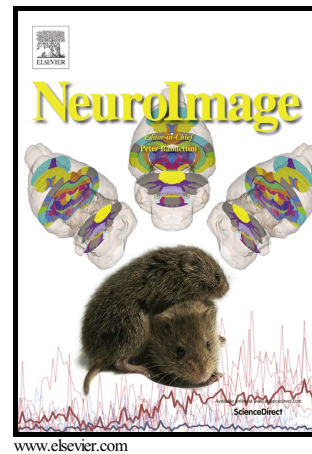


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Loss of lateral prefrontal cortex control in food-directed attention and goal-directed food choice in obesity

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Abstract

Loss of lateral prefrontal cortex (IPFC)-mediated attentional control may explain the automatic tendency to eat in the face of food. Here, we investigate the neurocognitive mechanism underlying attentional bias to food words and its association with obesity using a food Stroop task. We tested 76 healthy human subjects with a wide body mass index (BMI) range (19-35 kg/m²) using fMRI. As a measure of obesity we calculated individual obesity scores based on BMI, waist circumference and waist-to-hip ratio using principal component analyses. To investigate the automatic tendency to overeat directly, the same subjects performed a separate behavioral outcome devaluation task measuring the degree of goal-directed versus automatic food choices. We observed that increased obesity scores were

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