Why We Take Risks — It's the Dopamine

By Alice Park

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Risk-taking, by definition, defies logic. Reason can't explain why people do unpredictable things — like gambling or jumping out of planes — for little or, sometimes, no reward at all. There's the thrill, of course, but those brief moments of joy aren't enough to keep most risk takers coming back for more — which they do, again and again, like addicts.

A new study by researchers at Vanderbilt University in Nashville and Albert Einstein College of Medicine in New York City suggests a biological explanation for why certain people tend to live life on the edge — it involves the neurotransmitter dopamine (dope-a-meen), the brain's feel-good chemical.

Dopamine is responsible for making us feel satisfied after a filling meal, happy when our favorite football team wins, or really happy when we use stimulating drugs like amphetamines (am-fet-a-meens) or cocaine, which can artificially squeeze more dopamine out of the nerve cells in our brain. It's also responsible for the high we feel when we do something daring, In the risk taker's brain there appears to be fewer dopamine-stopping receptors — meaning that daredevils' brains are more soaked with the chemical, influencing them to keep taking risks and chasing the next high, like driving too fast.

David Zald, a professor of psychology and psychiatry at Vanderbilt, studied whether the brains of those thrill seekers differed in any way from those of the less adventuresome when it comes to dopamine.

Earlier studies in rats had shown that animals that tend to explore and take more risks in new environments also tend to have fewer of these preventing receptors, and Zald wanted to find out if the same was true in people.

The findings support Zald's theory that people who take risks get an unusually big hit of dopamine each time they have a new experience, because their brains are not able to stop the neurotransmitter. That blast makes them feel good, so they keep returning for the rush from similarly risky or new behaviors.

Cohen suggests that a better understanding of novelty-seeking behavior may even help researchers find more effective treatments for addiction. If future studies validate Zald's findings and show that addicts also have fewer dopamine-inhibiting receptors than average, then medicines designed to replace the function of those receptors may help bring their dopamine levels down to normal and weaken their addiction.