

Study of brain activity shows that food commercials influence children's food choices

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Food advertising is a multi-billion dollar industry, with approximately \$1.8 billion annually aimed at children and adolescents, who view between 1,000 and 2,000 ads per year. Some studies have shown that there is a relationship between receptivity to food commercials and the amount and type of food consumed. In a new study scheduled for publication in *The Journal of Pediatrics*, researchers studied the brain activity of children after watching food commercials and found that the commercials influence children's food choices and brain activity.

Twenty-three children, 8-14 years old, rated 60 food items on how healthy or tasty they were. Dr. Amanda Bruce and researchers from the University of Kansas Medical Center and University of Missouri-Kansas City then studied the children's [brain activity](#) while watching food and non-food commercials and undergoing [functional magnetic resonance imaging \(fMRI\)](#). According to Dr. Bruce, "For brain analyses, our primary focus was on the brain region most active during reward valuation, the [ventromedial prefrontal cortex](#)." During the brain scan, children were asked whether they wanted to eat the food items that were shown immediately after the commercials.

The researchers found that, overall, the children's decisions were driven by tastiness rather than healthfulness. However, taste was even more important to the children after watching food commercials compared with non-food commercials; faster decision times (i.e., how quickly the

children decided whether they wanted to eat the food item shown) also were observed after watching food commercials. Additionally, the ventromedial prefrontal cortices of the children were significantly more active after watching food commercials.

Food marketing has been cited as a significant factor in food choices, overeating, and obesity in children and adolescents. The results of this study show that watching [food commercials](#) may change the way children value taste, increasing the potential for children to make faster, more impulsive food choices. Notes Dr. Bruce, "Food marketing may systematically alter the psychological and neurobiological mechanisms of children's food decisions."

More information: Amanda S. Bruce et al., "The Influence of Televised Food Commercials on Children's Food Choices: Evidence from Ventromedial Prefrontal Cortex Activations," *The Journal of Pediatrics*, [DOI: 10.1016/j.jpeds.2016.06.067](https://doi.org/10.1016/j.jpeds.2016.06.067)

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