

## Study finds troubling new evidence of teens' lack of physical activity



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Credit: Colorado State University

A Colorado State University researcher has uncovered definitive evidence about adolescents' lack of physical activity, and the results are not good.

Instead of relying on surveys and self-reporting, as many past studies



have done, Assistant Professor Kaigang Li of CSU's Department of Health and Exercise Science used <u>physical activity</u> trackers called accelerometers to objectively measure the duration and intensity of exercise that a sample of 16- to 19-year-olds were getting daily.

The Centers for Disease Control and Prevention recommend a minimum of 60 minutes of moderate-to-vigorous physical activity a day for children and adolescents to maintain general health. Activity levels can be a reliable predictor of future health problems such as diabetes, heart disease and obesity.

Previous research has shown that only .04 percent of 9-year-olds don't get that amount of exercise daily, a figure that jumps to 70 percent for 15-year-olds.

Li found that, on average, his sample of kids in their late teens were exercising even less: 91 percent were not getting at least an hour of that type of physical activity each day.

"It's a huge problem," he said. "Parents and schools need to be doing more to help kids make exercise part of their daily life."

An article on Li's study, "Changes in Moderate-to-Vigorous Physical Activity Among Older Adolescents," was published in *Pediatrics* on Sept. 26.

## About the study

Li, who was lead author on the article, studied about 600 teenagers at 44 schools around the country for four years, from 10th grade through their first year after high school. The study, part of the \$10 million NEXT Generation Health Project, is one of the first studies to use accelerometers to measure <u>activity levels</u> in a sample that size over that



length of time. He said his team picked the 16- to 19-year-old age group because it's a time of great transition and development, physically, mentally and even environmentally, as many teens leave home and go to college or work.

Li had his subjects wear accelerometers on their right hips at least 10 hours a day, at least four days a week. He found that, after high school, <u>physical activity levels</u> continued to decline or remained low, regardless of whether the teens went on to college. Those who did attend college were slightly more active than those who didn't, and of the college students, those living off campus exercised less than on-campus residents.

"The environment can influence young people's level of engagement, because of access to fitness centers, gyms or other recreational facilities," Li said.

His conclusion? Teens may benefit from the structure that parents and high schools provide through PE classes or organized sports, but after graduation the vast majority don't continue to make exercise part of their daily lives. Li said one key is giving kids better time management skills in high school.

"They need to learn how to exercise by themselves, or they may not know how when they get to college," Li said. "They need to be able to do it on their own once they leave <u>high school</u> and home. They will need to have the skills to manage their time and improve their health and lifestyles."

## More rec centers?

Building more recreation centers on college campuses is not the answer, he said.



"College students have slightly higher activity levels than non-<u>college</u> <u>students</u>, but it's still low," Li said. "So colleges should expand opportunities for physical activity—not just with facilities, but with programs and campaigns to motivate students, because students aren't using those facilities enough. Something needs to be done to push them. It's not enough to build a rec center, you have to get the students to use it."

Li also raised concerns about those who don't attend college.

"What should we do to increase their physical activity?" he asked. "Governmental agencies and communities should reach out to them to better understand their needs, situation and barriers, and provide them with more publicly accessible facilities. No one should be left behind."

Predictably, the subjects in his study who were overweight exercised less on average than those at healthy weights.

Li, who has 7-year-old and 9-year-old daughters, said the results of his study have made him even more conscientious about making sure his children get enough exercise through swimming, karate, gymnastics and other activities.

"I want them to keep moving and consider exercise as part of their life," he said. "As a father myself, these findings hit home on a personal level."

## Partners in the study

Li's five co-authors include principal investigator Bruce Simons-Morton, senior investigator for the Intramural Research Program at the Eunice Kennedy Shriver National Institute of Child Health and Human Development in Bethesda, Maryland, where Li worked before joining



the CSU faculty about a year ago.

In addition to the NICHD, the agencies that funded the research were the National Heart, Lung and Blood Institute; the National Institute on Alcohol Abuse and Alcoholism; the National Institute on Drug Abuse; and the Maternal and Child Health Bureau of the Health Resources and Services Administration.

"People probably already know that we're not getting enough exercise, but I hope this serves as a national alert that we should be doing more to change that," Li said.

In a previous study published by *Pediatrics* in 2014, Li and his fellow researchers examined the same age group's attitudes toward driving under the influence, finding that riding with a driver impaired by drugs or alcohol made adolescents more likely to drive while impaired themselves.

**More information:** K. Li et al. Changes in Moderate-to-Vigorous Physical Activity Among Older Adolescents, *Pediatrics* (2016). <u>DOI:</u> <u>10.1542/peds.2016-1372</u>

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