

Community interventions and in-home visits may slow excess weight gain in American Indian children

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Community intervention can help American Indian families change behavior related to early childhood weight gain and obesity, according to a new Kaiser Permanente and Northwest Portland Area Indian Health Board (NPAIHB) study.

The study, published online in the *Journal of Community Health*, also finds that adding in-home visits to the community intervention has an even more profound effect on behavior change, and can reduce a child's body mass index.

Funded by the National Institutes of Health, this is the first study to target [obesity prevention](#) among American Indian children starting at birth.

"Nearly half of American Indian children are overweight and their rapid weight gain starts at birth. By starting interventions early we can have a long-term impact on their behaviors and may be able to slow down excess weight gain," said study lead author Njeri Karanja, an investigator with the Kaiser Permanente Center for Health Research in Portland, Ore.

"Tribal community health workers designed the interventions to fit the specific needs of their community and families," said Tam Lutz, study co-author and junior investigator with the Portland Area Indian Health

Board. For example, one tribe created and maintained a breast-feeding room at its tribal health clinic; another passed a resolution to stop buying sugar-sweetened beverages for tribally sponsored events. "Community health workers also customized home visits to the needs of the family," Lutz added. "For example, mothers who needed more breastfeeding support received additional home visits to address that need."

The study included 205 families from three American Indian tribes in Oregon and Washington. One tribe received only community interventions and two tribes received the community intervention along with in-home visits and telephone calls from community health workers. The visits started in the third trimester of pregnancy and lasted until the babies were 2 years old. The intervention boosted breastfeeding rates, reduced consumption of sugar-sweetened beverages and helped to slow excess weight gain.

According to a national pediatric nutrition survey done by the U.S. Centers for Disease Control and Prevention in 2003-2005, 60 percent of American Indian mothers in the United States start out breastfeeding their babies, but six months after birth that figure falls to only 23 percent. In comparison, 74 percent of mothers who received community intervention and in-home visits started out breastfeeding, and at six months 38 percent still were breastfeeding.

At the end of the intervention, families also filled out a survey indicating their confidence level about drinking more water and fewer sugar-sweetened beverages. Ninety percent said they were confident they could help their family drink more water, and 82 percent said they would limit sugar-sweetened beverages.

[Body Mass Index](#) —which is a measure of weight in relation to height -- did increase for all of the children in the study, but the increase was significantly less in the tribes that received the community intervention

and in-home visits. BMI scores increased by 30 percent in the tribe that received community intervention alone and by 8 percent in the tribes that received both interventions.

The study did not have a control—a tribe that received no intervention—so it is not possible to assess the effect of the community intervention alone or determine whether or not other factors influenced the results. However, authors say the results show that community-based interventions are feasible and acceptable to several different American Indian tribes and they suggest that simple interventions may slow down trends in escalating overweight and obesity in children. The study was conducted from 2001-2006. A larger study involving different Northwest tribes is underway.

In a report released earlier this month, the White House Task Force on Childhood Obesity acknowledged the promise of these types of interventions and the importance of focusing on early childhood.

This study is part of Kaiser Permanente and the Northwest Portland Area Indian Health Board's ongoing work to identify, prevent and treat childhood obesity through research, education and community programs. NPAIHB's efforts grew out over a decade of surveillance, measuring an alarming increase in type 2 diabetes in their population and a concern that diabetes was increasing even more rapidly among adolescents. The NPAIHB leaders indicated that investigating "upstream" interventions preventing obesity beginning at birth was a high priority.

Kaiser Permanente's recent study of 710,949 children published in the *Journal of Pediatrics* found that extreme obesity is affecting more children at younger ages. In February, Kaiser Permanente announced it was a founding partner of the Partnership for a Healthier America (www.ahealthieramerica.org), a nonprofit, nonpartisan foundation created to catalyze and increase support around first lady Michelle

Obama's campaign to curb childhood obesity in a generation.

Provided by GolinHarris International

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