

Kindergarten weight strong indicator of childhood obesity

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A recent study by researchers from Emory's Rollins School of Public Health suggests that development of new childhood obesity cases, or incidence, is largely established by kindergarten. The study showed that overweight kindergarteners were four times as likely as normal-weight children to become obese by the 8th grade.

Led by Solveig A. Cunningham, PhD, assistant professor in the Hubert Department of Global Health at Rollins School of Public Health, the team analyzed data on children who participated in an Early Childhood Longitudinal Study of the U.S. Kindergarten Class of 1998-1999. With appropriate survey adjustments the data sample represents all U.S. children enrolled in [kindergarten](#) during that time (approximately 3.8 million). Cunningham and team focused their findings on the rate of incidence of [obesity](#) in overweight and normal weight children entering kindergarten.

"Although trends in the prevalence of obesity are well documented, there is surprisingly little known about new cases of [childhood obesity](#)," explains Cunningham. Examining incidence may provide insight into the nature of the epidemic, the critically vulnerable ages, and the groups who are at greater risk for obesity."

Using the Centers for Disease Control and Prevention Growth Charts to calculate each child's body-mass index (BMI), the team determined cutoffs for normal weight, overweight (85th percentile BMI), and obesity (95th percentile BMI). According to findings:

- Over 12 percent of children enter kindergarten obese
- Over 14 percent of children enter kindergarten overweight and are four times more likely than [normal weight](#) children to become obese by the eighth grade
- Children who were large at birth and are overweight by kindergarten are at the

highest risk of becoming obese before age 14

Other findings determined that obesity incidence decreases with age during elementary school years and obesity incidence differs between racial, ethnic and socioeconomic groups.

"Our findings uncovered several important points by examining incidence over time," says Cunningham. "We have evidence that certain factors established before birth and during the first five years are important. Obesity-prevention efforts focused on children who are overweight by five-years-old may be a way to target [children](#) susceptible to becoming obese later in life."

Provided by Emory University

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