

68th OPHA Annual Conference & Meeting

October 8-9, 2012 Corvallis OR



We Are What We Eat and Breathe, and Build: Preventing Chronic Diseases and Protecting the Environment

by Building Healthy
Communities

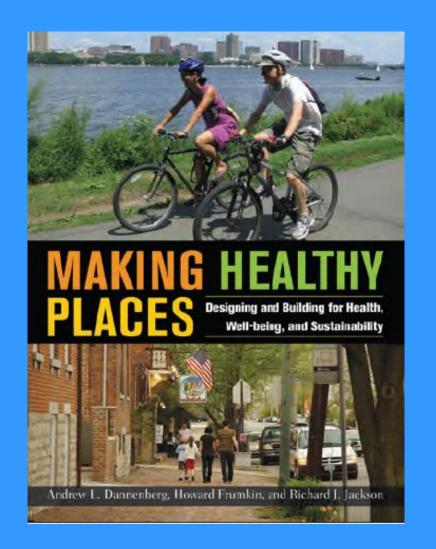
Richard J Jackson
MD MPH

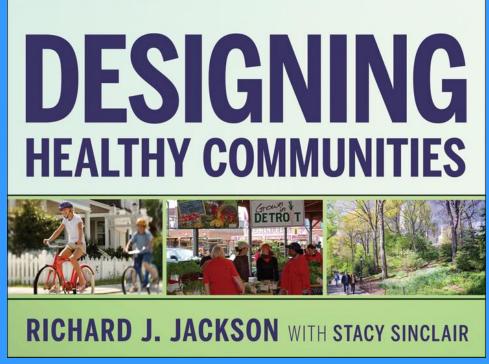
UCLA

Fielding School
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Health

We Are What We Eat and Breathe, and Build:

Preventing Chronic Diseases and Protecting the Environment by Building Healthy Communities





DESIGNING HEALTHY COMMUNITIES

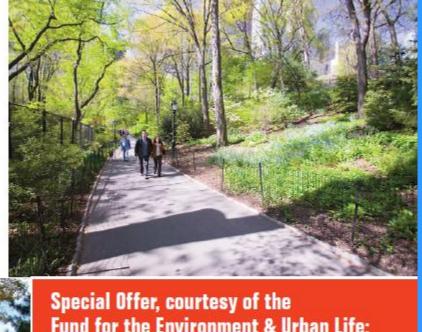
The 2012 PBS 4-Part Series

Dr. Richard Jackson, former head of Environmental Public Health for the Centers for Disease Control, explains the link between health and the way our communities - especially our suburbs - are designed. Obesity, asthma, diabetes and heart disease are aggravated by the auto-centric way we live today. It's no secret that today's young people are likely to have shorter lives than their parents due to

unhealthy lifestyles. It doesn't have to be this way. Well-designed communities can improve both physical and mental health.







Fund for the Environment & Urban Life:

Purchase the Complete Designing Healthy Communities Series (4 DVDs, 1 hour each, plus 4 bonus videos) to share with colleagues. Normally \$99, the series is available at \$20.

For this special offer, visit:

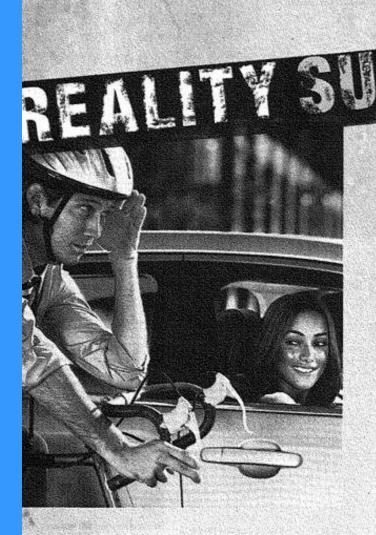
www.DesigningHealthyCommunities.org/oram

Limited supply available at discount. \$6 s/h added.

Major Message

- We are at a desperately important moment for Health and Environment, and the disciplines need to again work together...
 - a lot more and a lot better.
- Good Solutions Solve Multiple Problems

- The "environment" is rigged against the child...
- And the doctor, and the rest of us.

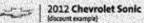


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CDC: Antidepressant use skyrockets 400% in past 20 years



Reprints & Permissions

Use of antidepressant drugs has soared nearly 400% since 1988, making the medication the most frequently used by people ages 18-44, a report from the Centers for Disease Control and Prevention shows.



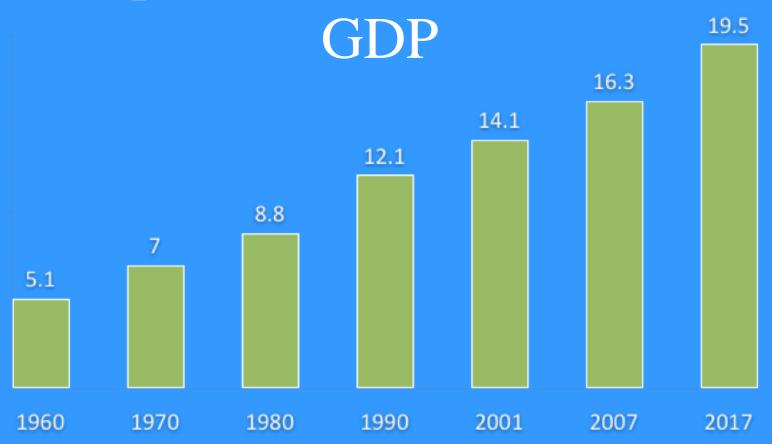
Matt Detrich, AP

Doctors who prescribe some popular antidepressants should monitor their patients closely for warning signs of suicide, especially when they first start the pills or change a dose. Eleven percent of Americans ages 12 years and older took antidepressants during the 2005-08 study period, the authors write. They add that though the majority of antidepressants were taken to treat depression, the drugs also can be used for anxiety disorders and other conditions

The data are from the National Health and Nutrition Examination Surveys, which included information from 12,637 participants about prescription-drug use, antidepressant use, length of use, severity of depressive symptoms and contact with a health professional.

Mental-health professionals not associated with the survey cited several reasons as possible explanations for the spike:

U.S. "Health" Care Expenditures as Percent of



Keehan et al: *Health Affairs* March/April 2008 27: 145-155 "...of the 30 years of increased life expectancy 1890 -1990...

5 years can be attributed to medical care."

The rest has come from:

- Infrastructure (including housing)
- Public Health (esp. immunization)

These disorders (and our depletion of land, water, air and economic resources) are shaped by how and where we build our homes, farms, workplaces, towns, cities and societies.



We have changed how much we walk or bike

- Percent of children who walk or bike to school:
- 1974 → 66%
- 2000 → 13% (CDC, 2000)





Fitness of California Children

Annual Fitnessgram Results

Conducted in Grades 5, 7, and 9

Measures 6 major fitness areas

(e.g. aerobic capacity, body composition, flexibility)

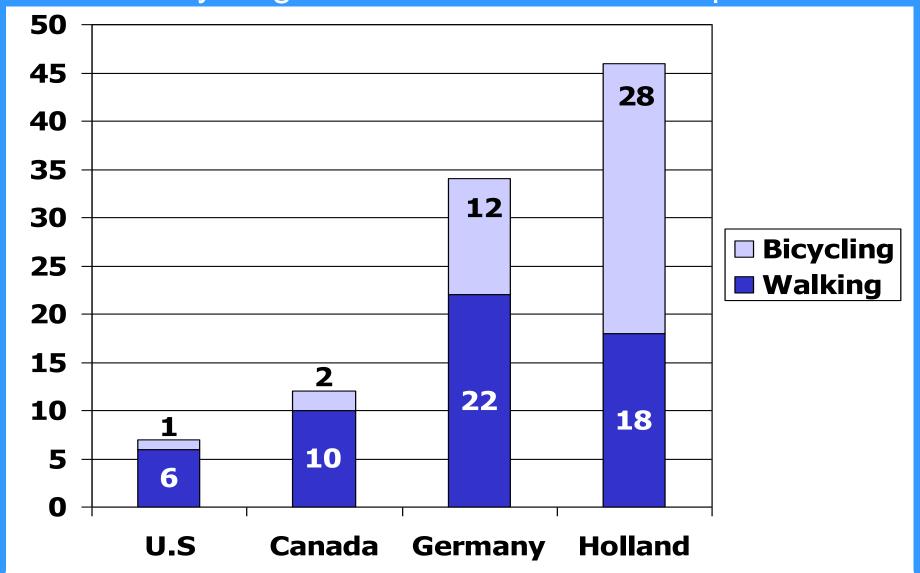
2011 Results: Who passed all standards?

Grade 5: 25%

Grade 7: 32%

Grade 9: 37%

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



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.

R		Cause and Number of Deaths								
A	Under 1	1-3	4-7	8-15	16-20	21-24	Other Adults			or Agreement
K	onuer i	1-3	4-7	0-15	10-20	21-24	25-34	35-44	45-64	35
1	Perinatal Period	Congenital Anomalies	MV Traffic Crashes	MV Traffic Crashes	MV Traffic Crashes	MV Traffic Crashes	MV Traffic Crashes	Malignant Neoplasms	Malignant Neoplasms	Service B.
2	Congenital Anomalies	MV Traffic Crashes	Malignant Neoplasms	Malignant Neoplasms	Homicide	Homicide	Suicide	Heart Disease	S. Carrier	
3	Heart Disease	Accidental Drowning	Congenital Anomalies	Suicide	Suicide	Suicide	Homicide	MU		
4	Homicide	Homicide	Accidental Drowning	Homicide	Malignant Neoplasms	Accidental Poisoning	M			
5	Septicemia	Malignant Neoplasms	Exposure to Smoke/Fire	Congenital Anomalies	Accidental Poisoni	For e	Verv	age	aro	un
6	Influenza/ Pneumonia	Exposure to Smoke/Fire	Homicide	Accidental Drowning	36		_	roug		_
7	Nephritis/ Nephrosis	Heart Disease	Herit	No.						No. 1
8	MV Traffic Crashes	and the same			c	cause of death				

Pedestrian Fatality Rates for Collisions at Different Speeds

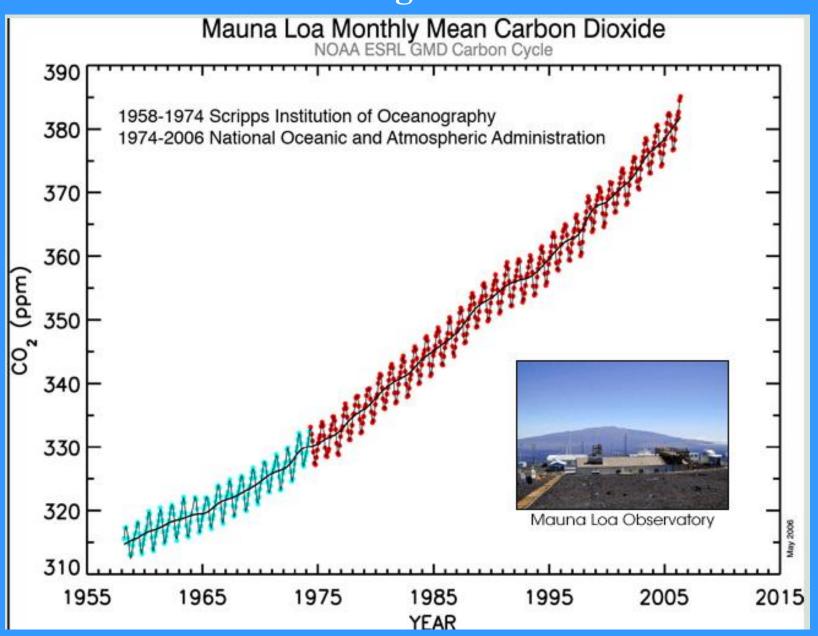


Zegeer et al 2002

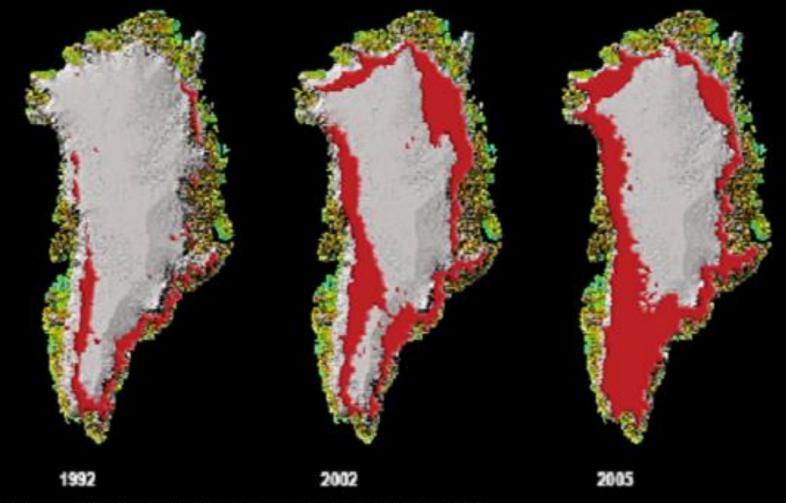
Asthma Study in 12 Southern California High Schools

- 3535 children with no history of asthma in 6 high and 6 low air pollution high schools
- 5 years later: 265 developed asthma.
 - High ozone high schools:
 - asthma rate was 3.3x higher in children playing three or more sports.
 - Low ozone high schools:
 - sports had no effect on asthma rates

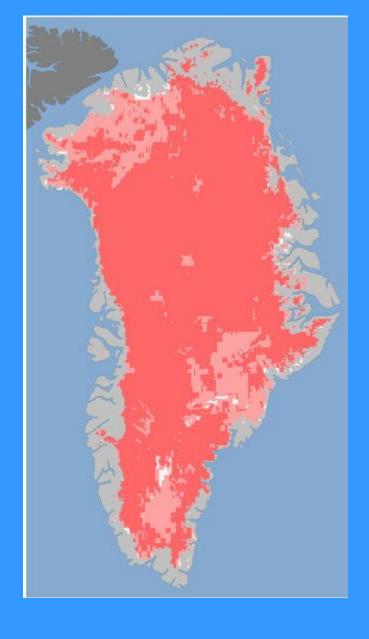
"Keeling Curve"



Increasing Extent of Greenland Seasonal Ice Melt

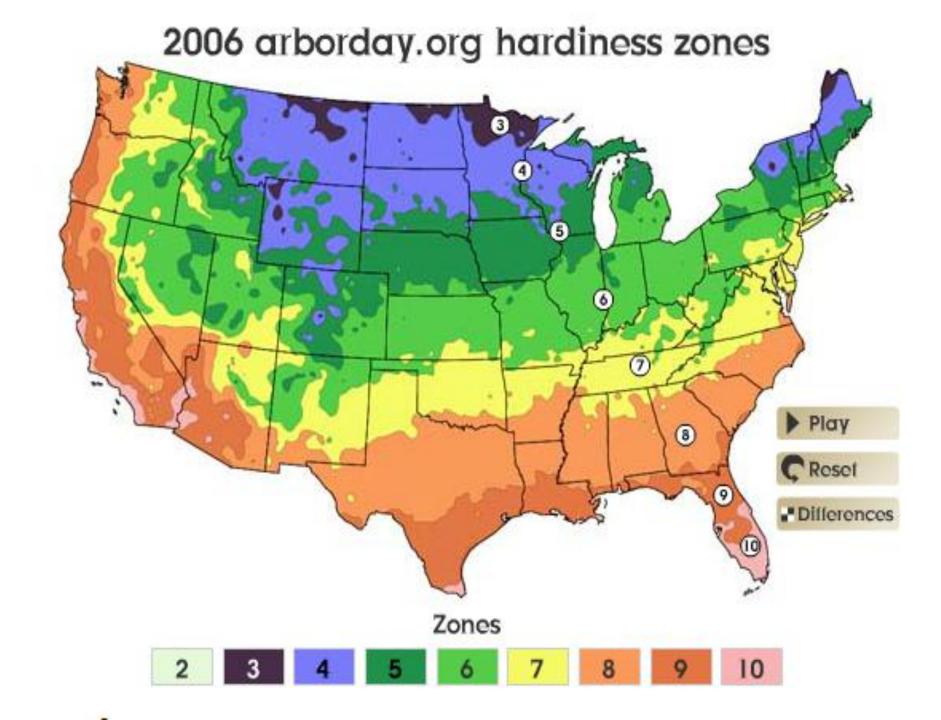


Velloogne and Wehr, "Acceleration of Greenland Ice mess lose in spring 2004", Nature (2005)



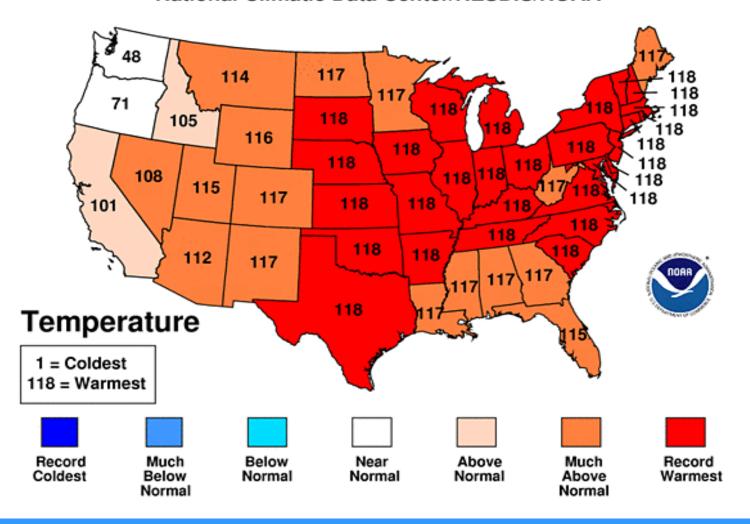
Greenland Surface Icemelt July 12, 2012 Deepest Pink Indicates Surface Has Melted

1990 USDA hardiness zones ▶ Play C Reset **₽** Differences Zones



January-June 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA





NATIONAL SECURITY AND THE THREAT OF CLIMATE CHANGE

GENERAL GORDON R. SULLIVAN, USA (Ret.)

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Former Commander-in-Chief of U.S. Central Command (CENTCOM)

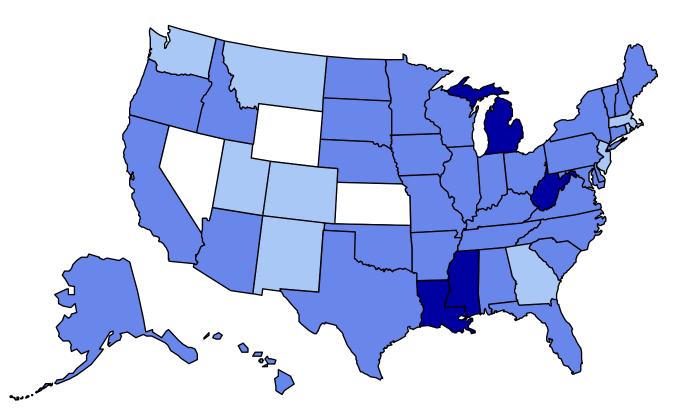
SHERRIW, GOODMAN

Executive Director, Military Advisory Board

The CNA Corporation

Obesity Trends* Among U.S. Adults

BRFSS, 1991 (*BMI ≥30, or ~ 30 lbs. overweight for 5′ 4″ person)

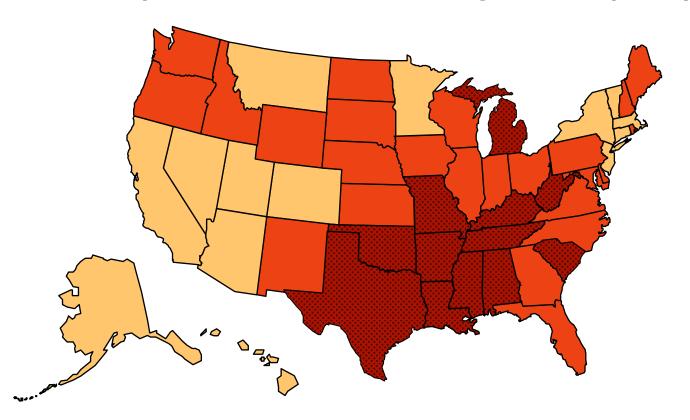




Obesity Trends* Among U.S. Adults

BRFSS, 2010

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







10%–14%



15%-19%



20%-24%



25%-29%



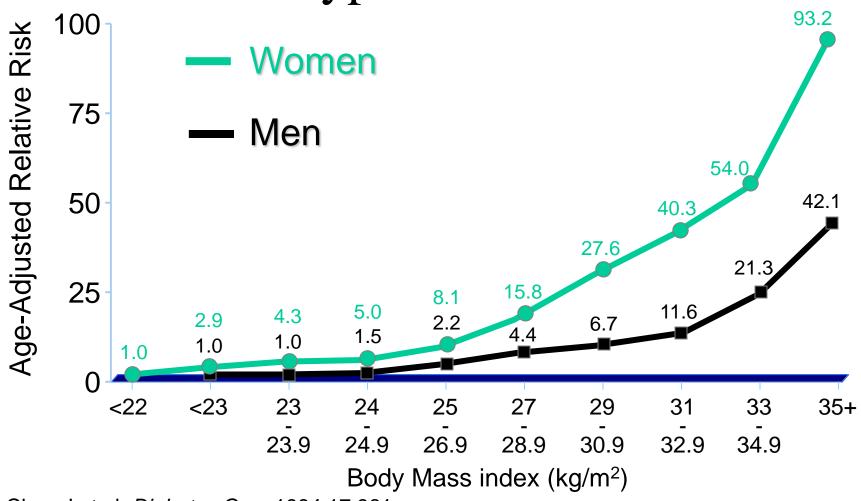
- ...by 2030
 obesity rates will
 rise to 42%
- The US will need to care for ...
 32 million more obese people than in 2010.



Forecast:

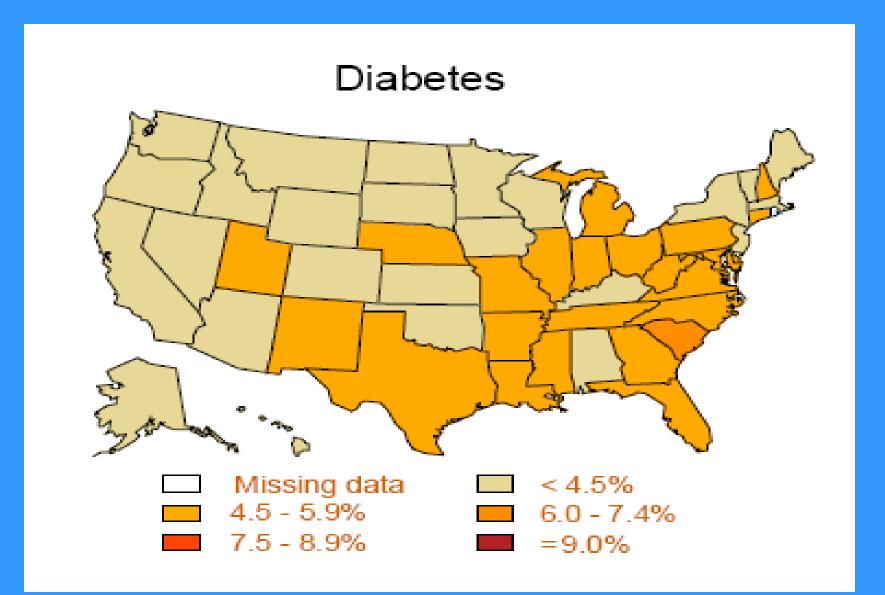
by 2030 the prevalence of the US population with a BMI over 40 (~100 pounds overweight) will be 11%

Relationship Between BMI and Risk of Type 2 Diabetes

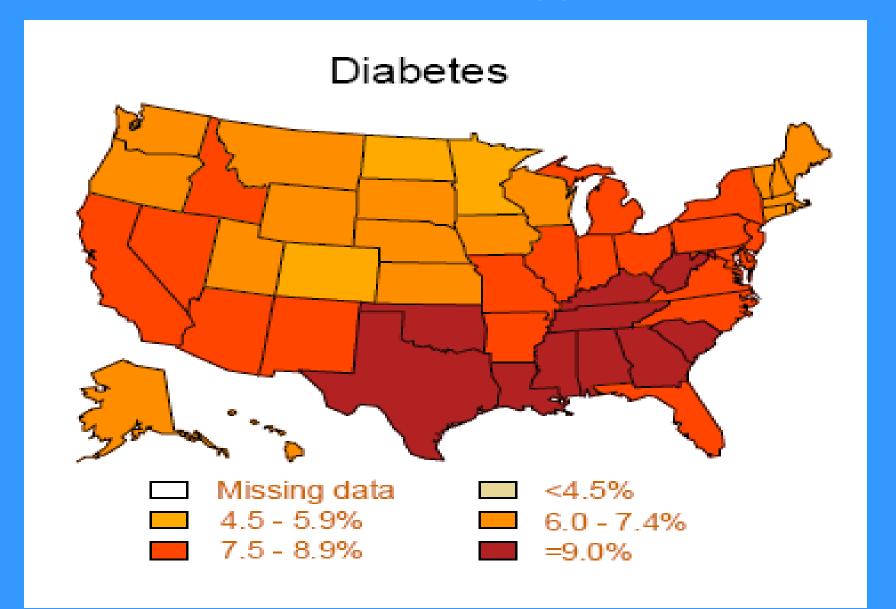


Chan J et al. *Diabetes Care* 1994;17:961. Colditz G et al. *Ann Intern Med* 1995;122:481.

Percentage of US Adults with Diagnosed Diabetes - 1994



Percentage of US Adults with Diagnosed Diabetes - 2007



"[over 30 years] the percentage of new-onset type 2 diabetes in adolescence has increased from 3% to ~50% today".

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Clinical Trial to Maintain Glycemic Control in Youth with Type 2 Diabetes

TODAY Study Group*

ABSTRACT

BACKGROUND

Despite the increasing prevalence of type 2 diabetes in youth, there are few data to guide treatment. We compared the efficacy of three treatment regimens to achieve durable glycemic control in children and adolescents with recent-onset type 2 diabetes.

METHODS

Eligible patients 10 to 17 years of age were treated with metformin (at a dose of 1000 mg twice daily) to attain a glycated hemoglobin level of less than 8% and were randomly assigned to continued treatment with metformin alone or to metformin combined with rosiglitazone (4 mg twice a day) or a lifestyle-intervention program focusing on weight loss through eating and activity behaviors. The primary outcome was loss of glycemic control, defined as a glycated hemoglobin level of at least 8% for 6 months or sustained metabolic decompensation requiring insulin.

The members of the writing group — Phil Zeitler, M.D., Ph.D., University of Colorado Denver, Aurora; Kathryn Hirst, Ph.D., and Laura Pyle, M.S., George Washington University, Washington, DC; Barbara Linder, M.D., Ph.D., National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD; Kenneth Copeland, M.D., University of Oklahoma Health Sciences Center, Oklahoma City; Silva Arslanian, M.D., Children's Hospital of Pittsburgh, Pittsburgh; Leona Cuttler, M.D., Case Western Reserve University, Cleveland; David M. Nathan, M.D., Massachusetts General Hospital, Boston;

David B Allen MD

New England Journal of Medicine

April 29, 2012

EDITORIAL



TODAY — A Stark Glimpse of Tomorrow

David B. Allen, M.D.

its consequences, particularly development of type change for modern medicine — a phenomenon cemic control, but 39% still had treatment fail-

Caloric intake that exceeds energy expended and 31% (and this weight loss was apparently transitory in many participants), and the addition of 2 diabetes mellitus, is emblematic of a climate rosiglitazone to metformin improved durable gly-

...These data imply that most youth with type 2 diabetes will require multiple oral agents or insulin therapy within a few years after diagnosis. "Fifty years ago, children did not avoid obesity by making healthy choices; they simply lived in an environment that provided fewer calories and included more physical activity for all."

David B Allen MD

New England Journal of Medicine

April 29, 2012

We need ... economic incentives to produce and purchase healthy foods and to build safe environments that require physical movement—and not simply the prescription of more and better pills...." Dr Allen

The New York Times

The Opinion Pages

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

EDITORIAL

No Longer Just 'Adult-Onset'

Published: May 6, 2012

A study of <u>diabetes in overweight and obese youngsters</u> bears an ominous warning about future health care trends in this country. It found that Type 2 diabetes, a new scourge among young people, progresses faster and is harder to treat in youngsters than in adults. The toll on their health as they grow older could be devastating.

Related

Obesity-Linked Diabetes in Children Resists Treatment (April 30, 2012)

House Passes Student Loan Bill Despite Veto Threat (April 28, 2012)

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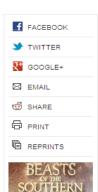
editor, Andrew Rosenthal, follow @andyrNYT.

Opinion

These findings provide more evidence of why the country must get the obesity epidemic under control — to improve health and to curb soaring health care costs.

Only two decades ago Type 2 diabetes was called "adult-onset diabetes"

because it was seldom found in young people, who suffered primarily from Type 1, in which the patient's immune system destroys cells that make insulin, a hormone needed to control blood sugar levels. Type 2- thought to be brought on by obesity and inactivity in many people — has increased alarmingly and accounts for almost a fifth of newly diagnosed cases in young people.

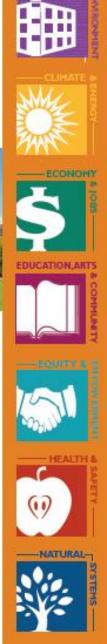


Institute of Medicine

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

STAR Community Rating System Version 1.0 · October 2012



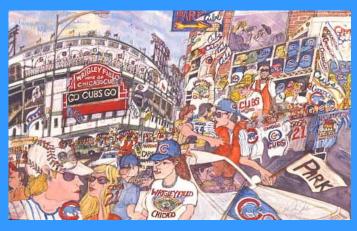




Perceived Benefits of a Stadium

Social

- Promotes a sense of community pride and solidarity
- Raises the visible profile of a city
- Increases the quality of life





Perceived Benefits of a Stadium

Economic

- Direct revenue to city via ticket taxes
- Influx of revenue by attracting regional fans to spend money in the city
- Source of jobs
- Other stadium utilizations can attract additional revenue
- Can be used to redevelop brownfields and other abandoned areas within urban centers to revitalize a community

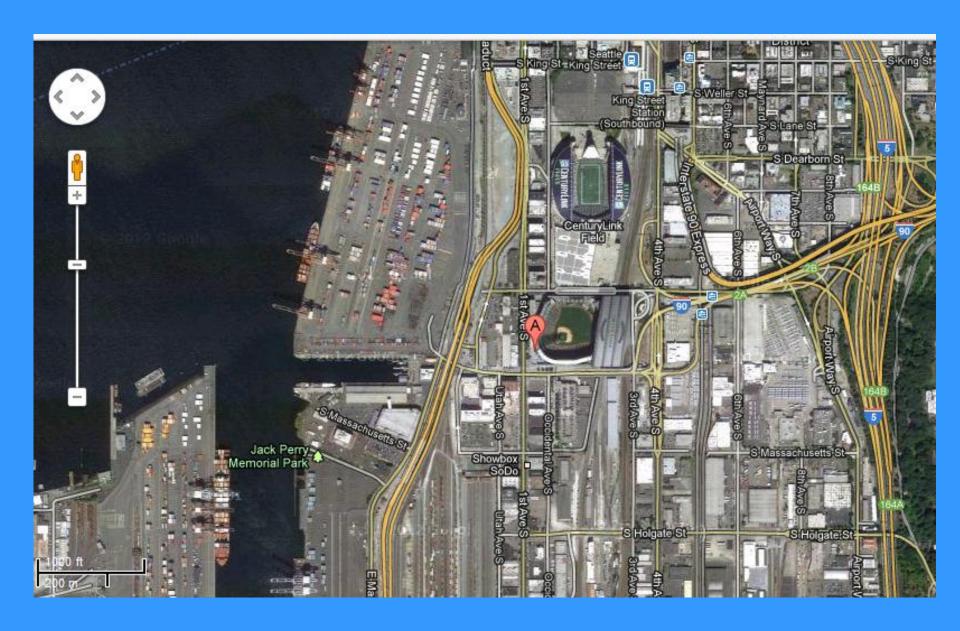
Safeco Field Seattle



Safeco Field, Seattle, WA

- Zoning was changed around the stadium to support stores and restaurants in the neighborhood
- Large parking lots and the adjacent football stadium made the site feel more isolated
- Residential zoning was banned because of fears port activity would annoy residents
- Result: Little to no development, with the surrounding area is marked by "empty buildings, covered windows and 'For Lease' signs"

Safeco Field Seattle



ATT Park San Francisco



Properties of More Successful Stadiums

- AT&T Park (not publicly funded)
 - Not an empty seat in over 140 baseball games
 - "Only" 4400 parking places.
 - Accessed easily via transit (train, bus, ferry service), minimizing traffic impact
 - Construction was coupled with the large scale
 Rincon Park-South Beach Redevelopment Project
 - Emphasis on mixed-use development
 - Provisions for low-income housing
 - Commercial properties and waterfront park and recreation areas have developed
 - Reuse of what was considered a "blighted" area, with a high percentage of abandoned buildings and lots



between the Upper and Lower Elementary
If you want to be a part of this market, g

Farmers' Markets and Urban Agriculture

SUSTAINABLE AGRICULTURE EDUCATION

David Brower Center, Berkeley, California Tel 510-526-1793 info@sagecenter.org



See what's new at the Sunol AgPark in our <u>Fall Newsletter</u>.



Students harvest organic strawberries at the AgPark

Linking Our Food, Farms & Future

SAGE (Sustainable Agriculture Education)

SAGE is a pioneer in connecting rural and urban interests for their mutual benefit.

To preserve regional agriculture, while meeting the equally urgent need for equitable, sustainable urban development, SAGE has developed an holistic approach to establishing multifunctional agriculture at the metropolitan edge, and fostering linkages between rural farmers and urban city dwellers.

Services & Projects

SAGE develops projects and participates in collaborations to support sustainable regional food and agriculture.

Urban Edge Agriculture Parks - part working agriculture and part parkland, our successful <u>Sunol Water Temple Agricultural Park</u> is a model of this approach

New Ruralism Framework: Metro Region Ag Planning & Foodshed Assessments - developing frameworks and projects for bridging smart growth and local food systems

Public & Farmers' Markets – bringing farmers and the community together

Public Education – engaging the public in sustainable agriculture

NEWS

Baia Nicchia's Produce Highlighted by Local Chefs

Baia Nicchia's delicious squash and peppers, grown at the Sunol AgPark, have been featured recently in the Edible East Bay and San Francisco Chronicle.

Read Mon

Foodsheds - A New Ruralism Bridging Smart Growth and Sustainable Agriculture

The urban-rural dichotomy doesn't work anymore. There's a connotation in the words 'urban' and 'rural' that suggests a neat line between the geographies of city and countryside.

Read More

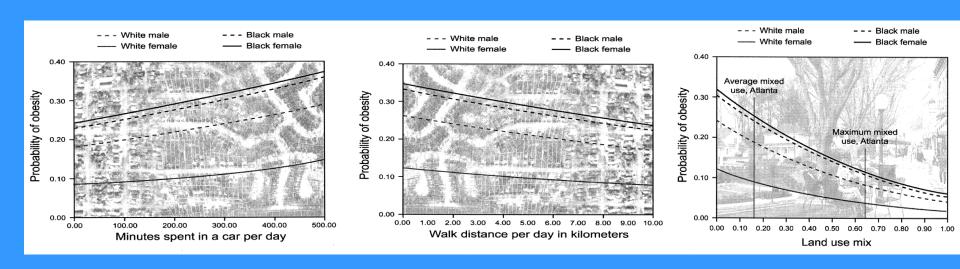
Likely Results of a Sugar Sweetened Beverage (SSB) Tax

• "A national tax of 1 cent per ounce on sugar-sweetened beverages (SSBs) would decrease consumption by 23% and raise \$14.9 billion in the first year alone."



Atlanta Population Study

More Time in a Car → Higher Probability of Obesity More Walking → Less Obesity Higher Density and Connectivity → Lower Obesity

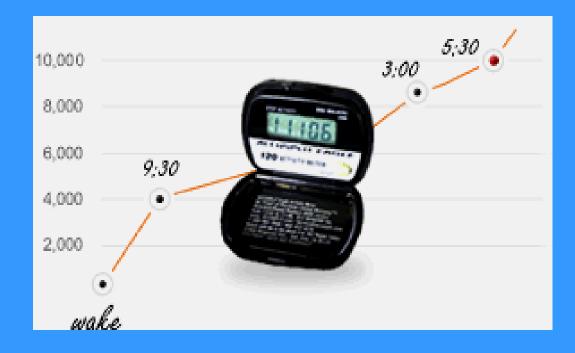


Obesity Relationships with Community Design, Physical Activity, and Time Spent in Cars

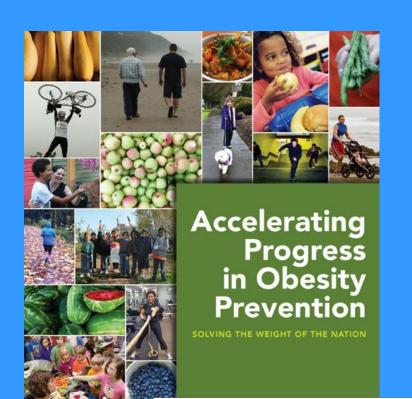
Lawrence D. Frank, PhD, Martin A. Andresen, MA, Thomas L. Schmid, PhD

• Always good, but especially as we age, what is the best exercise?

Walking 10,000 steps



- 3234 people with "Pre-Diabetes"
- Walked or exercised five times a week for 30 minutes for 6 months
- lost 5% to 7% of their body weight
- reduced their risk of diabetes by 58%



Institute of Medicine Report Accelerating Progress in Obesity Prevention May 8, 2012

Goal 1: Make physical activity an integral and routine part of life.

Recommendation 1: Communities, transportation officials, community planners, health professionals, and governments should make promotion of physical activity a priority by substantially increasing access to places and opportunities for such activity.

Strategy 1-1: Enhance the physical and built environment.

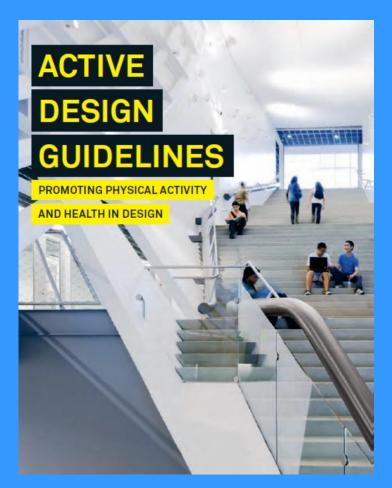
Communities, organizations, community planners, and public health professionals should encourage physical activity by enhancing the physical and built environment, rethinking community design, and ensuring access to places for such activity.

Potential actions include:

communities, urban planners, architects, developopers, and public health professionals developing and implementing sustainable strategies for improving the physical environment of communities that are as large as several square miles or more or as small as a few blocks in size in ways that encourage and support physical activity;

NYC Active Design Guidelines

- Resilient Bldgs
- Energy Efficient Buildings
- Healthy Bldgs
- Smart zoning and locations



http://www.nyc.gov/html/ddc/html/design/active_design.shtml

Complete Streets Bring Equity to Community and Transportation

- Complete Streets
 - social equity, aesthetics, walking, improved local sales, community building



The Mews-Review

Roseburg, Oregon

Vol. 145. No. 47

THURSDAY, JUNE 21, 2012

www.nrtoday.com

The path to healthy living

Environmental health expert Dr. Richard Jackson discusses city planning with disease prevention in mind

CARISA CEGAVSKE

The News-Review

Regular exercise adds about eight years to a person's life — more even than quitting smoking does. That's why a community should design an environment in which people want to walk and buke rather than drive.

That's the message Dr. Richard Jackson, the host of the Public Broadcasting Service series "Designing Healthy Communities," gave Wednesday to about 80 people who crowded into a room at the

Douglas County Library to hear him speak. Afterward.

Jackson, the chairman of

environmental

health sci-

ences at the

California.

Los Angeles, toured the city

with about a

dents. He rec-

dozen resi-

ommended

University of



If you want to devise a way in America for people to be depressed, isolate them in a steel box.

> Dr. Richard Jackson Environmental Health Expert

> > improvements along Washington Avenue and gave the city high marks for its

marks for its bicycle trail along the South

"I think it's a treasure. I think this should be the diamond which you should build a filigree necklace around," he said.



MICHAEL SULLIVAN The News-Review

Dr. Richard Jackson takes a walking tour through downtown Roseburg Wednesday after giving a presentation on designing communities to improve residents' health.

Environmental Health, Jackson has written two books, "Urban Sprawl and Public Heath" and "Making Healthy Places," on the connection between community planning and well being.

Jackson noted that more than a quarter of Oregonians are obese, twice the percentage of that 25 years ago. Jackson said.

The national picture isn't pretty, either. Two of seven applicants to the military can't get in because they don't meet physical fitness standards, and the average life span of the American male ranks 49th compared to other nations, he said.

seeing more overweight children with medical problems such as high blood sugar and signs of depression.

The root cause of these problems is a lifestyle revolving around the car, he said.

"I'm asserting that what we've done is taken environmental disease and turned it into medical disease," Jackson said. "The environment is rigged against this child and in many ways it's rigged against the dector."

He said the American dream has come to mean living in the suburbs, but long commutes mean more fast. fers, he said. "If you want to devise a way in America for people to be depressed, isolate them in a steel box."

Following his speech, Jackson headed out of the library for a walk, giving his impressions of Roseburg's design along the way.

While he thought Southeast Jackson Street was beautiful, Jackson found some areas less lovely upon turning down Washington Avenue.

At the intersection of an abandoned Rite-Aid building and former Safeway parking lot, Downtown Roseburg Association Director Jeff Bright showed him an illustration

Health: Pedestrian routes near schools crucial for cities

Continued from page 1

of what the area might look like if the city built a plaza.

Although he recommended adding trees to the plan, Jackson thought the plaza would be an improvement. "This is the heart of the city," he said.

He also suggested "dressing" the Overpark garage across the street by opening the ground floor up to small retail shops.

Walking farther down Washington Avenue, he commented favorably on the new Umpqua Business Center, which opened last week.

"This is a lovely building. They've done a nice job," he said.

He said he particularly liked that the parking was in back and not visible from the street and contrasted that with nearby

Oregons & Oregon Lottery

Wednesday Powerball 11-17-29-56-57 Powerball: 14 Next Jackpot: \$60 million

Tuesday Megamillions



MICHAEL SULLIVAN/N-R photo

Dr. Richard Jackson answers questions at the conclusion of a presentation Wednesday on designing communities to improve health.

parking lots facing Washington Avenue.

The streetfront parking lots convey the message that "the most important thing in our life is our cars," he said.

Jackson said the bike lane along Washington Avenue is too narrow for riders. The problem of continuing a lane across the Washington Avenue bridge toward Roseburg High School could be solved by constructing bike lanes on the outer edge the bridge, separating cyclists from motorists.

He said it's important to cre-

send a message to the kids," he said.

Jackson said that 50 years ago, schools and the routes to them were built in a way that was more respectful of the next generation.

"If you built something nice along here, 40 years from now the alumni would be talking about smoothing next to the river, and people need that," he said. "It's not a waste of money. It's essential to human enjoyment."

Jackson was complimentary of the Laurelwood neighborhood and of the open spaces at the high school, but even more complimentary of the bicycle path, which he followed from the school down to the bridge underneath Interstate 5 and along the South Umpqua River toward Winchester Street.

At the end of his tour, he gave Roseburg high praise.

"I think I'm going to move here as long as the sun shines all year 'round," he said.

Members of the bicycle and pedestrian coalition, which sponsored the event, said they were surprised and pleased by the turnout. Marilyn Carter, public health promotion manThe event drew community planners, transportation planners, health care providers and community gardening organizers.

"I was thrilled, to say the least," said Dick Dolgonas, spokesperson for the bicycle and pedestrian coalition.

Roseburg Community Development Director Brian Davis said he was intrigued by Jackson's presentation. He said the city plans to create better transportation connections in future development, but making changes in already developed areas may be hard.

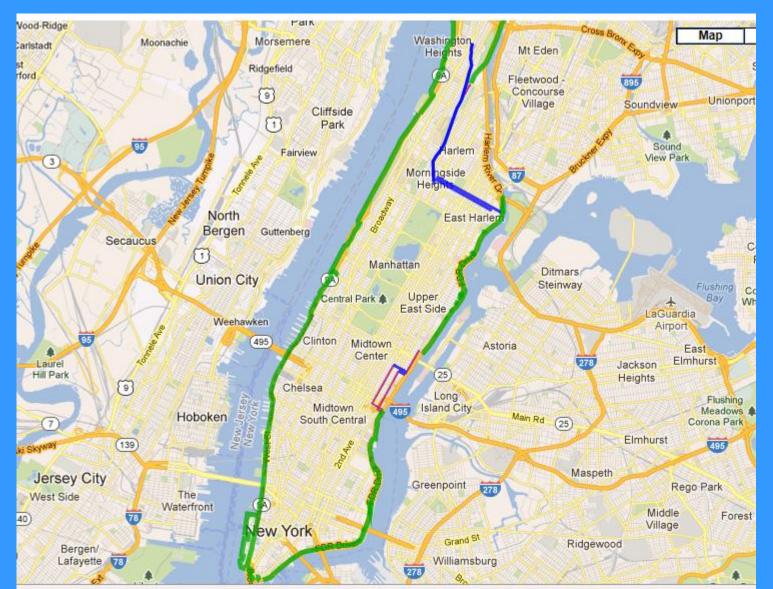
"I guess the struggle we would have there is the central part of the city that was built years ago and didn't have those standards," he said.

Kristina Johansson, owner of Wide Variety Recycling and 2nd Usage in Sutherlin, said she loved Jackson's presentation and said she would like to see some of the types of improvements he suggested happen in Sutherlin.

John McDonald, a transportation planner for the Oregon Department of Transportation, said ODOT is already moving in the direction of cre-

The Manhattan Waterfront Greenway

32-mile long walking and bicycling path around the island of Manhattan. The majority of the Manhattan Waterfront Greenway is physically separated from auto traffic



Charlotte, NC, Light Rail Opened November, 2007





- Significant increase in meeting the weekly Recommended Physical Activity
- ... through walking (OR1.09)
- ...and through vigorous exercise (OR1.11)

The Effect of Light Rail Transit on Body Mass Index and Physical Activity

John M. MacDonald, PhD, Robert J. Stokes, PhD, Deborah A. Cohen, MD, MPH, Aaron Kofner, MS, Greg K. Ridgeway, PhD

- The use of Light Rail Transit to commute to work was associated with an average reduction of 1.18 BMI points (*p*<0.05) and 81% reduced odds of becoming obese over time.
- For a person who is 5'5" -- equivalent to a relative weight loss of 6.45 lbs.

The New York Times

Sunday Review | The Opinion Pages

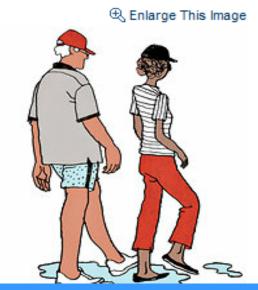
WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH

OPINION

Now Coveted: A Walkable, Convenient Place

By CHRISTOPHER B. LEINBERGER Published: May 25, 2012

WALKING isn't just good for you. It has become an indicator of your socioeconomic status.



Until the 1990s, exclusive suburban homes that were accessible only by car cost more, per square foot, than other kinds of American housing.

Now, however, these suburbs have become overbuilt, and housing values have fallen. Today, the most valuable real estate lies in walkable urban locations. Many of these now pricey places were slums just 30 years ago.





- Segway Personal Transporter
 - \$5000 and up
 - "burn" about ~200 kcal/hr

- Cost of Police Mountain Bike
 - **-** \$700**-**1000
- ~ 650/kcal/hr



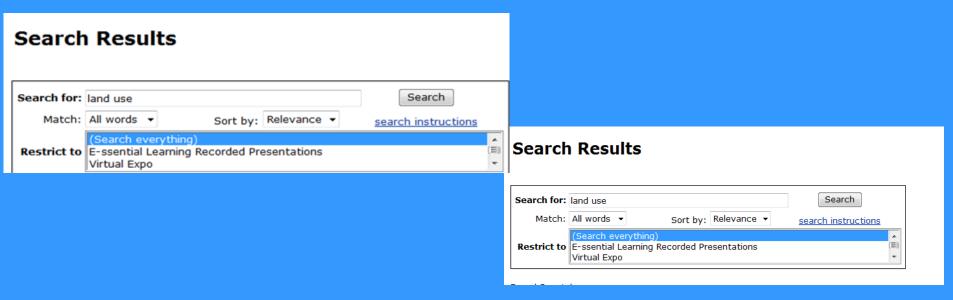
• The Chenoggye freeway ran through the center of Seoul ~1970-2005



- Cheonggyecheon -- 8.4 km long downtown Seoul, South Korea.
 - The \$900 million project initially attracted much public criticism.

APHA National Meeting 2002-2003 Abstracts with "land use" - 0

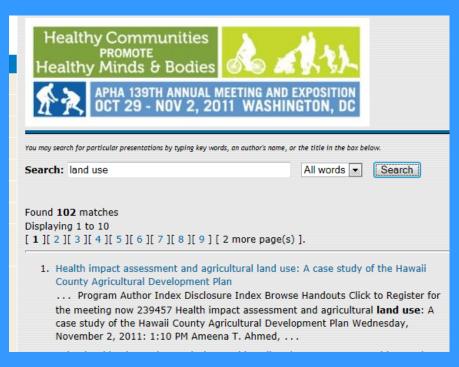
2002 2003



A Big Shift in Public Health's Awareness of Built Environment as a Core Determinant of Health

2011 APHA Annual Meeting

"land use" 102 matches



"built environment" 182 matches



disparities: The Multnomah County Built Environment Atlas project Monday,

October 31, 2011: 10:48 AM Betsy Clapp, MPH, Health ...