Prevalence of high body mass index among children and teens remains steady

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The prevalence of high weight for length or high body mass index (BMI) among children and teens in the U.S. (i.e., at or above the 95th percentile), ranges from approximately 10 percent for infants and toddlers, to approximately 18 percent for adolescents and teenagers, although these rates appear to have remained relatively stable over the past 10 years, except for an increase for 6- to 19-year-old boys who are at the very heaviest weight levels, according to a study appearing in the January 20 issue of *JAMA*. The study is being published early online because of its public health importance.

"High BMI among children and adolescents continues to be a public health concern in the United States. Children with high BMI often become obese adults, and obese adults are at risk for many chronic conditions such as diabetes, cardiovascular disease, and certain cancers," the authors write. "Since 1980, the prevalence of BMI for age at or above the 95th percentile (sometimes termed 'obese') has tripled among school-age children and adolescents, and it remains high at approximately 17 percent. However, the prevalence of BMI for age at or above the 95th percentile among children and adolescents showed no significant changes between 1999 and 2006 for both boys and girls or among non-Hispanic white, non-Hispanic black, and Mexican American individuals."

Cynthia L. Ogden, Ph.D., of the Centers for Disease Control and Prevention, Hyattsville, Md., and colleagues used 2007-2008 data from the National Health and Nutrition Examination Survey (NHANES; a

nationally representative sample of the U.S. population) to determine the most recent estimates of prevalence of high BMI among children and adolescents ages 2 through 19 years and high weight for recumbent length among infants and toddlers. The researchers also examined trends in overweight prevalence between 1999 and 2008. The analysis included height and weight statistics for 3,281 children and adolescents (ages 2 through 19 years) and 719 infants and toddlers (birth to 2 years of age).

Categories of weight included the prevalence of high weight for recumbent length (at or above the 95th percentile of the Centers for Disease Control and Prevention growth charts) among infants and toddlers. Prevalence of high BMI among children and adolescents was defined at 3 levels: BMI for age at or above the 97th percentile, at or above the 95th percentile, and at or above the 85th percentile of the BMI-for-age growth charts.

The researchers found that 9.5 percent of infants and toddlers younger than 2 years were at or above the 95th percentile of the weight-for-recumbent-length growth charts. For children and adolescents ages 2 through 19 years, 11.9 percent were at or above the 97th percentile, 16.9 percent were at or above the 95th percentile, and 31.7 percent were at or above the 85th percentile of BMI for age. "Based on the adult definition of obesity (BMI 30 or greater), in 2007-2008, 12.6 percent of adolescents aged 12 through 19 years were obese," the authors write.

Categorized by different age groups, 10.4 percent of 2- through 5-year-old children, 19.6 percent of 6- through 11-year-old children, and 18.1 percent of 12- through 19-year-old adolescents were at or above the 95th percentile of BMI for age.

Additional analyses indicated no significant trend in high weight for length or high BMI between 1999-2000 and 2007-2008 except at the highest BMI cut point (BMI for age at or above 97th percentile) among

all 6- through 19-year-old boys and among non-Hispanic white boys of the same age.

"There are currently many efforts underway aimed at preventing childhood obesity. Funded research on interventions related to school food and physical activity environments, taxes, food marketing, and physical environment (for example, park characteristics in urban environments) have shown some promise. Moreover, the Task Force on Community Preventive Services' systematic review of behavioral interventions related to obesity found that interventions aimed at reducing screen time had sufficient evidence of effectiveness for reducing measured screen time and improving weight-related outcomes. But the results presented here indicate that the prevalence of high BMI in childhood has remained steady for 10 years and has not declined. Moreover, the heaviest boys may be getting even heavier. More research is needed to identify the behavioral, biological, and environmental factors sustaining these levels of high BMI in U.S. children," the authors conclude.

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