

# Prevalence of High BMI Plateaus Among Children

BY AUDREY KUBETIN  
Editorial Intern

The apparent leveling off in the prevalence of being overweight among U.S. children and adolescents is cause for celebration, but it might not necessarily be a trend, experts say.

A study published by the National Center for Health Statistics (NCHS) found no significant trend in the incidence of high body mass index (BMI) among children and adolescents between 1999 and 2006, suggesting that rates of pediatric obesity might be stabilizing after tripling in the 1980s and '90s.

"It's difficult to know whether or not we are seeing a true halt to the rise in the prevalence of childhood obesity and overweight based on just a few years of data. I think that we were pleasantly surprised by the data, but we can only speculate as to the reasons behind [them]," Dr. Gilbert P. August, chair of the Endocrine Society panel that developed guidelines for the prevention and treatment of pediatric obesity, said in an interview.

The study was conducted by Cynthia L.

Ogden, Ph.D., and her associates at the NCHS. Working with data from the National Health and Nutrition Examination Survey, the researchers used logistic regression to model trends in high BMI for age over four time periods: 1999-2000, 2001-2002, 2003-2004, and 2005-2006. No significant trends were identified (JAMA 2008;299:2401-5).

The study also sought to identify recent changes in the prevalence of high BMI for age. To this end, the investigators analyzed height and weight measurements collected from 3,958 children and adolescents (aged 2-19 years) from 2003-2004 and 4,207 children and adolescents from 2005-2006.

The subjects' BMIs were calculated and compared with the Centers for Disease Control and Prevention's BMI-for-age growth charts with attention to three measures of high BMI: at or above the 97th percentile, at or above the 95th percentile, and

at or above 85th percentile. For each of these cutoffs, no statistically significant difference was found between the two 2-year periods.

Dr. Ogden and her associates pooled data from 2003-2004 and 2005-2006 to create population estimates for the prevalence of over-

weight among children and adolescents between 2003 and 2006. The data showed that within that period, 11.3% of children and adolescents had a body mass index at or above

the 97th percentile of the 2000 CDC growth charts, 16.6% had a BMI at or above the 95th percentile, and 31.9% had a BMI at or above the 85th percentile.

In an accompanying editorial, Cara B. Ebbeling, Ph.D., and Dr. David S. Ludwig of Children's Hospital Boston described the study by Dr. Ogden and her associates as a contrast to "years of unremitting bad news about increasing rates of pediatric obesity."

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Dr. Ebbeling and Dr. Ludwig said that more data will be needed to determine whether the study's findings indicate a true plateau in the obesity epidemic. However, they speculated that the findings might indicate the beneficial effects of public health campaigns aimed at raising obesity awareness and improving the quality of school lunches (JAMA 2008; 299:2442-3).

"The optimistic hypothesis is that increased awareness and some programs have made a difference, but we really don't know," Dr. Ogden said in an interview. She emphasized that the prevalence of pediatric obesity remains a critical issue. "We need to remember that it's still too high."

Dr. August, a pediatric endocrinologist and professor emeritus of pediatrics at George Washington University, Washington, stressed that it was important to continue to work at decreasing the prevalence of high BMI among children and teens even if the findings from the study reflect a true leveling off in the obesity epidemic.

The authors of the study reported no disclosures. ■

## Primary Care Counseling Failed To Curb Childhood Overweight

BY BETSY BATES  
Los Angeles Bureau

HONOLULU — A large, expensive, randomized trial of intensive primary care counseling failed to have any measurable effect on reducing weight gain in children who were already overweight.

The disappointing results of the 12-month Australian LEAP2 (Live, Eat, and Play) study may have wide-ranging policy implications for governments seeking to avert long-term health costs associated with childhood obesity in developed countries, said Dr. Melissa Wake, director of research and public health at the Centre for Community Child Health in Melbourne.

Despite proving that primary care providers could be trained to deliver brief, comprehensive, family-based, solution-focused therapy, with encouragingly high participation rates, "this intervention, at least, did not have any impact on any primary or secondary outcomes," Dr. Wake reported in an oral presentation at the annual meeting of the Pediatric Academic Societies. "It was both costly and ineffective."

Among 3,958 children aged 5-12 years who were screened by primary care providers in Melbourne, 947 (24%) were found to be overweight or mildly obese, and were therefore eligible for a 4-session, 12-week intervention during which the provider individually counseled the family in nutrition, physical activity, and sedentary behavior.

A lengthy initial session was aimed at assessing goals and willingness to change, followed by structured consultations. Extensive materials and accelerometers also were provided to each family.

To learn the techniques, 66 general physicians from 45 practices representing a broad socioeconomic range of families attended two 2.5-hour educational sessions that involved interactive DVD sessions and participated with a trained actor in two simulated family consultations.

Ultimately 258 families were enrolled, 139 assigned to the interventional arm and 119 to the control group, which was provided materials and four physician consultations over 3 months.

Impressive advances were seen in physicians' comfort levels and competency in managing childhood obesity, said Dr. Wake.

At least one consultation session was attended by 96% of families. The mean number of sessions attended was 3, with a range of 1-4. Twelve-month follow-up BMI was available for 94% of children enrolled.

Despite this extraordinary level of participation, the results were dismal, with no statistical change seen at 12 months in the children's or parents' BMI, physical activity, nutrition, or body satisfaction/dissatisfaction.

One child in the intervention group actually gained 10 kg, more than 22 pounds, over the year of the study. The only improvement at 12 months was an increase in psychosocial measures among children participating in the intervention group on the Pediatric Quality of Life: 77.7 on a 100-point scale, compared with 74.4 for children assigned to the control group.

The cost per child was over \$1,000, although Dr. Wake noted that the individual cost could be reduced to perhaps \$412 if trained physicians were each seeing many children.

Nonetheless, if the program were to be extended to the 250,000 overweight and obese children in Australia the cost would be over \$100 million.

Dr. Wake quoted Sir Winston Churchill, who said, "No matter how beautiful the strategy, one occasionally has to look at the results." In this study, the results didn't justify the costs, with potentially important lessons to be learned for policy bodies in Australia, the United States, and the United Kingdom, all of whom are considering brief primary care interventions in an effort to reduce childhood obesity, she said. ■

## Ask Parents of Overweight Kids About Quality of Sleep

BY HEIDI SPLETE  
Senior Writer

BALTIMORE — Both increased weight and sleep problems were associated with children's reports of poor quality of life, based on results from a study of 100 children aged 8-12 years.

Previous studies have linked poor quality of life to overweight and to sleep problems in children but this study is one of the few to investigate the joint contribution of weight and sleep to quality of life, said Kelly Ann Davis, who presented the results in a poster at the annual meeting of the Associated Professional Sleep Societies.

Ms. Davis and her colleagues used several types of statistical analysis to determine whether there were significant differences in sleep patterns for children in three different weight categories as defined by the Centers for Disease Control and Prevention—healthy, overweight, or obese. Parents and children completed the Children's Sleep Habits Questionnaire, the Pediatric Sleep Questionnaire, and the Pediatric Quality of Life 4.0. Each child's height and weight was measured by a health care professional.

In a logistic regression analysis, both sleep and weight were significant predictors of poor scores on the child-reported measures of psychosocial function and total quality of life, accounting for 48% and 33% of the variance, respec-

tively, Ms. Davis, a research technician at the Children's Hospital of Philadelphia, said in an interview. In addition, weight, but not sleep, was a significant predictor of low scores on child-reported physical function tests, accounting for 23% of the variance.

In a breakdown of the children's sleep patterns, the researchers found that obese children had significantly more symptoms of sleep-disordered breathing, compared with both overweight and healthy weight children, and both obese and overweight children had significantly more symptoms of excessive daytime sleepiness, compared with healthy weight children. In addition, overweight children had significantly longer sleep duration and significantly longer sleep onset latency, compared with healthy weight children.

Sleep was not a significant predictor of low scores on parent-reported measures of the child's quality of life. Increased weight was the only significant predictor of low scores, and it accounted for 11% of the variance in physical function scores and 12% of the variance in both psychological function scores and total quality of life scores.

"It is important for health care professionals to be aware of the association between weight and sleep and ask parents of overweight children about their child's sleep," Ms. Davis wrote.

Ms. Davis reported that she had no financial conflicts to disclose. ■