

Gaze and Gluttony: How BMI Affects Our First Fixations

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Abstract

We investigated selective attention towards high- versus low-calorie foods in individuals with normal (BMI 18–25) and high BMI (>25) using eye-tracking. Participants performed a central letter discrimination task while irrelevant food images appeared peripherally (5° from fixation). We measured the probability and latency of first fixations. High BMI participants were more likely to initially fixate on high-calorie processed foods. On the contrary, the normal BMI group showed a bias towards low-calorie foods, although this observation needs further investigation. These attentional biases occurred despite controlling for perceptual differences between images. The high BMI group showed a bias in the left visual field, as predicted by the literature on dominance of the right hemisphere in rewarding stimulus processing. This early, automatic attentional bias may contribute to unhealthy eating patterns and has implications for understanding cognitive mechanisms involved in obesity, particularly the role of bottom-up attentional capture by rewarding food stimuli.