

Kids in Motion

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This is an after-school program without sitting.

OK, maybe the kids sit to eat their snacks, but otherwise they're moving most of the time.

And that's the point. The FIT Kids after-school program, offered through the University of Illinois Department of Kinesiology and Community Health, aims to keep children active every day after school and teach them about the benefits of physical activity.

It also provides research data for Charles Hillman, a professor of kinesiology who studies the effect of physical activity on brain function.

The program, now in its third year, is open to children ages 7 to 9. It draws most of its participants from the Urbana school district, although a handful in the last two years were from Champaign. Hillman has a four-year National Institutes of Health grant for the program.

It runs five days per week throughout the school year. The goal is for the kids to be active a minimum of one hour, and it's usually more.

It's an important lesson to learn early. Children who are sedentary tend to become sedentary adults, Hillman said.

The rate of childhood obesity is a national concern, and data from the FIT Kids program mirror national statistics. About 40 percent of the children who have participated in FIT Kids are overweight or obese, according to their Body Mass Index, Hillman said. Nearly three-quarters start out the program in the lower levels of fitness, with half of those in the lowest percentile for cardiovascular fitness, he said.

The good news: After nine months in the FIT Kids program, students show large improvements.



Hillman said the preliminary data show children in the after-school program increase their cardiovascular fitness by almost 60 percent, and they are approximately three times as fit as a control group at the end of the program.

Both groups -- those in the after-school program and the control group -- improve in cognitive performance, because all children make gains as they mature. But the group that participated in the after-school program has shown improvements that are twice as large, and in some cases 25 percent more, than the control group.

"Whether that directly relates to school performance, I can't make that statement right now, but certainly the aspects of cognition we measure are involved in mathematics and reading," Hillman said.

He's starting to look at scores from the Illinois Standards Achievement Test for the children in the program, and whether they show larger gains as well.

Of the children who apply each year, half are randomly selected for the after-school program, and the other half serves as a control group. Those in the control group automatically get into the after-school program the following year.

All the children in both groups get tested in Hillman's lab at the beginning and end of the school year.

The lab tests include a treadmill test that measures a child's oxygen consumption, an indication of cardiovascular fitness; an EEG to measure electrical activity in the brain; an MRI to look at brain structure; a test that tracks eye movements as the student does a task; a scan that shows body composition; and a questionnaire that measures cognitive performance.

"It's a (time) commitment up front," Hillman said, "but there's a big payoff for parents," in the form of a free after-school program that emphasizes activity and healthy eating.

The children in the FIT Kids program begin each afternoon with an "instant activity" -- something to get them moving immediately.

"They walk in the door, they drop their bag and they go do something," Hillman said.

Last week, they were rotating between different stations in a gym at the UI's Campus Recreation Center East, jumping rope, negotiating an agility course or doing a relay that involved cup

stacking, running and jumping jacks.

There's an educational component too, with a different theme each week, such as heart health, nutrition or self-esteem.

The main activity time has two parts. One is games, such as trying to see how long they can keep a beach ball up in the air. The other teaches a sport skill, such as basketball or baseball.

Last week, children were playing a modified baseball game in which they hit the ball off a tee, then ran between cones until the fielders got the ball into a Hula-Hoop.

The participants get two snacks -- they recently had whole wheat bagels and sugar-free applesauce -- and a lesson in the appropriate size for a serving.



They also wear pedometers twice a week and a heart rate monitor every third day, so Hillman and his research team can track their levels of activity.

Hillman's research may be dealing with serious health questions, but the goal for the kids is to make the program fun so they want to be active.

"The one thing they never hear is that it's good for their brains," Hillman said.

But he's hoping the adults hear that.

"Obviously we hope that these data demonstrate to parents, school districts and policy makers that physical activity is important in individuals' ability to grow. It relates to brain health, cognitive health and effective functioning," he said.

Photos by Robert K. O'Daniell.

Top: Fourth-grader Zaryanna Cabette jumps rope during the FIT Kids afterschool program.

Bottom: UI senior Katie Yonkers puts a heart rate monitor on a child.





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