

Obese children more vulnerable to food advertising

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Rates of childhood obesity have tripled in the past 30 years, and food marketing has been implicated as one factor contributing to this trend. Every year, companies spend more than \$10 billion in the US marketing their food and beverages to children; 98% of the food products advertised to children on television are high in fat, sugar, or sodium. In a new study scheduled for publication in *The Journal of Pediatrics*, researchers used neuroimaging to study the effects of food logos on obese and healthy weight children.

Amanda S. Bruce, PhD, and colleagues from the University of Missouri-Kansas City and the University of Kansas Medical Center assessed 10 healthy weight and 10 obese children, ages 10-14 years, using both self-reported measures of self-control and [functional magnetic resonance imaging](#), which uses blood flow as a measure of brain activity. Dr. Bruce states, "We were interested in how [brain responses](#) to food logos would differ between obese and healthy weight children." The children were shown 60 food logos and 60 nonfood logos, and functional [magnetic resonance imaging](#) scans indicated which sections of the brain reacted to the familiar logos being shown.

Obese children showed greater activation in some reward regions of the brain than healthy weight children when shown the food logos. Healthy weight children showed greater [brain activation](#) in regions of the brain associated with self-control, when shown food versus nonfood logos. Overall, healthy weight children self-reported more self-control than the obese children. This adds to the body of research showing that in certain situations, healthy weight individuals experience greater activation of control regions of the brain than obese individuals.

"This study provides preliminary evidence that obese children may be more vulnerable to the effects of food advertising. One of the keys to improving health-related decision-making may be

found in the ability to improve self-control," notes Dr. Bruce. Self-control training may be a beneficial addition to obesity and behavioral health interventions, and may lead to greater success in weight loss.

More information: "Brain Responses to Food Logos in Obese and Healthy Weight Children," by Amanda S. Bruce, PhD, Rebecca J. Lepping, MA, Jared M. Bruce, PhD, J. Bradley C. Cherry, JD, Laura E. Martin, PhD, Ann M. Davis, PhD, MPH, ABPP, William M. Brooks, PhD, and Cary R. Savage, PhD, appears in *The Journal of Pediatrics*, [DOI 10.1016/j.jpeds.2012.10.003](https://doi.org/10.1016/j.jpeds.2012.10.003)

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