

Building Community Health with *Sticky Design*



Carterville, IL

Feb. 2014



Signs of the apocalypse . . . ?

Topics for consideration:

- Some **perspective** . . .
- The real “**epidemics.**”
- A question of **priorities**
- Recommendations for greater **stickiness.**
- Bringing stickiness to **your work.**



Carbondale

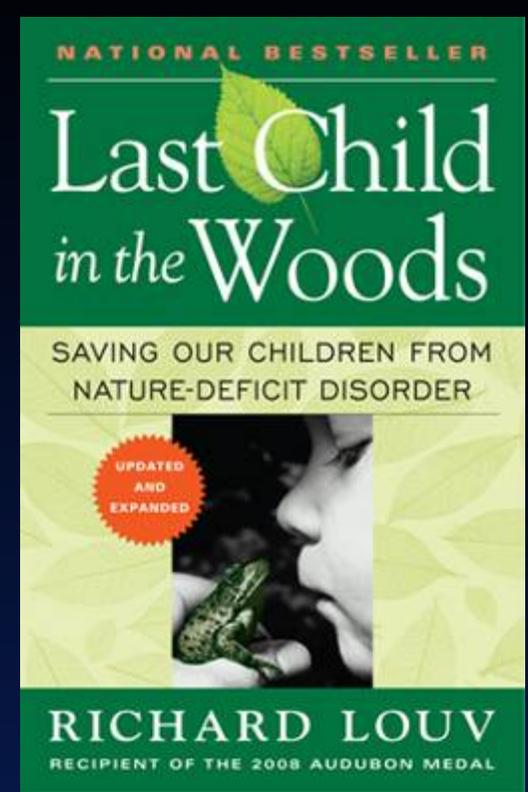


Youthful recollections





Not just my idea . . .



Kids held back with 'over-organised' play, says Shane Gould

Pia Akerman

OLYMPIC golden girl Shane Gould has blasted children's sports programs as "over-organised" and holding back the natural development of physical skills, contributing to physical and social problems down the track.



Gould

The swimmer, who won five individual medals at the 1972 Munich Olympics, yesterday took aim against children as young as five being pushed into team sports rather than recreational activities.

— 3, 6, 7, 8 — that is really too young for kids to be involved in organised sport, even though it is modified," she said at the Australian Institute of Public Management annual conference in Adelaide.

"I believe that children are over-organised and they don't have enough opportunity out for

counted the term "nature deficit disorder" — it's not actually a true disorder, but we are going to start to see problems in children like concentration, hyperactivity to regulate their emotions."

Currently working on a masters degree in social geography at the University of Tasmania, Gould will publish her thoughts on children's physical activity in the December issue of the *Child* publication in state capitals.

The Matter: the loss of traditional Australian backyards and the "impeding" of public play areas as factors reducing child-

ren's ability to play naturally.

"Public liability seems to be the main focus for the design of our children's playgrounds and all of us need to take some responsibility for this," Gould wrote.

"The race to blame someone for a child's fall from a piece of playground equipment has had the appalling knock-on effect of almost criminalising child's play and led to this devastating impact on our public spaces.

"Children prefer a log and a stick to play structures."

Speaking after her address,

Gould said home-improvement TV shows emphasising aesthetically pleasing courtyards had encouraged people to ditch traditional backyards.

"Kids need backyards — they need to dig dirt and pull up plants and see the roots. They need to find worms and beetles and make tracks and build cubbies and pull them down again," she said.

A mother of four, Gould raised her children on a property at Margaret River in Western Australia, where outdoor activity was an important part of everyday life. In her article, Gould argues the

Howard government's focus on after-school sports to address childhood obesity was "well-meaning" but failed to attract most children who often had a "can't do" attitude to sports.

"Children, particularly under eight, do not in my opinion, need to be involved in organised sports," she writes.

Gould said children today were stunted due to "lack of movement opportunities" such as reaching, climbing, tugging and spinning.



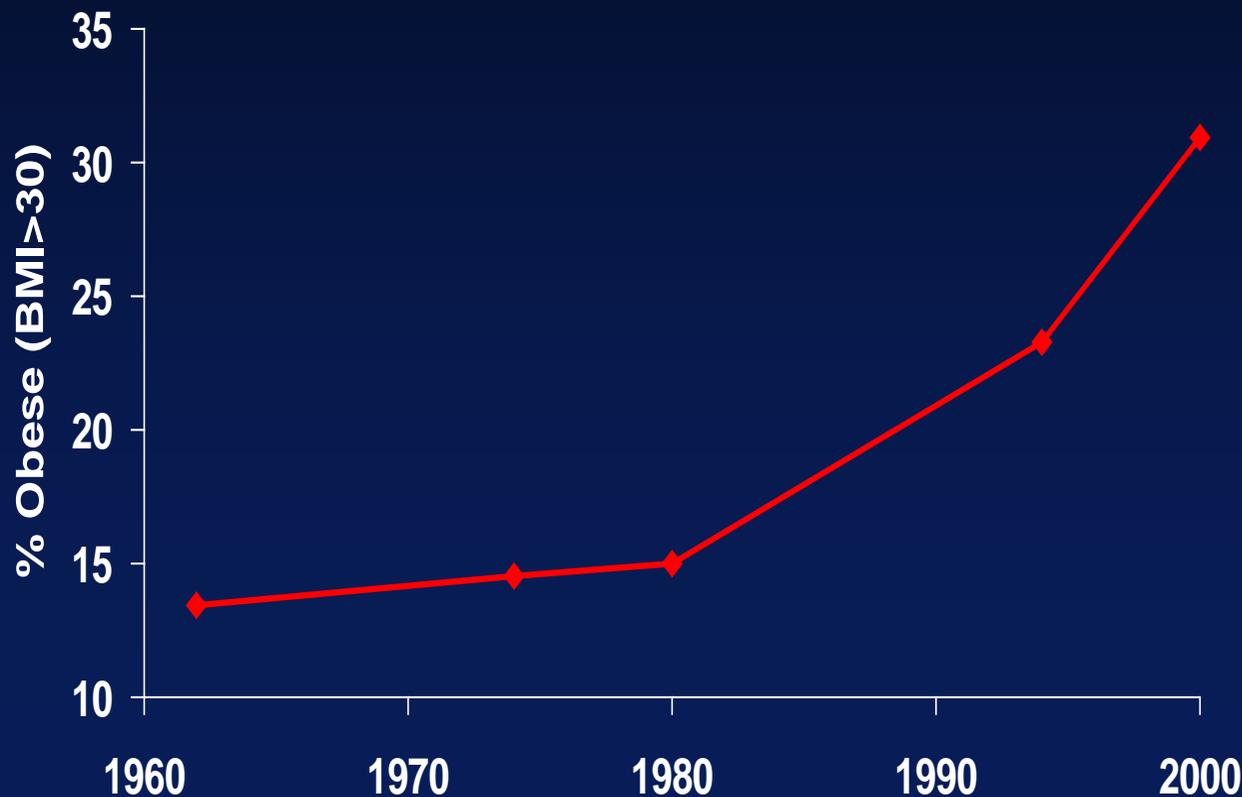
Have your say at theaustralian.com.au

The Australian, 14-Oct-2009

America's looming chronic disease apocalypse . . .

US "Obesity Epidemic"

Ogden et. al. (JAMA 288, 14; Oct. 2002)



My Rant:

Change our thinking. It's *not* just an obesity epidemic. It's twin epidemics of **physical inactivity and **poor nutrition**.***

*** Two of the three biggest drivers of skyrocketing healthcare costs.**

Rank the priority of these five activities:

- 1. America on the Move – national meeting.**
- 2. Local planning board meeting; re: trail.**
- 3. Belmont Health Fair – lead walks, etc.**
- 4. Address Governor's task force on the MA Highway Design Manual.**
- 5. Nordic Walking (w/poles) fitness DVD.**

Health Fair:



But how much, and what activity to recommend to average people?

Surgeon General's Report 1996 Physical Activity Guidelines 2008

www.health.gov/paguidelines

- **150 min/week** of moderate **physical activity**; more is better.
- Any activity is better than none.
- Can be **broken up**.
- **300 min/week** for children.
- Reduced risk for CVD, diabetes, osteoporosis, dementia in old age, clinical depression, a growing list of cancers, obesity.



This counts!

But, Health Fair is #5 because:

- Only reaches those who *choose* to show up!
- And only a fraction of those may actually use the information.



I'll be physically active—if you make me!



Recommendation 1:

Think about scale & effectiveness. Ask the simple question: in **how many people is this likely to actually change behavior?**

Nordic Walking benefits:

- 20% - 40% boost in energy expenditure.
- Increased upper body workout (arms, chest shoulders, back, abs).
- Improved balance; reduced loads on feet, legs.

www.nordicwalkingusa.com

www.markfenton.com



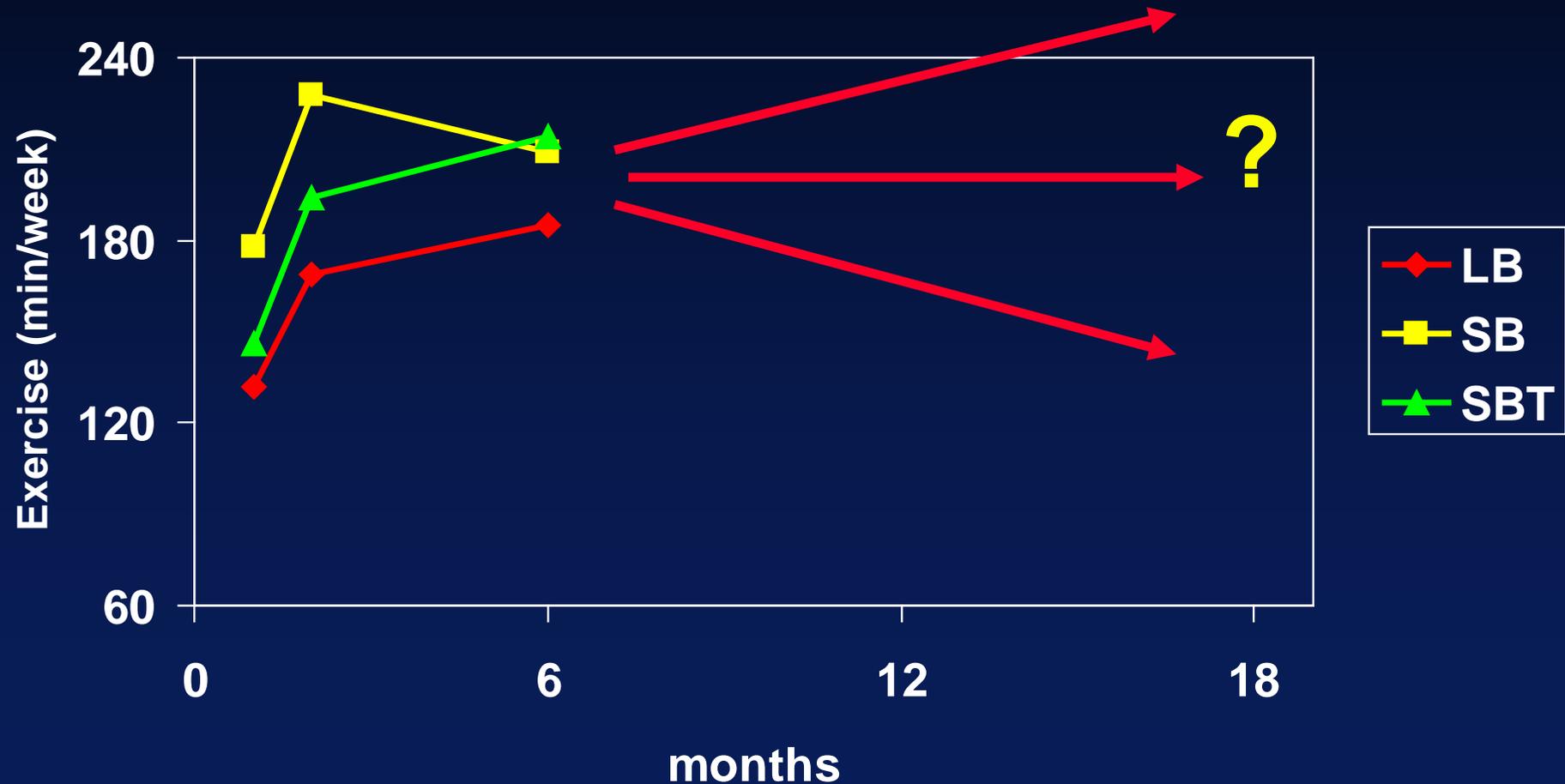
BUT: Nordic Walking? Another **fitness fad?** What about the “**dork factor?**” Or the **stickiness problem?**



Exercise Participation

Effect of Short Bouts, Home Treadmills

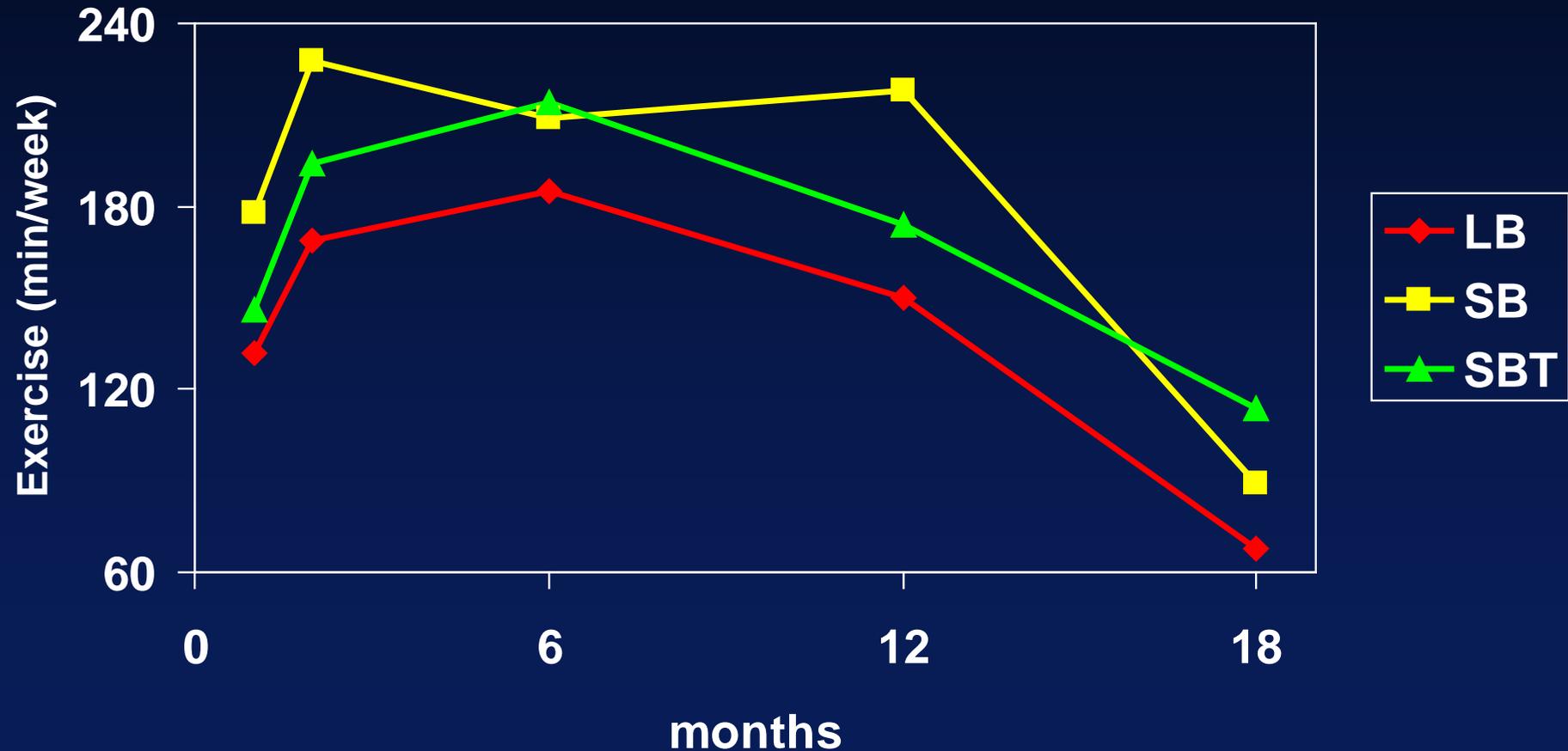
(Jakicic et.al., JAMA 282, 16)



Exercise Participation

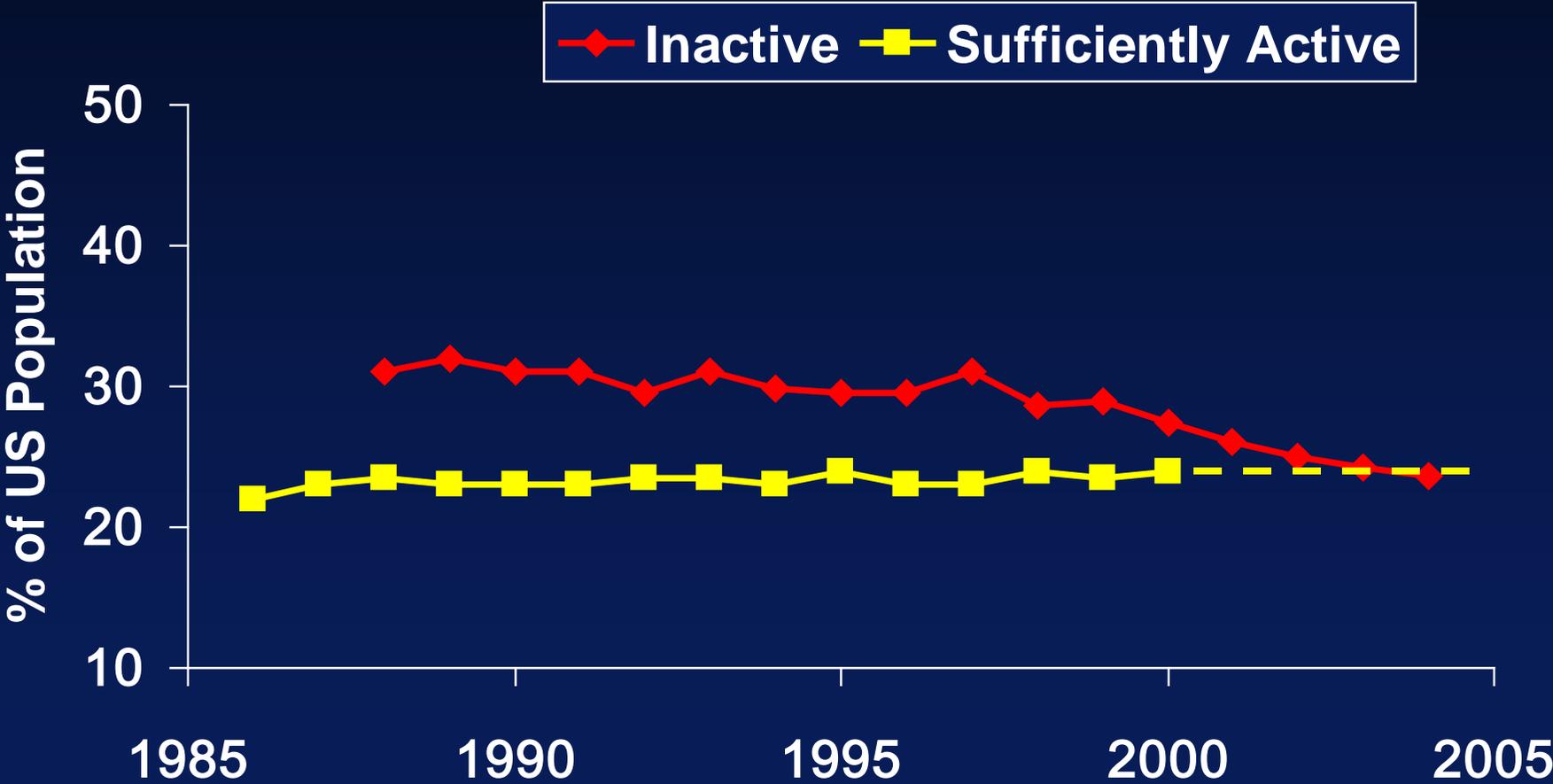
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Leisure Time Physical Activity in the US

(MMWR: 50(09), 166-9; 54(39), 991-4]

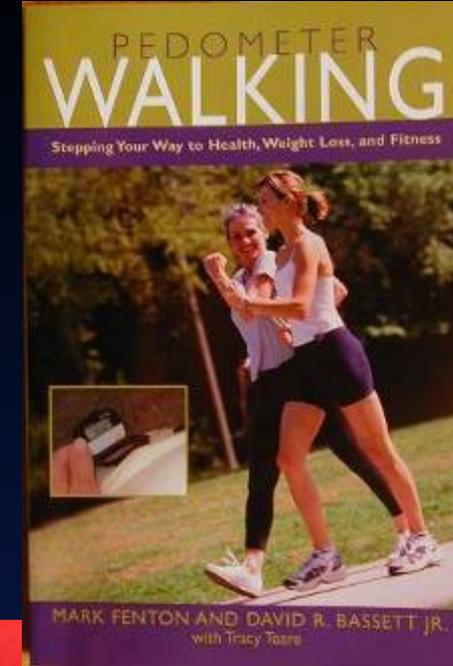


Recommendation 2:

Go for breadth—not just “exercise” for “diets.” We need increases in routine, daily physical activity and healthy food systems for everyone.

Pedometer-based “lifestyle” activity promotion:

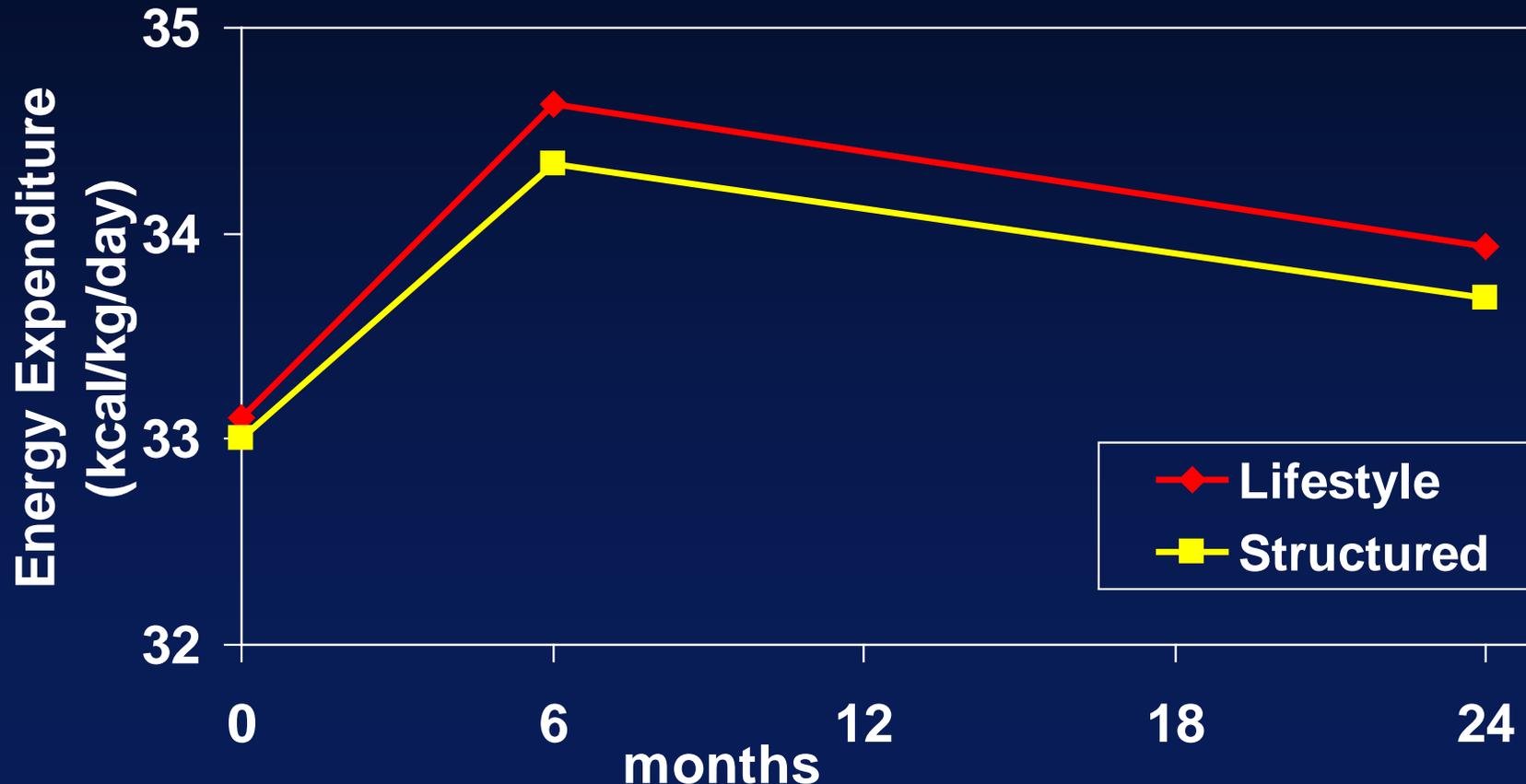
- Measure steps all day.
 - Determine your average daily steps.
 - Increase by only 10%-20% a week.
 - Keep gradually increasing . . .



Key to Success: Keep a record!

Energy Expenditure Lifestyle vs. Structured Activity

(Dunn et.al., *J. Amer. Med. Assoc.*, 281, 4)



Social Ecology Model

Sallis & Owen,
Physical Activity & Behavioral Medicine.

Determinants
of behavior
change

Individual
motivation, skills

Interpersonal - family,
friends, colleagues

Institutional - school, work,
health care & service providers

Community - networks, facilities

Public Policy - laws, ordinances,
permitting practices & procedures

**Easier to
Implement**

Individual
motivation, skills

**Greater
Impact**

Interpersonal - family,
friends, colleagues

Institutional - school, work,
health care & service providers

Community - networks, facilities

Public Policy - laws, ordinances,
permitting practices & procedures

Socio-ecological successes?



Tobacco use

Seatbelts, child safety restraints

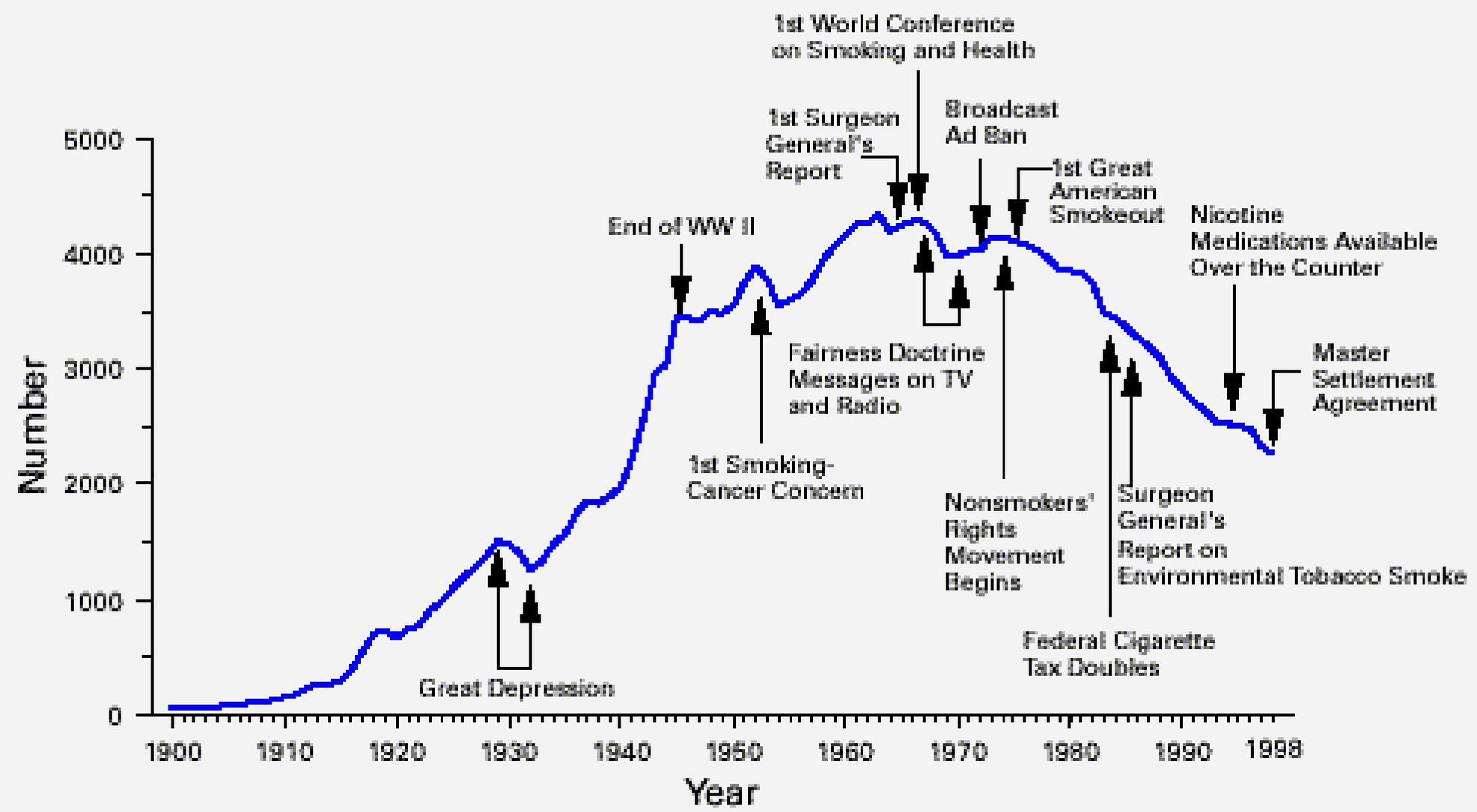


Water-borne disease

Recycling



FIGURE 1. Annual adult per capita cigarette consumption and major smoking and health events — United States, 1900–1998



Sources: United States Department of Agriculture; 1986 Surgeon General's Report.

Thanks to Dr. Ross Brownson, Washington Univ., St. Louis

www.markfenton.com



vs.



**Necessary and
important,
but not enough. >**



**< We must build
communities
where people are
intrinsically
more active.**



Belleville

Recommendation 3:

We have to make active living & healthy eating the easier choices - actually safer, more convenient, less costly, and even more fun than the alternatives.

Planning Board: Directly impacts local environmental factors.



If we build it will they come? Yes, if . . .

1. Destinations within walk, bike, & transit distance.
2. Network of sidewalks, trails, bike lanes, transit.
3. Functional, inviting sites for bikes, peds, transit.
4. Safe & accessible for all ages, incomes, abilities.



www.thecommunityguide.org

CDC Guide to Community Preventive Services

www.markfenton.com

1. Land use.

Live, work, shop, play, learn, pray.



E.g. post office,
grocery, schools

Compact neighborhoods
& shared open space.

Housing
above,
retail
below.



2. Network encourages active travel with:



- Presence of sidewalks, pathways, bike lanes.
- Shorter blocks, cul-de-sac cut-through.
- Access to park, greenway.
- Quality, reliable *transit*.



Transit riders are physically active.

Besser, Dannenberg, *Amer. J. Prev. Med.*, 29 (4), Nov. 2005.

Just during the daily walk to transit:

- Half of transit riders walk at least 19 mins.
- 29% get at least 30 mins. of activity.
- Minorities, poor (income <\$15k/yr.), denser area dwellers more likely to get 30+ mins./day.

Appleton WI



3. Site design:



N. Illinois Ave.

Which setting is more appealing for travel on foot and by bike?

Site design? Research & practice suggest:



Carbondale

- Buildings near the sidewalk, not set back; parking on street or behind.
- Trees, benches, lighting, awnings, “human” scale.
- Details: bike parking, open space, plants, art, materials.



Possible incentives:

- Decrease, share parking (include bike racks).
- Build-to lines.
- Mixed-use, multi-story, w/ residential density bonus.
- Expedite permits.



Neenah WI

Elected, appointed officials & staff must be supported if expected to act courageously.

Appleton WI



4. Safety.

- Engineering can dramatically improve safety.
- Increasing pedestrian and bike trips *decreases* overall accident & fatality rates.



Median islands



Roundabout (Neenah, WI)



Curb extensions

(Jacobsen P, *Injury Prevention*, 2003; 9:205-209.)



SIU campus ^



5. Community design & food systems?

- Community gardens (near schools, parks, senior housing)
- Zoning for urban farming; chickens, bees, compost . . .



- Regulate fast food, drive-through locations.



- Farmer's markets; accepting EBT/WIC
- Green grocers.
- Neighborhood stores.



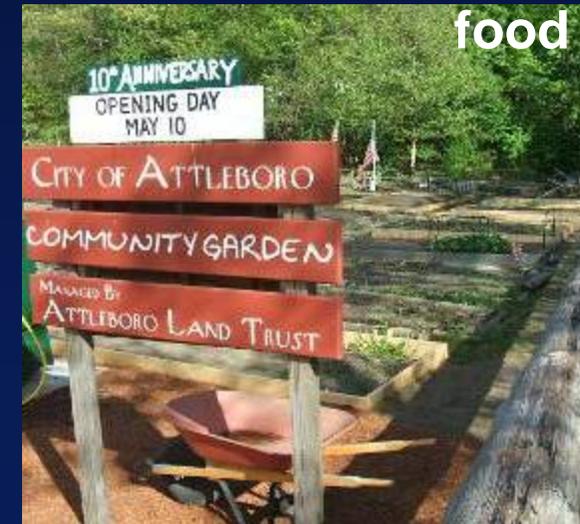
Five Elements of “Sticky” Community Design:



Ped, bike,
& transit
network



Healthy affordable
food



Safety &
access



Site design

www.activelivingresearch.org

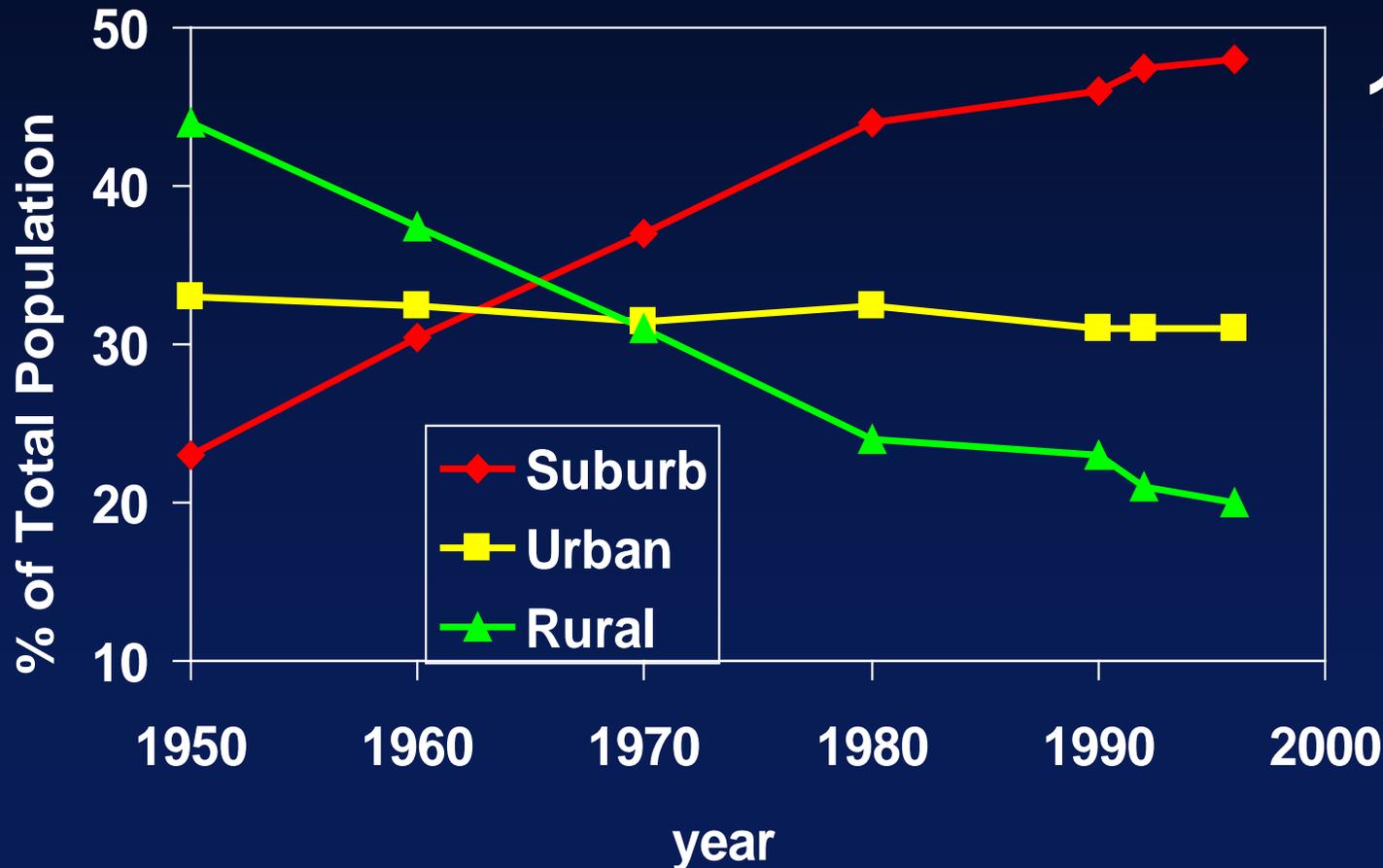
www.markfenton.com

“But what about rural areas . . . ?”

Suburbanization of America

US population shift, 1950-1996

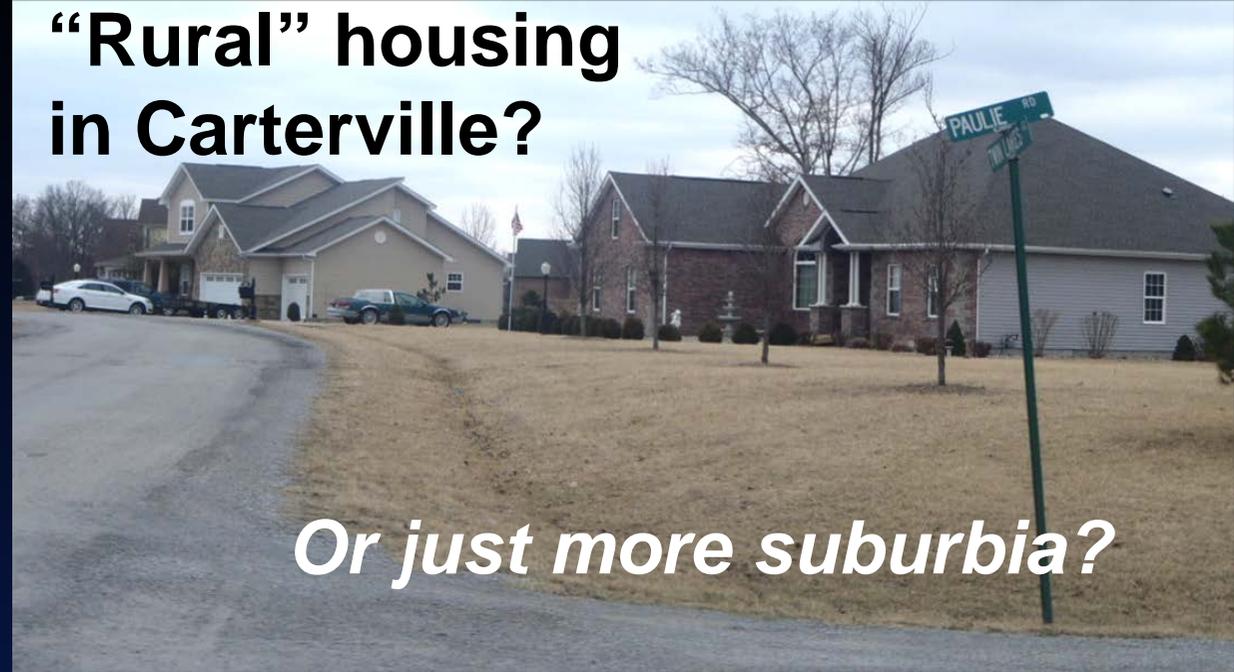
(after *Bowling Alone*, R. Putnam, 2000)



1. Suburbia is steadily consuming the landscape . . .

2. Rural areas are
where you can
affect the shape of
development
before it's done!

“Rural” housing
in Cartersville?



Or just more suburbia?



Elementary school



**No path,
sidewalk,
connector!**

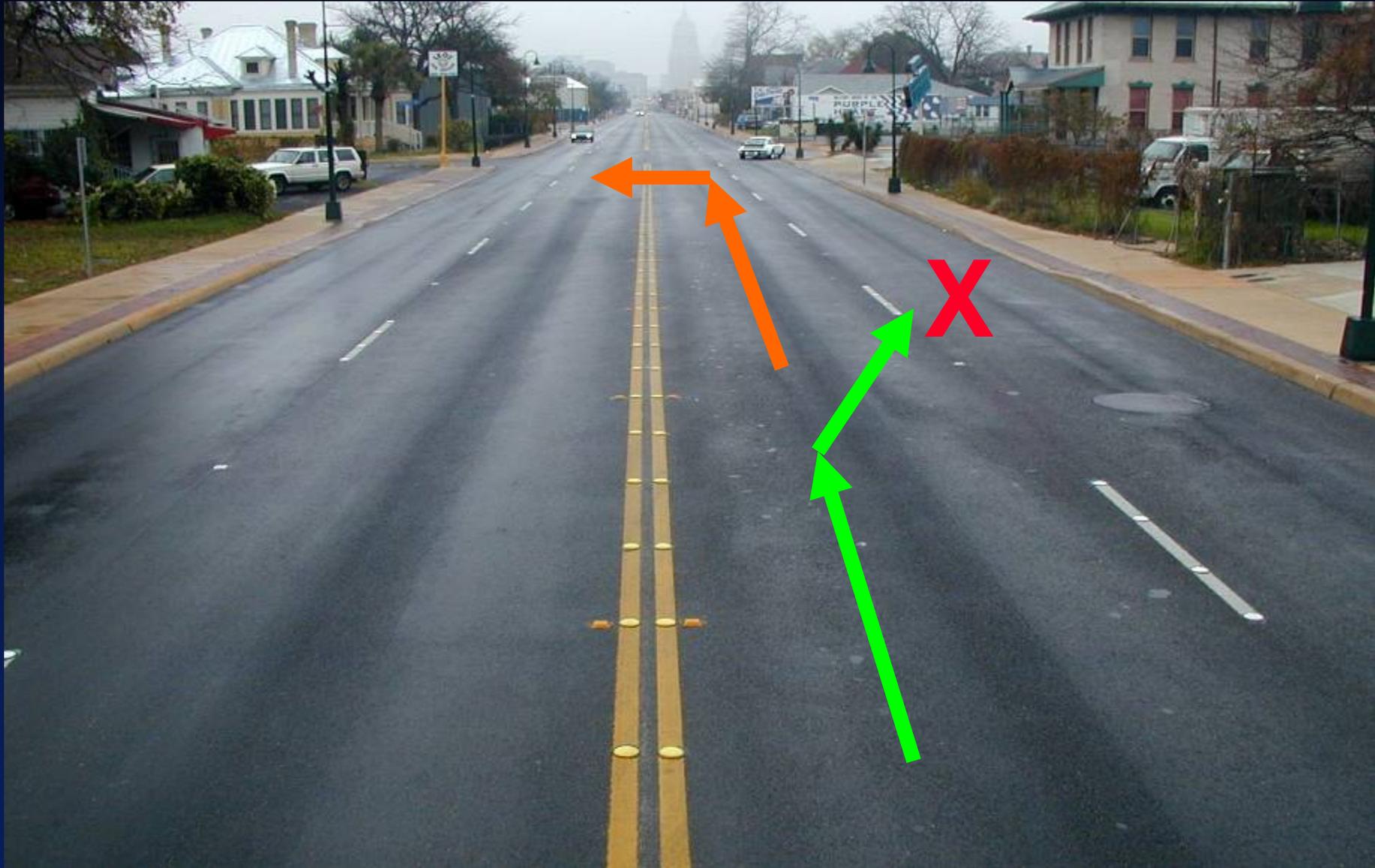


Recommendation 4:

Our environment matters a great deal, and it is critical to the health of this generation. Start by understanding what “sticks” and what doesn’t.

1. Highway Design Manual:

Affects the **built environment** for years to come.



Lane re-alignments

- Often called road diets, being seen more often.



Urbana, IL; before & after.



- Can reduce collisions & severity.
- Dramatically improves performance for pedestrians & cyclists.

The Story of “4”:

4,000 approximate annual pedestrian deaths in US.

40,000 approx. total motor vehicle deaths in US annually.

400,000 approx. annual deaths due to physical inactivity/poor nutrition.

MassDOT Design Guidelines: A Complete Streets approach



- Accommodate all user groups (pedestrians, bicyclists, transit users, motor vehicle drivers) of all ages & abilities whenever we touch a road.
- Only specific, very limited exemptions.



So my choices:

1. Highway Design Manual, Governor's Task Force.
2. Local planning board meeting.
3. America on the Move – national meeting.
4. Nordic Walking (w/poles) DVD.

Don't bother: Community Health Fair.

So, how to get there?



Three P's to increase stickiness.

- **Programs:** Build awareness & encourage behavior change.
- **Projects:** Improve the physical environment for active lifestyles.
- **Policies:** Rewrite the rules so the changes stick. Institutionalize!

Program ideas

- Quick to start.
- Usually less expensive.
- Targeted increases in PA.
- E.g.,
 - Health fairs, walking programs.
 - **But NOT comprehensive, and NOT very sticky.**

Speakers series, wellness training?

- Information may only reach those who show up!
 - And few will actually *act*, unless policies and environment are supportive!



Start with one-shot events, but only if building toward long-term change.

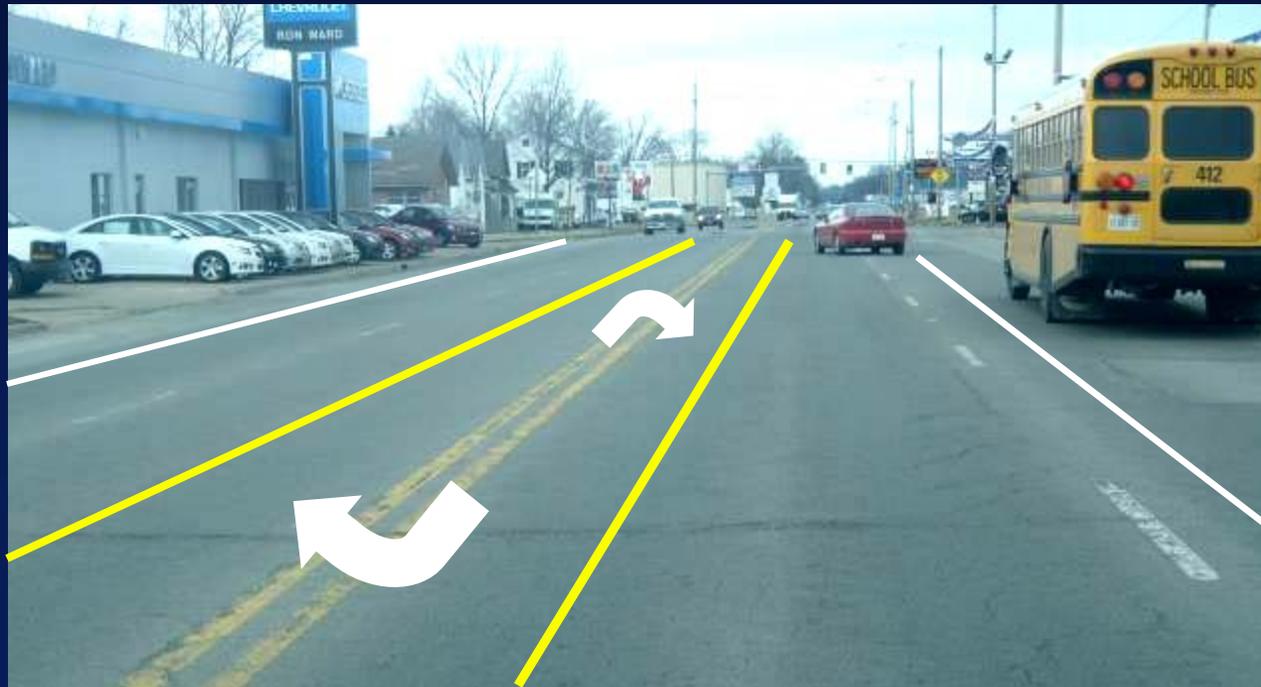
- Monthly, weekly, daily farmer's market.
- Street fair, walk, bike ride, concert. (E.g. on a roadway considered for “completion?”)



Open Streets event. E.g. downtown Herrin.



www.activetrans.org/openstreets

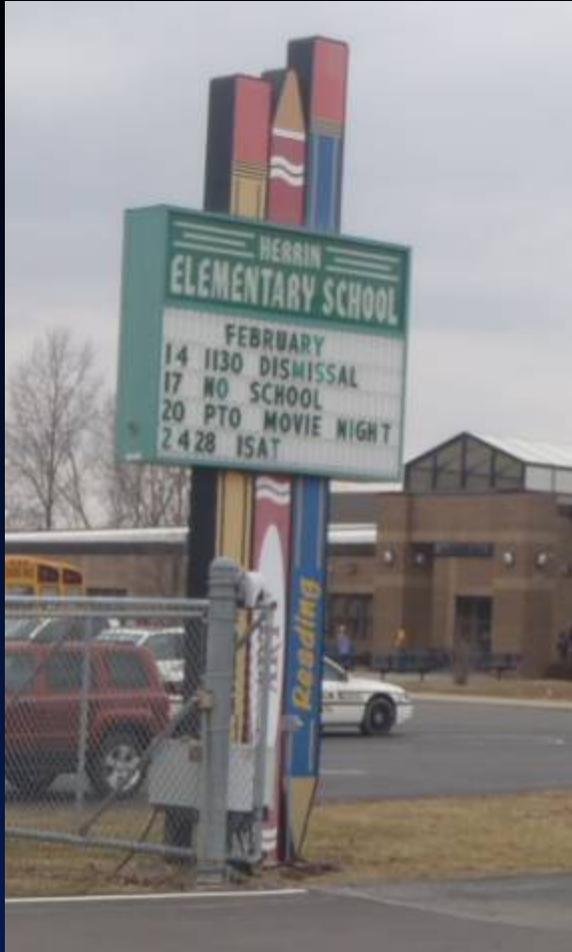


Adopt a Safe Routes to School Event, Program



First Wednesday in
October.

www.saferoutesinfo.org



Herrin
Elementary
dismissal
line . . .



Counseling physical activity . . .

Used to ask:

- What sports have you enjoyed?
- Prefer group or solitary activities?
- Competitive or not?
- Instructor or self-motivated?
- Morning person?
- Measure aerobic fitness, estimate Max HR.

Now *also* ask:

- Where do you live, work, shop, do daily tasks . . . ?
- How do you get around?
- What's your COMMUTER CALCULUS? (+30-60 min. to your commute)
- Your routine: Kids' school, family needs?
- Map your opportunities: parks, trails, shopping, bank, post office?

Project ideas

- Construction usually takes longer.
- Generally more expensive.
- Creates an environment where increases in PA are likely to **stick**.
- *There are less expensive, easier options for a quick start.

Wellness Center or Fitness Facility?



- Is the most costly.
- Mostly serves the “already actives.”
- Membership ≠ participation.

Activity-friendly infrastructure



Point of decision prompts:

- Open locked doors; signs.
- Clean & paint, art, music.
- Footprints, encouragement.
- **3%-10% increase in stair use.**

Create more walkable, bike-friendly facilities.



^ Sacramento, CA. Portland, OR. v

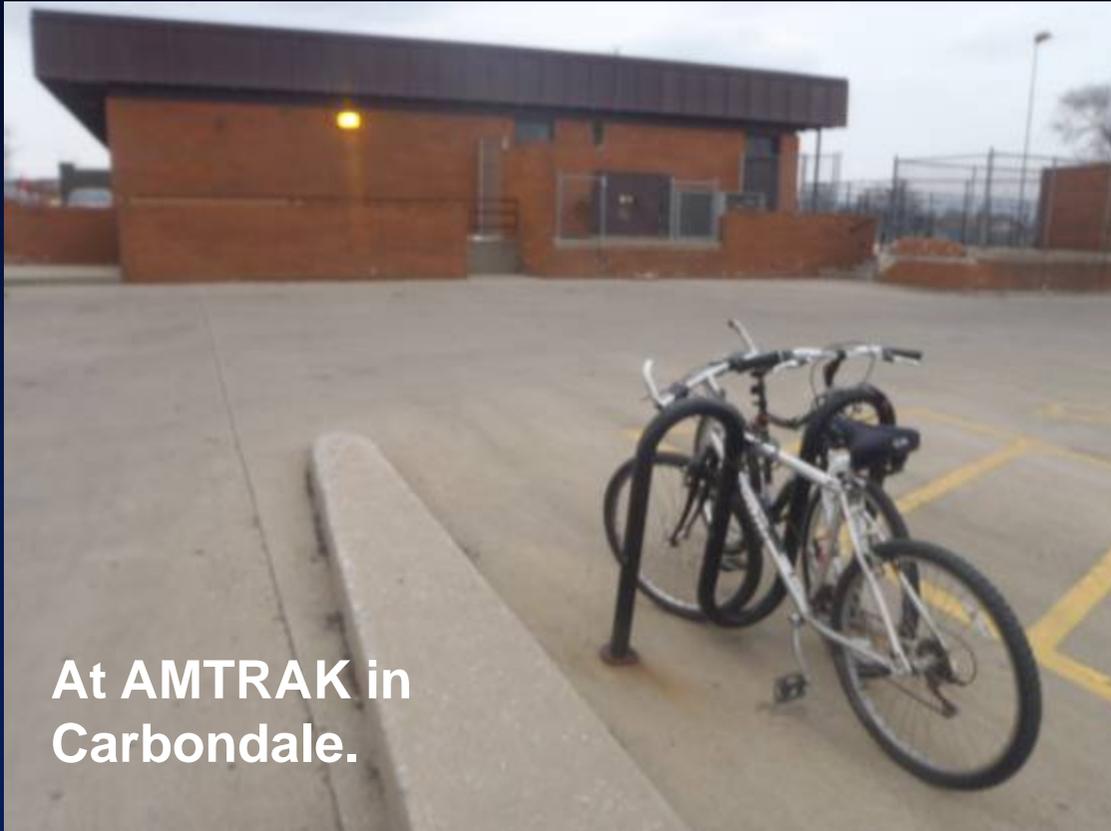


Launch an active commute program.



- Student, employee IDs as transit pass; free or reduced \$.
- Reduce, eliminate free parking.
- Transit, van/car pool promotion.

**We say ride a bike, or take the bus,
or at *least* park far from the building.**



At AMTRAK in
Carbondale.



**But would
*you?***



Asheville, NC



Somerville, MA



**But maybe if
you worked
or shopped
here . . .**

**Install
bicycle
racks.**



**It's okay
to have
fun . . .**



Work Site Walking Path.

Mark or create an “on-campus” loop; tie to **community trails.**

E.g.,

- LL Bean in Brunswick, ME
- Thrivent in Appleton, WI
- Crum Assoc., Dunedin, FL
- West Bend Mutual!

Rails-to-Trails Conservancy:
www.railtrails.org



Adopt a trail!

- Routine maintenance.
- Gardens, plantings
- Construct new links.
- Trail patrol, ambassadors.



Tunnel Hill Trail

W Frankfort Trail



Policy ideas

- Some are easy, some challenging.
- Often more about leadership & political will than about money.
- Goal is positive cost implications in the long run.
- Key to changing the culture and creating **sustained increases** in physical activity.

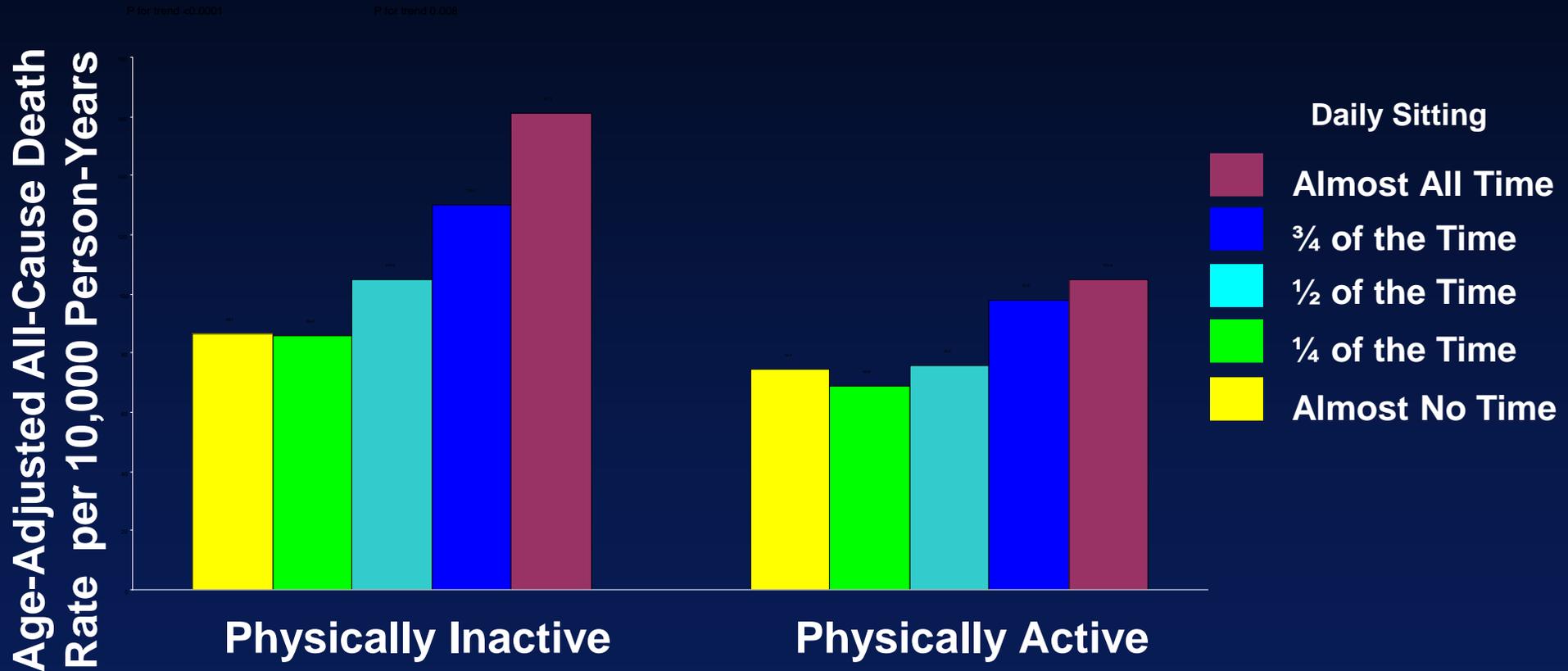
Flex time; physical activity breaks

- Key goal: Sit less!
- Increasing evidence that **time spent sitting** is an independent risk factor.
- Even those who get 30 min/day can suffer **increased chronic disease** risk from being sedentary the other 15.5 waking hours. (Neville Owen, Sep. 2009)



Daily Overall Sitting Time and All-cause Mortality in 17,013 Canadian Men & Women

Canada Fitness Survey 12-year Mortality Follow-up, 1981-1993



“Physically Active” defined as ≥ 7.5 MET-hr/week

Katzmarzyk PT et al. (2009) Sitting time and mortality from all causes, CVD, and cancer. *Med Sci Sports Exerc* 41: 998-1005

**Get beyond your
business . . .**

Take your planner, engineer, head of DPW to lunch.

- Choose somewhere to which you can walk.
- Ask what they're up to; upcoming meetings, plans, developments.
- Tell them what you're up to and why.
- Ask how **you** can help **them** help employees & the community.



Host an Active Community Design Workshop



1. Learn;
2. Walk;
3. Solve;
- 4: Commit

Group problem solving with citizens & professionals is central to success.



**Walkable & Livable
Communities Institute:
www.walklive.org**

**Southern Illinois Metropolitan Planning Org.:
www.greateregypt.org/SIMPO**

New evaluation measures, too.

Used to measure:

- Attendance at events, programs, HRAs.
- How much leisure time physical activity do you get? What intensity?
- Fitness facilities, use.
- Physical profile: BMI, cholesterol, glucose, blood pressure . . .
- Health expenditures, reimbursement , treatment policies?

Now *also* measure:

- Program “stickiness?”
- How much occupational & transportation physical activity do you get?
- Environment profile:
 - Open clean stairs; lockers, showers, bike parking.
 - Sidewalks, trails, layout.
- Policy profile:
 - Flex time, PA breaks.
 - Rewards for PA: earned vacation, health insurance discount.

The future of health promotion . . .

Should
this guy
pay more
for health
insurance?





**Olshansky et.al., “A
Potential Decline in
Life Expectancy . . .”
New Eng. J. of Med.,
March 17, 2005**