improve the quality of life for all people who live, work, worship, learn, and play within their borders -- where every person is free to make choices amid a variety of healthy, available, accessible, and affordable options.

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Quick Links

- > [Air Pollution](#)
- > [American Public Health Association - National Public Health Week](#)
- > [Lead Poisoning](#)
- > [Tracking](#)

Key Resources

[Creating A Healthy Environment](#) [PDF, 815KB]

[The Built Environment and Children Health](#) [PDF, 184KB]

[Urban Sprawl and Public Health](#) [PDF, 492KB]

CDC Programs

[Healthy Swimming](#)

[National Center for Infectious Diseases](#)

[National Immunization](#)

Good Built Environments

- Places where life is Happening—
 - Food
 - Music
 - Art
 - All ages
 - Joy
 - Safety
 - People (density and diversity)
 - Walking



A Healthy California Wish List

- Every child can Walk or Bike safely to school
- Urban and suburban schools should be humane in size, have physical education, less asphalt, and a garden
- All neighborhoods should have sidewalks, bike routes and parks—and a public facility to allow sheltering for at least one week after a disaster
- No junk food advertising to children
- A penny a teaspoon tax on HFCS

We owe our children a world that is more beautiful, healthful and diverse than the one we were given.



Richard Joseph Jackson, MD MPH

Dickjackson@berkeley.edu

Robust and Adaptable Civilizations Need to Have These Layers in Harmony

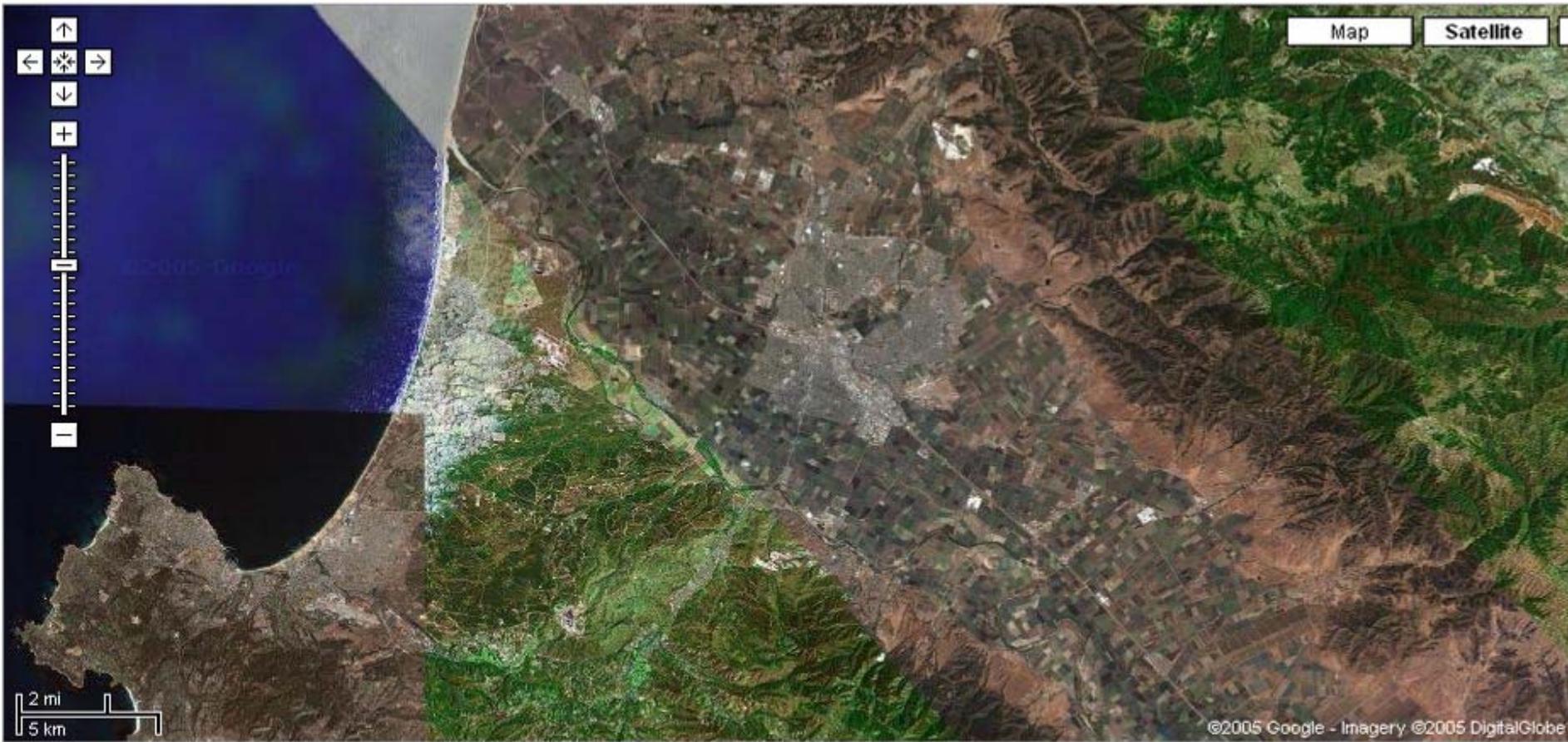
- Individual needs
- Commerce
- Infrastructure
- Governance
- Culture
- Nature





National **Vacant Properties** Campaign
CREATING OPPORTUNITY FROM ABANDONMENT

<http://www.vacantproperties.org>



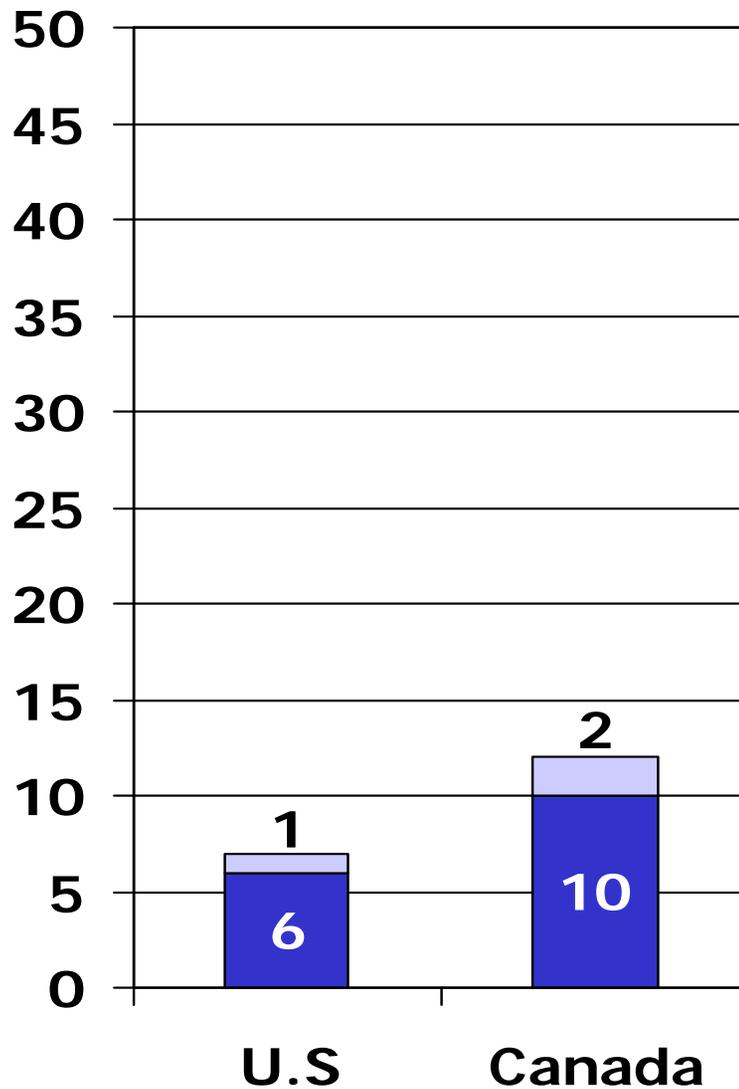
Map

Satellite



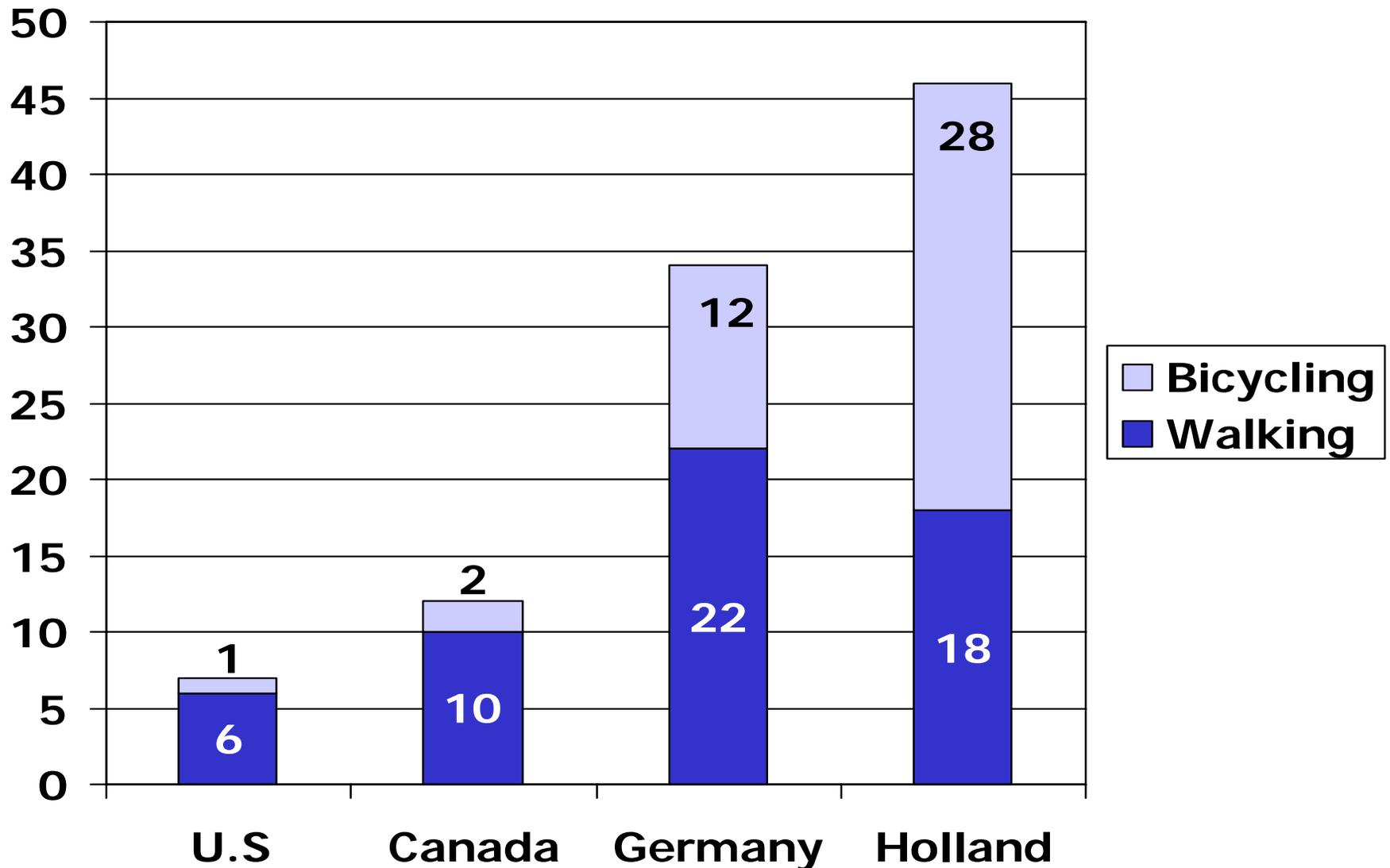
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Percentage of Trips in Urban Areas Made by Walking and Bicycling: North America 995



Pucher J and Dijkstra L. Promoting Safe Walking and Cycling to Improve Public Health: Lessons From The Netherlands and Germany. AJPH, September 2003;93(9):1509-16.

Percentage of Trips in Urban Areas Made by Walking and Bicycling: North America and Europe 1995



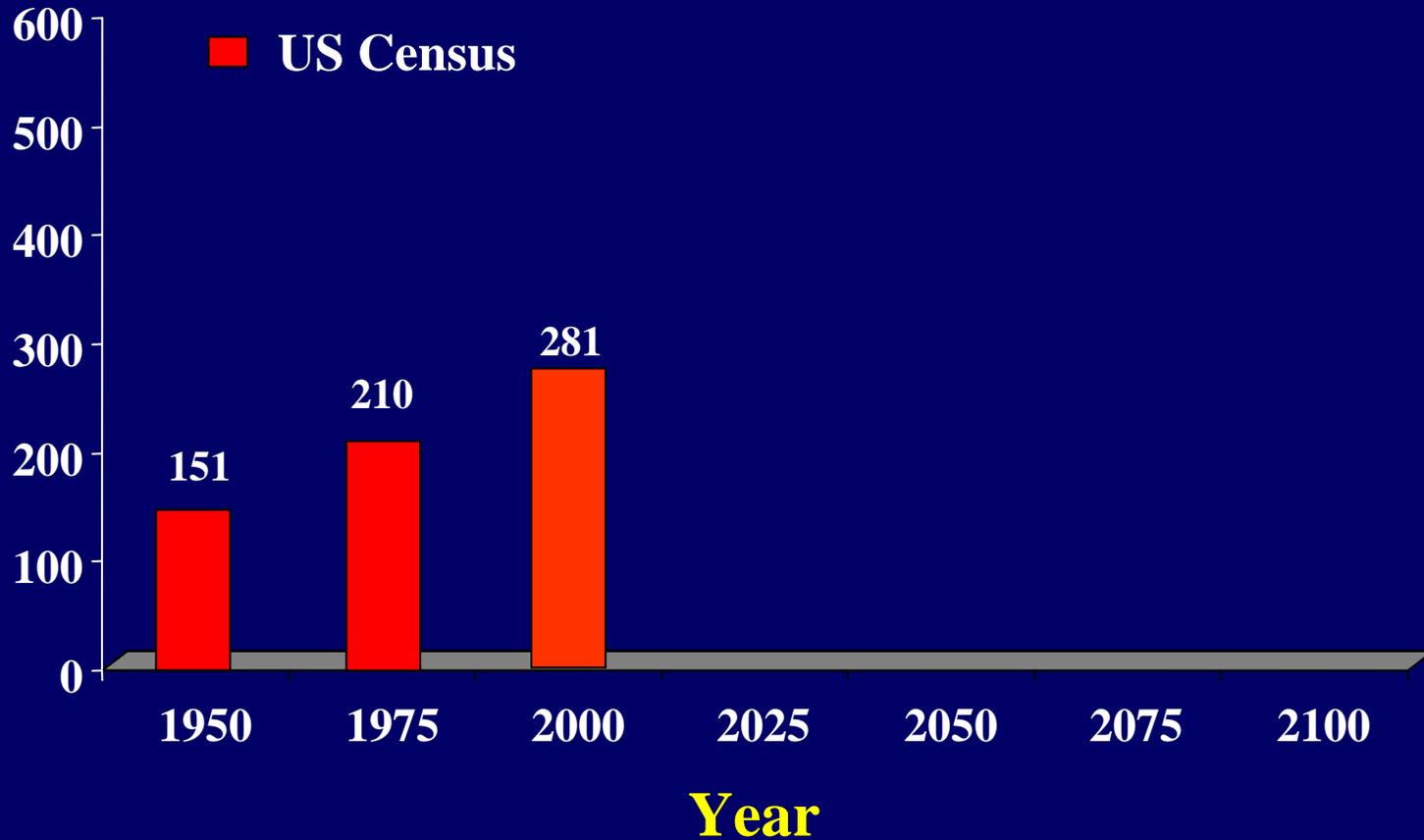
Photovoltaic Roofs



Sacramento, California

U.S. Population, 1990-2000

Number in millions



Source: U.S. Census Bureau

AMERICAN MANIA

PETER C. WHYBROW, M.D.

WHEN MORE
IS NOT
ENOUGH

**Environmental Health****Healthy Places**

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- > [Contact Us](#)

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- > [About Healthy Places](#)
- > [Related Articles](#)
- > [Terminology](#)
- > [Additional Resources](#)
- > [Events](#)

Health Topics

- > [Accessibility](#)
- > [Children's Health](#)
- > [Elders' Health](#)
- > [Healthy Homes](#)
- > [Health Impact Assessment \(HIA\)](#)
- > [Injury](#)
- > [Mental Health](#)
- > [Physical Activity](#)
- > [Respiratory Health](#)
- > [Social Capital](#)
- > [Water Quality](#)

**Designing and Building Healthy Places**

As the leading public health agency in the United States, the Centers for Disease Control and Prevention (CDC) scientifically considers all factors that affect the health of the nation. As we embark into the 21st century, the interaction between people and their environments, natural as well as human-made, continues to emerge as a major issue concerning public health.

Health and Healthy Places

According to the World Health Organization, health is a state of complete physical, mental, and social well-being and not merely the absence of infirmity. A healthy community as described by the U.S. Department of Health and Human Services *Healthy People 2010* report is one that continuously creates and improves both its physical and social environments, helping people to support one another in aspects of daily life and to develop to their fullest potential. Healthy places are those designed and built to improve the quality of life for all people who live, work, worship, learn, and play within their borders -- where every person is free to make choices amid a variety of healthy, available, accessible, and affordable options.

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Quick Links

- > [Air Pollution](#)
- > [American Public Health Association - National Public Health Week](#)
- > [Lead Poisoning](#)
- > [Tracking](#)

Key Resources

[Creating A Healthy Environment](#) [PDF, 815KB]

[The Built Environment and Children Health](#) [PDF, 184KB]

[Urban Sprawl and Public Health](#) [PDF, 492KB]

CDC Programs

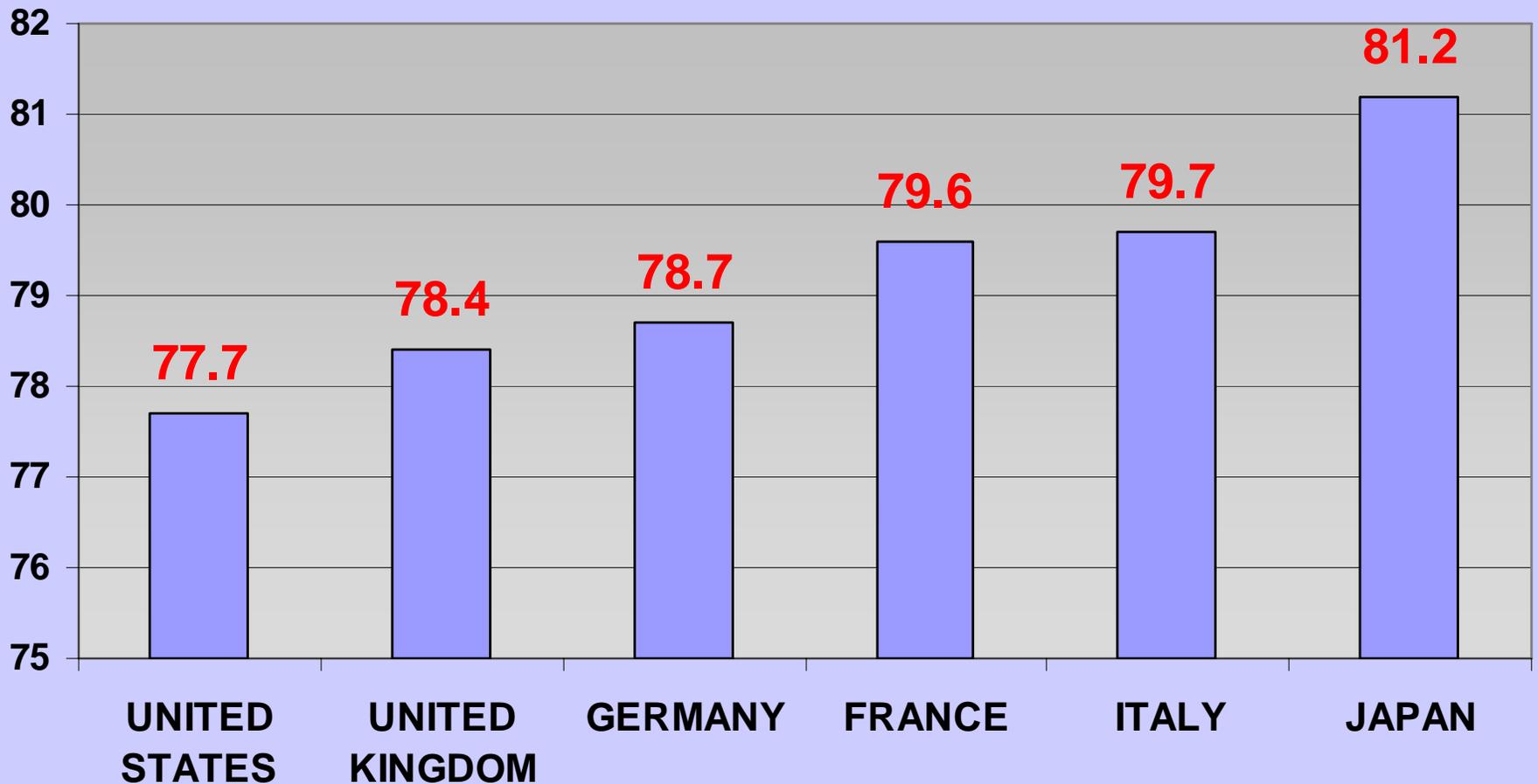
[Healthy Swimming](#)

[National Center for Infectious Diseases](#)

[National Immunization](#)

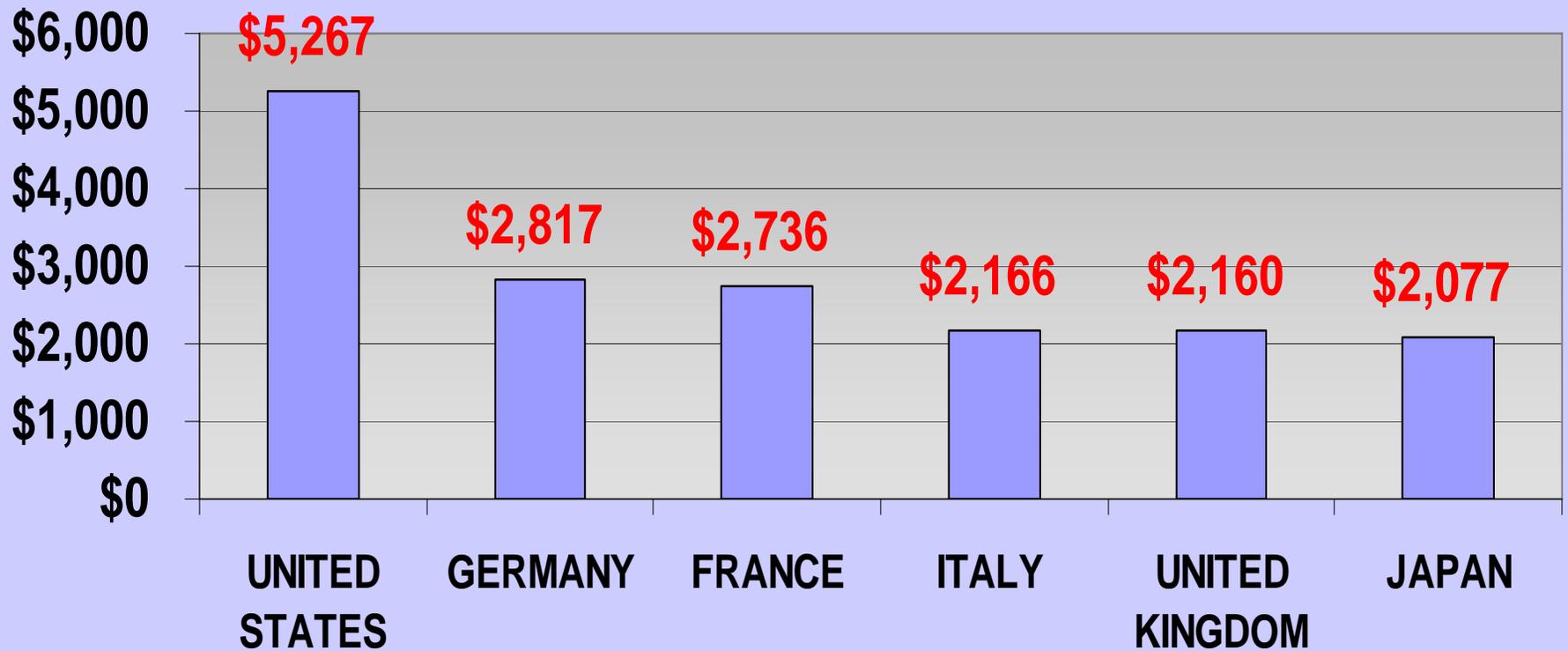
And have shorter life expectancies

LIFE EXPECTANCY (YEARS)



... pay much more for health care

HEALTH CARE SPENDING, PER CAPITA



Challenges Ahead

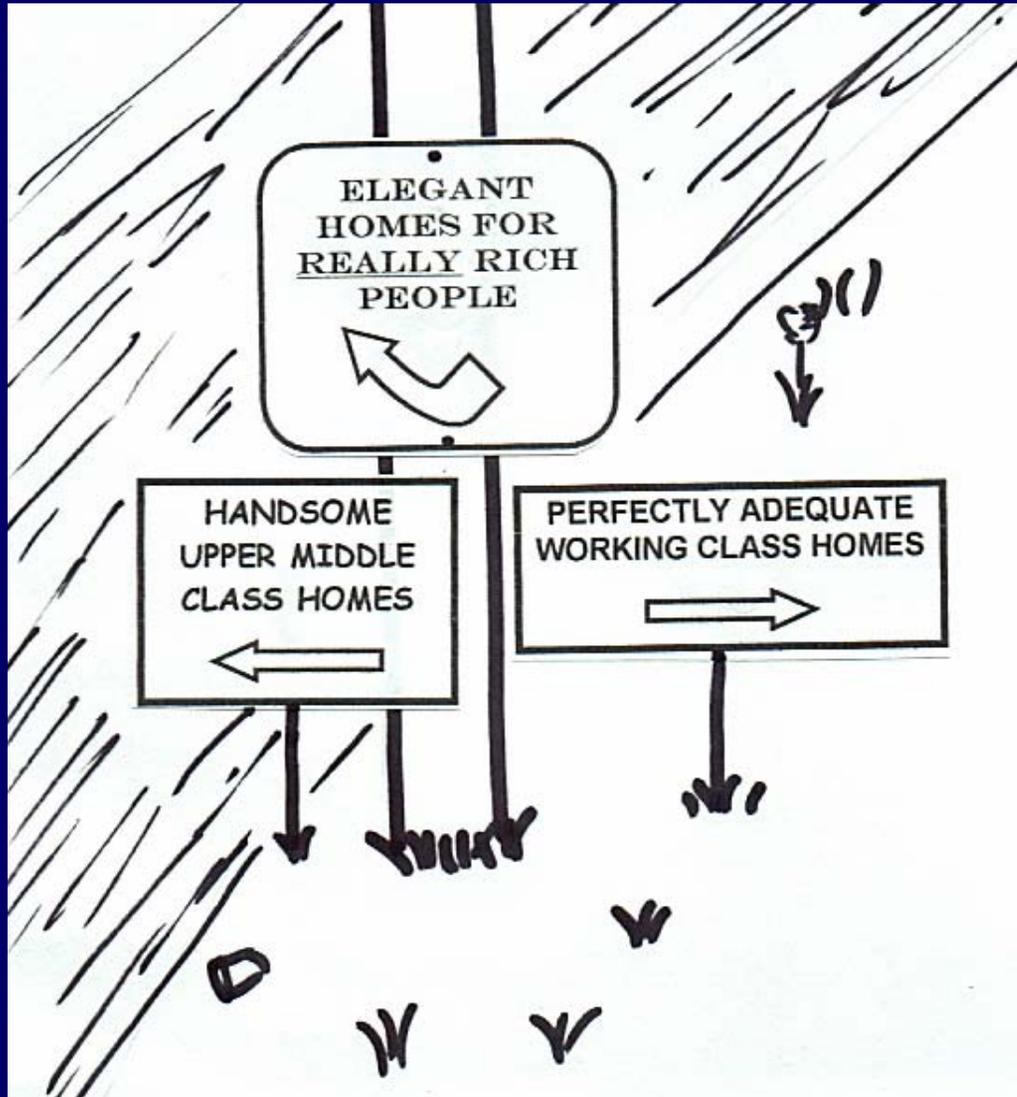
- Getting Americans to Exercise

San Bernardino County

- The county's health officer says the effort aims to combat obesity and physical inactivity in the region, which is "increasingly plagued by chronic diseases that are caused by [unhealthy] lifestyles." One effort that could be expanded by the initiative is the current redevelopment of San Bernardino's downtown area, which is being transformed into a mixed-use development that combines housing with retail and recreation spaces within walking distance.



A Highly Effective Strategy for Income Segregation



Sprawl and Income Inequality





**Elderly
people**

Active vs Passive Recreation

Active Recreation – Active recreation refers to a mix of uses in a neighborhood park that includes the following facilities or facility types: athletic fields, building or structures for recreational activities, concession, community garden, courses or courts, children's play area, dog play area, or a bike path.

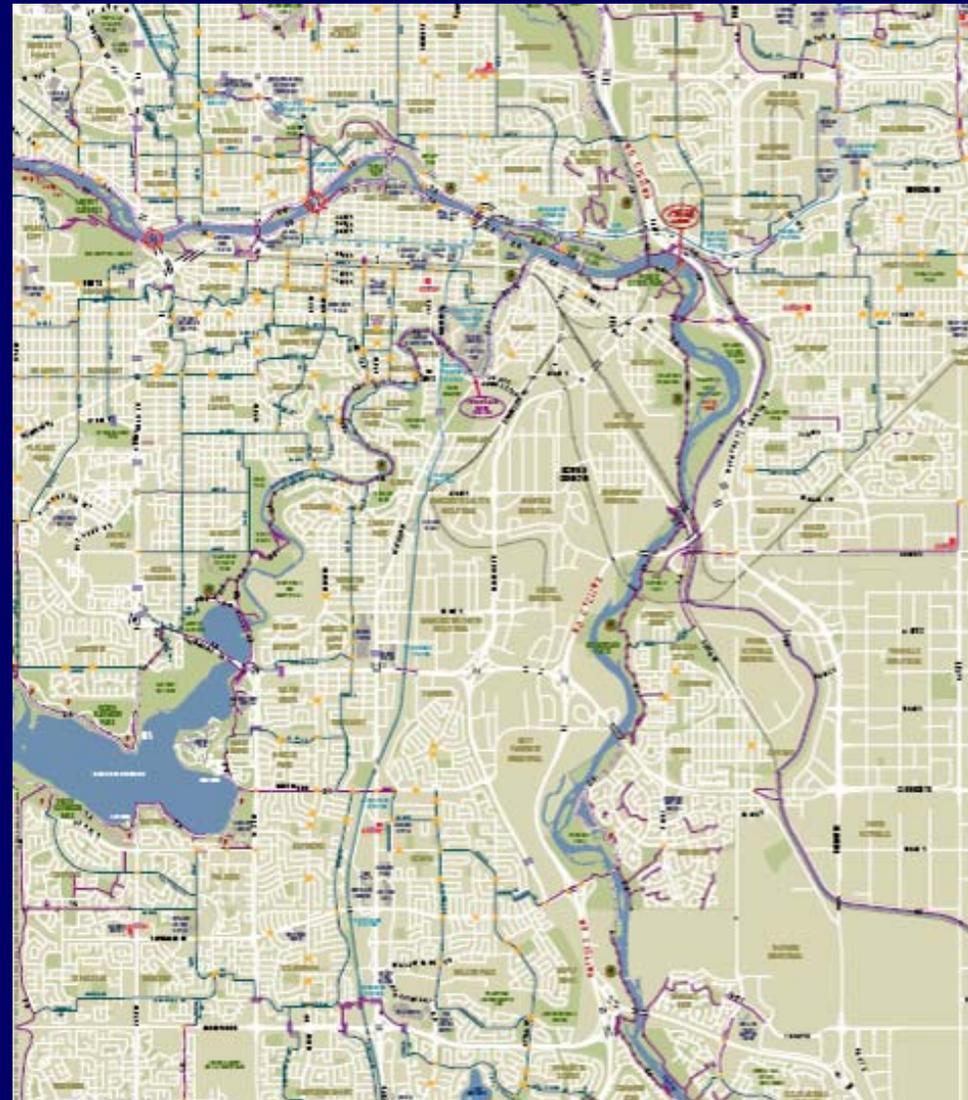
Passive Recreation - A passive recreation area refers a mix of uses in a neighborhood park, undeveloped land or minimally improved lands which includes the following: landscaped area, natural area, ornamental garden, non-landscaped greenspace, stairway, decorative fountain, picnic area, water body, or trail without recreational staffing.

From Murray Lee

- I have lots of thoughts on trails. Next to pubs they are one of my favorite components of the built environment (and don't get me started on trails that lead to pubs.) I think trails are crucial, and I have some issue with the idea that they should be treated as isolated amenities or interventions for promoting activity or revitalizing an area. Like sidewalks or streets they should just be part of the urban environment without question.

- Calgary is an interesting place in this regard. The bike path system there is treated as a core component of the infrastructure and routes are laid out in advance of the conception of new communities. There is somewhere around 600+ km of pathway and there really isn't anywhere you can't get by bike, despite the sprawling and often inhospitable terrain. It has even become an important part of the commuter network, such that the city plows snow off a fair chunk of the network in the winter.

Calgary Bike Trails





Chamblee, GA Runoff to North Peachtree Creek

Curitiba, Brazil

Transportation

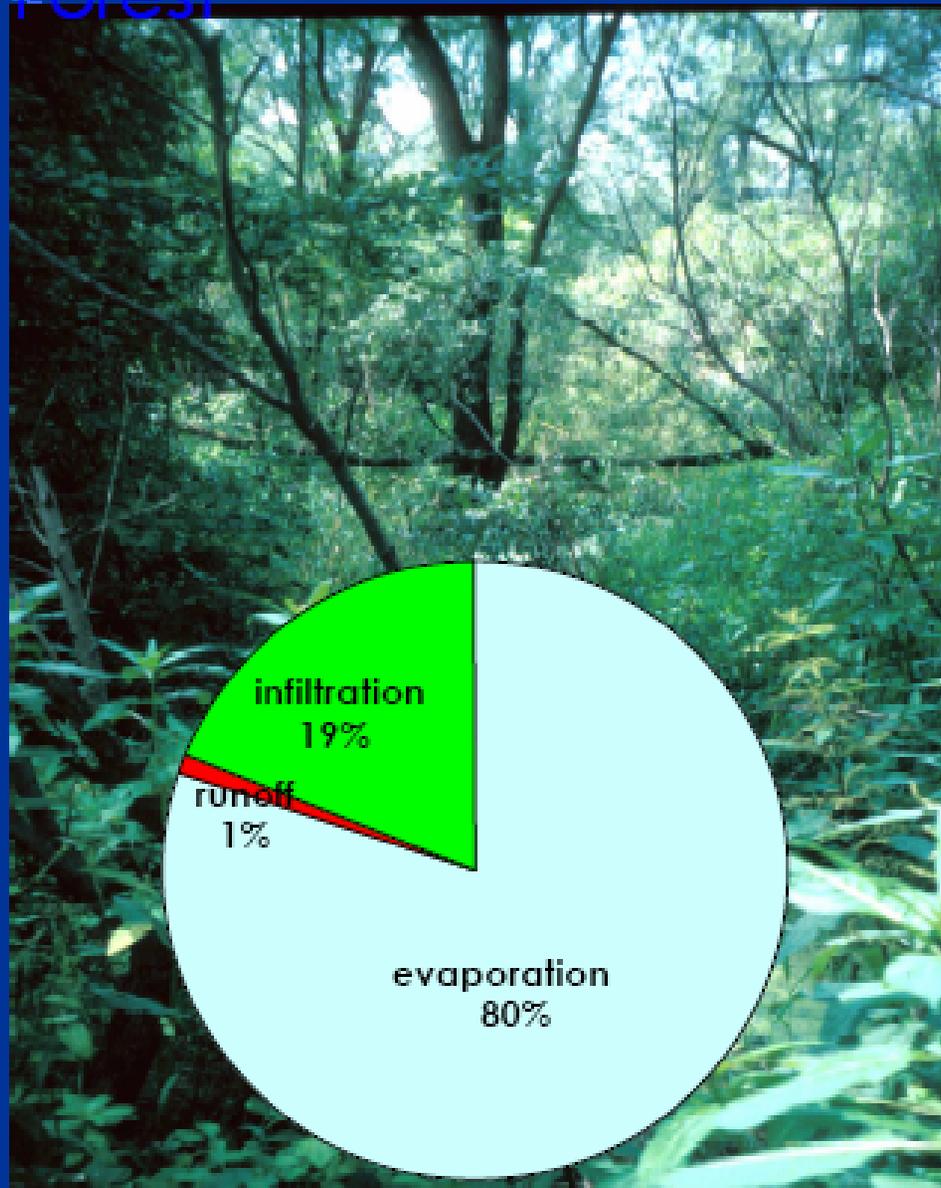


- Use Existing Streets
 - » Triplets of Arteries
- High Speed Buses
- Pedestrian Emphasis
 - » Weekend Coup

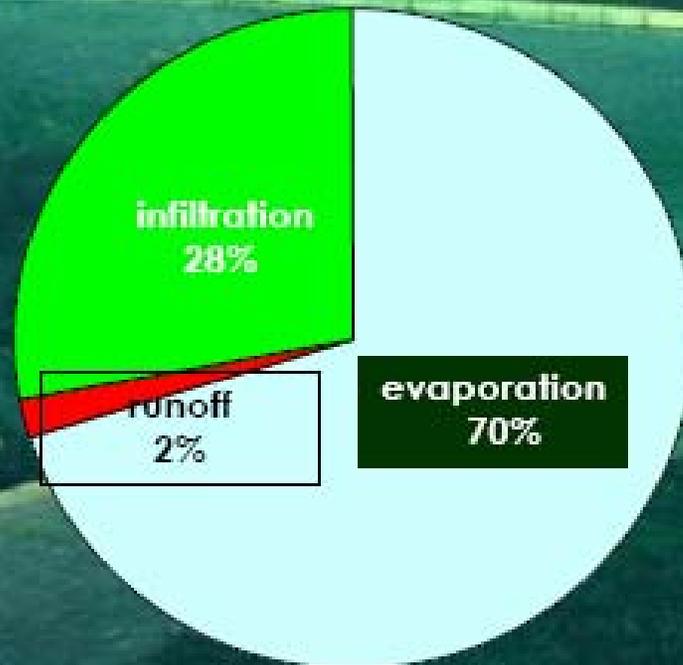


- Carries 4X passengers daily Rio's subway at cost of 0.5% per kilometer traveled
- Highest car ownership in Brazil, but 75% commute by bus!

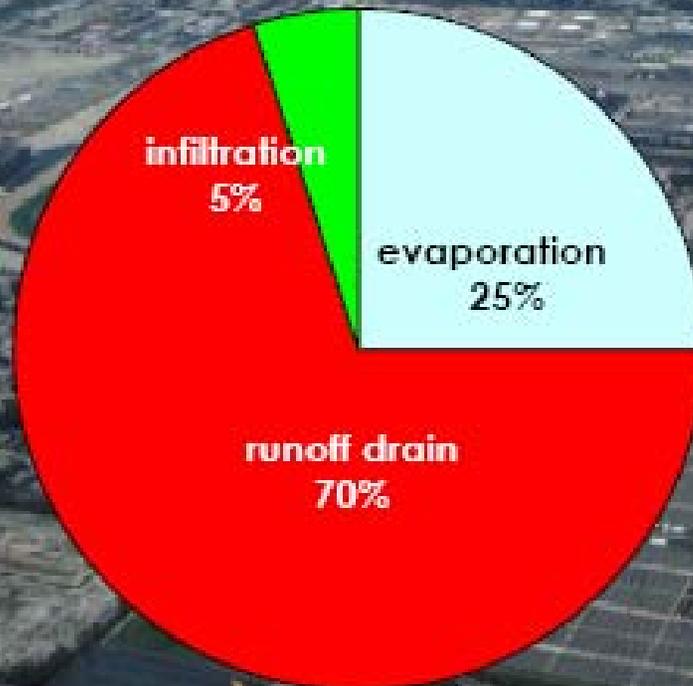
Water in the Forest



Water in Agricultural Landscape



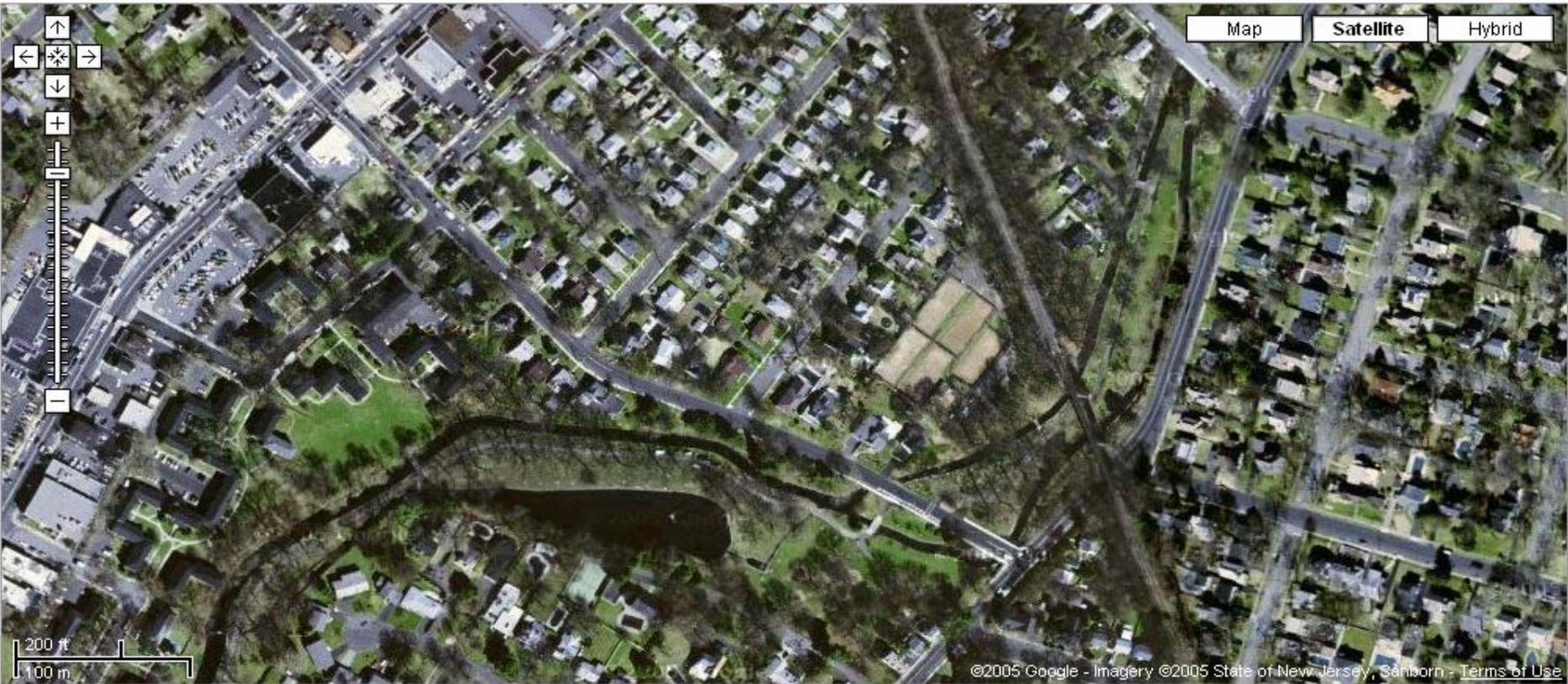
Water in Urban Regions



Pervious Concrete Offers **Win-Win Solution** for Developers



As developers, land planners and civil engineers are faced with more stringent "smart growth" requirements, pervious concrete offers a win-win solution for developers and the environment. Formally referred to as Portland cement pervious pavement, pervious concrete, also known as porous concrete, is an innovative pavement solution because it maximizes land use and improves water quality. In fact, the Florida Department of Environmental Protection's (DEP) *Storm Water Management Guide* states: "Porous concrete is another innovative Best Management Practice with widespread applicability for parking areas..."



Map **Satellite** Hybrid



200 ft
100 m

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Map

Satellite

Hy

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