Active Living by Design

The built environment and physical activity in children

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Overview

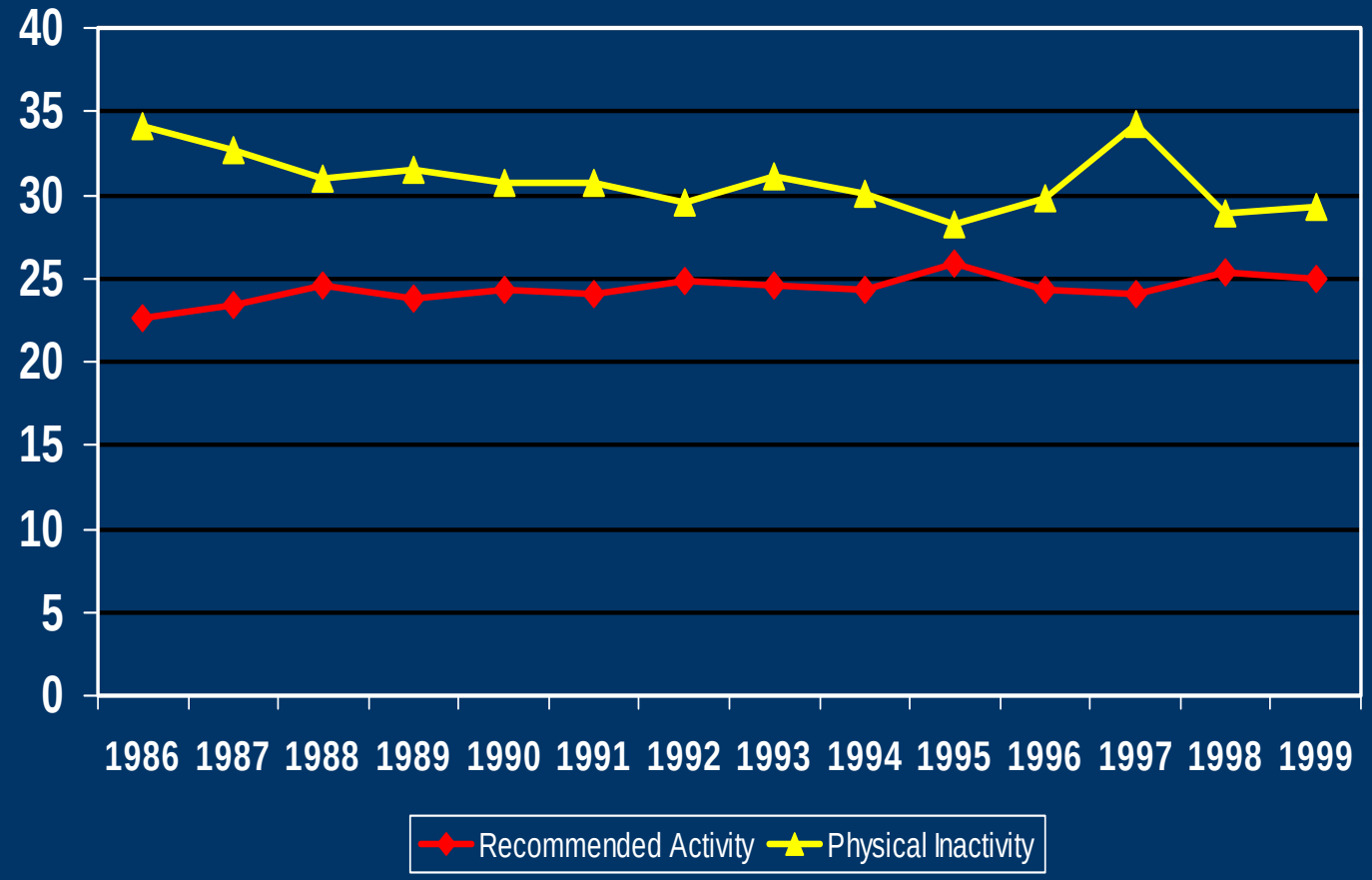
- Active Living by Design: The Concept
- Built Environment Barriers for Kids
  - To and From School
  - At School
  - After School Hours
- Strategies for Built Environment Barriers
- National Recommendations

Defining Active Living

Active Living is a way of life that integrates physical activity into daily routines with the goal of accumulating at least 30 minutes of activity each day.

Active Living by Design promotes environments that offer choices for integrating physical activity into daily life.

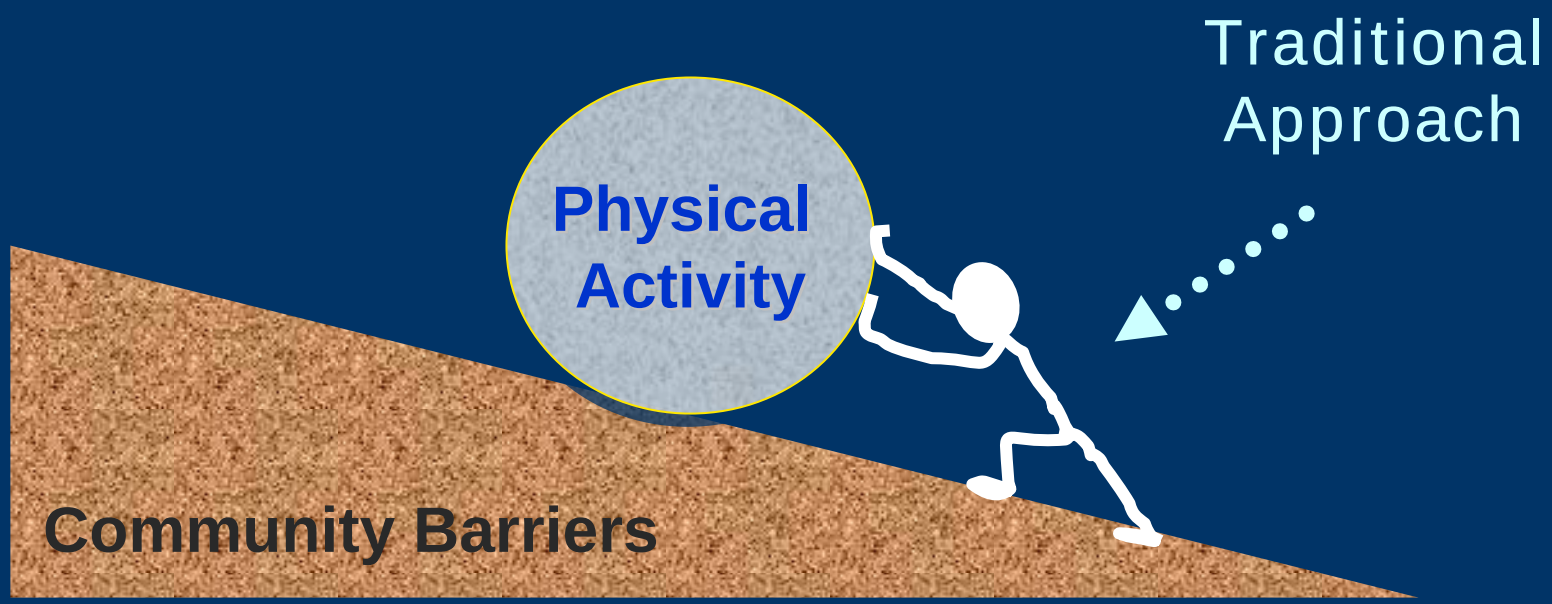
Leisure Time Physical Activity Trends U.S., BRFSS: 1986-1999



S. Ham, CDC, 2000.

Recommended Activity = Moderate or Vigorous Activity

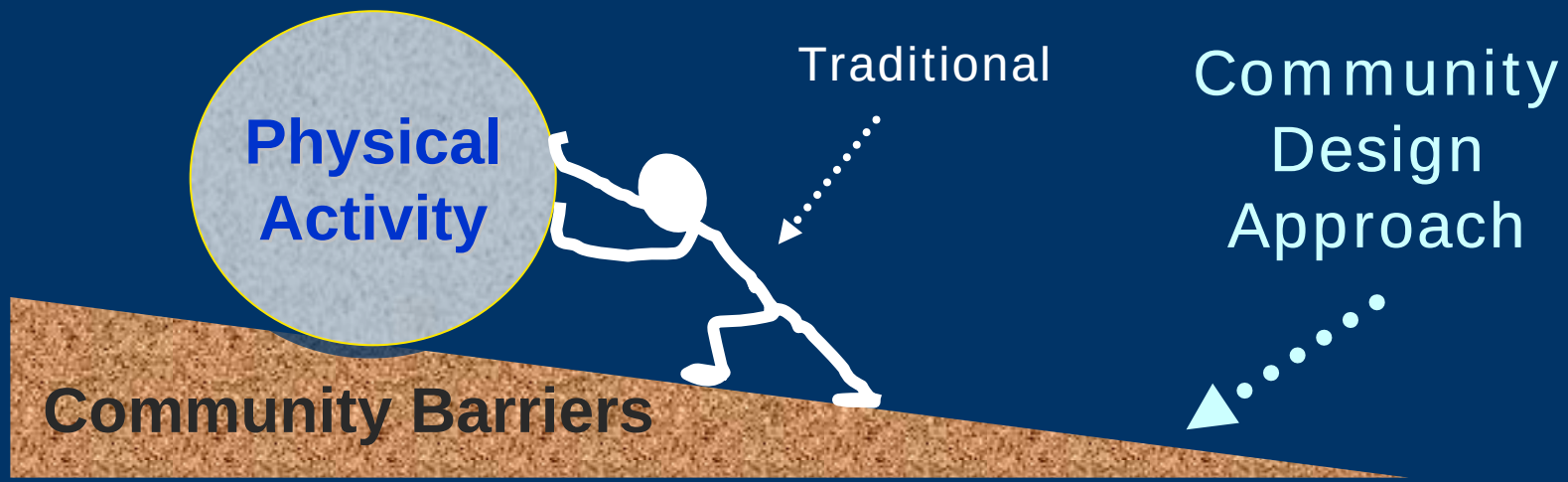
Physical Activity Promotion for the Individual



The Influences on Behavior

Source: Promoting Physical Activity: A Guide for Community Action, 1999. US DHHS, CDC

Physical Activity Promotion and Community Design



Why Focus on the Built Environment?

- Efforts which ignored the built environment failed
- Environment is a major barrier to choice and motivation
- Conducive environment combined with a more achievable goal removes barriers for everyone
- Seeking broader impact

Benefits of a Supportive Built Environment

- Access, convenience, safety stimulate walking/biking
- Offers many other benefits that communities desire
- Makes physical activity attainable for large numbers of people during their normal routine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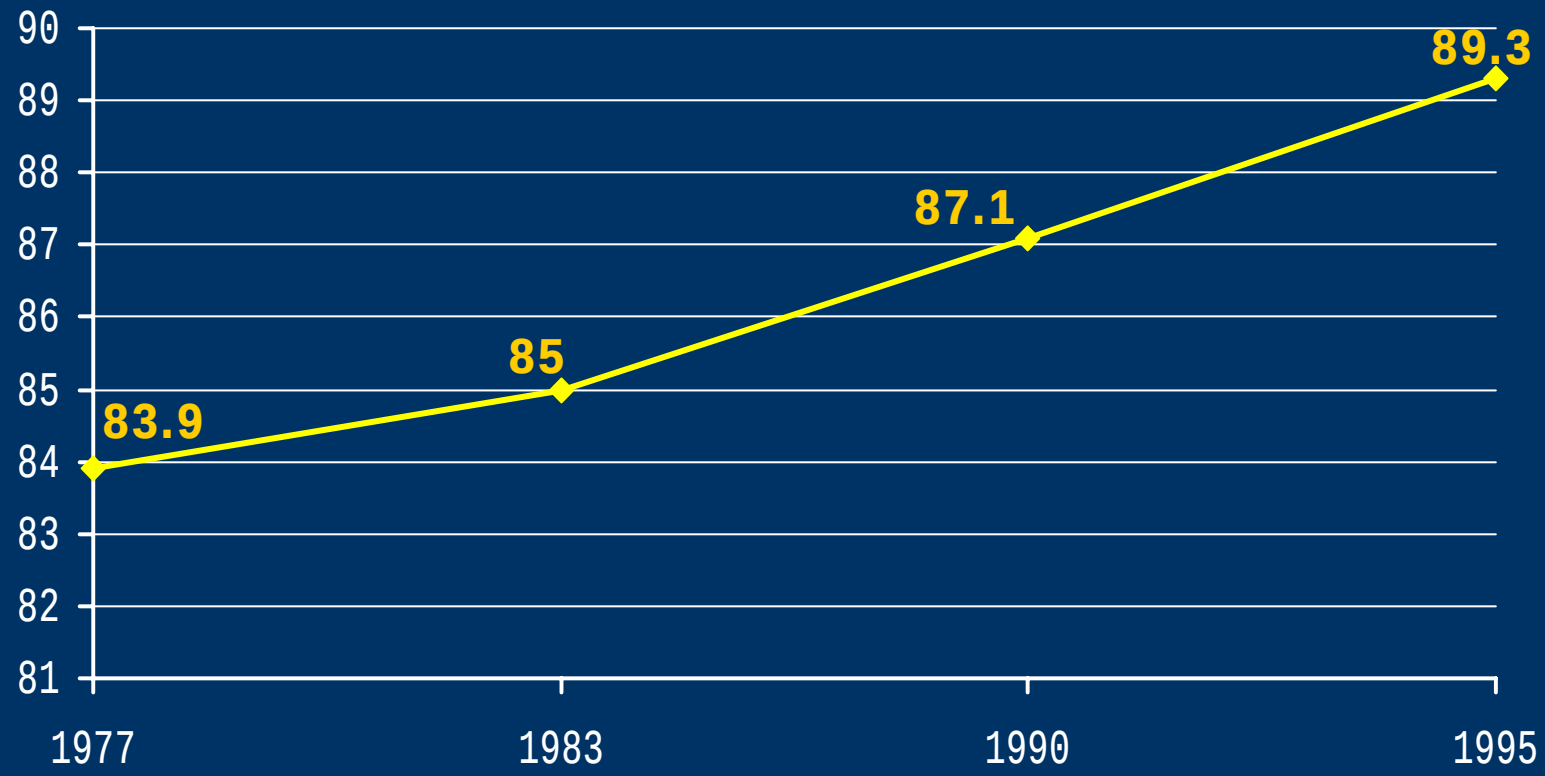
The Environment We Have Built
Common Barriers to Walk or Bicycle

- Few sidewalks, bike lanes and greenways
- Disconnected and dead end streets
- Concentrated traffic on wide, high-speed roads
- Poor investment in streetscapes

- Long distances between destinations
- Single family only and commercial only zones
- Large parking lots, long blank walls
- Decline of neighborhood schools

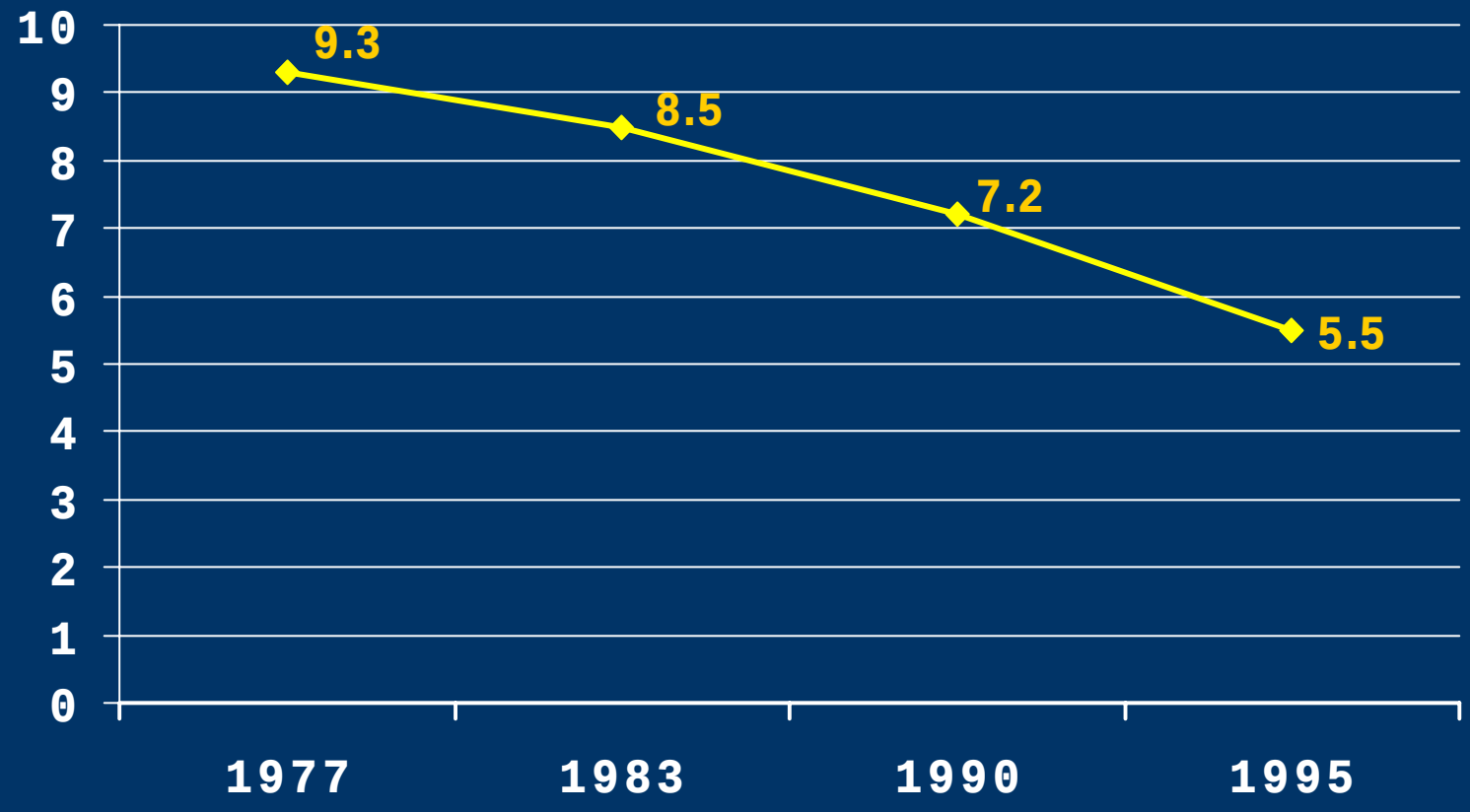
Auto Trips 1977 - 1995



Source: National Personal Transportation Survey, 1995

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Walk Trips 1977 - 1995



Source: National Personal Transportation Survey, 1995

CDC
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Barriers & Opportunities

All Trips

- 25% of all trips are one mile or less
- 75% of those trips are made by car

Source: U.S. Department of Transportation, Federal Highway Administration. Summary of Travel Trends, 1995 Nationwide Personal Transportation Survey.

Active Transportation to School in Decline

- Trips to school by walking and biking have declined by 40% nationwide in the past 20 years. (CDC, 2003)

- Of short school trips, 28% are on foot and less than 1% are by bike.

- US Survey: 7 in 10 adults walked or biked,
  2 in 10 allowed their children (STPP, 2002)

  Reasons against:

  Too far (66%), no safe route (17%), abduction fear (16%), crime (15%), children on desire (6%), school policy against (1%)

Barriers to Children's Physical Activity

To and from school:

1. Stranger danger/perception
2. Crime danger/perception
3. Motor vehicle danger/perception
4. Streets not walkable/bikeable
5. School sites not walkable/bikeable
6. Distance from home to school
7. Inadequate alternatives routes to school

Barriers to Children's Physical Activity

At school

8. Inadequate or limited school grounds/facilities and equipment
9. Physical education: too infrequent, curriculum not necessarily geared to life skills, many teachers not certified, too competitive for some kids
10. Physical activity used recess withdrawn as punishment (and sweets as treats)

After school hours

11. Inaccessible school grounds/facilities
12. Inaccessible or limited recreational facilities

Strategies for Built Environment Barriers (1) Stranger and (2) Crime Danger

- More “eyes on the street”
- Promote active travel as a routine activity: walk/bike-to-school promotions
- Parent supervision: walking school buses
- Increased police patrols along school routes
- Crime prevention through environmental design (CPTED)

Strategies for Built Environment Barriers

(3) Motor Vehicle Danger

- Increased police patrols and speed enforcement along school routes
- Sufficient crossing guards
- Better traffic calming measures
- Better in-school education about pedestrian and bicycle safety
- Better signage

(4) Streets not Walkable/bikeable

- Pedestrian and bicycle-friendly street design guidelines
- Adequate sidewalks, bikeways, crossings, signage
- Better street connectivity

Strategies for Built Environment Barriers

(5) School Sites not Walkable/Bikeable

- Bicycle Racks
- Sidewalks leading up to school
- Separate pedestrians and bicyclists from vehicle and bus drop-off
- Better signage

(6) Distance from Home to School

- Build neighborhood schools
- Compact mixed-use development
- Reconsider minimum acreage standards in school siting guidelines
- Encourage renovation of existing neighborhood schools

Strategies for Built Environment Barriers

(7) Inadequate Alternative Routes

- Create networks of multi-use greenways/trails linking neighborhoods and schools

(8) Inadequate School Grounds/Facilities

- Funding for on-site physical activity facilities and equipment
- Joint use agreements to share costs between departments, e.g. recreation/schools

(9) Physical Education

- Encourage certification and better pay for PE teachers
- Less competitive, life-skills oriented activity

Strategies for Built Environment Barriers

(10) Physical Activity as Punishment

- Develop school policy standards to create positive associations with physical activity (and healthy eating)

(11) Inaccessible School Grounds/Facilities

- Policies allowing community use of facilities after school hours
- Joint use agreements to share costs between departments, e.g. recreation/schools

(12) Inaccessible or Limited Recreation Facilities

- Funding for neighborhood parks/trails/greenways
- Joint use agreements to share costs between departments, e.g. recreation/schools

Other Agencies Urging Action to Improve our Built Environment

- National Institutes of Health
- Centers for Disease Control and Prevention
- Environmental Protection Agency
- National Academy of Sciences
- Academia, e.g. UNC-CH

Research Priorities

NIH, National Institute of Env Health Sciences

Identifying successful strategies to

- Change eating behavior
- Promote a more active lifestyle
- Change the design of residential communities to make them more conducive to walking

- N.I.E.H.S., Obesity and The Environment Fact Sheet, 2003

Active Community Environments

Centers for Disease Control and Prevention

"Characteristics of our communities such as proximity of facilities, street design, density of housing, availability of public transit and of pedestrian and bicycle facilities play a significant role in promoting or discouraging physical activity."

- CDC, ACEs Website: http://www.cdc.gov/nccdphp/dnpa/aces.htm, 2004

Built Env Influences on Walking

- “Of the many built environment variables, the proportion of arterials and collectors with sidewalks along proved to be the most significant influence on walking.”

E.P.A., Travel and Environmental Implications of School Siting, 2003

Call to Action

National Academy of Sciences, Institute of Medicine

- "Ensure that all children and youth participate in a minimum of 30 minutes of moderate to vigorous physical activity during the school day, including expanded opportunities for physical activity through classes, sports programs, clubs, lessons, after-school, and community use of school facilities, and walking and biking to school programs."
- "Assess school policies and practices related to nutrition, physical activity, and obesity prevention."
- "Expand and promote opportunities for physical activity in the community through changes to ordinances, capitol improvement programs, and other planning practices."

- I.O.M. Preventing Childhood Obesity: Health in the Balance, Sep 2004

Creating Neighborhood Schools

Center for Urban and Regional Studies, UNC-CH

- Adopt land use regulations that allow more compact development adjacent to schools.
- Explore joint use of school facilities.
- School boards should collaborate with local planners and municipal elected officials in selecting the location for new schools.
- Select school sites that maximize bicycle and pedestrian access.
- DPI: Promote renovation of old schools that serve as anchors to the community.
- DPI: De-emphasize minimum acreage standards in facility planning guides

- C.U.R.S., Good Schools – Good Neighborhoods, Sep 2004