

Fighting the Epidemic No One is Talking About

-

**Vermont Obesity Summit
Burlington, VT
Oct. 2005**



**Mark Fenton
mark.fenton@verizon.net**

USA Today Mar. 2005

Oil drilling in Alaska Nat'l Wildlife Refuge.

Continuing War in the Middle East.

“Obesity threatens life expectancy.”

USA TODAY
NO. 1 IN THE USA

Hoop hopes rise, fall today
■ Previews of first 16 games, 4C
■ Washington is surprise No. 1 seed, 3C
■ Men's bracket, 7C ■ Women's bracket, 9C

PlayStation toggles game wars
■ Stores stock up, 1D
■ Standing games, 7D
■ Review, 5B

Wolfowitz to World Bank
Bush picks Defense deputy to be head of development bank ■ 13A

Vote sets stage for drilling in refuge
Senate Democrats say fight isn't over

Two years later
Daily life after Saddam

Families' lives measure pace of progress in Iraq

The al-Tales
Three generations but cautious for now

The Muhaleens
Life looks neither better nor worse from squatter's shack

The al-Zubaidis
Clan turns shame into honor, fear into anticipation

Obesity threatens life expectancy
Disputed study says young could lose 2 to 5 years

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Disputed study says young could lose 2 to 5 years

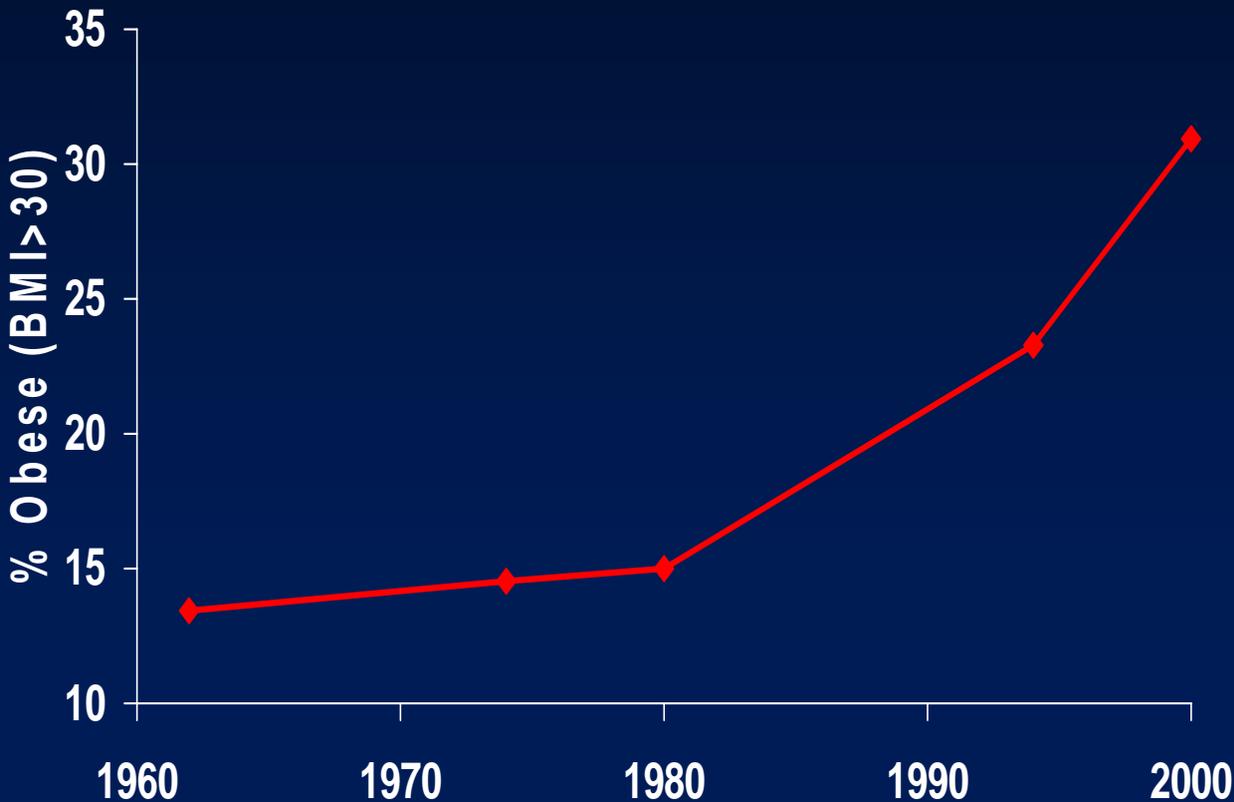
Age group	Weight gain (lb)
50-year-old male	77.4
50-year-old female	68.0
60-year-old male	74.2
60-year-old female	65.0

Oil sets record
■ Hits \$58.40 per barrel, 1B

First sign of the chronic disease apocalypse?

US "Obesity Epidemic"

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



“Supersize Me?”



DECEMBER 9, 2008

TIME

JACK ACTS HIS AGE!

Hillary Carroll, 11, has "adult-onset" diabetes

- WHO'S GETTING IT
- WHY IT'S STRIKING SO MANY
- WHAT YOU CAN DO TO FIGHT IT

DIABETES

ARE YOU AT RISK?

H0XB0JLX *****CAR-RY L01**C-004
#1911 0010 950HID 3203M004 K HAR05 0023
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26 CRESCENT AVE
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www.time.com AOL Keyword: TIME

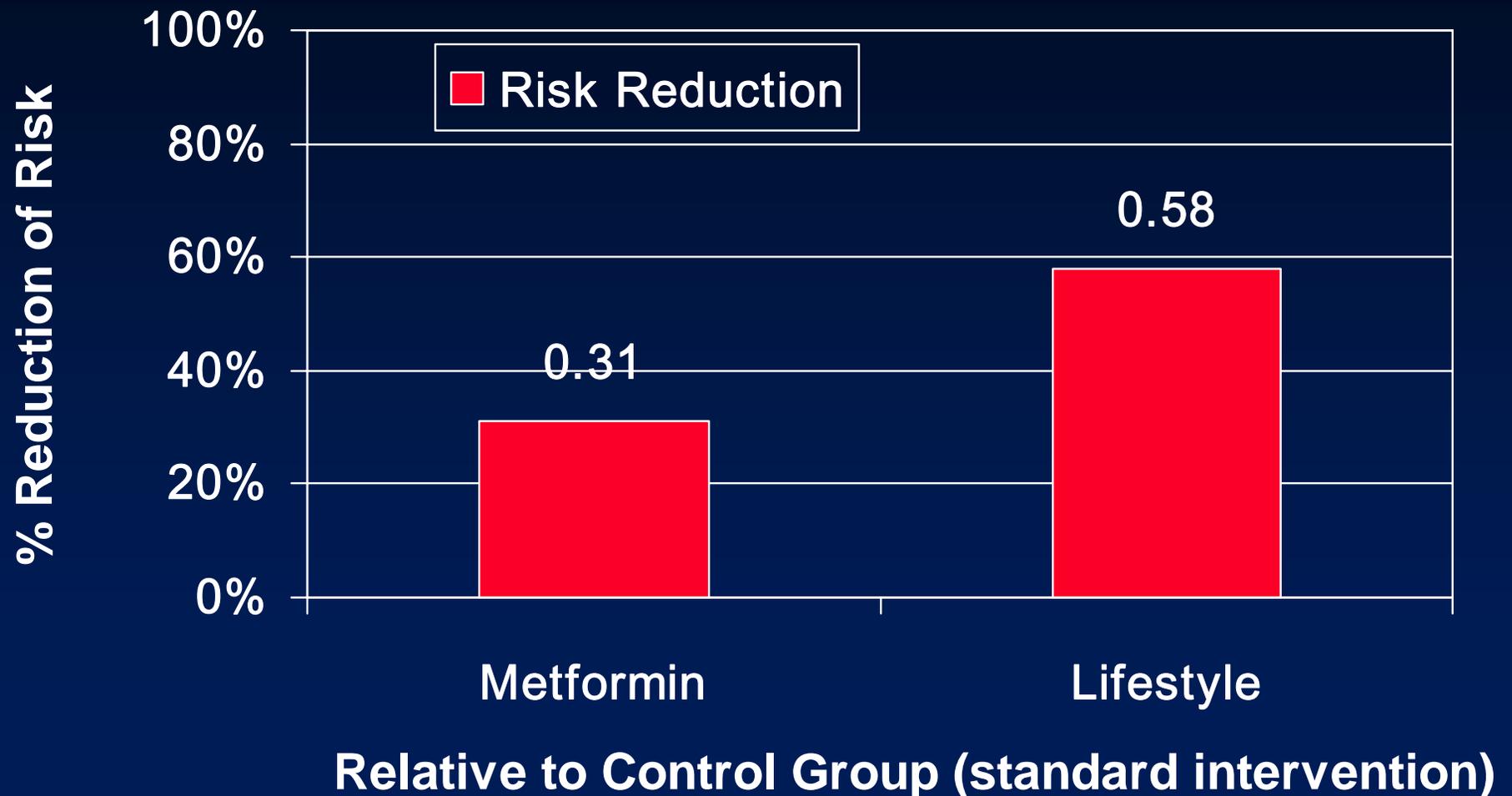
Diabetes Prevention Program (DPP)

Compared three treatments for nationwide cohort (3,000+) at risk for developing diabetes (elevated fasting glucose).

1. Control: Standard exercise and nutrition counseling; placebo.
2. Standard plus drug treatment: Metformin
3. Intensive lifestyle change: Nutritional training, **150 min./week physical activity.**

Diabetes Risk Reduction

(Diabetes Prevention Program; NEJM, April 2002)



My Rant:

**Change the conversation. It's
not just an obesity epidemic.**

**It's an epidemic of **physical
inactivity** and poor nutrition.**

Rank the priority of these five activities for me:

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

5. Health Fair:



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

Surgeon General's Report on Physical Activity & Health, 1996

- **30 minutes** of moderately vigorous physical activity.
- Most days of the week.
- Can be broken up.
- Reduced risk for CVD, diabetes, osteoporosis, obesity, clinical depression, a growing list of cancers.



Health Fair is #5 because:

- Only reaches those who show up!
- And only a fraction of those will actually use the information.



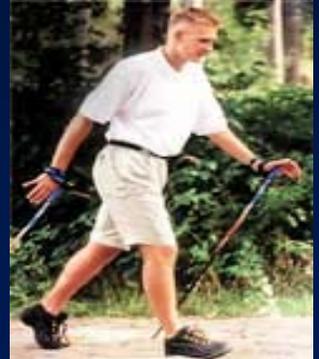
Recommendation 1:

Think about scale. Ask the simple question: how many people can or will this reach?

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.nordicwalker.com



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



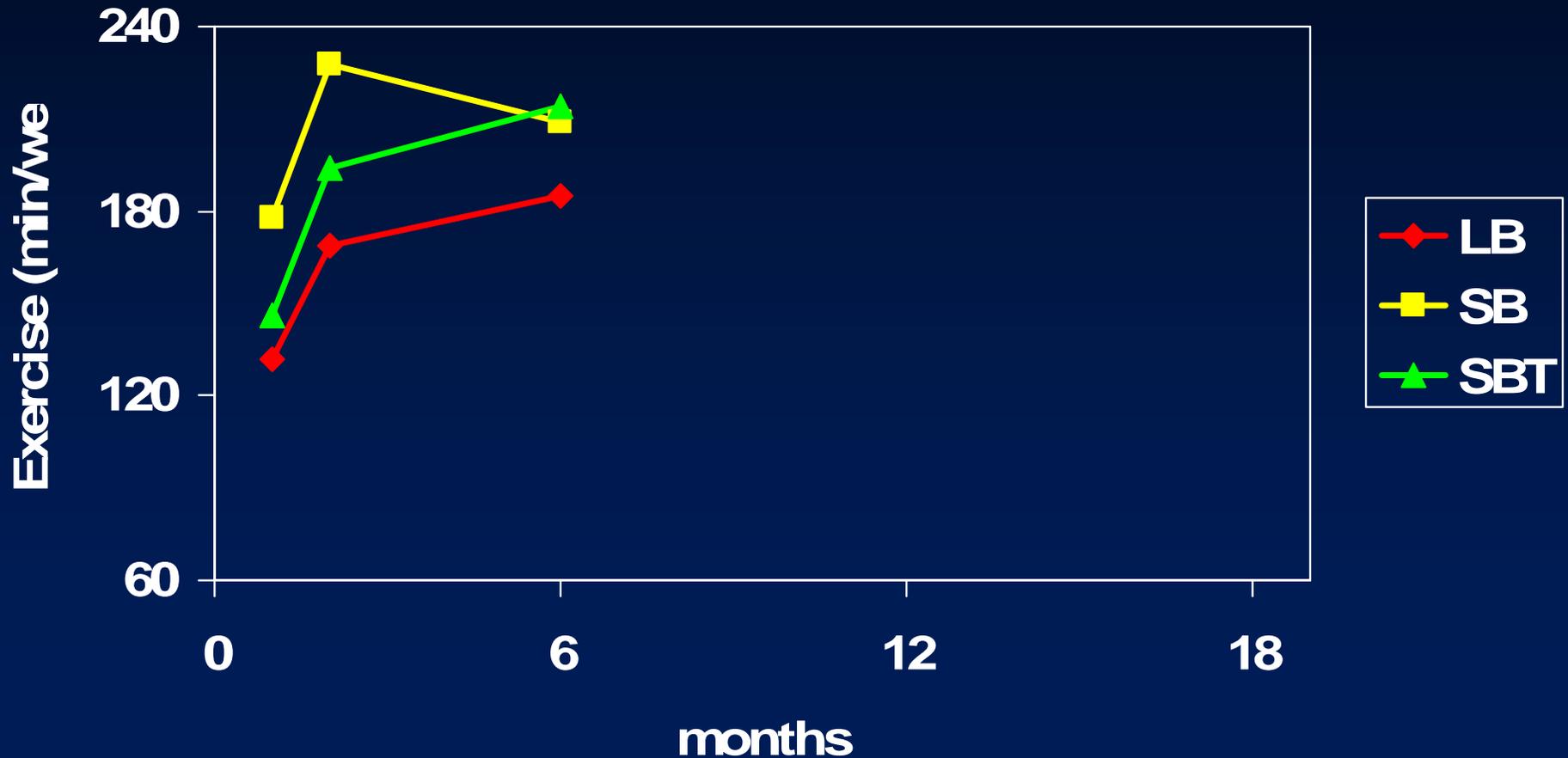




Exercise Participation

Effect of Short Bouts, Home Treadmills

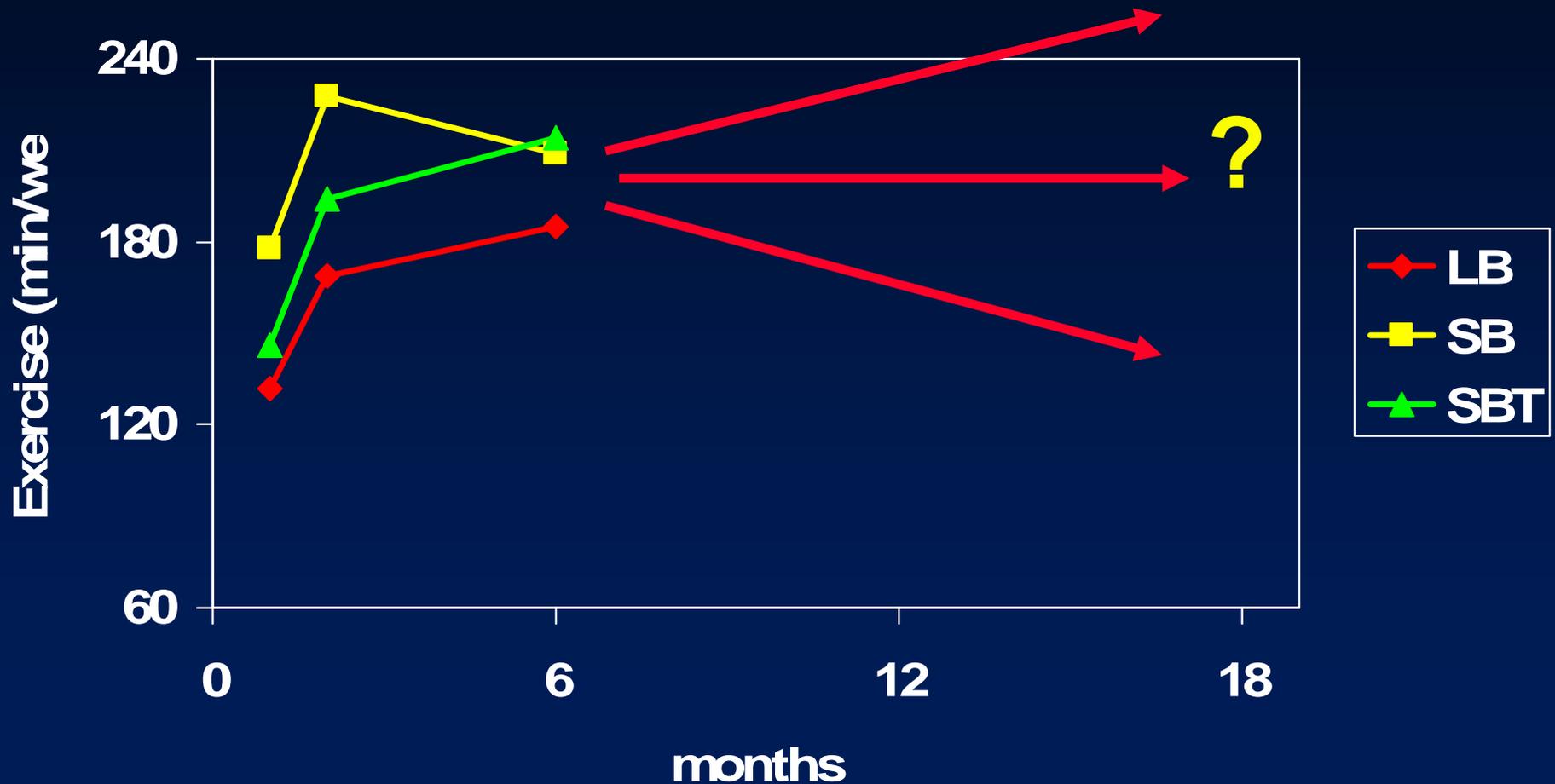
(Jakicic et.al., JAMA 282, 16)



Exercise Participation

Effect of Short Bouts, Home Treadmills

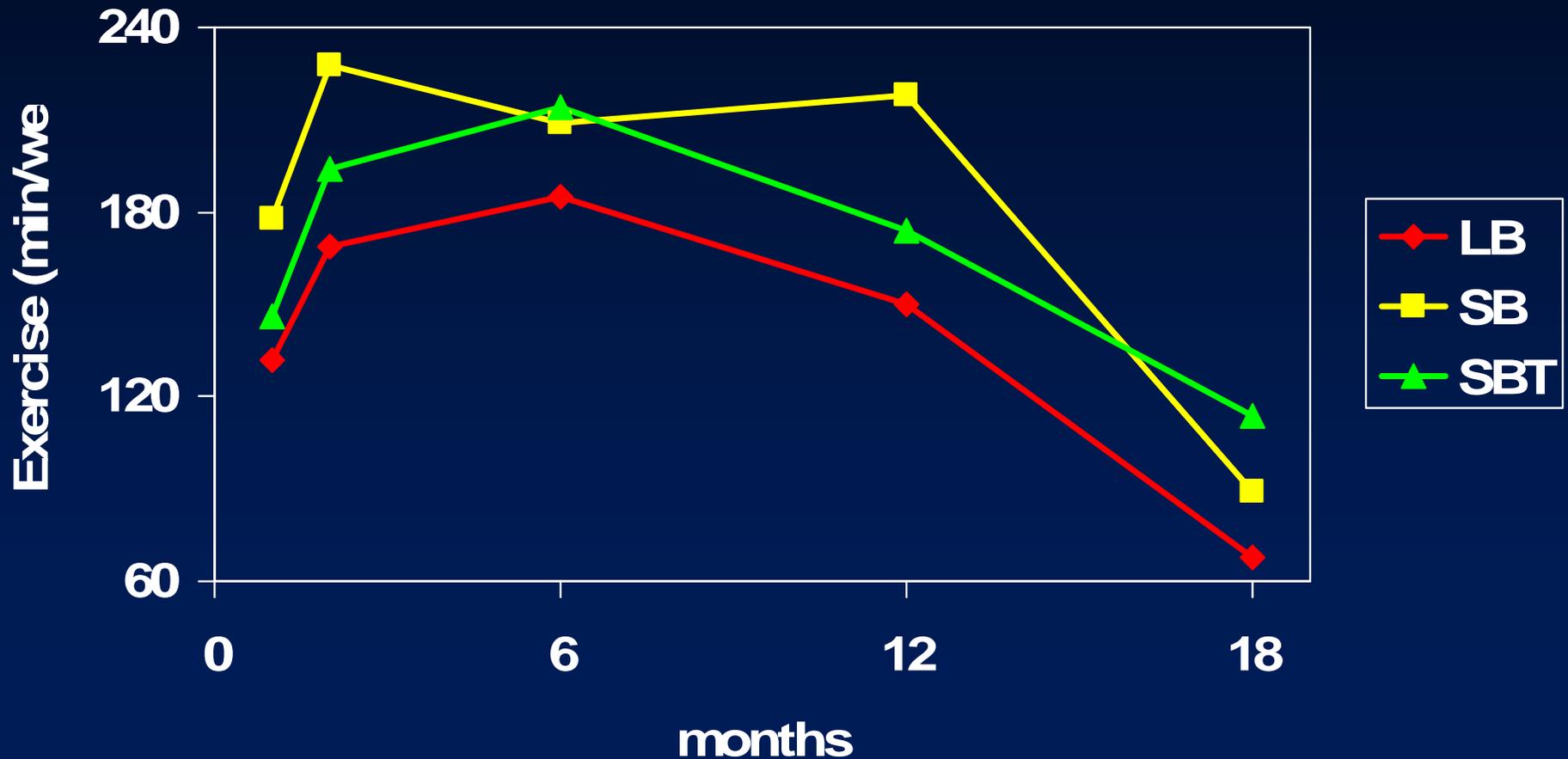
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Exercise Participation

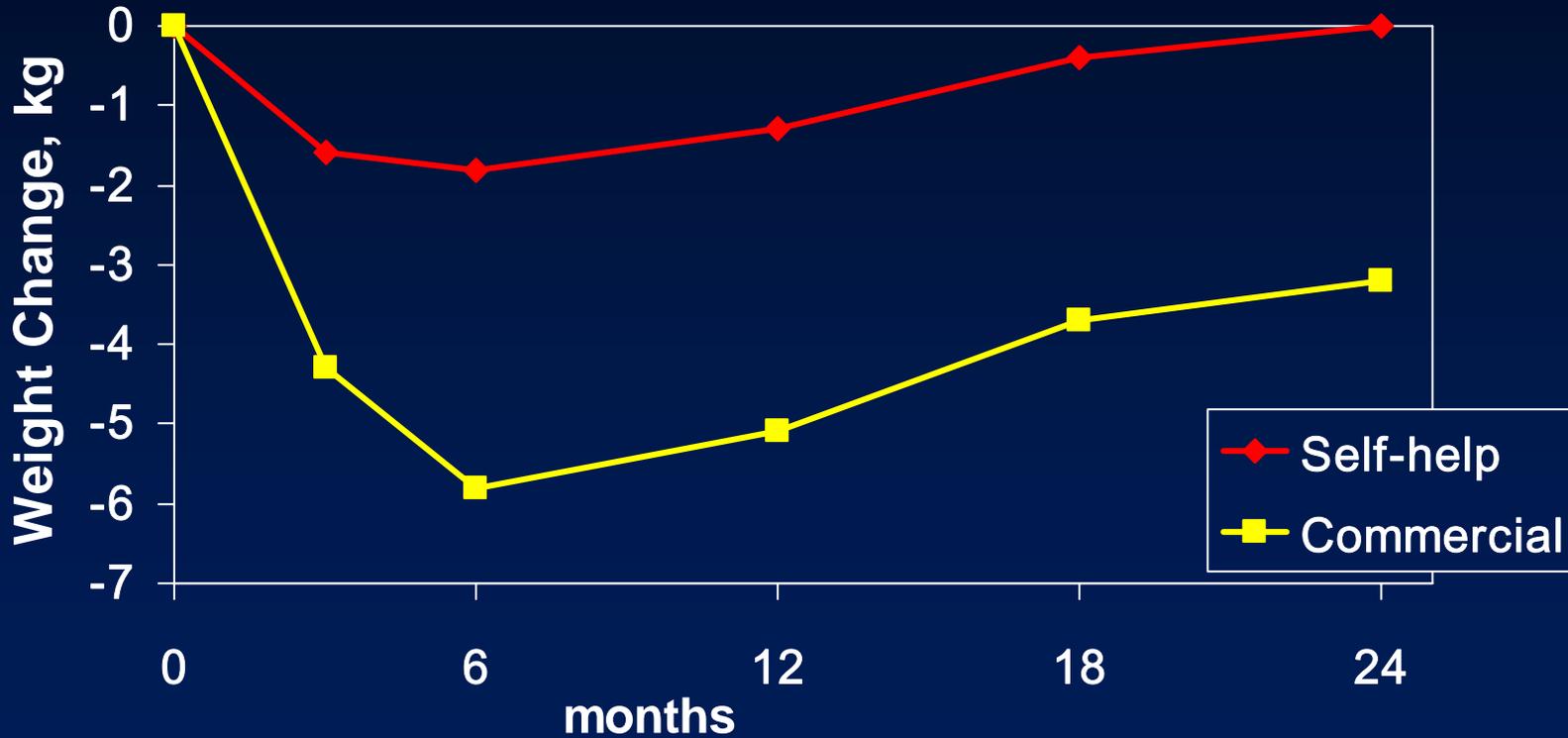
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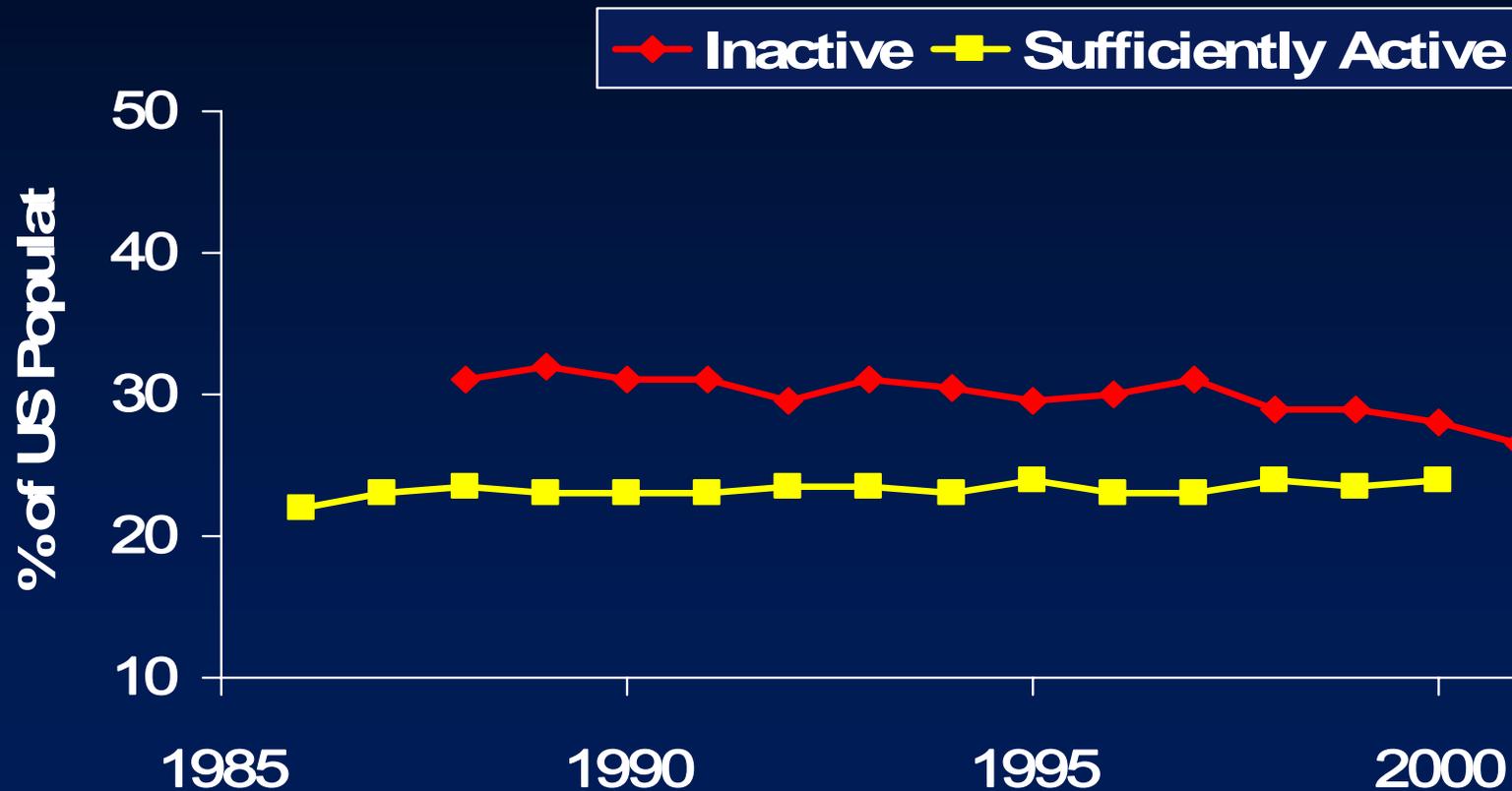
Self-help vs. Commercial Weight Loss Programs

(Heshka et.al., JAMA 289, 14; April 9, 2003)



Physical Activity in the US

(MMWR 50 (09); 166-9; Mar. 9, 2001)



Recommendation 2:

Go for breadth—not just “exercise” for the actively inclined. We need increases in routine, daily physical activity for everyone.

America on the Move:

Pedometer based,
targets 2,000 step/day
increase.

The focus is on routine
lifestyle activity.

www.americaonthemove.org

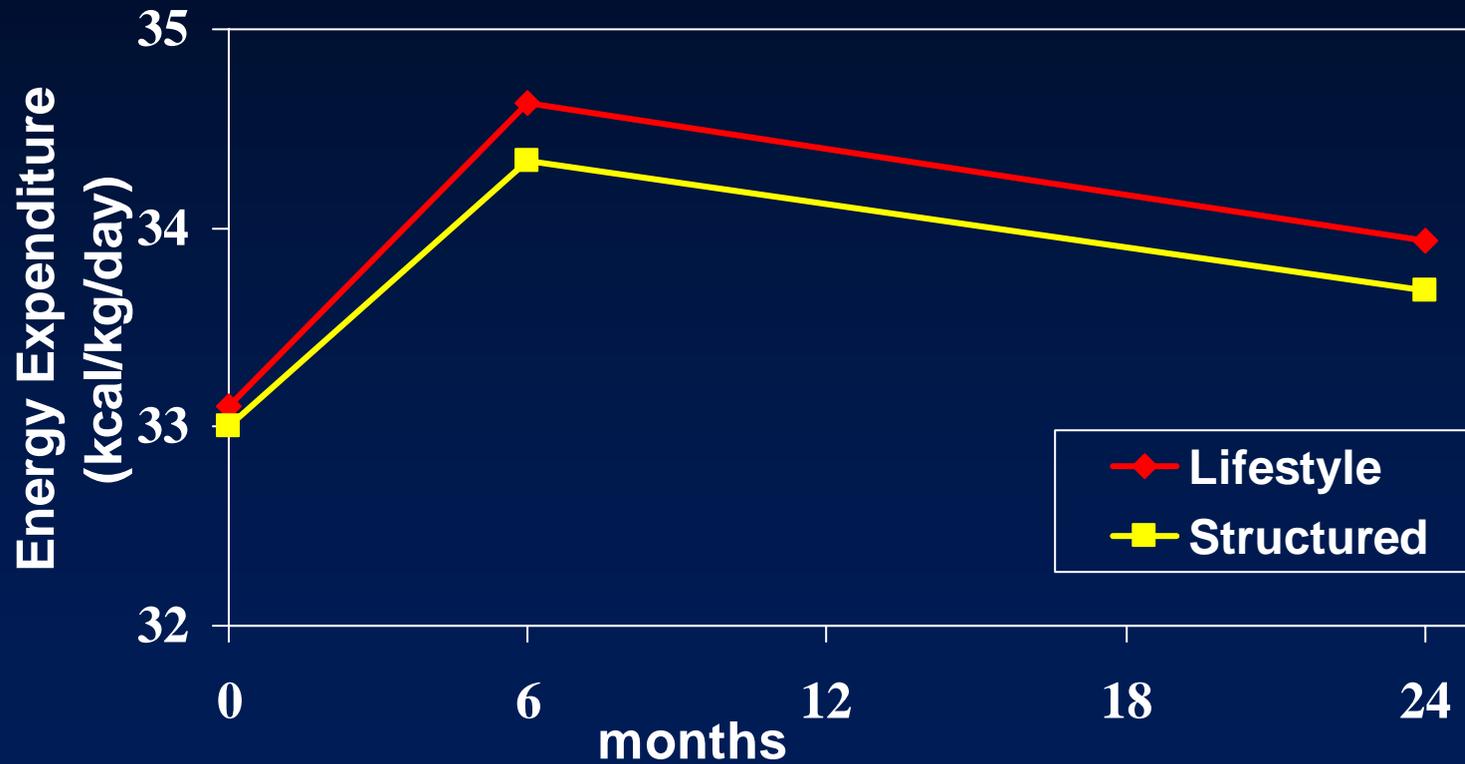




**How does
advising
people to
“take the
stairs . . .”
work?**

Energy Expenditure Lifestyle vs. Structured Activity

(Dunn et.al., JAMA 281, 4)



**An approach to
increasing
physical activity . . .**

P.A.P.P.I. (?)



Physical
Activity
Promotion
through
Predator
Introduction

Social Ecology Model

Determinants of behavior change

Sallis, Owen, "Physical Activity and Behavioral Medicine."

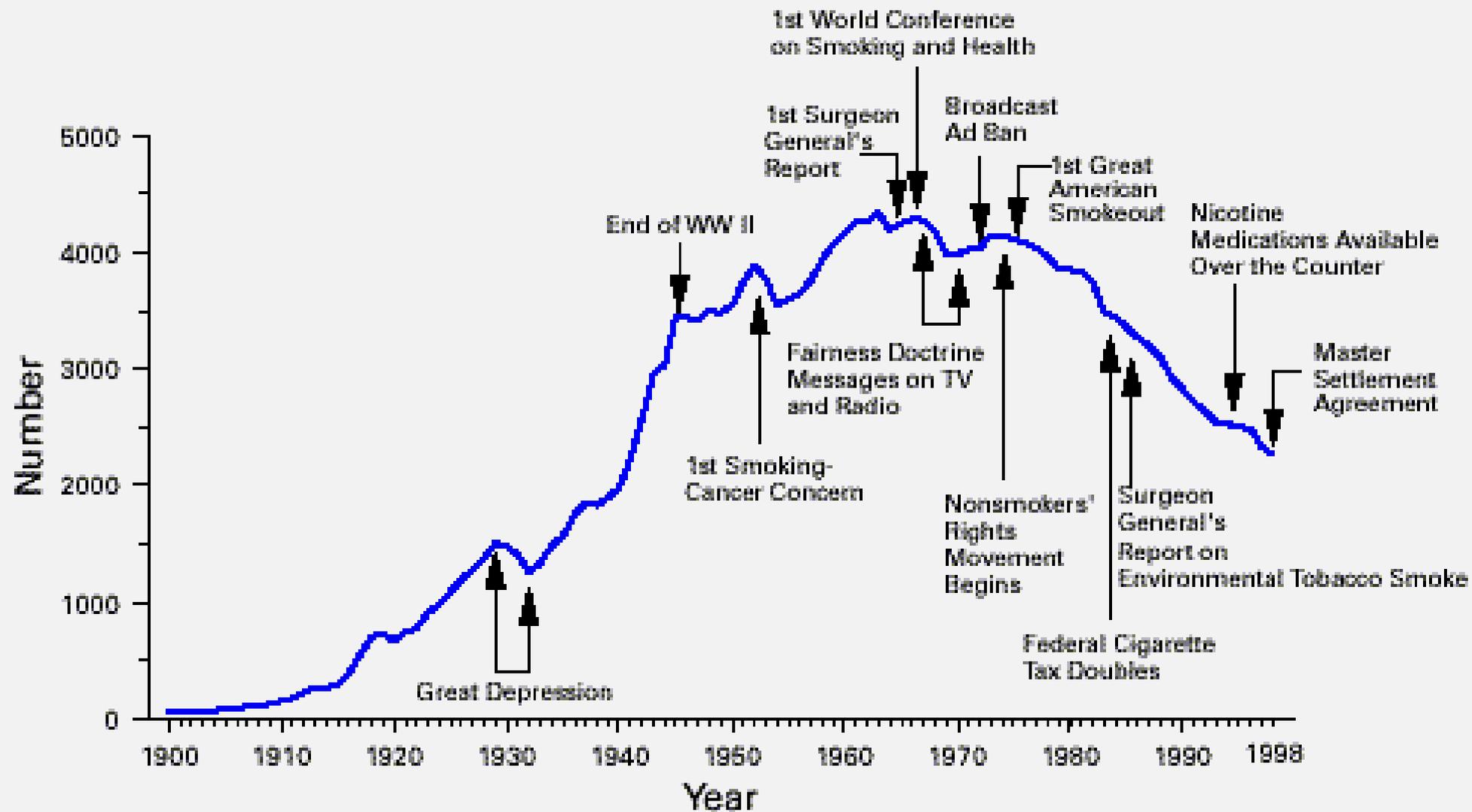
- Individual (readiness, efficacy)
- Interpersonal (family, friends)
- Institutional (school, work, HMO)
- Community (networks, local gov't)
- Public Policy (transport, land use)



Socio-ecological success: tobacco

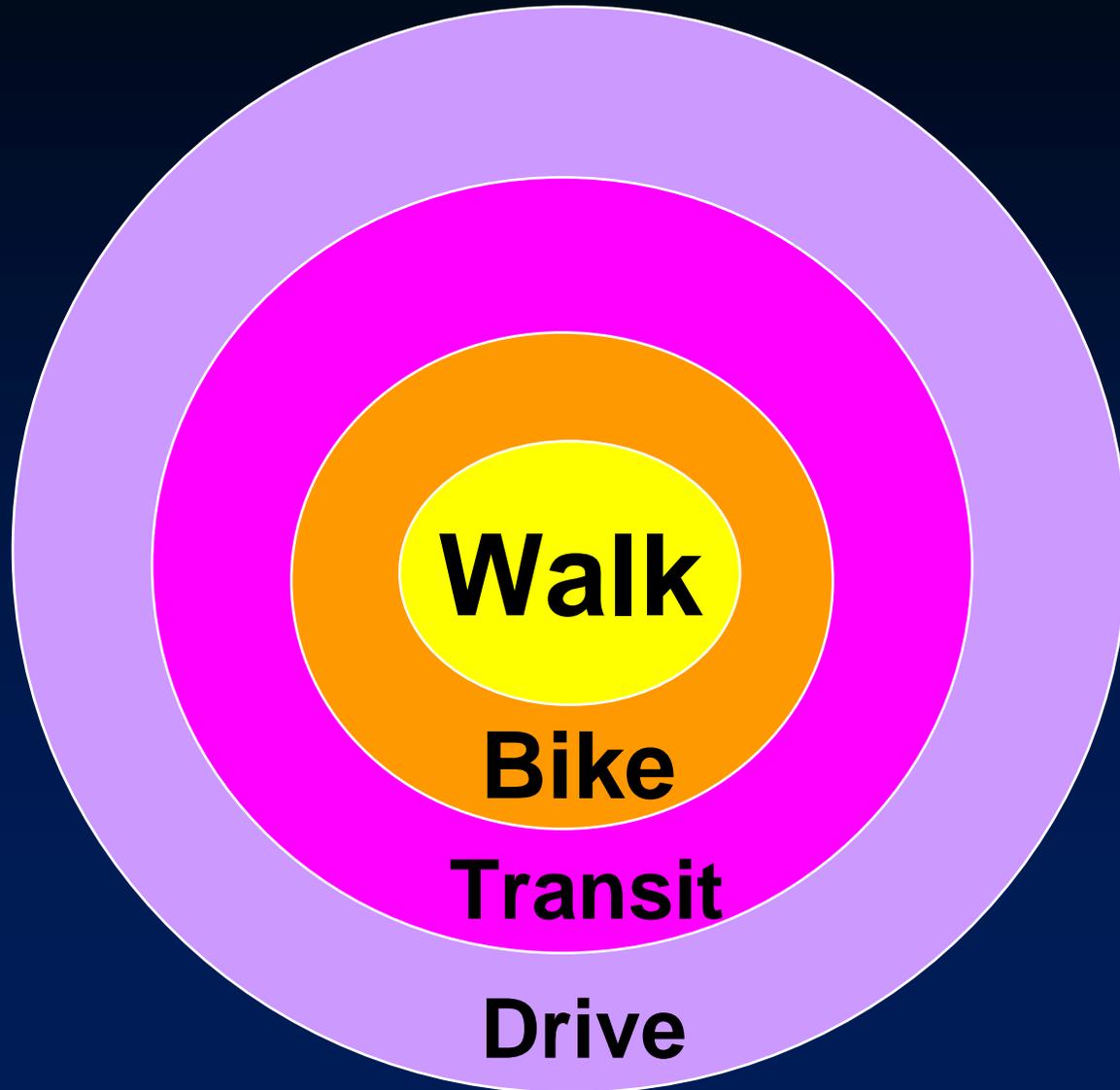
- **Individual – education, medication**
- **Interpersonal – 2nd hand smoke, kids**
- **Institutional – work place bans**
- **Community – smoke free policies**
- **Public Policy – taxes, enforcement, advertising bans, SG's warning label.**

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.

The ideal “trip” decision hierarchy*:



***Nearly 25% of trips are less than or equal to one mile.
(1995, NPTS)**

Recommendation 3:

We have to make being physically active the easier choice - actually safer, more convenient, and more fun than being sedentary.

2. Planning Board: Affects local environmental factors.



The “Toxic” Environment?



So what seems to matter?

- Land use mix.
- Network of bike & pedestrian facilities.
- Site design and details.
- Safety.



Land use? Research suggests more walking if:

- Higher housing densities.
- Greater mix of uses (homes, work, schools, shopping, recreation, etc.)
- Convenience!



Network? Research says more walking if:

- Presence of sidewalks, paths.
- Shorter blocks, more frequent intersections.
- Access to trail, park, greenway.



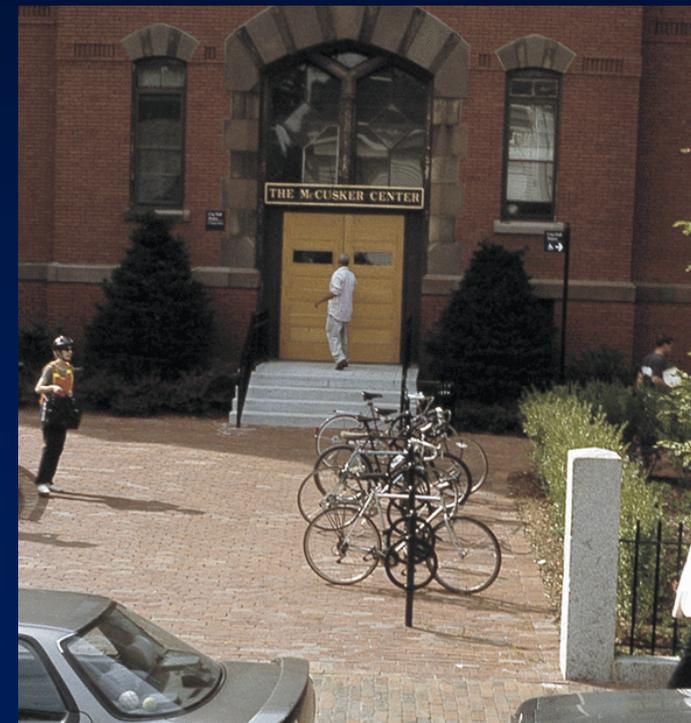
Bicycle network options:



Site design?

Research says:

- Pedestrian friendly architecture is near the street, not set back.
- Trees, benches, water, aesthetics, human scale.
- Details: bike parking, greenery, open stairs . . .



Site design:



Where would
you prefer to
shop on foot?

Pedestrian access; bicycle parking.



Aesthetics, art, human scale design.

Richmond, VA



Safety Research suggests:

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



(Jacobsen et.al., *Transportation Safety*)



**Median
islands.**

**Curb
extensions.**



The preferred residential street?



Recommendation 4:
The built and policy environments matter, so work on improving them.
Start by getting people realizing what works and what doesn't.

1. Highway Design Manual:

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







0.60

0.60



The Story of “4”:

4,000

**Approximate number of
annual pedestrian deaths in
America.**

40,000

**Approximate total annual
deaths in motor vehicle
crashes.**

400,000*

**Approximate annual deaths
due to sedentary living and
poor nutrition.**

***Rounded up from corrected 365,000.**

40,000,000,000

\$40,000,000,000

**Approximate direct annual
medical expenditures due to
obesity, borne by taxpayers.**

www.cdc.gov/nccdphp/dnpa/

(*Obesity Research, Finkelstein et.al., Jan, '04*)

Calculate the cost of inactivity at: www.activelivingingleadership.org

E.g.: Business employing ~250 in Rutland. Annual costs of physical inactivity:

• Medical care:	\$21,336
• Worker's comp.:	\$1,452
• Lost productivity:	<u>\$569,182</u>
• Total:	\$591,970

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) fitness video.

Don't bother: Community Health Fair.

A QUIZ: How do you invest to reduce the cost of employee benefits?

- 1. Build a fitness center/gym.**
- 2. Launch an “active commute” program (e.g., transit passes, covered bike parking, lockers, showers, parking fee).**
- 3. Host a health fair & speaker series.**
- 4. Build a trail around/near your worksite.**
- 5. Launch a 16 week employee walking program with teams, incentives, etc.**

Our typical path:

Health care	Health professional exercise counseling, prescription pads.
Work sites	Health fairs, lunch time walking groups.
Schools	Increased PE, recess time, teacher training.
Community	Sports & recreation programs, senior walking groups.
Physical environment	Parks, trails, athletic fields, basketball courts.

A stickier way to think:

	Physical Environment
Health care	Health professional testimony on zoning, transportation. Hospital active commute programs.
Work sites	Stairwells, transit pass, bike parking, showers, lockers, parking fees.
Schools	Safe Routes to School, paths, safety education, enforcement.
Community	Sidewalk & trail network, public parks & art, traffic calming, mass transit.

Be an active role model:



Leave the car behind at least one trip per week; walk, bike or take transit instead.

This guy
is a new
model of
success!



How do you help?

Pursue the three P's!

- **Programs:** Build awareness, support, skills, & plans.
- **Projects:** Improve the built environment for walking, cycling
- **Policies:** Rewrite the rules so the changes stick!

Programs

Typical outreach, social marketing efforts:



- Pedometers, pamphlets, T-shirts, health fairs.
- Worksite activity groups.
- Workshops, instruction.



International Walk to School Day



October 6, 2004.
www.walktoschool.org

Safe Routes to School

www.walktoschool.org

- **Safety Education.**
- **Encouragement programs.**
- **Enforcement.**
- **Engineering improvements.**
- **Sustain change!**



**International
Walk to
School Day**

Oct. 4, 2006

Adopt a trail programs . . .



**Clean, patrol,
maintain, or
even build a
section.**



E.g., Transit passes & access, bike parking, lockers, showers.



Step up: Walk, bike, and transit to work programs.



Start with one-shot events, but look toward long-term impacts.

- Monthly, weekly, daily farmer's market.
- Street fair (on a road considered for calming or closure).
- Walk to work/transit; create \$ incentives.



Projects

Walk & Bike checklists: Not glamorous, but effective.



- Room to walk/ride?
- Able to cross?
- Traffic a problem?
- Safe, pleasant?
- Accommodating?
- Ample destinations?

www.pedbikeinfo.org

Walkable Community Workshops



National Center for
Bicycling & Walking
www.bikewalk.org

Michigan Governor's Council on Physical Fitness, Sports, and Health . . .



Active Community
Environment
on-line survey

www.michiganfitness.org

**Create pedestrian
advocacy groups;
local and
statewide.**



**America Walks:
www.americawalks.org
League of American
Bicyclists:
www.bikeleague.org**

Policies

**Get outside of your
comfort zone;
attend other
meetings; learn!**

- **Planning**
- **Zoning**
- **School**
- **Recreation**
- **Conservation**
- **Historical Society**
- **Chamber of Commerce**
- **Neighborhood Association**



Policy information:

www.lgc.org

www.vtppi.org

Change the rules.

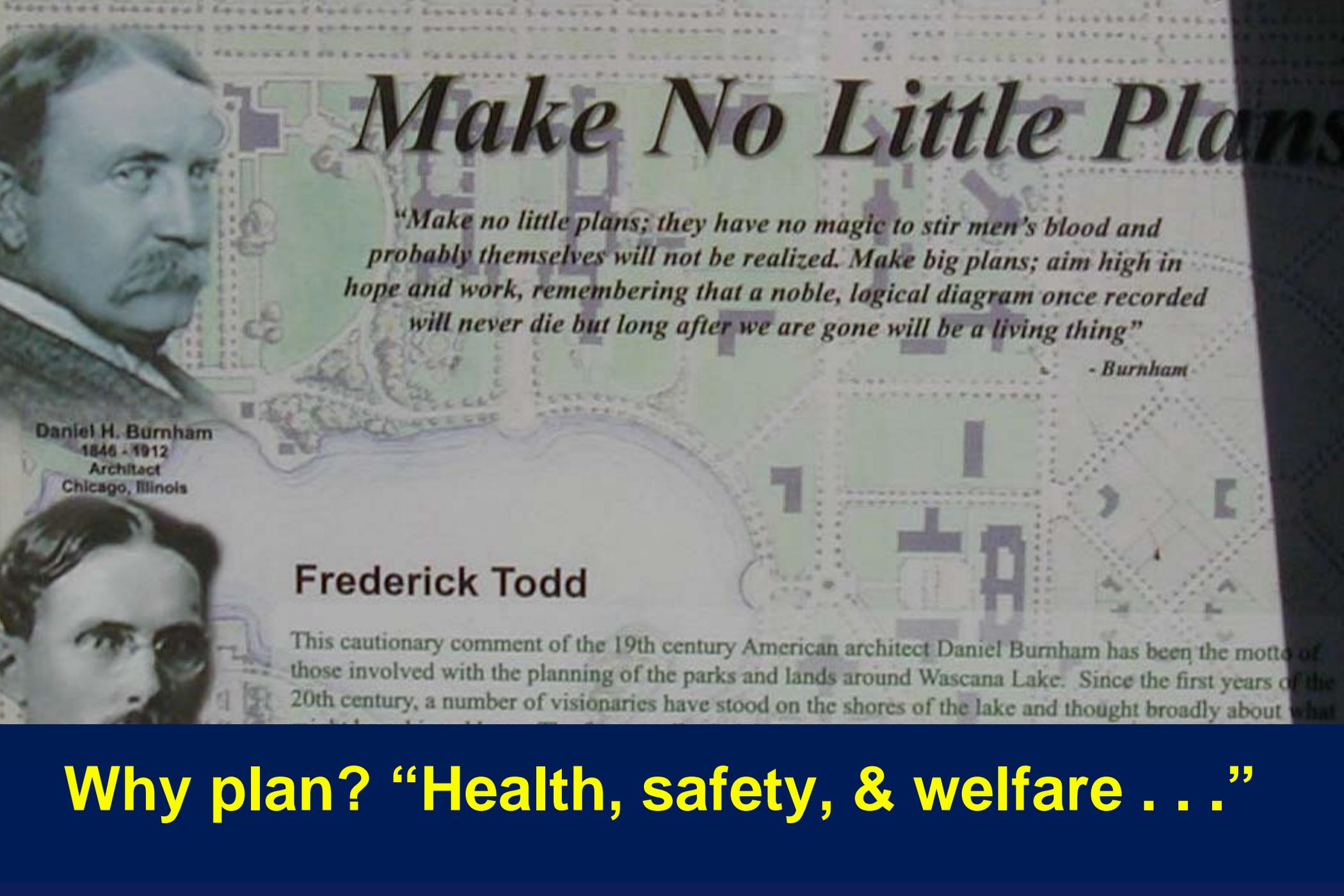
- **Zoning codes:** Mixed uses, accessory dwellings, density bonuses.



- **Site requirements:** Max. setbacks & curb-cuts; limit drive-throughs.
- **Subdivision rules:** Curbs, sidewalks, road widths.

The Wild Future of Physical Activity Promotion?

- ↑ • Parking costs & restrictions.
- ↑ • Toll roads, fuel taxes.
- ↑ • Congestion charges (e.g. London)
- ↑ • Mileage-based auto insurance.
- ↓ • Location efficient mortgages.



Make No Little Plans

“Make no little plans; they have no magic to stir men’s blood and probably themselves will not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will never die but long after we are gone will be a living thing”

- Burnham



Daniel H. Burnham
1846 - 1912
Architect
Chicago, Illinois



Frederick Todd

This cautionary comment of the 19th century American architect Daniel Burnham has been the motto of those involved with the planning of the parks and lands around Wascana Lake. Since the first years of the 20th century, a number of visionaries have stood on the shores of the lake and thought broadly about what

Why plan? “Health, safety, & welfare . . .”

The role of public health:

- Enumerate: An epidemic of **physical inactivity** and poor nutrition.
 - Enunciate: **Engineering** routine activity back into our lives.
- Collaborate: Create **interdisciplinary teams**, launch models of success.
- Facilitate: **Institutionalize**; change the rules, how we do business.



**Example 1:
Walk/Bike
Brockport Action
Group**



- **Arts & Aesthetics;
“buy a bench.”**
- **Goat trails (scouts).**
- **Walking scavenger
hunt, downtown
maps, welcome
center.**
- **Farmer’s market.**
- **Main Street
reconstruction.**

Example 3: Indianapolis Trail Building Campaign



- Started with one main effort.
- Growing into a citywide network.
- Increasing focus on:
 - 1- Utilitarian users.
 - 2- Reaching underserved communities.
 - 3- Policy change to incorporate trails in all construction & maintenance.

Three editorial points:

- **Why it really matters.**
- **What's essential to success.**
- **What may not be.**

Why care about walking and walkable communities?

- The **inactivity** epidemic; **our kids may pay!**
- **4,000** pedestrian, **40,000** motor vehicle deaths/year.
- **Smog alerts**, over an hour of average commute time/day.
- OPEC; drilling in **ANWR**; an **oil war** in Iraq.
- More eyes on the street, **less crime.**
- **Shopping locally**, keeping dollars close.

What's essential?

- **Inspired leadership.** True champions who persevere.
- **Vision.** Ability to see and describe the big-picture goal.
- **Key partners.** Transport, DPW, planning, development & business.
- **Time** and patience.



What's not?

- **Money.** Don't overlook . . .
 - Routine accommodation.
 - Opportunistic improvements.
 - Occasional special projects.
- **A Huge Coalition.** Can be fantastic, but isn't the only way.
- **Massive Popular Support.** Initially expect resistance; build gradually.



