Parks and Health

How Public Parks and Recreation Contribute to a Healthy Lifestyle

National Recreation and Park Association
Foreword

Park and recreation agencies can play a major role in helping Americans get physical activity, feel a connection with their neighbors and enjoy the benefits of a healthy environment.

- John Thorner, CAE
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Part I
Obesity and Physical Activity

Research shows parks encourage the physical activity essential to maintaining healthy weight and good health. Park and recreation agencies can make the active choice the easy choice by building paths and trails, creating parks close to home and improving active access to parks.

Part II
Depression and Social Isolation

Parks provide connections, both to nature and to other people, which help fight depression and build social capital. Park and recreation agencies can enhance that effect by creating great public spaces that meet residents’ need for social connection.

Part III
Parks, Health and the Environment

As natural areas, parks pull dangerous pollutants from the air and water, and moderate the impact of extreme heat. Park and recreation agencies can provide these benefits simply by protecting their natural areas, but can also look for opportunities to reclaim damaged urban areas.

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Mission

Parks serve an important role in addressing the diverse health challenges facing Americans. From obesity to depression and even asthma, parks provide opportunities for people to lead healthier, happier lives. This publication documents the health benefits provided by parks and gives public park and recreation agencies solid ideas on how they can enhance these benefits in their communities.

For more information

NRPA produced this publication in cooperation with Washington, D.C.-based author Barbara McCann, a former CNN journalist who has written extensively about transportation and land-use policy issues. For more information on the involvement of public parks and recreation departments in health promotion, please e-mail cybrary@nrpa.org.
The writing is on the wall. According to the Centers for Disease Control and Prevention, despite the proven benefits of physical activity, more than 60 percent of American adults do not get enough physical activity to improve their health. In 2002, the rate of obesity among adults in this country reached 30 percent, while the rate of overweight children ages 6-19 has tripled over the past 40 years.

What is the response to this growing epidemic? We build sprawling, isolated suburbs that fail to offer sufficient parkland, sidewalks and walkable access to daily amenities. We eschew the bicycle in favor of the family car—even for trips that cover the span of only a few blocks. And we allow the maintenance of existing parks—and the creation of new ones—to be considered a frivolous expense, funded with money that is “left over” after other municipal budget line items are satisfied.

The reality is that park and recreation agencies can play a major role in helping residents be more physically active, feel a connection with their neighbors and enjoy the benefits of a healthy environment. As the examples in this paper show, park and recreation agencies that begin to think in terms of parks and health often build new partnerships that enrich the community while bringing additional resources to the table. They discover new ways of managing the precious public resources that make up parklands, in the service of human health. Through innovative programs and new partnerships, parks can help people live healthier lives.

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PART I

Obesity and Physical Inactivity

Americans are eating too much and moving too little. About 65 percent of American adults are overweight or obese. The portion of children who are overweight has tripled in recent decades, resulting in 16 percent of those ages 6 to 19 being classified as overweight. Public health officials are alarmed because being overweight is tied to many serious diseases and conditions. If trends continue, one-third of children born in 2000 are expected to become diabetic.

Physical activity is an important part of fighting this epidemic. And being active has health benefits that go far beyond controlling weight: Active people are less likely to die from coronary heart disease, and have a lower chance of developing high blood pressure and a reduced chance of colon cancer.

Public parks can give millions of Americans opportunities to be active. The ball fields, basketball programs, walking trails and other amenities and programs in parks are getting people moving. But the fact remains that 60 percent of Americans don’t meet the recommended minimum of 30 minutes of moderate activity, five days a week.

What Can Parks Do?

What more can parks do to encourage people to get moving? Many park and recreation departments have launched educational programs that are linked with activities, such as walking, to help park users understand the health benefits of getting out and getting active.

For example, Indy Parks and Recreation helped launch a partnership with the city of Indianapolis, the Marion County Health Department and the National Institute for Fitness and Sport called “Indy in Motion.” This effort to get more residents moving began with a simple agreement with the health department to provide walking and aerobics classes in parks. It now targets families, children, seniors and people with disabilities, featuring organized walks in parks and on trails as well as information about opportunities for physical activity throughout the parks system.

All 13 parks that offer the program help participants log their activity and offer incentives. The parks also offer health education, aerobics and group and individual walks; Indianapolis residents took advantage of the program’s offerings more than 1 million times in 2004. Indy Parks and Recreation is planning additional programs in 2005 to increase activity on one of the systems’ lesser-used greenways. The Indy in Motion partners meet regularly to coordinate their activities.

• “Hearts n’ Parks” is a joint program of the National Recreation and Park Association and the National Heart, Lung, and Blood Institute. Park and recreation agencies across the country are using NRPA-NHLBI materials to teach children, adolescents and adults about physical activity and healthy eating, in conjunction with recreational activities in the parks.
Recent research shows that moderate activity, such as walking for 30 minutes a day, provides significant health benefits. Such activity can be integrated more easily into daily life than could a formal exercise program. People can simply step outside for a brisk walk, or they can walk or bicycle as part of running errands—or even getting to work. Providing places to walk is important: 43 percent of people who reported having safe places to walk within 10 minutes of home met the U.S. surgeon general’s recommended activity level, versus only 27 percent of those without safe places to walk near home.¹

Current sprawling development patterns can make such active living a challenge. Isolated subdivisions often offer few or no destinations within walking distance, and sometimes provide no attractive sidewalks or paths. In fact, because the neighborhood park may be one of the few destinations close to home, it is an especially important venue for active living in these environments. A recent survey by the International City/County Management Association (ICMA) revealed that 89 percent of city managers felt that parks and recreation departments should take a leading role in developing a community conducive to active living². And a recent report by the Institute of Medicine on combating childhood obesity calls on local governments to expand the number of recreational facilities, parks and bike paths.³

Increase access to parks

The research clearly shows that having access to places to get active is one of the most important factors linked to whether people will be active. Studies have revealed that parks and trails are positively associated with physical activity—and the closer people live to a park or trail, the stronger the effect. In fact, a systematic review of studies performed by the Centers for Disease Control and Prevention found that increased access to places to be active can boost the number of people getting enough exercise at least three days a week by 25 percent.

Enhancing access to places to be active is one of six actions strongly recommended by the CDC to increase physical activity.⁴ The aforementioned ICMA survey found that 45 percent of city managers said their highest action item is to create a cohesive system of parks and trails, incorporating accessible neighborhood parks. An accessible park system includes the creation of new neighborhood parks, as well as promotes ease of access to parks that already exist.

Create more parks close by

Research shows that proximity is the most important element of creating accessible parks. For example, one study of 449 adults over the age of 60 in Australia found that those who lived near safe foot and bicycle paths, gyms, parks and recreation centers were more likely to be getting enough physical activity to improve their health and stave off disease.⁵

A larger number of smaller neighborhood parks may be more effective at encouraging active living than building large sporting complexes on the edge of communities. In many communities, developing such small parks is a challenge; limited budgets make it difficult to acquire land, and the lack of funds for maintenance is a significant barrier. Some communities have partnered with land conservation organizations to acquire land or have teamed up with corporate partners to build playgrounds.

One place that has focused on creating small parks is Lakewood Township, N.J. Over the past several years, the township has built 16 neighborhood playgrounds. Some of the playgrounds have been put on vacant lots owned by the city. The township has partnered with the school district to build playgrounds on school grounds that are open to the community during non-school hours. Developers are also asked to put playgrounds in new developments that are then owned by the community.

Lakewood Township Public Works Director John Franklin says the priority has been on giving children places to play within walking distance of home—and on giving the neighborhoods what they want. Some of the parks have picnic shelters, and one has special equipment for children with disabilities. In one area, neighbors petitioned for a baseball field instead of the planned tennis courts. Even though the limited space means it has a short outfield, citizens got the ball field they wanted.

- Long Beach, Calif., has a goal of providing every neighborhood with some type of park or open space.⁶
- The Trust for Public Land has worked to help urban areas acquire land for parks and playgrounds.
- The nonprofit KaBOOM! works to involve the private sector in playground development.
**Improve active access to parks**

Part of improving access to parks is making it possible for people to be active on their way to the park—by walking or bicycling. Parks should have safe sidewalks and entrances that are convenient for pedestrians. And neighbors should not have to walk a half-mile around a park’s perimeter to reach an entrance designed for cars.

Improving transit access can also encourage active living, because most transit trips involve walking. Many transit buses now have bicycle racks, providing cyclists with another way to reach parks. Encouraging greater access to parks via foot, bicycle and public transportation can be one way to avoid the destruction of green space to create additional parking spaces.

For example, Marymoor Park, in King County, Wash., is accessible by bicycle or foot for residents who live far beyond the immediate neighborhood, because of its extensive trail connections. This large park has ball fields, a rock-climbing wall and many other attractions that make it a regional draw. Bicyclists from Seattle and Bellevue can reach the park via the 27-mile-long Burke-Gilman/Sammamish River Trail and the Bridle Crest Trail, which connect to an existing path inside the park designed as an exercise trail. Park officials estimate 5 percent to 10 percent of park patrons arrive via the trails, and trail use goes way up for special events such as the 4th of July fireworks display.

A significant number of patrons also drive to the park in order to bicycle or walk on the trails. A new pedestrian bridge was built recently over the Sammamish River to separate the non-motorized traffic from cars. In the future a new East Lake Sammamish Trail will link Marymoor Park to Lake Sammamish State Park and the Mountains to Sound Greenway.

- **Active Living by Design**, a project of the Robert Wood Johnson Foundation, is working in 25 communities to increase physical activity by improving the built environment. A number of the partnerships involve park and recreation departments, most notably in Cleveland and Oakland and Santa Ana, Calif.

- The master plan for Oakland’s Lake Merritt Park calls for the creation of sidewalks, bike lanes and good transit routes surrounding the park. Oakland is also developing a recreational trail corridor that will link three schools, three parks and two commercial districts.

In addition to proximity and accessibility, other features that induce people to be more active in parks include good lighting, toilets and drinking water, and attractive scenery.

**Build paths and trails**

The research shows that multi-use trails encourage more of the moderate physical activity that health experts recommend. For example, a survey of residents near a newly opened trail in rural Missouri found that 55 percent of them were walking more since the trail opened.

Park and recreation departments can be at the forefront in developing multi-use paths. Paths and trails built within parks can serve as an attractive destination for people out for a walk or a bicycle ride, particularly when they circle a lake or wind through a park that offers opportunities for people-watching. Trails can serve as important transportation corridors if they allow bicyclists and even pedestrians to avoid major roads and multiple intersections while providing access to other destinations.

Some communities are developing interconnected path and trail networks that link together parks, homes, restaurants, and shopping and employment destinations. For example, Santa Ana, Calif., is planning a “golden loop” trail that will link together downtown, the South Coast Plaza Village shopping district, schools and parks, as well as connect to an extensive regional trail network. The city currently manages 11 existing trails. The project is one part of a comprehensive program to increase active living in the Santa Ana area.
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• The Northern Virginia Regional Park Authority manages what it calls the “skinniest park in Virginia”: the 100-foot-wide Washington and Old Dominion Trail. The paved multi-use trail is 45 miles long, reaching from the suburbs of Washington, D.C., deep into Virginia’s horse country. The park authority works with an active citizen group, Friends of the W&OD, which works to improve and promote the park.

• The Cedar Lake Regional Trail in Minneapolis connects users to Cedar Lake Park, and also serves as a “bicycle freeway” for commuters heading downtown.

Include partnership and innovation in active living

Many park and recreation agencies have reached beyond their boundaries to form partnerships and offer programs that promote healthy physical activity. Cleveland Metroparks, a regional parks authority, is working with a variety of groups to increase trail connections across Cleveland. These partnerships stem from a commitment to walking as a primary activity in the city’s 20,000 acres of parkland, much of it an “emerald necklace” surrounding the city.

Cleveland Metroparks first became involved in active living with a modest “Walking Works” kit that provides a pedometer, walking tips and a walking log, as well as information about many led hikes and walks. Now, the parks authority is working with citizen groups, towns and cities in the region, community development corporations, a parks advocacy group and others to plan and build neighborhood trails that connect to a regional trail network. One of the projects is an ambitious and diverse Active Living by Design grant led by the Slavic Village CDC that is developing trails and parks in lower-income neighborhoods. Cleveland Metroparks is also an active partner in the Cuyahoga County Greenspace Working Group, which developed a comprehensive greenspace plan for open space in the Cleveland area.

• In Portland, Ore., the city’s park and recreation department has worked with the African American Health Coalition to co-sponsor events and classes. Former Portland Parks and Recreation Director Charles Jordan says the secret is to meet with other groups in the community and ask them what they need as they seek to increase physical activity.

• The developers of Millennium Park in Chicago worked with the local bicycle advocacy group, the Chicagoland Bicycle Federation (CBF), to establish a Bicycle Station in the park that makes life easier for bicycle commuters and recreational cyclists. It offers secure bicycle parking, showers and lockers, bicycle repair and rentals, and a snack bar and Internet kiosk. As an added service, the CBF offers “valet” bicycle parking at special events held in area parks, to encourage people to be active on their way to other activities.

Resources

To learn more about the central role of parks in active living:

• Active Living by Design “Parks, Trails and Greenways” fact sheet at www.activelivingbydesign.org


• “Designing for Active Recreation” research summary from Active Living Research at www.activelivingresearch.org

• “Parks for People,” published by the Trust for Public Land at www.tpl.org
More than 19 million Americans suffer from clinical depression, and countless more face high levels of stress or feel isolated from their community. Parks can play a role in easing all of these forms of mental anguish.

Numerous studies have documented the mental health benefits of green space. Harvard biologist Edward O. Wilson coined the term *biophilia*, “the innately emotional affiliation of human beings to other living organisms.” Biophilia may be one of the reasons that green space conveys health benefits.

One of the most famous studies on this subject found that patients in a Philadelphia hospital with a view of trees outside their hospital room windows had shorter hospitalizations, used fewer painkillers and had fewer negative comments in a nurses’ log than patients whose rooms faced brick walls. Other studies have found that contact with nature delivers benefits for people in many different situations: prisoners, children with attention-deficit disorder, dental patients, senior citizens, inner-city girls. Parks also can help ease everyday stress. Studies show natural settings relieve mental fatigue and aid in stress recovery.

Parks and green space also promote interaction and people’s willingness to cooperate and work toward common goals, a concept sometimes referred to as “social capital.” For example, University of Illinois researchers found that residents in a low-income area whose community included park-like settings were more likely to socialize with neighbors and had a stronger sense of belonging and safety than those without such spaces. Such ties may be one reason that apartment buildings surrounded by greenery have been found to have lower crime rates.

**What Can Parks Do?**

What can parks do to provide settings that promote social interaction and provide people with a natural recharge? Neighborhood parks close to home and parks that are close to daytime activity centers are critical: pleasant places where neighbors or co-workers will run into one another in the course of daily life. While trees and other greenery are important, many other factors must come together to create a space that promotes healthy, comfortable social interaction.

- The Project for Public Spaces (PPS) is dedicated to helping create such places, and offers a list of 11 principles to create a great public space. Among them: “the community is the expert,” “look for partners” and “you are never finished.” PPS recommends working to create a place, not a design, by including anything that will welcome visitors and make them comfortable: outdoor seating, water fountains, a good pedestrian circulation pattern or inviting landscaping. PPS also recommends “triangulation,” grouping park features for maximum benefit and use.
• PPS has named Hermann Park in Houston a “great place” because it provides residents with a comfortable and safe park that offers many attractions, including a zoo, museum and Japanese gardens. It has comfortable, well-designed benches and tables, and it provides many opportunities for sociability, from riding the pedal boats in the lake to attending concerts to simple people-watching.

Village Green Park in Macon, Ga., was revitalized with an aim of preventing crime, and a more sociable place was born. The city worked with the neighborhood and a nonprofit organization to add a picnic shelter, tables and grills, and a new playground and basketball goals. The parks department began sponsoring athletic programs in the park. Crime in the area dropped more than 50 percent, and residents care more about their neighborhood.13

California’s statewide Vision Insight Planning, or VIP, project for parks and recreation gives perhaps the best description of how to think of parks in terms of their broader social benefits:

“Parks and recreation professionals mobilize people to solve community problems—from building trails to coaching sports leagues to tutoring youth at risk. We are the essential connection to people and their needs in the communities and settings that we serve.”14

This definition challenges parks to go beyond providing recreational facilities and to become community-builders. The evidence shows that such a role will contribute to the overall health and social vibrancy of a community.

Resources

• American Planning Association City Parks Forum briefing papers at www.planning.org/cpf/briefingpapers.htm
  “How Cities Use Parks for Community Engagement”
  “How Cities Use Parks to Create Safer Neighborhoods”

• Project for Public Spaces, Urban Parks Online at www.pps.org

• University of Illinois at Urbana-Champaign, Human-Environment Research Laboratory at www.herl.uiuc.edu
PART III

Parks, Health and the Environment

One of the most fundamental benefits provided by parks is that they help to keep the environment healthy for human life. They do this simply because trees and natural areas help clean the air and water and cool the environment. Parks can also take a more active role by actually reclaiming dangerously polluted areas for human use.

**Pollutants**

Air pollutants are associated with lung disease, lung irritation and asthma (ground-level ozone); respiratory illness and lung damage (sulfur dioxide and nitrogen dioxide); cancer (toxic contaminants); headaches, nausea and reduced mental alertness (carbon monoxide); and premature death (particulate matter). Fortunately, trees and other greenery found in parks actually absorb many pollutants, removing them from the air. A study of one urban park of 520 acres found that daily the tree cover removed nine pounds of nitrogen dioxide and six pounds of sulfur dioxide (both components of ozone), two pounds of carbon monoxide and 48 pounds of particulates, as well as 100 pounds of carbon.

Parks also help to clean bodies of water, as trees, plants and soil filter and absorb pollutants and excess nutrients such as nitrogen before they can enter lakes and streams. Some communities have documented the “green infrastructure” benefits of parks and other open space, saving millions of dollars that might normally be invested in wastewater treatment plants. Parkland also serves as an important buffer against flooding.

**Natural air conditioning**

Air temperature also has a major health impact: More people die during heat waves in the summer than in all other weather-related events. Urban areas, with their dark rooftops, roadways and parking lots, absorb the sun’s heat and then radiate it back out at night, creating urban “heat islands.” Trees provide shade and evaporative cooling, and studies show that parks can reduce the temperature in neighborhoods and even across a region.

**What Can Parks Do?**

Park and recreation agencies can help document these benefits of parks in order to promote their protection and expansion. Consider working with the local branch of the American Lung Association or other groups that are promoting cleaner air and water. The Trust for Public Land provides a pollution calculator on its Web site that documents the benefits of urban trees.

**Brownfields redevelopment**

One of the most promising ways that parks can help improve health is in the reclamation of brownfields—polluted sites, usually damaged by past industrial activity. If left untended, the toxic or carcinogenic materials that remain pose a threat to human health.
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health. A process of remediation and conversion to parkland is a viable option that many communities have embraced, often with the help of federal funds administered through the U.S. Environmental Protection Agency.

- In Boston, funding from an EPA settlement and the city allowed the conversion of an abandoned rail line into the attractive East Boston Greenway, a 2.5-mile linear park.

- The Los Angeles River Greenway is an ambitious project involving many partners that will ultimately create extensive new parkland for residents, particularly in park-poor neighborhoods, while cleaning up a number of industrial sites along the river.

Resources

- American Planning Association City Parks Forum briefing papers at www.planning.org/cpf/briefingpapers.htm
  How Cities Use Parks for Green Infrastructure

- Trust for Public Land, "Brownfields to Parks" at www.tpl.org

- U.S. Environmental Protection Agency at www.epa.gov/brownfields
Endnotes


Endnotes


About NRPA

The National Recreation and Park Association is a national nonprofit organization dedicated to advancing park, recreation and conservation efforts that enhance quality of life for all people. Through its network of nearly 19,000 recreation and park professionals and citizens, NRPA encourages the promotion of healthy lifestyles, recreation initiatives, and conservation of natural and cultural resources.

Headquartered in Ashburn, Va., NRPA works closely with local, state and national recreation and park agencies, citizen groups and corporations to carry out its objectives. Priorities include advocating favorable legislation and public policy; continuing education for park and recreation professionals and citizens; providing professional certification, university accreditation, research and technical assistance; and increasing public awareness of the importance of parks and recreation. For more information, visit www.nrpa.org.