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[Odds on serotonin regulating gambling impulses](#)

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Rats can learn to play the odds, which is useful because it helps shed light into how the brain regulates gambling behavior, as reported online in this week's *Neuropsychopharmacology*.

Though gambling can be a harmless pastime for some people, it becomes a compulsive and maladaptive obsession akin to drug addiction for others. Little is known about the neurobiological basis of such pathological gambling and few treatment options exist for those affected.

Catharine Winstanley and colleagues devised a gambling task for rats that provides a better means of studying the neural and chemical processes underlying gambling. During the task, the rats were able to choose from four options that differed in the probability and magnitude of food rewards and timeouts. High stake options offered more sugar pellets with less frequency and longer potential timeouts. Rats learned how to be successful gamblers, selecting the option with the optimum level of risk and reward to maximize their sugar pellet profits.

However, when the rats were treated with drugs that affected the levels of dopamine and serotonin, two neurotransmitters in the brain implicated in impulse control and drug addiction, their gambling performance became significantly impaired. The findings suggest a role for these neurochemicals in moderating gambling behavior and a potential method of researching new leads for the treatment of gambling disorders.

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