

Outdoor Play

Combating Sedentary Lifestyles

BETSY THIGPEN

Western Kentucky University

PLAY HAS INCREASINGLY become undervalued in the United States. The increasing emphasis on cognitive and preliteracy skills, even during the infant and toddler years, has taken precedence over physical development. The lack of play, especially outdoor play, is a contributing factor to the growing sedentary habits of children. The World Health Organization (WHO) suggested that sedentary lifestyle is one of the 10 leading causes of death and disability in the world and contributes to unhealthy diets, caloric excess, obesity, and associated chronic diseases (WHO, 2007).

Interestingly, movement and motion are often limited and even denied young children in home and child care environments in the United States today. Children are consistently encouraged to sit still, slow down, stop running, and otherwise curb their movement and motion. Many children who spend long hours in child care programs that fail to keep them physically active also have limited opportunities to engage in outdoor, physically stimulating play after they return home because, after a long workday, their parents have many other family responsibilities to attend to and may not have time to play.

For a variety of reasons, our society has moved our children indoors. Parents no longer feel safe letting their children run around the neighborhood unsupervised. Children are spending more time in structured activities and in child care arrangements with less available free time. As a result of these societal changes, there is concern about the negative social and emotional impact of spending less time interacting with others in the natural environment.

Exacerbating the problem are practices such as the overuse of infant seats, swings, bouncy chairs, and other devices that can restrain children for unreasonable amounts of time. Caregivers may use buggies and strollers in child care centers to transport toddlers versus allowing them to walk or run. The overuse of any piece of equipment that restricts movement can prevent chil-

dren from using the opportunities they need for vigorous activity. Restricted more often than not to indoor environments with too little space for free physical activity, children are growing more and more sedentary and are now suffering the consequences of overweight and obesity with the potential for a host of serious related health issues.

Why Go Outside?

KEEPING CHILDREN inside for most of the day leads to less active play and more structured, adult-directed activity. Outdoor play provides important opportunities to explore the natural world and learn about our environment. Very young children explore through their senses, and the outdoors presents a new world of sights, sounds, smells, and tactile experiences. When outside, children are more apt to engage in vigorous play, strengthening their muscles, hearts, and lungs. Outdoor play also encourages creativity and imagination and provides opportunities for collaboration and problem solving with peers. The outdoor environment can become an important part of the daily curriculum, supporting not only motor skill development but literacy, language, culture, math, and science learning.

Physical Activity in Child Care

OF THE CHILDREN under age 5 in the United States, almost 12 million (63%) participate in some type of

child care arrangement every week. On average, the children under age 5 with working mothers spend 36 hours per week in child care (National Association of Child Care Resource and Referral Agencies, 2007). Child care environments offer an untapped potential for addressing obesity, overweight, and sedentary lifestyles in young children. But too often, these children spend the greater portion of their days inside, thereby decreasing opportunities for vigorous physical activity.

In the *Baseline Survey of Environmental Conditions of Outdoor Areas in North Carolina Childcare Centers* (Moore & Cosco, in press), researchers found that children in 312 North Carolina child care centers (10% of the state's licensed centers) spent, on average, only 60–75 minutes outside as part of a 10-hour day. The researchers found that many centers were below this average.

An additional study conducted by Pate, Pfeiffer, Trost, Ziegler, and Dowda (2004)

Abstract

Increasingly sedentary lifestyles are contributing to overweight and other health concerns as children spend less and less time outside engaged in active play. Outdoor play provides important opportunities to explore the natural world, interact with peers, engage in vigorous physical activity, and learn about our environment. However, outdoor environments often fall short of providing infants and toddlers with comfortable, engaging, and challenging activities needed for optimal physical development. This article provides suggestions for creating satisfying and developmentally appropriate outdoor play spaces for infants and toddlers.

suggests that children in child care and Head Start spend far too little time engaged in vigorous physical activity during the hours they attend the center. The researchers used instruments that measure movement to record the physical activity of children in nine Head Start and child care centers in South Carolina. Results of the study found that children spent only 4–10 minutes per hour engaging in vigorous physical activity while attending the centers. A survey of parents indicated that children were unlikely to engage in enough additional physical activity outside the center to compensate for inadequate time in the centers. The researchers concluded that children are not receiving adequate physical activity to meet current recommendations. Additional information from structured interviews with child care center personnel indicated that center policies and practices such as daily schedules and curriculum also had an impact on the amount of children’s physical activity (Pate et al., 2004).

The National Association for Sport and Physical Education has established useful guidelines for the amounts and kinds of physical activity for infants and toddlers (2002). For infants, the guidelines suggest that part of the infant’s day should be spent with a caregiver or parent who provides systematic opportunities for planned physical activity. Recommendations include safe settings that facilitate physical activity, environments that do not restrict movement for prolonged periods of time, physical activity that promotes the development of movement skills, and



NATURAL LEARNING INITIATIVE, NORTH CAROLINA STATE UNIVERSITY, COLLEGE OF DESIGN, RALEIGH

A small, enclosed garden provides a multisensory, ever-changing environment for crawling children. A large shade canopy is suspended high enough to allow light for plants to provide shelter from the sun for children and teachers.

environments that provide large-muscle activities. The guidelines recommend that toddlers should be exposed to planned physical activities for at least 30 minutes throughout the day and at least 60 minutes and up to several hours per day of unstructured physical activity. In addition, toddlers should not be sedentary for more than 60 minutes at a time except when sleeping.

Outdoor Environments

INFANTS AND TODDLERS benefit from time spent outside as much as older children do, but caregivers may not recognize the need or benefits for very young children. Even when children are taken outside, they often play in environments that fall far short of providing them with comfortable, engaging, and challenging activities needed for optimal physical development. Play spaces for infants and toddlers need to accommodate the needs of young babies, crawling infants, new walkers, and active climbers. They must be free of choking hazards and provide a soft landing for unsteady feet. They also need to provide space for safe exploration, play with peers, and comfortable seating for adults. However, many outdoor play areas for children are dull, show a striking dearth of natural elements, and often restrict children’s play to a flat, rectangular, rubberized surface. Unfortunately, there is little published guidance available to early care and education programs about how to design effective outdoor spaces. (See “Enhancing Outdoor Play Areas” for some simple ways to improve an outdoor space.)

A review of current literature and developmentally appropriate practices for young children reveal limited guidance for caregivers and parents in providing adequate outdoor activities for very young children. However, a number of organizations can provide some useful guidelines. For example, the National Association for the Education of Young Children provides certification standards that include specifications on the amount



NATURAL LEARNING INITIATIVE, NORTH CAROLINA STATE UNIVERSITY, COLLEGE OF DESIGN, RALEIGH

An infant classroom opens on to a covered porch leading to a lawn and garden. Raised beds of fragrant herbs add sensory interest and the gently undulating lawn provides a challenge for children learning to walk.

ENHANCING OUTDOOR PLAY AREAS

Budget considerations play a role in how much of a redesign a child care program can do to enhance their outdoor play spaces, but even simple and relatively inexpensive changes can make a big difference:

- Put a diaper changing table in the outdoor play area so that caregivers do not have to disrupt the outdoor play time to attend to diapering needs.
- A porch swing or hammock in a shaded area provides an ideal setting for feeding and nurturing infants and offers comfort for the caregiver.
- Sand and water activities delight young children. Slices of logs, large pebbles, and places to hang shovels, pails, and other items in the sand area add interest and opportunities for gross and fine motor development.
- Create a natural habitat with butterfly bushes or bird feeders to provide firsthand experience with the natural world.
- Hang wind chimes or mobiles, both of which provide visual and auditory interest.

of space made available; mandate regular safety inspections; and require that outdoor play areas, designed with equipment that is age and developmentally appropriate and that is located in clearly defined spaces with semiprivate areas where children can play alone or with a friend, accommodate:

- Motor experiences such as running, climbing, balancing, riding, jumping, crawling, scooting, or swinging.
- Activities such as dramatic play, block building, manipulative play, or art activities.
- Exploration of the natural environment, including a variety of natural and manufactured surfaces, and areas with natural materials such as nonpoisonous plants, shrubs, and trees. The program makes adaptations so children with disabilities can fully participate in the outdoor curriculum and activities. (National Association for the Education of Young Children, 2007)

Important information about playground safety is available from the U.S. Consumer Product Safety Commission (www.cpsc.gov), the National Program for Playground Safety (www.uni.edu/playground), and the National Resource Center for Health and Safety in

Child Care and Early Education (<http://nrc.uchsc.edu>). Programs also need to consult with state child care licensing regulations, brush up on local building codes, and consult other applicable regulations that may relate to the process of designing and equipping a playground.

In addition to safety considerations unique to infants and toddlers, it is vitally important to understand how the developmental skills of children under 3 years of age differ from older children. The developmental needs of very young children require different kinds of equipment, activities, and experiences in the outdoor play space. The *Community Investment Collaborative for Kids Resource Guide* (Pardee, Gillman, & Larson, 2005) provides some specific recommendations for this age group:

- Places for eating or just relaxing outdoors in the shade;
- Convenient access to diapering area and hand-washing;
- Safe spots for crawling, such as grass, a unitary safety surface of vinyl or wood composite decking, such as Trex;
- Sturdy ledges or railings at a height of 14–16 inches for babies pulling up to stand;
- A non-metal slide with a gentle slope accessed by a low climbing ramp with steps and a handrail;
- Bucket swings at a safe distance from other play;
- Short tunnels and peek-a-boo places;
- Seating at various levels;
- Rocking toys that children can sit inside;
- Pushing or riding wheeled toys; and
- Safe water and sand play with simple props (Pardee et al., 2005, p. 13).

The Built Environment

THE U.S. NATIONAL INSTITUTE of Environmental Health Sciences defines the *built environment* as all of the buildings, spaces, and products created or modified by people (League & Deary, 2004). The design of the built environment can have an important impact on obesity by affecting physical activity and eating habits. Researchers have demonstrated that time spent outdoors strongly correlates with increased physical activity and fitness in children (Moore et al., 2003). Built environments that affect children's level and frequency of physical activity include child care center play areas, public parks, and common areas in communities. Well-designed outdoor environments can inspire greater interest and opportunities for activity. However, a better understanding between obesity and the built environment will require a collaborative approach within communities by involving parents, educators, community planners, researchers, environmental scientists, engineers, elected officials, and other stakeholders in developing successful strategies that get children and their families outdoors and active.

The Natural Learning Initiative (NLI) at North Carolina State University is one example of how community partnerships can promote the importance of the natural environment for early childhood health and development. NLI's mission is to "help communities create stimulating places for play, learning, and environmental education—environments that recognize human dependence on the natural world. We collaborate with educators, play leaders, environmental educators, planners, politicians, and all professionals working for and with children" (Natural Learning Initiative n.d.). NLI's services include design consultation



NATURAL LEARNING INITIATIVE, NORTH CAROLINA STATE UNIVERSITY, COLLEGE OF DESIGN, RALEIGH

A curving toddler garden path, covered with a skim coat of soft, pour-in-place safety surface, accommodates children with push toys. Small-scale shrubs that children can walk between offer whole-body tactile stimulation.



NATURAL LEARNING INITIATIVE, NORTH CAROLINA STATE UNIVERSITY, COLLEGE OF DESIGN, RALEIGH

Infant lawn and classroom porch, with bamboo walking rail in the foreground. Plantings are low, in scale with very young children.

(see photos throughout this article for a sample of their work) and training programs that help child care centers develop site-specific play and learning designs as well as related educational programs. The NLI Web site provides recommended readings, links, and other resources on a wide range of topics related to the importance of the natural environment for children.

Conclusion

THERE IS UNDISPUTED CONSENSUS that prevention of overweight and obesity must begin early in life to address the increasingly unhealthy and sedentary lifestyle of children. Environments that promote and support active and

energy-expending opportunities and that allow for the free, unrestricted movement of young bodies must be seen as a necessity, not a luxury for our children. Primary prevention efforts to address obesity and overweight in infants and toddlers will need the cooperation and collaboration of the whole community. Here are some examples of recommended actions:

- Parents and caregivers can balance time inside with time outside and can give children ample opportunities for unrestricted movement.
- Pediatricians can remain alert for the onset of overweight and obesity and can inform parents of the importance of

good nutrition and physical activity for themselves and their children.

- New and future child care centers can plan more carefully to allow theories about the built environment to influence architectural designs for both indoor and outdoor environments.
- Existing child care centers can begin to naturalize play areas, use outdoor environments for learning and development, significantly increase time and activity in the outdoors, and support teachers and caregivers in learning how to use outdoor play areas as part of the curriculum.
- State licensure agencies can become more aware of the restrictions imposed on child care centers either by regulations or by the interpretation of regulations by licensure consultants.
- Architects and landscape designers for child care centers can become more informed regarding the needs of young children and the importance of design in influencing movement, motion, and physical activity.
- Society in general, especially in the United States, can be more tolerant of the needs of infants and toddlers for movement, mobility, and free play, not only on playgrounds and in backyards but in public spaces, as well. ♣

BETSY THIGPEN, MA, is an early education and management specialist with Training and Technical Assistance Services at Western Kentucky University Research Foundation. In 2005–2006, she was a visiting scholar at North Carolina State University, College of Design, where she worked on a Head Start project to transition current playgrounds to natural learning environments.

Learn More

NATIONAL CLEARINGHOUSE FOR EDUCATIONAL FACILITIES (NCEF)

www.edfacilities.org/rl/playgrounds.cfm

This Web site contains NCEF's resource list of links, books, and journal articles on the planning and design of playgrounds for varying age levels, including resources on safety, accessibility, equipment, surfaces, and maintenance.

COMMUNITY INVESTMENT COLLABORATIVE FOR KIDS, RESOURCE GUIDE 4: CREATING PLAYGROUNDS FOR EARLY CHILDHOOD FACILITIES

(2005) *Mav Pardee, Amy Gillman, and Cindy Larson*
www.lisc.org/content/publications/detail/814

This resource guide, published by the Local Initiatives Support Corporation/Community

Investment Collaborative for Kids, includes recommendations for creating an outdoor playspace, considerations in selecting equipment, tips for managing cost, and resources for additional information.

U. S. CONSUMER PRODUCT SAFETY COMMISSION'S HANDBOOK FOR PUBLIC PLAYGROUND SAFETY

www.cpsc.gov/cpscpub/pubs/325.pdf

The guidelines in this handbook are for children ages 2 years and older. The handbook is intended to raise awareness of potential safety hazards and includes checklists and recommendations for the safe construction and maintenance of public playgrounds.

National Program for Playground Safety

www.uni.edu/playground

NPPS's mission is to help the public create safe and developmentally appropriate play environ-

ments for children. Information packets (\$5.00 each) offer resources about supervision, age-appropriate design, surfacing, maintenance, planning, accessibility, and fundraising. The center provides consulting, workshops, and online training.

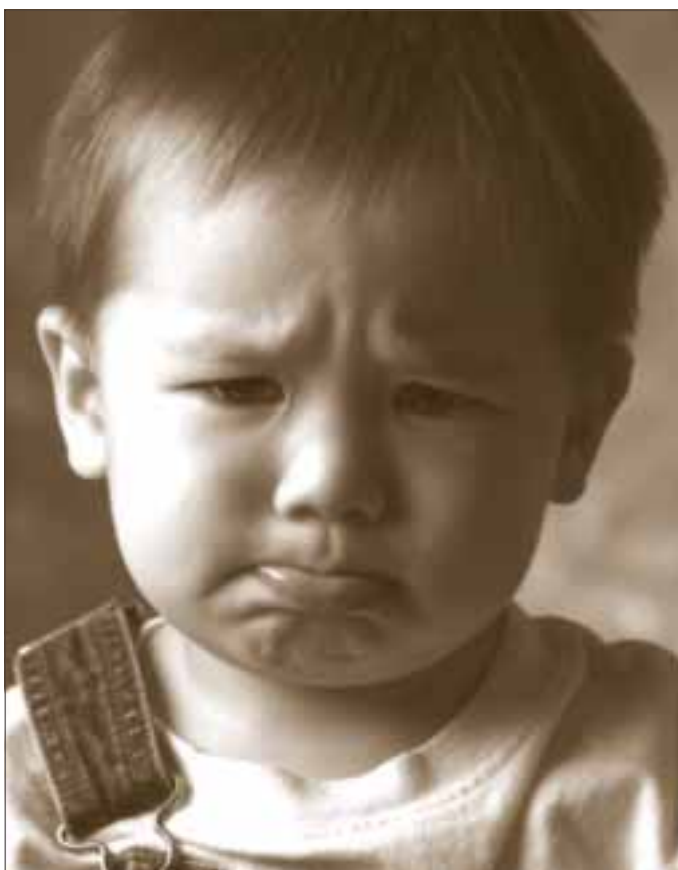
The Natural Learning Initiative

www.naturalelearning.org

The purpose of the Natural Learning Initiative is to promote the importance of the natural environment in the daily experience of all children through environmental design, action research, education, and dissemination of information. Services include design consultation, research and evaluation, training, distance learning, and materials dissemination.

References

- LEAGUE, C. A., & DEARRY, A. (2004). *Obesity and the built environment: Improving public health through community design*. Research Triangle Park, NC: National Institute of Environmental Health Sciences/National Institute of Health.
- MOORE, R., & COSCO, N. (in press). *Baseline survey of environmental conditions of outdoor areas in North Carolina childcare centers*. Raleigh, NC: Natural Learning Initiative.
- MOORE, L., DI GAO, A., BRADLEE, L., CUPPLES, A., SUNDARAJAN-RAMAMURTI, A., PROCTOR, M., et al. (2003). Does early physical activity predict body fat change throughout childhood? *Preventive Medicine*, 37, 10-17.
- NATIONAL ASSOCIATION OF CHILD CARE RESOURCE AND REFERRAL AGENCIES. (2007). *Child care in America fact sheet*. Retrieved July 31, 2007, from www.naccrra.org/policy/docs/childcareinamericafactsheet.doc
- NATIONAL ASSOCIATION FOR THE EDUCATION OF YOUNG CHILDREN. (2007). *NAEYC accreditation criteria for physical environment standard*. Retrieved July 31, 2007, from www.naeyc.org/academy/standards/standard9/standard9B.asp
- NATIONAL ASSOCIATION FOR SPORT AND PHYSICAL EDUCATION. (2002). *Active start: A statement of physical activity guidelines for children birth to five years*. Reston, VA: Author.
- NATURAL LEARNING INITIATIVE. (n.d.) *Purpose*. Retrieved July 31, 2007, from www.naturalearning.org/aboutus/purpose.htm
- PARDEE, M., GILLMAN, A., & LARSON, C. (2005). *Community investment collaborative for kids, resource guide 4: Creating playgrounds for early childhood facilities*. New York: Local Initiatives Support Corporation.
- PATE, R., PFEIFFER, K. A., TROST, S.G., ZIEGLER, P., & DOWDA, M. (2004). Physical activity among children attending preschools. *Pediatrics*, 114, 1258-1263.
- WORLD HEALTH ORGANIZATION. (2007). *Sedentary lifestyle: A global public health problem*. Retrieved July 11, 2007, from www.who.int/move-forhealth/advocacy/information_sheets/sedentary/en/index.html



Need an Interpreter?

Developmentally Based Diagnosis

ZERO TO THREE's *Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood, Revised (DC: 0-3R)* enhances your ability to assess, diagnose, and treat mental health problems in infants and toddlers. Mental health professionals, physicians, nurses, early interventionists, early childhood educators, and researchers will find *DC: 0-3R* to be an indispensable guide to effective evaluation and treatment planning with young children and their families.

Item #335-DC3 • \$32.95



National Center for Infants, Toddlers, and Families

Order your copy today! Call toll-free (800) 899-4301 or visit www.zerotothree.org/bookstore