

# Lifestyle intervention reduces preschoolers' body fat, improves fitness

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Migrant children are at increased risk of obesity, but a new study shows that a program teaching multiple lifestyle changes to predominantly migrant preschoolers and their parents helps the children reduce body fat and improve fitness. The results will be presented Monday at The Endocrine Society's 92nd Annual Meeting in San Diego.

Such interventions may be needed to help curb the global [obesity epidemic](#), the study's lead author Jardena Puder, MD, said. A senior resident at the University of Lausanne, Lausanne, Switzerland, Puder said, "Even young children have high rates of obesity today."

In the United States, about 14 percent of children ages 2 to 5 years are obese, statistics show.

The public health program in this study attempted to reduce the risk of obesity among [preschool children](#) from areas of Switzerland with high migrant populations. Specifically, it encouraged the children to increase their physical activity, improve nutrition, get more sleep and reduce audiovisual media use, especially TV watching. Excessive media use can contribute to lack of physical activity, and insufficient sleep in early life may play a role in [childhood obesity](#), according to the authors.

Puder and her colleagues included children, their parents and their preschool teachers in the program, which took place during the 2008-2009 school year. They randomly selected 40 preschool classes in migrant-populated areas and then randomly assigned 20 of the classes to

participate in the program and 20 classes to not participate and thus serve as controls. Of the 655 children enrolled in the study, 73 percent had at least one migrant parent.

The program included information materials for teachers and parents as well as two informational and discussion evenings for parents. Children received structured lessons from the regular teachers about physical activity, nutrition, media use and sleep.

In addition, the school environment was adapted, such as by adding a climbing wall. "This gave unstructured movement an automatic place within school," Puder said.

Before and after completion of the program, the researchers evaluated numerous measures, including overall fitness on an obstacle course and aerobic fitness. For the latter, children performed the 20-meter shuttle run test, in which they repeatedly ran at increasing speeds between two lines spaced 20 meters (just over 22 yards) apart.

Compared with the control group, the group of [children](#) who participated in the program had significantly improved overall and aerobic fitness, according to the abstract. Additionally, the intervention group had greater reductions in total and percent of body fat, waist size and media use. They also improved more than controls in "some aspects of nutritional behavior," Puder said.

Besides Health Promotion Switzerland, the Swiss National Science Foundation helped fund this study, called "Ballabeina." This word means seesaw in Rhaeto-Romanic, a Latin language spoken in parts of Switzerland. Puder said, "The name stands for a life in motion but also in balance."

Provided by The Endocrine Society

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