

Fighting the Epidemic No One is Talking About

-

Creating Active Communities
Jefferson County,
Watertown, NY
Sep. 2006



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America's looming chronic disease apocalypse . . .

US "Obesity Epidemic"

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



USA Today Mar. 2005

Oil drilling in Alaska Nat'l Wildlife Refuge.

INSIDE: GM profits plummet . . .

“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

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

Obesity threatens life expectancy

Disputed study says young could lose 2 to 5 years

Gaining weight

Age Group	Weight Gain (lbs)
10-year-old girl	77.4
10-year-old boy	64.9
15-year-old girl	74.3
15-year-old boy	61.0

Obesity threatens life expectancy
A new study says that obesity could shorten the average lifespan of an entire generation of children by two to five years, according to a controversial new life expectancy analysis.

Disputed study says young could lose 2 to 5 years
Obesity could shorten the average lifespan of an entire generation of children by two to five years, according to a controversial new life expectancy analysis.

Vote sets stage for drilling in refuge
WASHINGTON — The Senate gave a green light Wednesday to drilling for oil and gas in Alaska's Arctic National Wildlife Refuge, handing President Bush a big victory and dealing a blow to environmentalists.

Obesity threatens life expectancy
The 11-43 vote sets the stage for energy exploration on 1.5 million acres of the 14.8-million-acre refuge. It also shows the increased power of the Republican majority. Two years ago, the Senate rejected by a 52-45 vote, but Republicans narrowed that vote to last year's election, and those votes proved decisive.

Obesity threatens life expectancy
Senators Democrats, including Majority Leader Harry Reid and Maria Cantwell of Washington, vow a re-election fight to block a breakthrough for the oil industry, which has been trying since 1981 to gain access to the refuge's coastal plain in the northeastern corner of Alaska. It is the first time that the Senate, the House and the president agree on the proposal.

Obesity threatens life expectancy
The Senate vote came on a day that oil prices hit a record \$36.46 per barrel. Bush, who has made increased domestic oil and gas exploration a centerpiece of his energy policy, hailed the Senate action, saying it will "make America's low dependence on foreign sources of energy." The United States imports 11 million barrels of oil a day or 58% of its needs.

Obesity threatens life expectancy
How big a difference drilling in the ANWR could make is a matter of heated debate. Sen. Lisa Murkowski, R-Alaska, said ANWR could produce 1 million barrels of oil a day. But Sen. Barack Obama, D-Calif., said the oil nation could reduce its dependence on foreign oil just as much by raising fuel economy standards by 40 percent.

Obesity threatens life expectancy
ANWR's coastal plain represents the largest unopened oil reserve in the USA, between 8 billion and 18 billion barrels. According to the U.S. Geological Survey, the nation currently uses 20 million barrels a day. The U.S. Energy Information Agency estimates that the

“Supersize Me?”



DECEMBER 8, 2003

TIM

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?

HPXBWJLY *****CARBY EDT**C-004
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www.tim.com AOL Keyword: TIMM

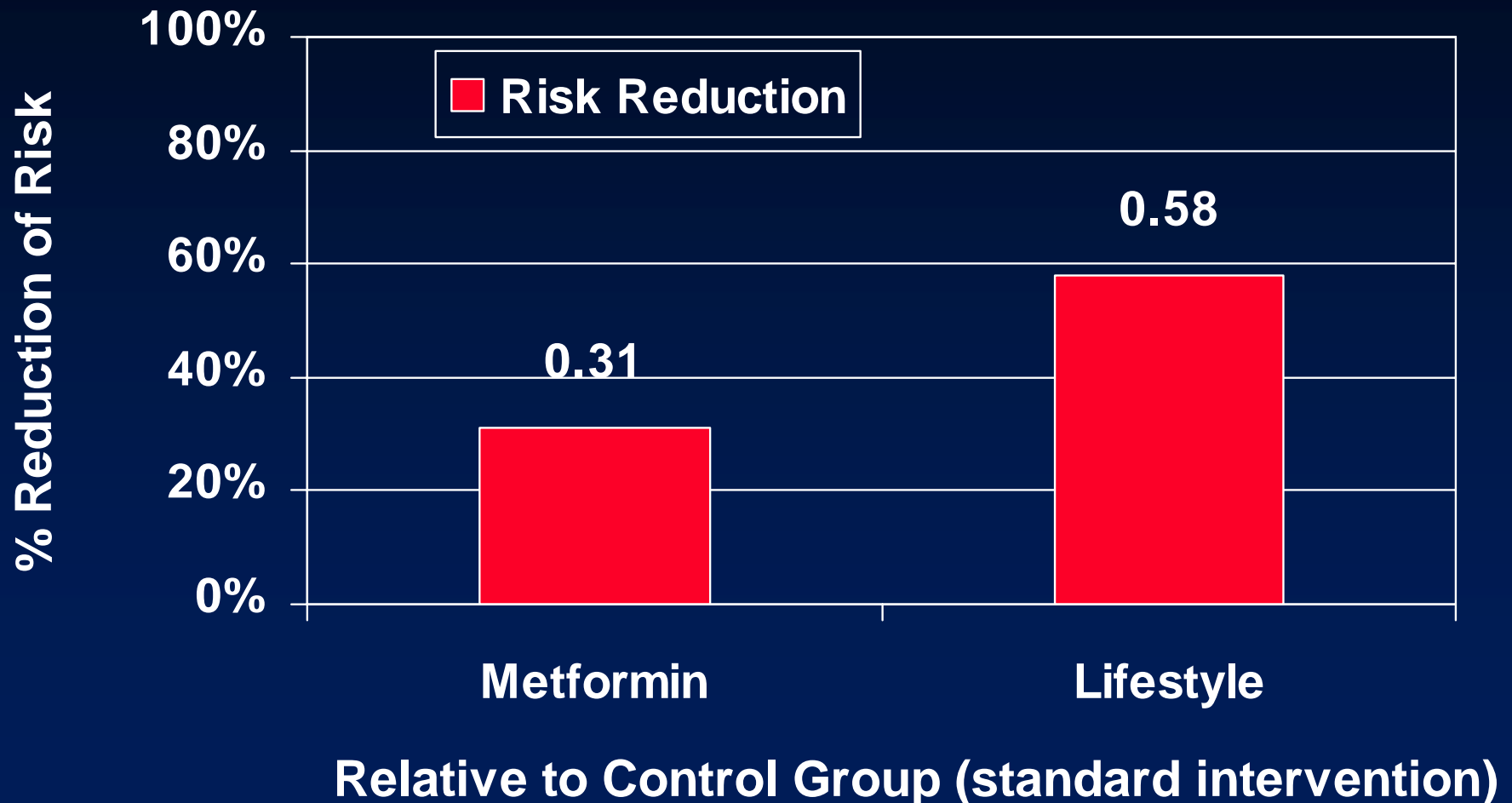
Diabetes Prevention Program (DPP)

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. Address Governor's task force on the MA Highway Design Manual.**
- 5. Nordic Walking (w/poles) fitness video.**

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 (all) days of the week.
- **Can be broken up**.
- Reduced risk for CVD, diabetes, osteoporosis, obesity, dementia, clinical depression, a growing list of cancers.



The Activity Diamond



ACSM fitness
recommendation,
1978-2000.

USDA Dietary
Guidelines,
2005.

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

Health Fair is #5 because:

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



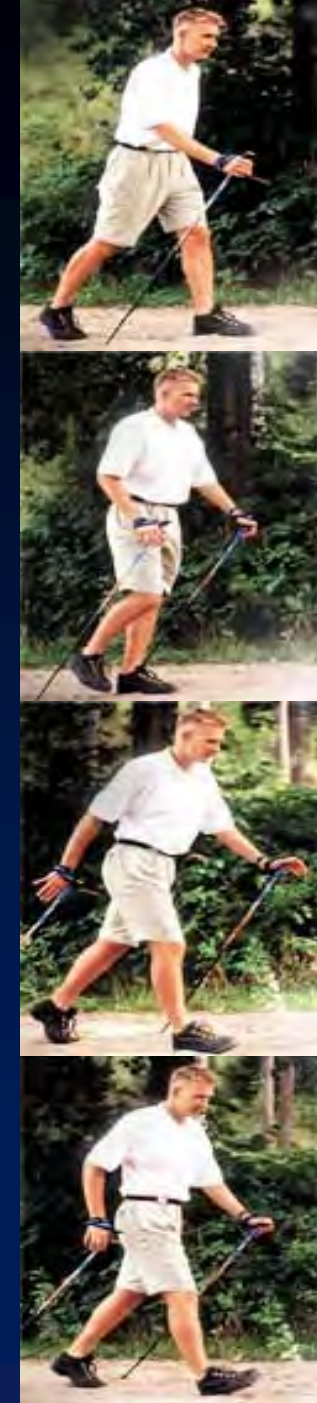
Recommendation 1:

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

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**?



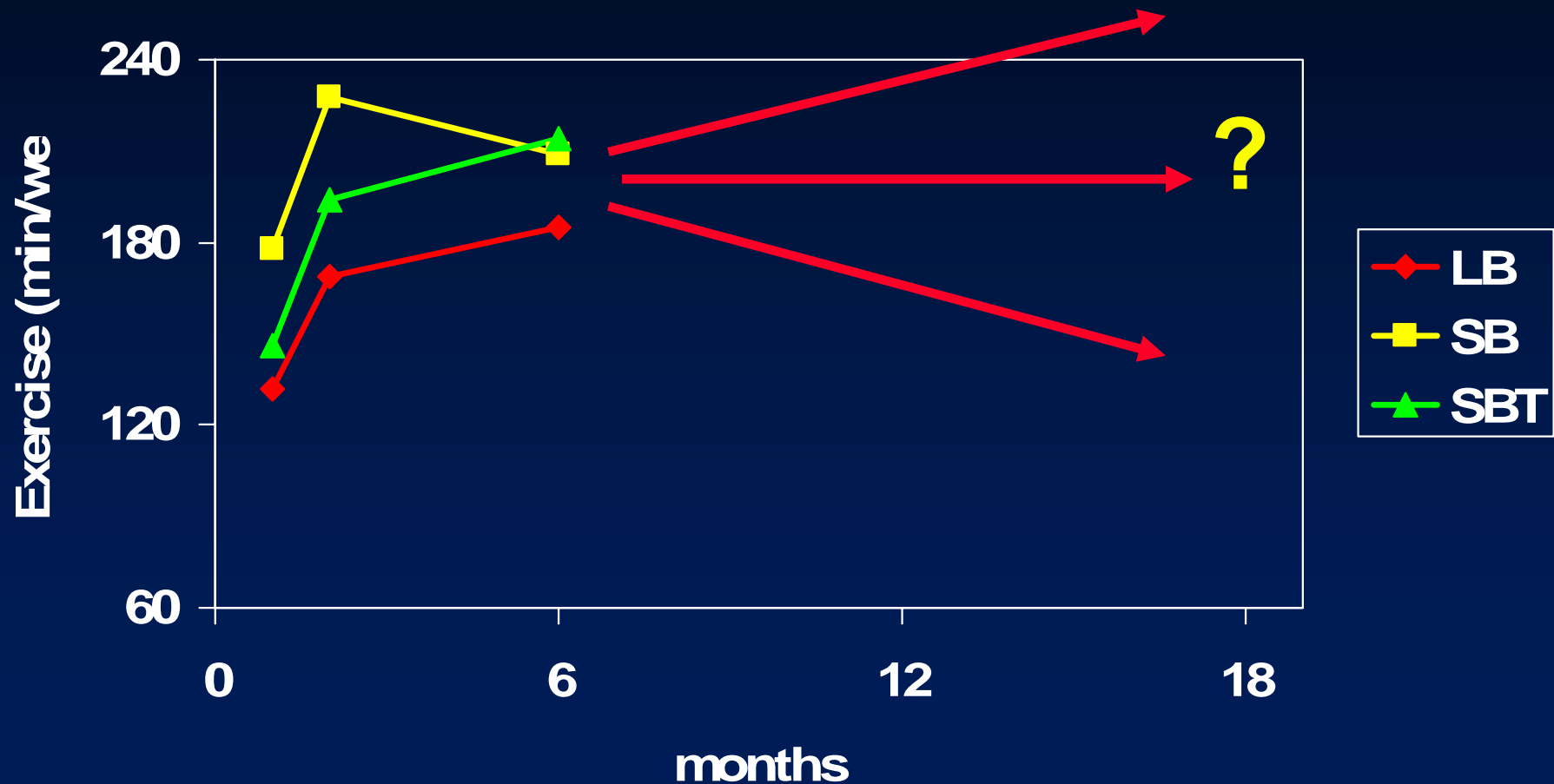




Exercise Participation

Effect of Short Bouts, Home Treadmills

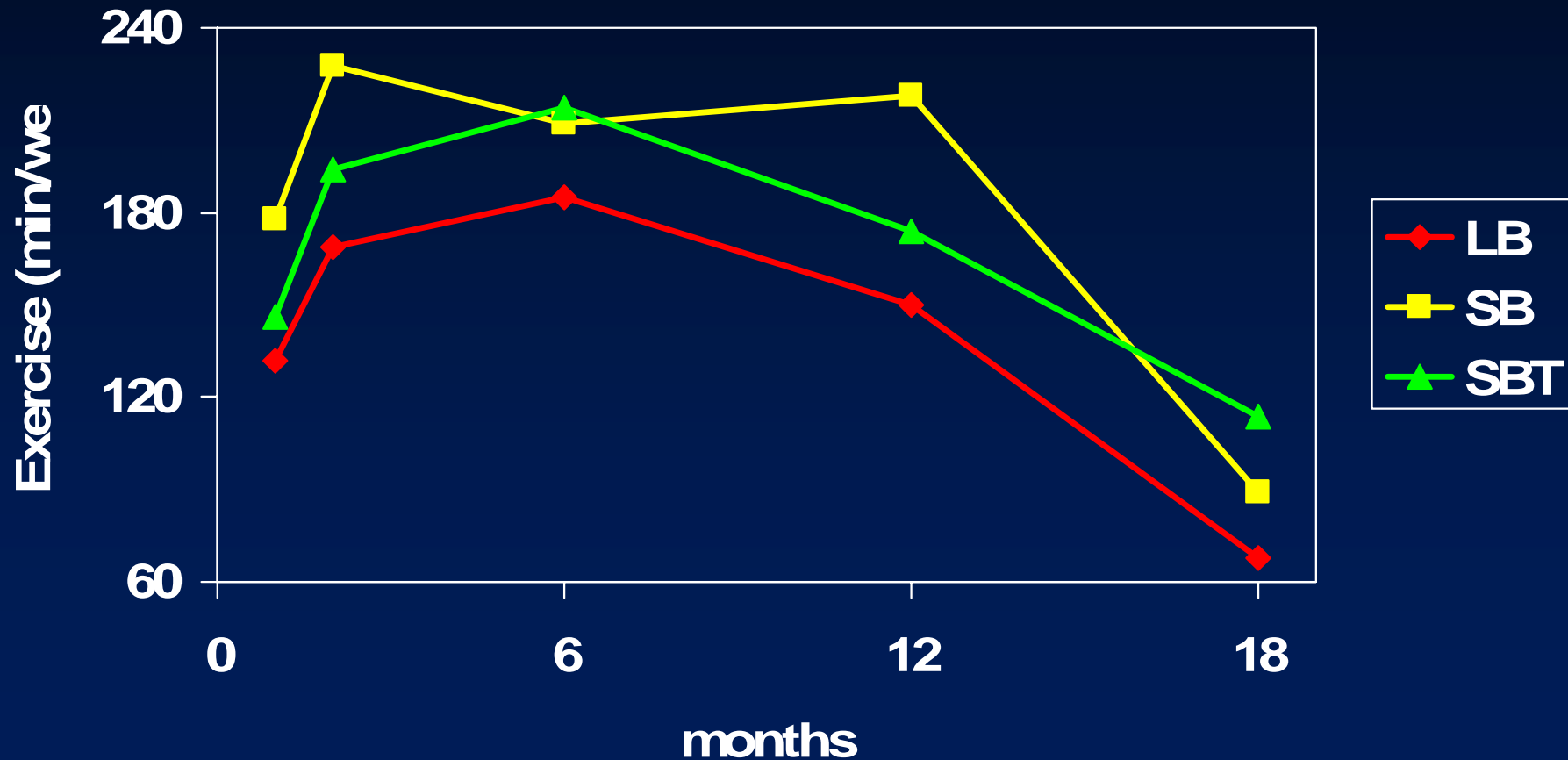
(Jakicic et.al., JAMA 282, 16)



Exercise Participation

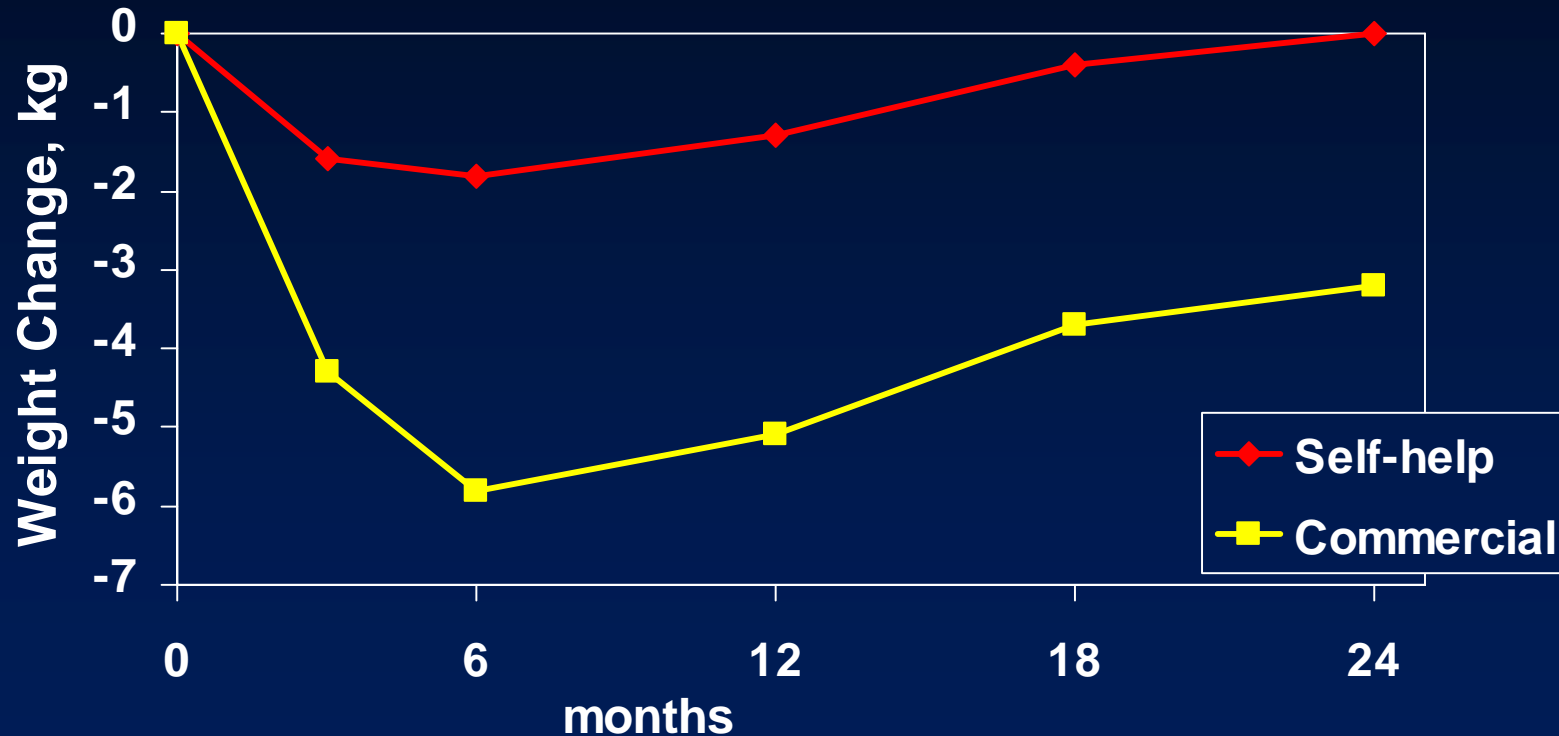
Effect of Short Bouts, Home Treadmills

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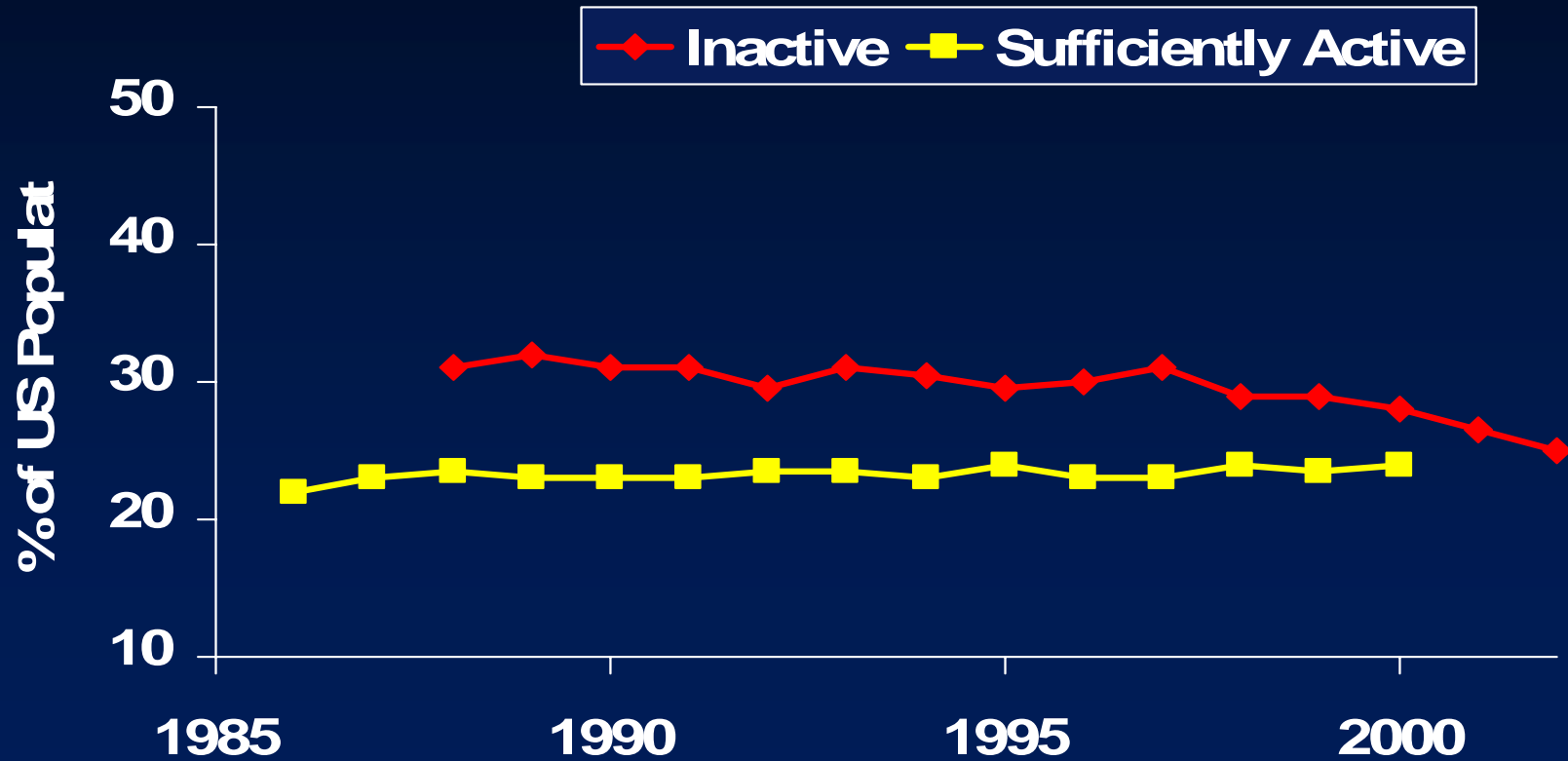
Self-help vs. Commercial Weight Loss Programs

(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.

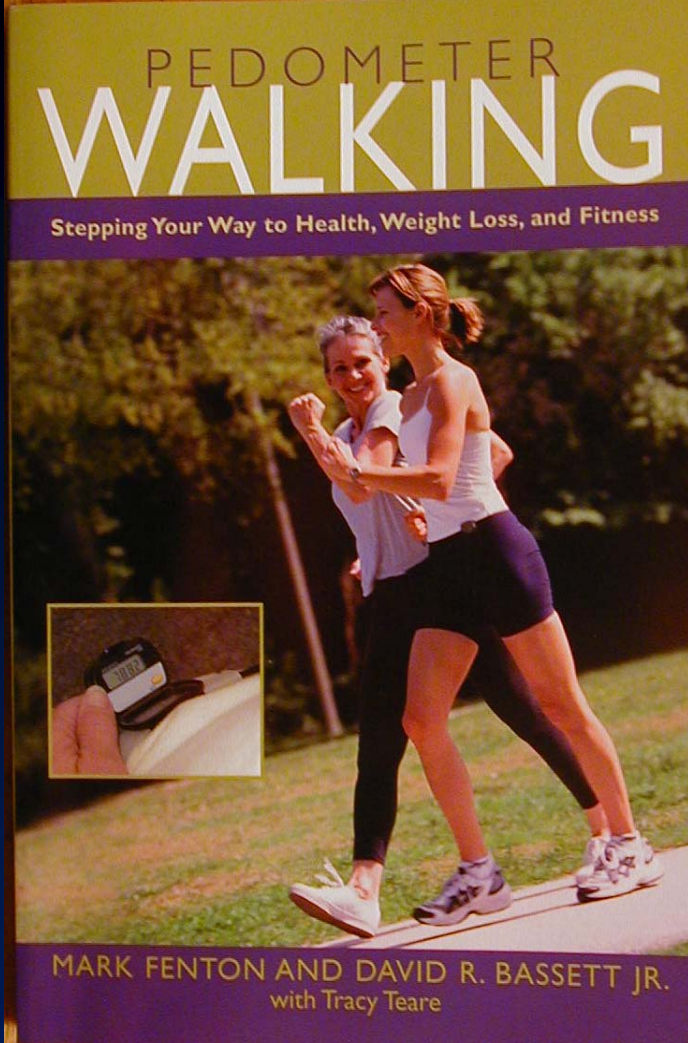
America on the Move:

Pedometer based,
targets 2,000 step/day
increase.
The focus is on routine
lifestyle activity.



www.americaonthemove.org

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**A moment of shameless
self-promotion:**

Pedometer Walking

**by David Bassett & Mark Fenton,
with Tracy Teare.**

**A compilation of the latest research &
practical advice on pedometer use.**

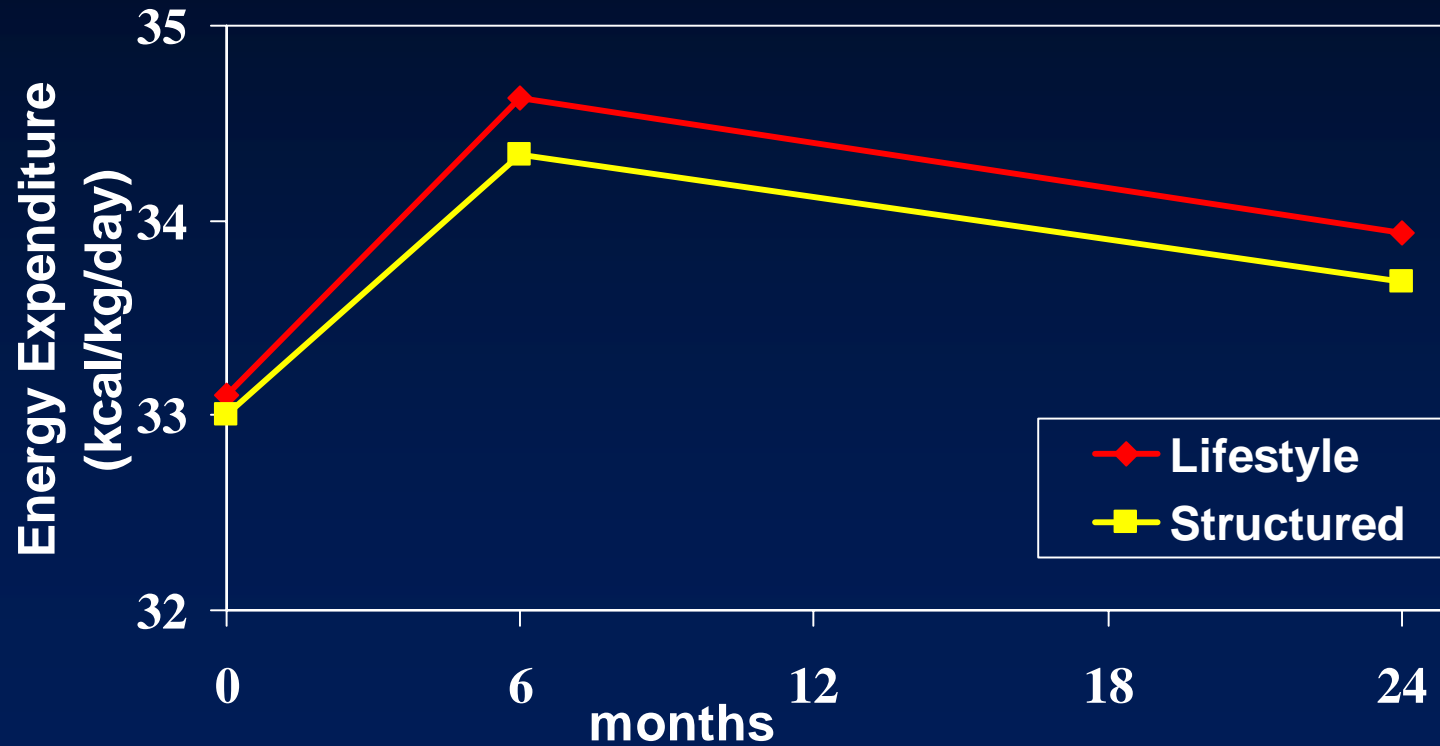
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**How has
advising
people to
“take the
stairs . . .”
worked?**

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."

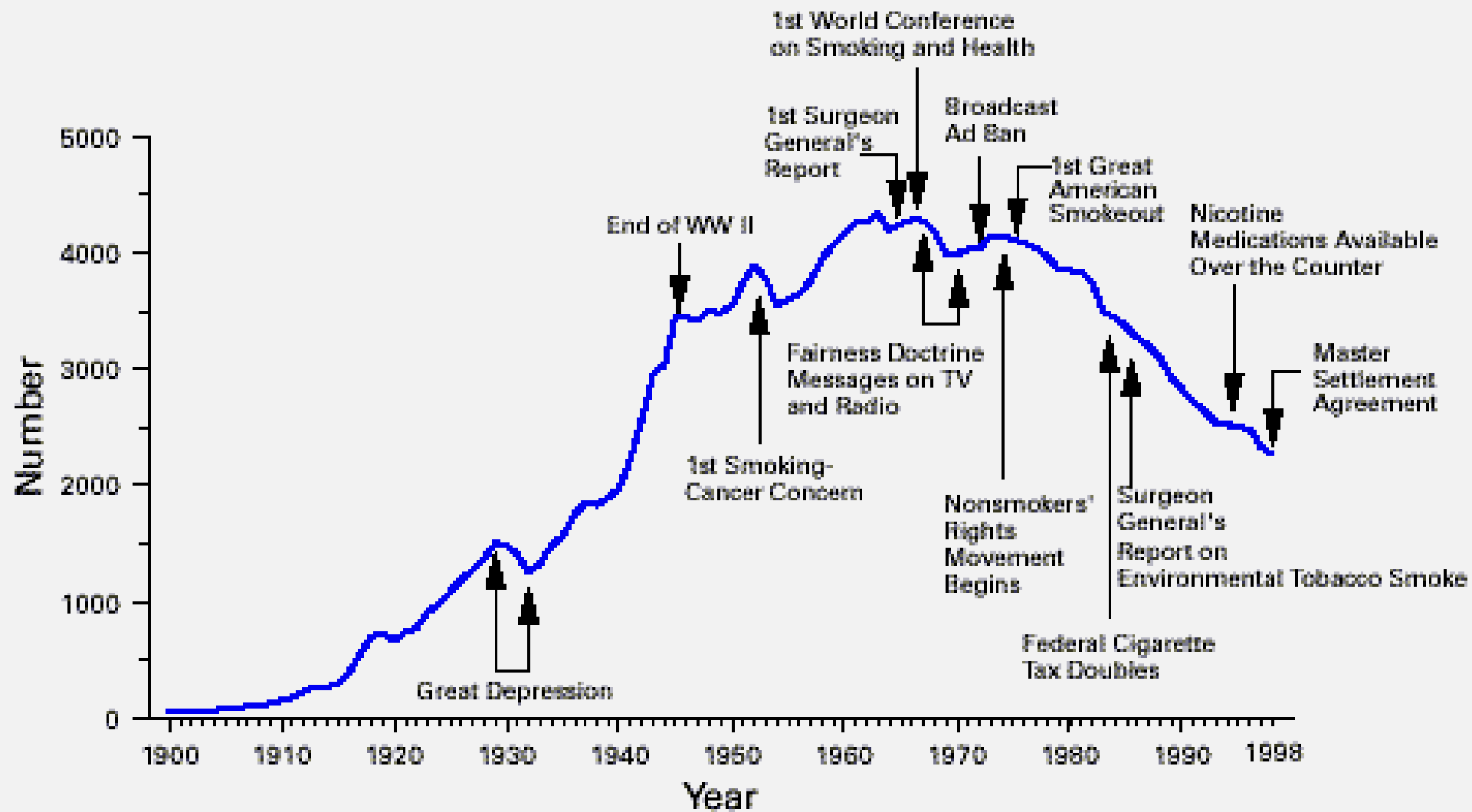
- Individual (readiness, efficacy)
- Interpersonal (family, friends)
- Institutional (school, work, HMO)
- Community (networks, local gov't)
- Public Policy (transport, land use)



Socio-ecological success: tobacco

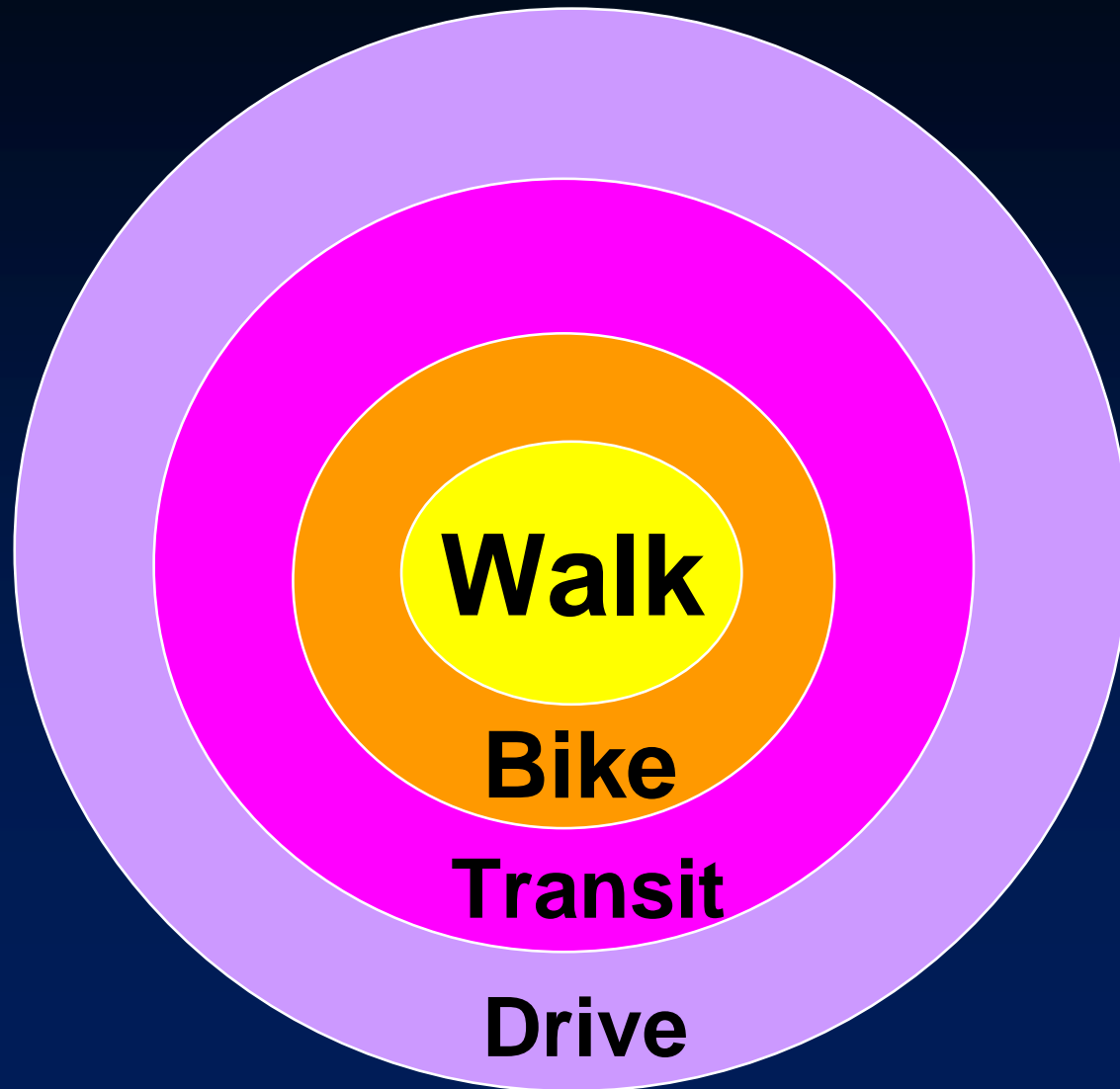
- **Individual – education, medication**
- **Interpersonal – 2nd hand smoke, kids**
- **Institutional – work place bans**
- **Community – smoke free policies**
- **Public Policy – taxes, enforcement, advertising bans, SG's warning label.**

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)**

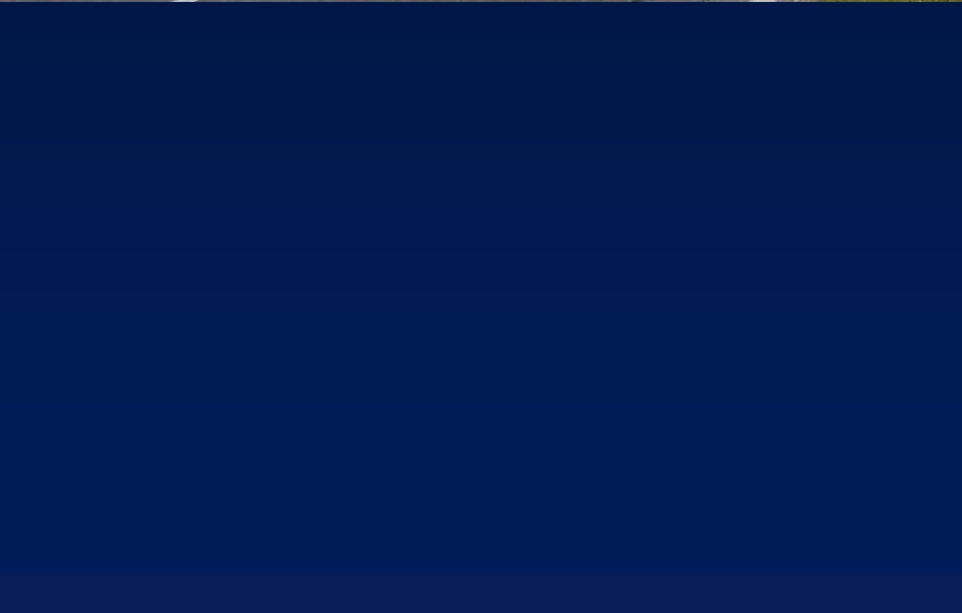
Recommendation 3:

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

Planning Board: Directly impacts local environmental factors.



The “Toxic” Environment?





NISSAN

TOYO

SALE

SALE

SALE

SALE

SALE

So, what seems to matter?

- Destinations within walk & bike distance?
- Sidewalks, trails, bike lanes, crossings?
- Inviting settings for bikes & pedestrians?
- Is it safe?



Land use.



**Schools
in town.**



**Smaller lot
sizes.**

**Accessory
dwellings.**



Mixed use, multi-family.



Network.



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



Comfortable pedestrians? Drivers?



(How far back?)



1.0 Fenton

Bicycle network options:

Denver, CO



Washington, DC



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Site design:



Where would
you prefer to
shop on foot?

**It's not a
theoretical
question:**



**Where would you
feel more
comfortable
shopping on
foot?**

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Site design.

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



Safety.

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



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

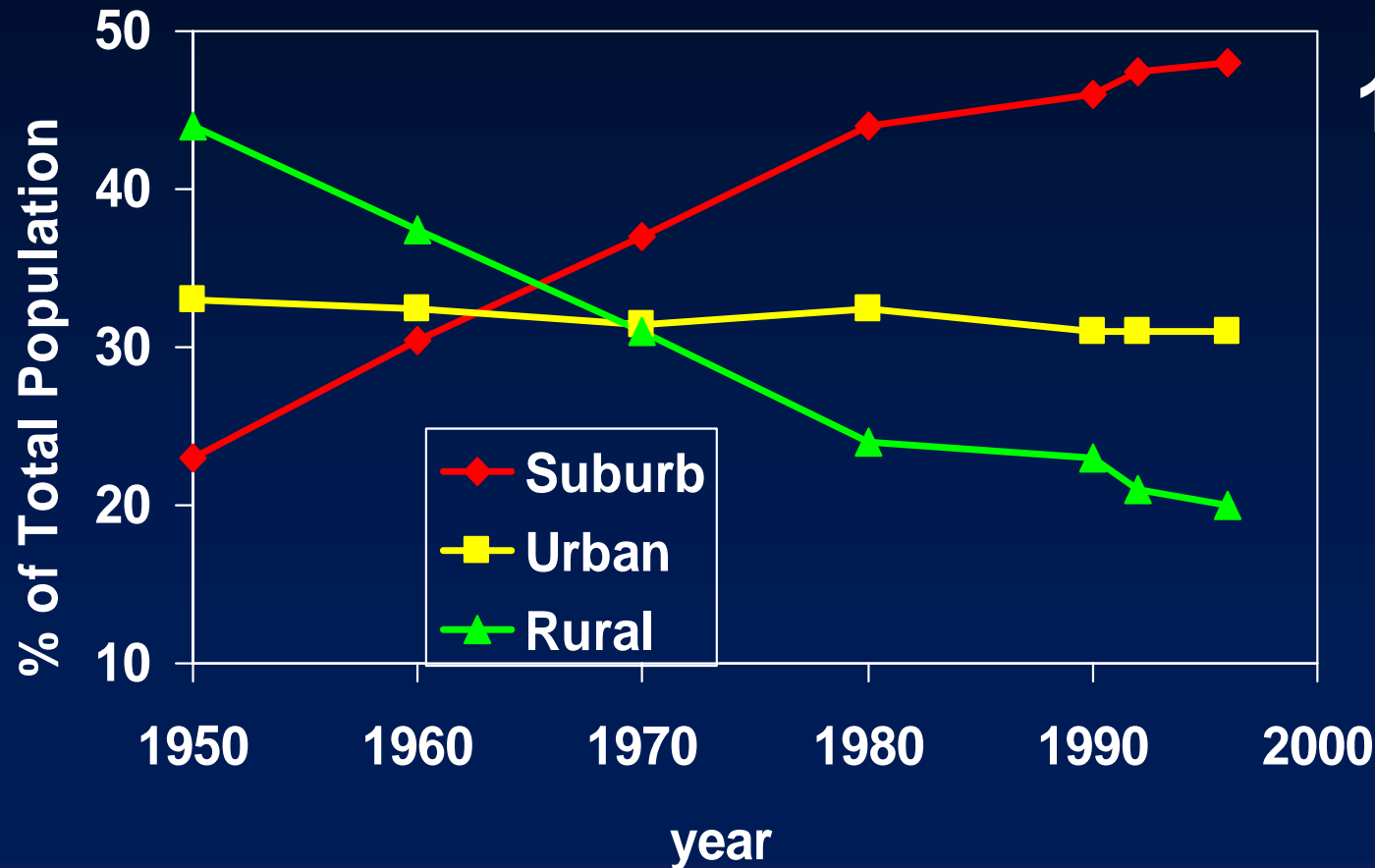
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“But we’re a very rural region . . . ?”

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 we can
affect the shape of
development
before it's done!



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

Two great national groups that can help:

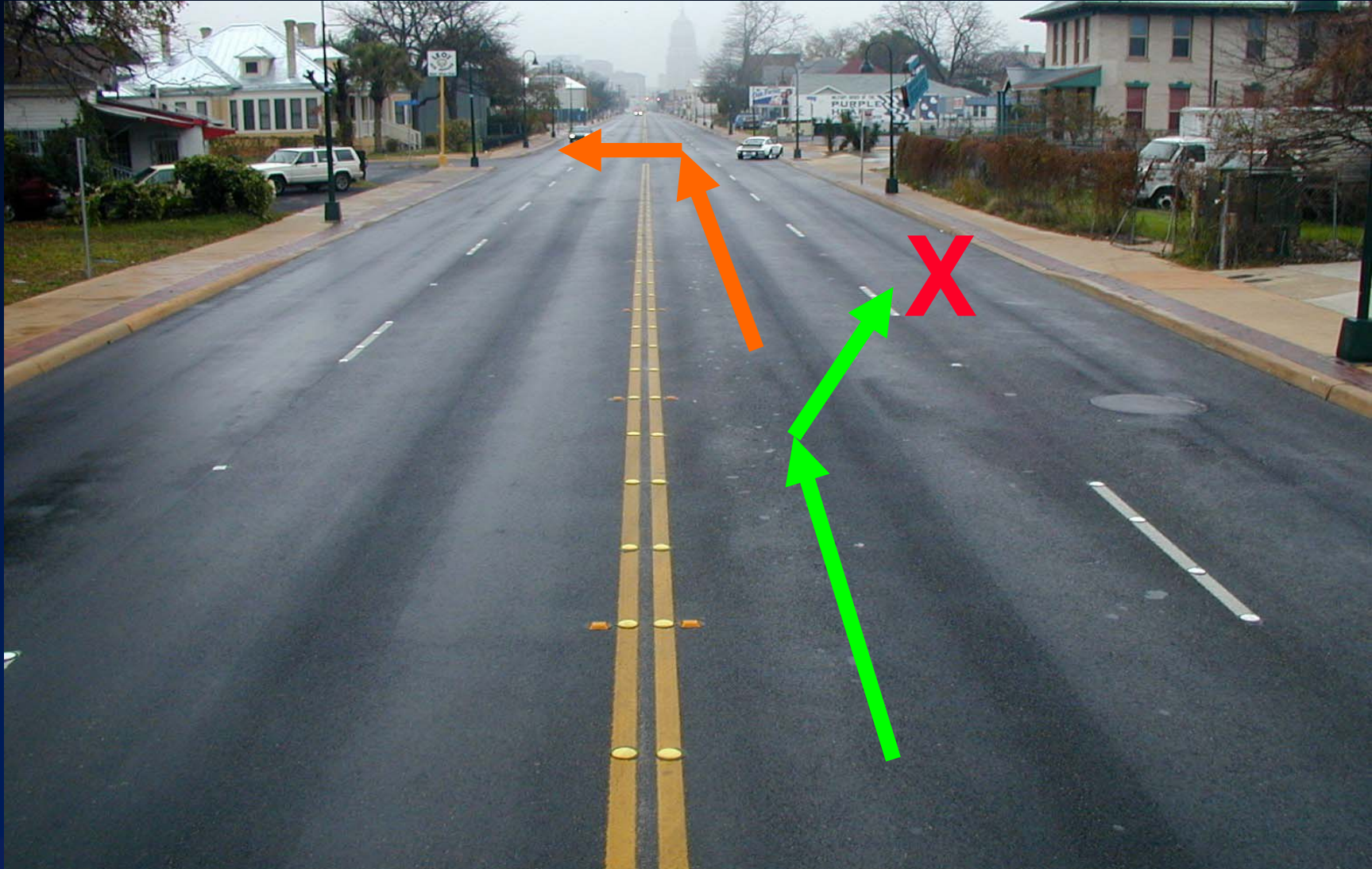


America Walks:
www.americawalks.org
League of American Bicyclists:
www.bikeleague.org

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1. Highway Design Manual:

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







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*)

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Calculate the cost of inactivity at:

www.activelivingleadership.org

E.g.: Business employing ~250 in Jefferson County, annual costs of physical inactivity:

- **Medical care:** \$21,336
- **Worker's comp.:** \$1,452
- **Lost productivity:** \$569,182
- **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 best to invest mini-grant \$\$\$\$\$ to improve community health?

- 1. Equipment for a fitness center/gym.**
- 2. Launch “active commute” program (e.g., covered bike parking, lockers, showers).**
- 3. Host a health fair & speaker series.**
- 4. Start a trail around/near worksite.**
- 5. 16 week employee walking program (pedometers, T-shirts).**

How do you help?

- **Speak up:** To patients/clients, to media, to community leaders.
- **Act up:** Help improve the built environment for walking, cycling.
- **Step up:** Be a role model—build more activity into your day!

Speak up:

- No more 'obesity epidemic.'
- Prescribe **physical activity** to patients, clients, friends, family.
- Encourage routine physical activity, help people build **active lifestyle skills**.
- Be an advocate for more **walkable, bicycle-friendly** communities.



Act Up:

Media,
community
workshops,
& local
activism.



www.americawalks.org

www.bikeleague.org



Safe Routes to School;
Walk to School Day

Oct 4, 2006;

www.walktoschool.org



Support bike
& pedestrian
facilities,
trails, safety,
& land use
decisions.



Activity promotion programs;
active commuting, etc.

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**Get outside 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

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**Step up:
Be an active
role model.**



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

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Recommendation #5:

Be *stickier* with all 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:

Media, community workshops, & activism training.



Walk to School & Safe Routes promotions.



Active-commute incentives; E.g., tax free transit pass, health benefit discount.

Activity promotion programs. E.g. 10,000 steps a day; www.americaonthemove.org

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

- Monthly, weekly, daily farmer's market, walking event.
- Street fair, walk, concert, (on a road considered for calming or closure).



Projects:

Bike lanes,
narrowing, traffic
calming, multi-
use trails.



Road paint, cones,
curbs, plantings, . . .



Bike parking,
lockers,
showers;
walking
paths,
countdown
timers.



**School siting,
district lines,
bus policies.**



**DPW standards:
snow removal, road
lanes, crossings . . .**

Policies:

**Zoning: Mixed use,
accessory
dwellings, open
space conservation.**



**Site
standards:
Setbacks,
parking,
access.**





**School siting,
district lines,
bus policies.**



**Sidewalk standards,
street cleaning, bike
lanes, crossings . . .**

Policies:

**Zoning: Mixed use,
accessory
dwellings, open
space conservation.**



**Site
standards,
setbacks,
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**Get outside of your
comfort zone;
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- **Planning**
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The simple prescription?

Make your community activity-friendly.

Invite others; move whenever you can.

Build activity into your life (esp. walk & bike).

This guy
is a new
model of
success!





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)



Individual.

- Health fairs, street fair.
- Speaker series, special events (involve managers, community leaders).
- Pedometers, activity logs & prizes.
- Health messages (posters, media, email msgs.).
- E.g.: join-fitnet@lists.ia.gov



Interpersonal.

- Team pedometer programs, clubs.
- Contests w/ group goals and rewards (e.g. theme party or prizes).
- Team events (walk, run).
- Activity support group (www.bikementor.org).
- Family programs.



Institutional.

- Flex time for travel.
- Scheduled activity breaks.
- Pedestrian access.
- Lockers, showers.
- Covered, secure bike parking.
- Mark walking loops in building, on the grounds; paths & sidewalks.
- Open & clean stairwells, “point of decision” prompts.



Community.

- Build an on-site loop or tie to community trail.
- Reduce parking or create remote spaces.
- Car & van pools.
- Adopt a trail, plant a tree.
- Adopt a School program (Sports, Safe Routes).



N. Battleford tree planting.



Policy.

- Commuter passes, \$ for transit.
- Parking cash out; increase parking fees.
- Cash or vacation rewards for active employees.
- Host a Walkable Community or Safe Routes to School Workshop.

