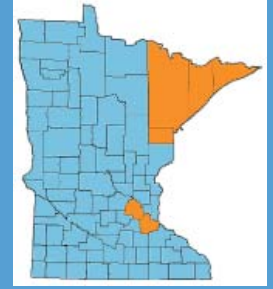




# ActiveLiving Community Vision



## Active Living Community Vision Primer

**Active living** is a way of life that integrates physical activity into daily routines. The goal is to accumulate at least 30 minutes of activity each day. Individuals may achieve this by walking or bicycling for transportation, exercise or pleasure; playing in the park; working in the yard; taking the stairs; and using recreation facilities.

**Active Living by Design** promotes environments that offer choices for integrating physical activity into daily life. This primer presents an overview of the relationships between our environments and physical activity.

The text that follows includes a summary of physical inactivity and related diseases, the importance of an active lifestyle to achieving good health, and suggestions for increasing active living within communities.

The following aspects of the active living environment are addressed:

- Minnesota overweight & obesity
- Land use
- Transportation
- Parks, trails, and greenways

## Physical Inactivity Adversely Affects Health

Physical inactivity plays a significant role in the most common chronic diseases in the U.S., including coronary heart disease, stroke, and diabetes; each of these is a leading cause of death.<sup>1</sup> More specifically:

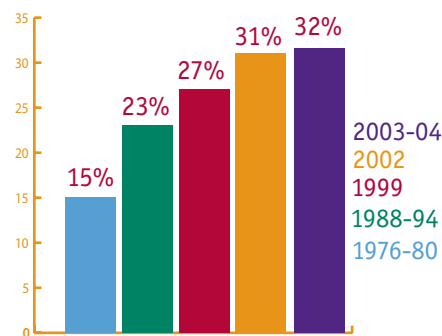
- Physical inactivity and poor diet are responsible for between 100,000 and 300,000 deaths annually from coronary heart disease, colon cancer, stroke, and diabetes.<sup>2,3,4</sup>
- 34% of coronary heart disease deaths can be attributed to physical inactivity;<sup>5</sup> physically inactive adults are nearly twice as likely as those who are active to have coronary heart disease.<sup>5</sup>
- Physical inactivity can increase the risk of stroke and high blood pressure.<sup>6</sup>
- Diabetes, a chronic condition, increasingly affects individuals and their families. In 2001, about one in ten adults reported having diabetes. Type 2 diabetes is influenced by physical inactivity.<sup>7</sup>

- Pediatricians and health scientists are increasingly concerned about Type 2 diabetes in children, due largely to physical inactivity.<sup>8</sup>
- Physical inactivity strongly influences obesity and overweight, which contribute to or increase chronic diseases and death. Analysis of data from the 2003-04 National Health and Nutrition Examination Survey (NHANES) showed that 66.3% of adults measure

as being overweight or obese, and 32.2% of adults register as obese, or approximately 30 pounds overweight.<sup>9\*</sup>

- The proportion of youth who are overweight and adults who are obese has more than doubled in the last 20 years.<sup>7</sup> This increase has led scientists to declare an “obesity epidemic.”<sup>7</sup>
- Among children aged 2 through 19 years in 2002, 33.6% were overweight or at risk of overweight and 17.1% were overweight.<sup>9</sup>
- People who meet or exceed the recommended levels of physical activity report higher levels of perceived quality of life and health status. In 2001, individuals across all age groups meeting recommended levels of physical activity were significantly less likely to report “unhealthy days” compared to physically inactive adults.<sup>11</sup>

Obesity Rates in U.S. Adults, 1976–2004



Source: NHANES

\*Obesity = Body Mass Index (BMI) of 30 kg/m<sup>2</sup> or greater; Overweight = BMI of 25–29.9 kg/m<sup>2</sup>

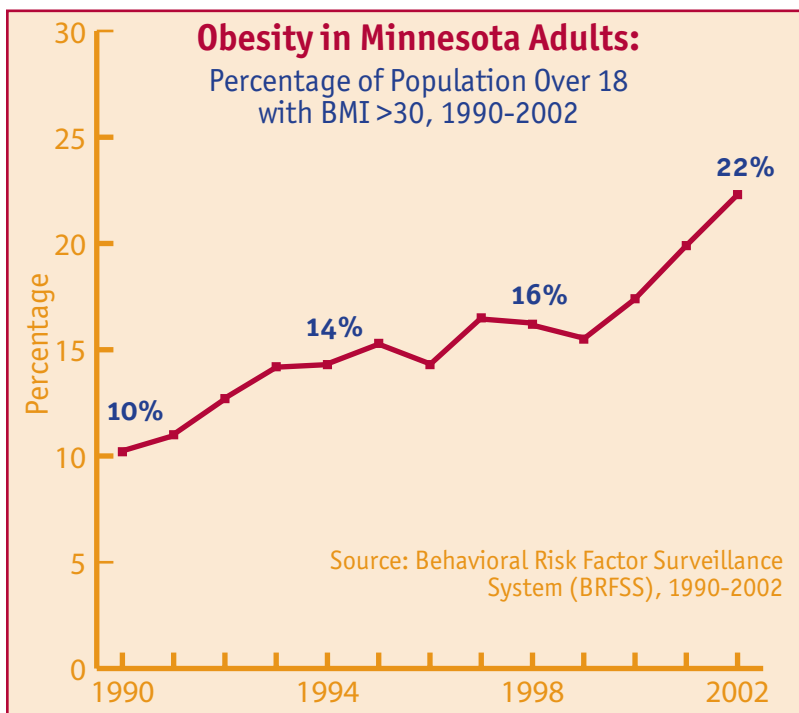
## Costs of Physical Inactivity in Minnesota:

The costs of an inactive population are significant. In 2000, an estimated \$495 million was spent in Minnesota treating diseases and conditions that could be avoided if all Minnesotan adults were physically active.<sup>1\*</sup>



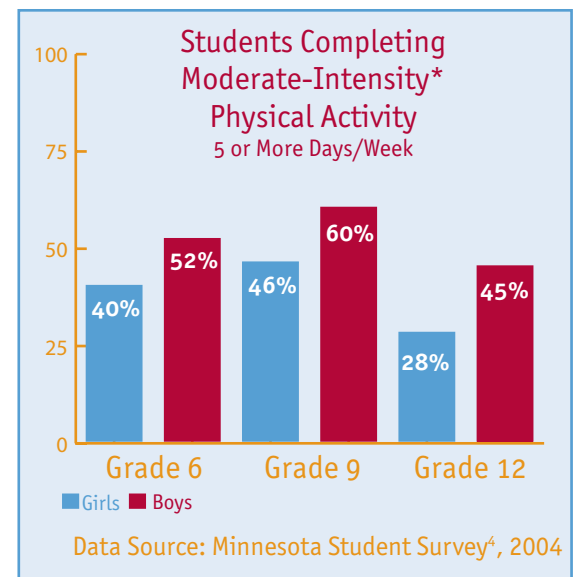
## A physically active Minnesota population would expect to see:

- 30% fewer cases of heart disease, stroke, colon cancer, and osteoporosis
- 18% fewer cases of type 2 diabetes and hypertension
- 16% fewer injuries from falls in the elderly
- 12% fewer cases depression and anxiety
- 5% fewer cases of breast cancer<sup>1</sup>



## Physical Inactivity in Minnesota Youth

The recommendation for physical activity for youth is stated in the Dietary Guidelines for Americans and supported by the National Association for Sports and Physical Education. Children and adolescents can choose any type of moderate or vigorous intensity physical activity, such as brisk walking, playing tag, jumping rope, or swimming, as long as it adds up to at least one hour a day.<sup>3</sup>



**In 2005**, only 51% of Minnesota adults achieved the recommended level of physical activity per week. Additionally, 16% of Minnesota adults reported they did not participate in any physical activities.<sup>2</sup>

\*All citations on page two referenced below:

1. Health Care Costs of Physical Inactivity in Minnesota, 2002, Minnesota Department of Health, accessed at [http://www.health.state.mn.us/divs/hpcd/chp/obesity/pdf/costofphysicalinactivity\\_fact.pdf](http://www.health.state.mn.us/divs/hpcd/chp/obesity/pdf/costofphysicalinactivity_fact.pdf)
2. Behavioral Risk Factor Surveillance System, 2005, Centers for Disease Control and Prevention, accessed at <http://apps.nccd.cdc.gov/brfss>
3. Dietary Guidelines for Americans, 2005, U.S. Department of Health and Human Services and U.S. Department of Agriculture, accessed at <http://www.healthier.us.gov/dietaryguidelines>
4. Minnesota Student Survey, 2004, Minnesota Department of Education and Minnesota Department of Human Services.

## Physical Activity Recommendations

- Adults should accumulate 30 minutes or more of moderately intense physical activity on five or more days per week, or 20 minutes or more of vigorously intense physical activity on three or more days per week.
- It is recommended that children and adolescents participate in at least 60 minutes of moderate intensity physical activity most days of the week, preferably daily.

—Adapted from the physical activity recommendations provided by the Centers for Disease Control and Prevention 2003 and Dietary Guidelines for Americans 2005.

# Land Use and Physical Activity

**Land use** influences the fundamental character of our communities and our lifestyles by determining:

- What land is developed and for what purpose.
- Where and how far apart our destinations are.
- What kinds of activities can happen in a given space.
- Who can live next to whom or what.
- What choices people have in getting from place to place.



## Mixed Land Use and Opportunities for Physical Activity

Evidence is mounting that automobile-oriented land use policies reduce transportation choice, adversely affect air quality and safety, and discourage physical activity.<sup>17</sup> A more compact and mixed land use pattern that offers short distances to interesting destinations combined with pedestrian-friendly design features would: encourage walking and biking; remove barriers to activity for everyone; and make healthy levels of physical activity attainable for more people during their daily routine.

- Mixed land use increases the number and percentage of walking and biking trips; for trips less than one mile, mixed-use communities generate up to four times as many walking trips/week as residents of low walkable neighborhoods.<sup>18</sup>
- Residents in a highly walkable neighborhood engage in about 70 more minutes per week of moderate and vigorous physical activity than residents in a low-walkability neighborhood.<sup>19</sup>
- Forty-three percent of people with safe places to walk within ten minutes of home meet recommended activity levels, compared to 27% of those without safe places to walk.<sup>20</sup> People are more likely to walk or bicycle if they live in a city center, live close to a non-residential building, live close to

a grocery store or drug store, and have good access to public transportation.<sup>21</sup>

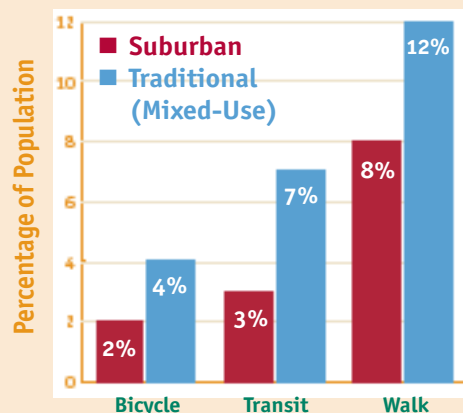
- An 11-year study that followed residents in Seattle as they moved found that people shifted some trips to transit, bicycling and walking as a result of moving into more walkable neighborhoods.<sup>22</sup>
- A national study of 448 metropolitan counties found that people living in

sprawling, low-density counties walk less, weigh more and are more likely to be obese or have hypertension than people living in more compact counties.<sup>23</sup>

Current land use trends increase automobile dependency and make walking, biking and transit less practical, less convenient, less safe and less pleasant.

- Between 1982 and 1997, urban land density in the U.S. dropped by more than 20%, requiring greater reliance on cars for travel.<sup>24</sup>
- From 1960 through 1990, the percentage of workers with jobs outside their counties of residence tripled, while the proportion of workers commuting within their counties of residence declined. Vehicle miles traveled rose dramatically during this period, while walking declined.<sup>25</sup>
- Acreage standards for new schools typically range from 10–60 acres. Older schools typically occupy only 2–8 acres.<sup>26</sup> These and other standards require that new schools be built in outlying areas, away from established neighborhoods. Largely as a result, only one in six children walks or bikes to school.<sup>27</sup> Less than 15% of students between the ages of five and 15 walked to or from school in 2001 and 1% biked, compared to 48% that walked in 1969.<sup>28</sup>

### Comparative Use of Physically Active Modes of Transportation in Mixed-Use Communities vs. Suburban Subdivisions



Source: Friedman, Gordon, Peers, Transportation Research Record 1466, 1996

# T ransportation and Physical Activity

Transportation determines not only how people move from place to place, but also the fundamental character of communities and the choices and opportunities people are provided.



## Transportation Policies Make a Difference

Trends toward a more spread out and segregated landscape reinforce a growing car dependency that reduces opportunities for regular physical activity during daily routines.

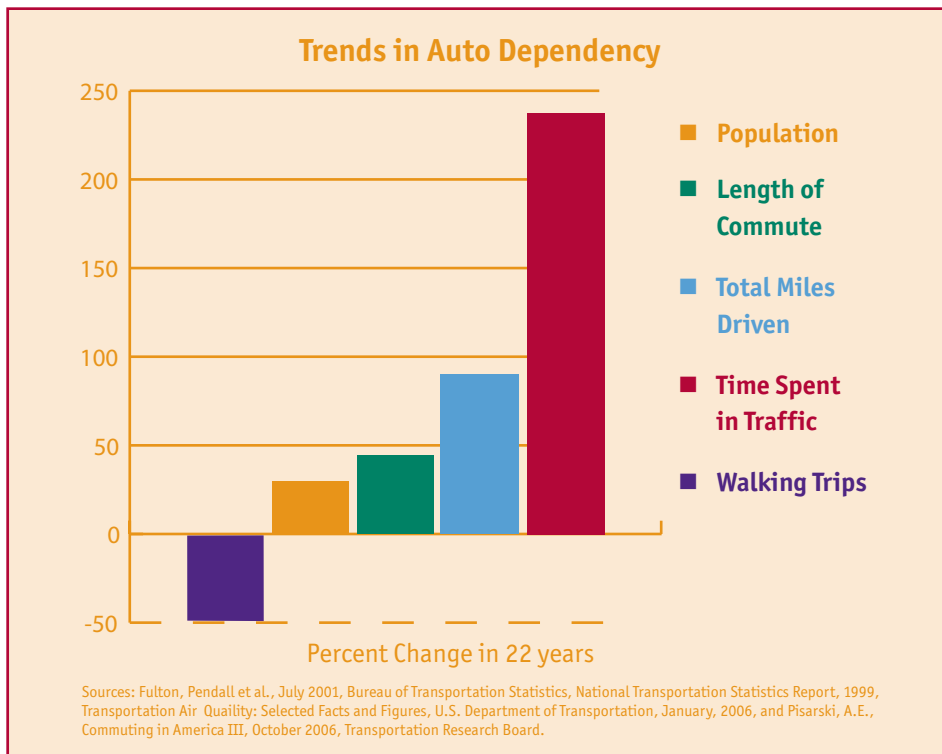
There is growing evidence that current transportation policies that promote automobile dependency adversely affect air quality and safety and discourage physical activity.<sup>18</sup> A more balanced transportation system that offers more choices and encourages walking and biking would remove barriers to activity

for everyone and make healthy levels of physical activity attainable for large numbers of people during their daily routine.

The transportation system can encourage physical activity:

- Recent studies have found that people with access to sidewalks are more likely to walk<sup>29</sup> and meet the Surgeon General's recommendations for physical activity.<sup>30</sup>

- People who report having access to walking/jogging trails are 55% more likely to be physically active.<sup>31</sup>
- Walking trips increase with good connectivity of the street network, a greater number of intersections and blocks, and streets with low speeds that are narrow and visually interesting.<sup>32</sup>
- There is a significant, dose-response relationship between the number of places to exercise near the home and the likelihood of meeting physical activity requirements.<sup>33</sup>



Current transportation trends indicate that walking, biking and transit are becoming less practical, less convenient, less safe and less pleasant. Consider this:

- Between 1977 and 1995, trips made by walking declined by 40% for both children and adults while driving trips increased to almost 90% of the total.<sup>34</sup>
- During the past 20 years, the time we collectively spent in traffic grew 12 times as fast as the population, while the number of trips taken on foot dropped by 50%.<sup>24, 25,</sup>
- One-fourth of all trips people make are one mile or less, but three-



fourths of these short trips are made by car.<sup>34</sup>

- Although almost half of all trips were less than three miles in 1990—a convenient distance for a bicycle—less than one percent were actually made by bicycle.<sup>35</sup>
- Children’s walking and biking trips to school declined by 62% between 1969 and 2001.<sup>34, 35</sup> Children between the ages of 5 and 15 make only 10–

12% of their school trips by walking or riding their bicycles. Almost 70% of all children’s trips are by car.<sup>35</sup>

- Between 2002 and 2004, the average annual amount spent on pedestrian/bike projects was \$1.42 per person while the average annual amount spent for roads and bridges was more than 100 dollars per person.<sup>42, 43</sup>

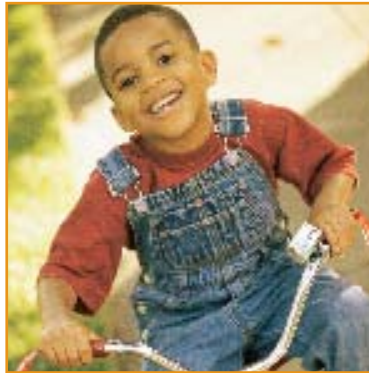


## Healthy Communities: Design for Active Living

Active Living by Design provides technical assistance to three communities funded by Blue Cross and Blue Shield of Minnesota and guides them through a community assessment and engagement process that results in a clearly defined vision for active living. In addition, Active Living by Design helps the communities create a plan for rallying community support to implement their vision. The overarching aim is to transfer skills to these communities, build long-term capacity to promote environments that encourage physical activity, and ultimately improve the health of Minnesotans. The three funded communities are the Arrowhead Region (Carlton, Cook, Lake, and St. Louis Counties), Dakota County and Hennepin County.

# Parks, Trails and Greenways and Physical Activity

Parks, trails and greenways\* are important community places that provide opportunities for close-to-home recreation and connections to local destinations. The proximity of these places to where people live and work and the types of facilities and programs available influence levels of daily physical activity.



## The Impact of Accessible Parks, Trails and Greenways

Researchers have found positive relationships between settings for physical activity and physical activity patterns in adults.<sup>35</sup> Other studies suggest that the presence of parks, trails and greenways can increase physical activity among adults.

- In a survey of U.S. adults, people with access to neighborhood parks were nearly twice as likely to be active as those without access.<sup>28</sup>
- A survey of users on three greenways in Texas found that respondents indicate that the greenways have contributed the most to community quality of life through health and fitness, followed by access to natural areas and recreation, land use patterns, pride in the community, and community identity.<sup>36</sup>

- A study of park usage of older adults in the Cleveland metropolitan area found that most park users older than 50 were physically active during their visit. More than two-thirds used the parks for moderate or high levels of physical activity. More specifically, about 16% enjoyed a high level of physical activity (e.g., jogging, bicycling, hiking), 51% had a moderate level (e.g., walking 21–45 minutes, biking, hiking or swimming less than 30 minutes), 17% had a low level (e.g., playing with grandchildren, walking 20 minutes or less).<sup>37</sup>
- In a Missouri survey, 55.2% of people using trails reported an increase in walking since they began using the trails. Women and people with a high school education or lower were more than twice as likely to have

increased their amount of walking since they began using the trails. This study also found that walking trails may be beneficial in promoting physical activity among women and people in lower socioeconomic groups.<sup>38</sup>

Parks, trails and greenways not only provide a low-cost and fun way for people of all ages to increase their physical activity levels but also can provide other health and environment benefits to communities. Evidence is growing that parks, trails, and greenways can have positive effects on cities by protecting open space, attracting investment, revitalizing cities, reducing personal stress, and protecting the environment.<sup>39</sup>

\* Greenways are corridors of protected public and private land along rivers, stream valleys, ridges, abandoned railroad corridors, utility rights-of-way, canals, scenic roads or other linear features.

## Physical Activity and Daily Routine

Parks, trails and greenways can provide a low-cost way for people to get to work, school, a grocery store or other destinations of interest. These community places are an excellent way to integrate physical activity into people's daily routines and achieve the Surgeon General's recommendation of 30 minutes of moderately intense physical activity five or more days per week.



## Calls to Action

Active Living by Design recommends the following strategies for comprehensive promotion of active living.

### Preparation

Develop and foster multi-disciplinary partnerships that include representatives from public health, city planning, transportation, architecture and other fields. Assess existing policies and environmental conditions, develop a strategic plan, and identify additional resources.

### Promotion

Communicate through a number of available outlets, such as traditional mass media channels, listservs and newsletters. Messages should highlight the importance of active living in a variety of built, natural and social environments.

### Programs

Create programs that heighten the demand for physical activity in the community. Some programs may help raise awareness of active living issues, while other programs will mobilize the public to advocate for policy change.

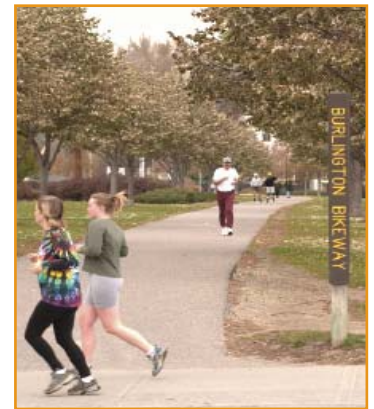
### Policy Influence

Influence decisions that impact policies and programs to ensure that supportive infrastructures are institutionalized. Legislators and other policy makers play a key role in determining community design and transportation options.

### Physical Projects

Promoting routine physical activity will require specific physical improvements, such as parks, trails, bikeways and sidewalks. Implementing and supporting facilities that promote physical activity will require the full integration of the four other strategies described here.

For a detailed listing of Calls to Action for each active living area, see the Active Living by Design Land Use, Transportation, and Parks, Trails and Greenway Fact Sheets. Fact Sheets available online at [www.activelivingbydesign.org](http://www.activelivingbydesign.org).



**Active Living by Design** is a national program of The Robert Wood Johnson Foundation and is administered by the University of North Carolina's School of Public Health in Chapel Hill. The program establishes and evaluates innovative approaches to increase physical activity through community design, public policies and communications strategies. For more information, please visit our website [www.activelivingbydesign.org](http://www.activelivingbydesign.org).

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Photographs used in the primer were taken from the Pedestrian and Bicycle Information Center ([www.pedbikeimages.org](http://www.pedbikeimages.org)). Photographer Dan Burden.