

“The role of orbitofrontal cortex in experiencing regret”

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Abstract

In this study orbitofrontal patients and normal control subjects participate in a series of choices between risky gambles. We induce distinctive emotional responses providing different feedback information. Normal controls report emotional responses consistent with counterfactual reasoning between obtained and non-obtained outcomes; they choose minimizing future regret and learn from their emotional experience. Whereas orbitofrontal patients do not report regret and do not anticipate negative consequences of their choices. These results suggest that orbitofrontal cortex has a fundamental role in linking between cognitive and emotional components of decision making under risk.