Responsiveness to External Cues Tied to Obesity

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BALTIMORE — Children with greater body mass indexes appear to be more responsive to external food cues and less responsive to internal satiety signals, a study involving almost 11,000 children shows.

The findings, presented at the annual meeting of the American Psychosomatic Society, suggest that variation in responsiveness to internal and external cues could contribute to variation in adiposity, said Jane Wardle, Ph.D., who is the director of the Health Behaviour Research Centre at University College London.

It's long been speculated that obese individuals have an overresponsive meal-initiation system (high food responsiveness) and/or inability to end a meal (low satiety sensitivity).

For this study, the researchers looked at two samples: a preschool group of 572 children (aged 3-5 years) and an older group of 10,364 twins (aged 8-11 years). The twins are part of the larger Twins Early Development Study (TEDS), which involves more than 16,000 families whose twins were born between 1994 and 1996.

Wheeled Sports: Benefits Are Long Term

A dolescents who engage in frequent school-based or extracurricular physical activity—especially Rollerblading, skateboarding, and bicycling—are up to 48% less likely to become overweight or obese in early adulthood, Dr. David Menschik and his colleagues reported.

These wheeled sports also helped those who were overweight to slim down as they entered early adulthood, the researchers wrote (Arch. Pediatr. Adolesc. Med. 2008;162:29-33).

"Overweight adolescents who participated [in wheeled activities] three to four times per week were 85% more likely to become normal-weight adults than [were] overweight adolescents not participating," wrote Dr. Menschik, who was with the preventive medicine residency at Johns Hopkins University, Baltimore, and his coauthors. Dr. Menschik is now at the Food and Drug Administration.

Team sports and swimming also were beneficial to both normal- and overweight teens, but the study did not find a correlation between jogging or walking and achieving a normal adult weight.

The researchers drew their data from 3,345 subjects who were included in the National Longitudinal Study of Adolescent Health.

"In view of an obesity epidemic costing the United States an estimated \$117 billion annually, policy makers now have evidence that a relatively low-cost strategy may offer a long-lasting solution," Dr. Menschik and his colleagues concluded.

-Michele G. Sullivan

Eating behavior of the twins and preschoolers was assessed when the children were between 8 and 11 years of age using parent reporting on the Child Eating Behaviour Questionnaire. The researchers were particularly interested in satiety sensitivity (as measured by the satiety responsiveness scale) and food responsiveness (as measured by the enjoyment of food subscale). The researchers determined the height and weight of the preschool group, while the parents mea-

sured the height, weight, and waist circumference of the twin group.

Satiety responsiveness was negatively correlated with BMI (adjusted for age and sex) in both groups and also was negatively correlated with waist circumference in the twin group. So children with greater BMIs responded poorly to satiety signals. Food responsiveness was positively correlated with BMI (adjusted for age and sex) in both groups and with waist circumference in the twin group. In terms of sati-

ety responsiveness and food responsiveness, "it's not just a difference between the obese and everybody else. It's a quantitative variation across the distribution," Dr. Wardle said.

Dr. Wardle suggested that people with higher-risk eating behavior traits—less sensitivity to satiety signals and greater response to external food cues—are more responsive to the modern obesogenic environment, in which eating opportunities are everywhere.

