



Physical Activity and the Built Environment

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Nationwide

The U.S. Department of Health and Human Services recommends that young people aged 6–17 years participate in at least 60 minutes of physical activity daily.⁽¹⁾ Yet, in 2011, only 29% of high school students surveyed in the Youth Risk Behavior Surveillance System (YRBSS) had participated in at least 60 minutes per day of physical activity on the seven days prior to the survey.⁽²⁾ In that same year’s survey, 60% of females and 40% of males reported getting 60 minutes of physical activity on less than five days in the prior week, with 18% and 10% not getting the recommended amount on any of the seven previous days. Black, Hispanic, and Asian youth were less likely to be physically active than Caucasian youth.⁽³⁾ In a national study using objective measures of physical activity (as opposed to asking people to self-report), 42% of children 6–11 years old met the 60 minutes per day guideline, while only 8% of adolescents achieved the goal. Males and younger children were more active than females and older children, adolescents, or adults.⁽⁴⁾

The causes of physical inactivity are numerous and complex. Studies have identified a number of features of the physical environment (the combination of features that occur naturally and those that are built) that influence physical activity. In one review of the literature, relationships were found between physical activity and land use mixture (whether or not multiple kinds of destinations exist within one community), traffic density and safety, and access to green space and recreational facilities.⁽⁵⁾



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In a review of thirty-three quantitative studies that examined the relationships between the physical environment and physical activity among children ages 3-18, children were found to be more active if they had access to parks and recreation facilities, supportive sidewalks, controlled intersections, a variety of destinations of interest, and public transportation. Conversely, the number of streets to cross to get to important destinations, traffic density, crime, and lack of available space for recreation were associated with lower levels of physical activity.⁽⁶⁾

Active Living Research, in a series of research reviews and briefs, has pointed to such diverse factors as access to recreational environments (e.g., parks, trails), physical activity programs (e.g., in childcare, school, and after school), open and accessible schoolyards, and characteristics that make communities “walkable” (having nearby destinations to walk and safe direct routes to get to them) as having a positive influence on children’s physical activity levels.^{(7) (8)} Most studies of children and adolescents suggest that active transportation to school (walking or biking) is associated with higher levels of overall physical activity. Yet the percentage of children who walked or biked to school decreased between 1970 and 2000⁽⁹⁾ – the three decades over which the childhood obesity epidemic has soared to today’s levels. While the presence of physical activity facilities and infrastructure influences activity, such facilities and infrastructure lead to more physical activity when they are perceived to be of high quality and safe.⁽¹⁰⁾

Though research has clarified many of the factors associated with increased physical activity, the lack of equitable distribution of the resources associated with increased physical activity may help to explain the racial and ethnic disparities in obesity observed in the U.S. Multiple studies and research reviews suggest that environmental features such as parks and green space,⁽¹¹⁾ attractive scenery,⁽¹²⁾ and recreational facilities (e.g., schools, recreation centers, public swimming pools)⁽¹³⁾ are less frequently found in U.S. communities with predominantly lower-income or racial and ethnic minority residents.

In addition to the availability of environmental features that support physical activity, programs specifically designed to engage children in physical activity are also essential, but do not inherently lead to increased physical activity. In the Active Living Research brief, *Policies and Standards for Promoting Physical Activity in After-School Programs*, the summarized studies point to two key results. While after-school programs may be plentiful and intended to engage children in physical activity, children participating in them frequently get less than the recommended daily amount of activity, and often a large percentage of those enrolled are inactive (or “sedentary”) during the program.⁽¹⁴⁾ The largest study of physical activity within after-school programs found that only 17% of children came close to half of the daily recommended number of steps for children while participating.⁽¹⁵⁾

The evidence cited above speaks to the importance of designing and improving neighborhoods and communities so that they support and enable activity by providing a safe and secure environment equipped with the necessary infrastructure. An inhospitable and unsupportive environment can discourage even the most motivated individual from pursuing a physically active lifestyle. To enable activity, sidewalks must be available and well maintained, street crossings properly marked and controlled, and parks outfitted with safe play equipment and free of illegal activity. Families must also feel confident that children can walk to school or play outside without fear of crime and violence.

Chicago

According to 2007 YRBSS data reported by the Child Health Data Lab at Lurie Children's Hospital, only 29% of high school students in Chicago engaged in moderate physical activity on five days or more during the week before they were surveyed (compared to 46% in the rest of Illinois). Students in Chicago were also less likely to attend physical education class one or more times a week and more likely to watch three or more hours of television on an average day.⁽¹⁶⁾

Research suggests that Chicago communities are not as supportive of walking and biking as they could be. While Chicago is home to over 7,600 acres of publicly available parks, playgrounds, and beaches, Chicago experiences disparities in park access. In an October 9, 2011 *Chicago Tribune* article, an analysis of data from the Chicago Department of Housing and Economic Development, the Metro Chicago Information Center, and the U.S. Census Bureau indicated that 32 of Chicago's 77 community areas failed to meet the city's own standard for open space – two acres for every 1,000 people. Twenty of those 32 had a 2009 median household income that fell below the city's median of \$46,781. While low open-space access areas exist in all regions of the city, only three border the lakefront (Rogers Park, Edgewater, and Near North Side). Further, according to the article, neighborhoods with the greatest open-space deficit (more than 40 acres below the 2/1,000 people standard) are concentrated on the north and northwest sides; and many of these have large Hispanic populations.⁽¹⁷⁾ In a recent study of park use in Tampa, FL and Chicago, only 50% of children observed in parks were engaged in physical activity. In Chicago, children in parks in predominantly African American neighborhoods, and park users in higher-income neighborhoods were more active than in low-income neighborhoods.⁽¹⁸⁾



Safety and injury are significant problems on city streets. Chicago had the third highest hospitalization rate for motor vehicle crashes among youth across eight Illinois public health regions, with 45.5 per 100,000 people from 2005-07. Within Chicago, the central, north, and northwest regions had the lowest hospitalization rates (23.2 – 34.4/100,000), while the west, southwest, south, and far south regions had the highest (40.5 – 55.5/100,000). Children ages 5-9 and 15-19 had the highest hospitalization rates. While hospitalizations among 15-19 year olds were most likely to result from injuries sustained as a passenger in a vehicle, hospitalizations among 5-9 year olds most frequently resulted from injuries sustained as pedestrians.⁽¹⁹⁾

Current Strategies/Progress to Date

A number of interventions are underway in Chicago to improve the physical environment and increase physical activity. Efforts to improve the city's bicycle infrastructure can be found at www.chicagobikes.org. The Chicago Department of Transportation (CDOT), with support from CLOCC, the Chicago Department of Public Health, and the Chicago Park District, developed a guide to improvements in access to the city's parks. CDOT also developed a set of guidelines for street engineering to make Chicago's streets more accommodating to pedestrians, cyclists, and public transit users. A number of community-based organizations have partnered with city agencies to create programs that encourage residents to use the city's streets and sidewalks for physical activity.

on designated days of the week. Initiatives such as Open Streets, Play Streets, and B-Ball on the Block turn streets into temporary physical activity zones for residents in neighborhoods where park space is limited. Community groups across the city, from Englewood to Brighton Park to Rogers Park, have used CLOCC's Neighborhood Walkability Assessment Tool (NWAT) to identify and address barriers to walking and biking in their neighborhoods. The tool, which was developed by CLOCC and a consultant from the Active Transportation Alliance, guides users through an evaluation of four components of supportive physical activity environments:

- **Walkability**
Are sidewalks, streets, and crossings safe and walkable?
- **Aesthetics**
Is the surrounding environment attractive?
- **Recreation facilities and spaces**
Are they available and accessible?
- **Safety**
Does traffic, crime, or violence compromise user safety?

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Once the walkability of a block, intersection, or access route to an important destination has been evaluated, the NWAT suggests specific actions and strategies to effect obesity-preventive changes to the environment. Numerous neighborhood improvements to promote walkability have been implemented by residents and community groups as a result of their use of the tool. The "Walkable Bikeable Humboldt Park" team, comprised of 20 neighborhood block clubs, employed the NWAT to secure the following improvements: street lighting repaired, speed bumps installed and replaced, abandoned buildings boarded, and the conversion of an empty lot to a community garden. The Martha Gonzalez Memorial Committee in Pilsen utilized the NWAT to successfully advocate for additional signage, a longer pedestrian walk time, and a new traffic pattern at a dangerous intersection.

Additional strategies exist to promote physical activity and safety. Local park advisory councils have launched park programming that displaces crime and loitering and engages families and children in active play. Many communities operate walking school buses to guide children safely to and from school.

Recommendations for the Next Decade

Goal 1: Ensure that children participate in physical activity programming where they live, learn, and play.

- Objective 1-1:** Expand existing city-wide physical activity strategies.
- **Strategy a:** Implement or expand physical activity opportunities for children in childcare (see **Early Childhood** section) and school (see **Schools** section).
 - **Strategy b:** Improve access (availability, affordability) to formal physical activity programs at community institutions (e.g., YMCAs, Chicago Park District facilities, gyms and fitness centers).
 - **Strategy c:** Support and expand organized programs that make temporary use of the public way for organized physical activity (e.g., CDPH’s Play Streets, Chicago’s Open Streets, LISC’s B-Ball on the Block).
- Objective 1-2:** Increase community awareness of availability and importance of physical activity opportunities.
- **Strategy a:** Educate children and adults who care for them about the importance of physical activity. (See **Health Promotion and Public Education** section)
 - **Strategy b:** Promote the availability of community-based programs that deliver culturally- and community-appropriate physical activity and strengthen children’s physical activity skills.



Goal 2: Create, expand, or improve community environments where children can be physically active.

- Objective 2-1:** Ensure that city streets and sidewalks support walking, biking, and other forms of physical activity for leisure and transportation.
- **Strategy a:** Gather and share data about barriers to walking and biking in neighborhoods with community organizations and government agencies.
 - **Tactic:** Train and support community-based organizations to implement CLOCC’s Neighborhood Walkability Initiative.
 - **Tactic:** Support street/sidewalk environmental change approaches.
 - **Strategy b:** Implement Chicago’s Complete Streets policies and practices.
 - **Strategy c:** Implement the components of the Chicago Department of Transportation and Chicago Park District’s *Make Way for Play*.
 - **Strategy d:** Adopt and/or implement city policies regarding land use, zoning, community development and more to incorporate infrastructure and other environmental improvements that accommodate physical activity.

Objective 2-2: Increase or improve the use of public space for physical activity.

- **Strategy a:** Make school grounds available for public use after school hours.
- **Strategy b:** Convert available space (e.g., empty lots) to physical activity spaces (e.g., walking paths, skate parks, playing fields, community gardens).

Objective 2-3: Ensure the safety of existing and/or new physical activity environments.

- **Strategy a:** Strengthen crime prevention in community spaces and during times when children are more likely to be outside and active.
- **Strategy b:** Increase traffic enforcement on major streets and intersections to calm traffic and reduce pedestrian-vehicle crashes.
- **Strategy c:** Ensure and monitor the safety of playground equipment in schools and parks.

Objective 2-4: Enhance the aesthetics of community environments.

- **Strategy a:** Incorporate artwork into public places and other parts of the community.
- **Strategy b:** Require landscaping in public places.
- **Strategy c:** Establish culturally acceptable standards for aesthetics of major street development.
- **Strategy d:** Promote property maintenance through neighborhood planning and neighborhood groups.

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