Parents of Overweight Children Blind to Problem

BY DIANA MAHONEY  
New England Bureau

Boston — Many parents of children who are overweight or those at risk for becoming overweight don’t perceive their children’s weight accurately, reported Dr. Cluss of the University of Pittsburgh.

“The parents of overweight girls were more likely to accurately perceive their child’s weight as being overweight compared with [the parents of] boys, particularly preadolescents,” said Dr. Cluss. While 65% of overweight girls’ parents recognized their children’s weight status, only 29% of overweight boys’ parents had accurate perceptions.

The results also showed that parental perceptions were more often correct for children aged 6-12 years than for children younger than 6 years old.

Only 8% of the parents whose children were at risk for becoming overweight or those at risk for being overweight didn’t perceive their child as being overweight, reported Dr. Cluss.

Carrel, M.D., said at the annual meeting of the Society for Pediatric Academic Societies.

The findings add to a growing body of data indicating that many parents do not correctly perceive their child’s weight status—a fact that may hinder parents’ readiness to engage with the pediatrician in tracking and intervention strategies, said Dr. Cluss.

As such, physicians “have an important role to play in identifying at-risk children and communicating early concern to parents,” she said.

In addition, special attention should be given to communicating with parents of younger children who may be overweight or at risk of becoming so and with parents of overweight boys, considering both groups had low accuracy rates, Dr. Cluss said.

Fitness Classes Beat Team Sports For Helping Children Lose Weight

BY CHRISTINE KILGORE  
Contributing Writer

Washington — Specially designed physical education classes that increase levels of physical activity were better for overweight children than team-oriented sports and games, according to findings from a school-based study.

Dr. Carrel and his associates worked with a school district outside of Madison to randomize 50 overweight, middle-school children to either standard physical education classes, which emphasize team sports and games, or to fitness-oriented gym classes. All children were held three times a week for 42 minutes.

The fitness-oriented classes were smaller in size—approximately 15 students, compared with 30-35—and focused on the use of equipment, such as treadmills, and other fitness-oriented activities. In the [standard] class, there was more standing around and choosing games, Dr. Carrel noted at the meeting, sponsored by the American Pediatric Society, the Society for Pediatric Research, the Ambulatory Pediatric Association, and the American Academy of Pediatrics.

All students had a body mass index above the 95th percentile for age. At the beginning and end of the school year, they underwent fasting evaluation of insulin and glucose and measurement of body composition by dual x-ray absorptiometry (DXA).

They also participated in maximal oxygen consumption (VO2 max) testing, indicating that was progressive and staged. Every minute the treadmill got steeper “until the child could not exercise any longer,” he said.

At baseline, there were no significant differences between the two groups in any of these measures. But after the 9-month school year was up, the children in the specially designed classes had a greater loss of body fat (4% vs. 2%), a greater increase in cardiovascular fitness (an increase in VO2 max of nearly 3 ml/kg per minute vs. less than 1 ml/kg per minute), and greater improvement in fasting insulin (−5 µU/ml vs. +3 µU/ml).

Other research conducted has shown that fitness has a greater correlation with insulin than body fat, Dr. Carrel noted.

Exercise Improves Cognition in Obese Children

BY DIANA MAHONEY  
New England Bureau

Boston — A prescription for exercise may do more than boost obese children’s physical health. It also may improve how they think, results of a study have shown.

The findings are consistent with recent work demonstrating exercise-induced improvements in cognition in older adults and are realizable in the children’s weight management, according to Mathew Gregoski of the Georgia Prevention Institute of the Medical College of Georgia in Augusta.

As part of an ongoing investigation of a possible dose-response relationship between a 3-month exercise program and adiposity, insulin sensitivity, and executive functioning in overweight youth, 30 children aged 8-11 years with a body mass index at or above the 85th percentile for age and gender were randomized to one of three intervention conditions—no exercise, low-dose exercise (20 min/day), and high-dose exercise (40 min/day)—to test the effect of aerobic exercise training on cognitive measures.

Both of the exercise conditions included vigorous aerobic activities and games that maintained average heart rate above 150 beats per minute. Mr. Gregoski reported at the annual meeting of the Society for Behavioral Medicine.

Before and after the interventions, all children underwent standardized mental functioning testing using the Cognitive Assessment System (CAS). The investigators calculated the changes from baseline in four scales of the CAS, including planning, attention, successive, and simultaneous, said Mr. Gregoski, who conducted the investigation under the direction of Catherine Davis, Ph.D.

The planning scale measures an individual’s ability to focus attention, take in information, and maintain sufficient alertness to attempt problem solving. The successive scale is associated with the ability to integrate information in serial order, and the simultaneous scale is associated with mental operations that require consideration of all elements of a complex stimulus concurrently.

Analysis of variance revealed significant improvement following both exercise interventions in the planning scale of the CAS with the high-dose exercise group experiencing the most change from baseline. The other cognitive measures did not show an effect, he said.

That significant cognitive benefit was observed with the 20-minute intervention in addition to the longer duration is notable in that such a program could readily be introduced during regular physical education sessions.

These results “provide evidence for the direct relationship between physical activity and children’s cognitive development,” Mr. Gregoski said.

Moderate Exercise May Be Best for Overweight Boys

Walking at the moderate pace of 4 km/h appears as beneficial to fat oxidation as more strenuous exercise in prepubertal boys, according to Claudio Maffei, M.D., of the Department of Pediatrics at University Hospital, Verona, Italy.

Twenty-four boys, aged 9-11 years, with an average body mass index of 25.5 were given a treadmill test, their respiratory exchange measured by indirect calorimetry while they walked at 4, 5, and 6 km/h. The investigators also measured the boys’ maximal oxygen uptake. All the boys reported a sedentary lifestyle, spending 2 hours per week in recreational organized physical activity.

Energy expenditure and carbohydrate oxidation increased progressively as the treadmill speed was increased. However, the fat oxidation rate did not change significantly when walking speed increased (J. Clin. Endocrinol. Metab. 2005;90:231-6).

After adjusting for fat-free mass, a partial regression analysis demonstrated that energy expenditure during walking correlated with adiposity in boys, the researchers said. In another partial regression analysis, they found a significant association between adiposity and the fat-to-carbohydrate oxidation rate during walking at all three speeds.

“Therefore, at similar exercise intensities, the greater the adiposity of the body, the higher the energy expenditure and the proportion of carbohydrate in the fuel mix that oxidized during walking,” the researchers said.

In addition, the researchers said, “the speed at which boys may be more acceptable to overweight children and may not lead to the higher carbohydrate oxidation and the sedentary behavior and increased appetite, they added.”