Obesity rates differ among racial/ethnic groups in kids as young as four

April 6 2009, by Emily Caldwell

Obesity is twice as common in young American Indian/Native Alaskan children as it is in white and Asian children, according to new research offering the first nationally representative analysis of obesity prevalence among preschool-aged kids in five major racial/ethnic groups.

The analysis also shows that obesity prevalence is higher in Hispanic and black children than it is in whites and Asians.

The research offers evidence that obesity prevalence differs among racial and ethnic groups in the United States in children as young as age 4. This is the first study to include national estimates of obesity prevalence among preschool children who are American Indian/Native Alaskan and Asian.

Overall, an estimated 18.4 percent of 4-year-olds in the United States are considered obese based on measures of their weight relative to their height, according to the study.

The data indicated there are three tiers of obesity prevalence among young children of different racial and ethnic backgrounds. Based on body mass index measures, obesity prevalence was estimated at 31.2 percent among American Indian/Native Alaskan children, 22 percent for Hispanics, 20.8 percent in blacks, 15.9 percent of whites and 12.8 percent in Asians.

"The implications are that childhood obesity prevention efforts must

begin early in life. And these efforts might benefit from better understanding of how differences in obesity risk between racial and ethnic groups emerge so early," said Sarah Anderson, assistant professor of epidemiology at Ohio State University and lead author of the study.

Anderson conducted the analysis with Robert Whitaker of Temple University. The research is published in the April issue of *Archives of Pediatrics & Adolescent Medicine*.

Anderson and Whitaker analyzed height and weight data collected in 2005 on 8,550 children who were born in the United States in 2001. The data were collected as part of the Early Childhood Longitudinal Study, Birth Cohort, which is an ongoing study conducted by the National Center for Education Statistics to provide information about learning environments, health and development of young U.S. children.

The researchers calculated the body mass index (BMI) of the children using the measured heights and weights of the children. BMI is derived by dividing weight in kilograms by height in meters squared.

BMI measures for adults use set numbers to define overweight or obesity, but those numbers do not apply in growing children whose bodies are constantly changing, Anderson explained. In this study of preschool children, BMI measures were converted into percentiles for age and sex based on growth charts developed by the Centers for Disease Control and Prevention in 2000.

Children whose BMI scores were at or above the 95th percentile on those charts were referred to as obese for the purposes of this analysis. Because obesity rates based on BMI have been increasing steadily for adults and children in the United States over the years, a total of 18.4 percent of the 4-year-olds studied now rank in what used to represent just the top 5 percent of BMI scores among children of the same age.

The children's race and ethnicity were defined in part by what their mothers chose using categories established for the U.S. census. The researchers placed each child in one of five mutually exclusive categories: American Indian/Native Alaskan, Hispanic, non-Hispanic black, Asian and non-Hispanic white.

"We know that there are disparities in prevalence of adult obesity across racial/ethnic groups, especially among women. And we know those disparities may contribute to health disparities in diabetes, hypertension and other diseases in adulthood," Anderson said.

"This is certainly not about stigmatizing any particular subgroups. I think if we understand better how it is that these racial/ethnic disparities have come to be at such a young age, that can help us to design obesity prevention programs that will be useful before children enter school."

She noted that the data offer no information about the children's health or how much fat their bodies contain. BMI does not measure the actual amount of fat on a person's body, but is an accepted standard measure to use for large population studies.

"On a population level, the people who have high BMI and are thus defined as obese by our current definitions tend to have high levels of body fat. We are aware that on an individual level, a person can have a high BMI and not have excess body fat. For the U.S. population as a whole, it is a good measure," Anderson said.

She also noted that the analysis does not provide information about why these disparities exist. She suggested that future research might focus on families to explore whether racial/ethnic differences in household behaviors and even broader communities somehow affect obesity in kids.

"It's important from a public health perspective to have data on the characteristics and health of the population and of different subgroups in the population because there's a focus on racial/ethnic disparities in the United States in terms of the long-term health consequences," she said. "Because obesity is so strongly related to many of those later health outcomes, it's important to understand descriptively what the prevalence of obesity is in these different race/ethnicity groups."

Source: The Ohio State University (news : web)

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