



For Immediate Release

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Study receives \$3 million NIH grant to look at the effect of Denver's redeveloped schoolyards on childhood obesity

Learning Landscapes and Center for Human Nutrition to partner with 24 local schools

DENVER/AURORA, Colo. (Sept. 17, 2009) – Over the last 10 years, thanks to the generous support of Denver voters, foundation grants, and grassroots efforts, Denver's children now have healthier places to play. This week, [Learning Landscapes](#), a program of the College of Architecture and Planning at the University of Colorado Denver and the [Center for Human Nutrition](#) at the UC Denver School of Medicine have learned they are the recipients of a \$3 million National Institutes of Health grant to study how Denver's redeveloped schoolyards, in combination with nutrition education, affect childhood activity levels and obesity rates.

The five-year grant will look at 24 Denver Public Schools' (DPS) elementary playgrounds; 12 that have Learning Landscapes in place and 12 control schools that have older playground equipment and pea gravel yards.

“So far, in small-scope evaluation of the landscapes that have been built at 48 Denver elementary schools, we found that the new play equipment and green spaces have influenced children's physical and creative activities,” said Lois Brink, MLA, director of Learning Landscapes at UC Denver's College of Architecture and Planning and lead investigator on the study.

In a preliminary study in 2006, Learning Landscapes observed and compared activity levels at nine schools within DPS; three of which had not been renovated, three that had been built and renovated over the prior three years, and three that were built just the summer before. The observation method used was the “System for Observing Play and Leisure Activity in Youth” (SOPLAY) in which trained observers used guidelines to determine the differences between very active, active and sedentary children.

The number of children, activity levels, activity types, equipment used, gender, weather, time of scan and number of supervisory adults were all recorded and analyzed for the study. The *preliminary* results found that the renovated playgrounds had more kids who played harder and longer and significantly more children reached the level of “active.”

The \$3 million grant from the Eunice Kennedy Shriver National Institute of Child Health & Human Development at the NIH, will expand the research into the effects of the landscapes on obesity by setting up interventions on physical activity arranged by gender, ethnicity, and weight status. The study also will determine whether the interventions extend to behavior change outside of school time. The 24 schools involved in the study

will be randomly assigned to either Sports, Play, and Active Recreation for Kids, called SPARK, which will be implemented on the playgrounds during recess, and/or the Balance First curriculum, implemented during physical education classes.

SPARK is designed to increase children's participation in moderate to vigorous physical activity, improve personal physical skill levels and to promote a positive attitude toward physical activity and health. Employees will be hired through UC Denver to implement the program during school recess three times per week for eight weeks in the fall and spring of each year, over five years.

Balance First is a six-lesson curriculum that teaches children about the importance of balancing physical activity and food intake. The program was developed by James O. Hill, PhD, and colleagues at the Center for Human Nutrition, located within the School of Medicine at UC Denver. The curriculum works in partnership with physical education teachers.

“This grant will allow us to combine inventive nutrition education programs with innovative physical activity programs in an environment that facilitates learning and play,” said Hill, director of the Center for Human Nutrition at UC Denver. “This should be a real win for all students.”

For both interventions, children's physical activity levels will be measured at baseline and at three time periods after an observation method called SOPLAY (System for Observing Play and Leisure Activity in Youth). A survey will also be given to students in the fourth and fifth grades at baseline and after the interventions. In addition, a subset of students also will be selected to wear accelerometers.

The elementary schools participating in the treatment group will receive \$2,500 in SPARK equipment while schools in the control group will receive \$2,500 in play equipment at the end of the study period.

Last fall, Denver voters showed their support for the Learning Landscapes program and other Denver Public School initiatives by passing a \$450 million school district bond. A portion of this bond will fund the capital costs and construction to complete Learning Landscapes on the remaining 37 schoolyards and program improvements at 17 other DPS schoolyards, creating the nation's first district-wide schoolyard renovation program.

The [University of Colorado Denver](#) is located in Denver on the Downtown Campus and on the Anschutz Medical Campus in Aurora, Colo. UC Denver offers more than 100 degrees and programs in 13 schools and colleges and serves more than 28,000 students. For more information, visit the [UC Denver Newsroom](#).

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