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Spilling the beans about coffee, anxiety and alertness

DOI: 10.1038/npp.2010.71

The sensation of alertness that comes from a cup of coffee may be an illusion. A study published online this week in *Neuropsychopharmacology* reports that frequent coffee drinkers develop a tolerance to both the anxiety-producing effects and the stimulatory effects of caffeine. Caffeine brings individuals dependent on it back to — but not above — their baseline level of alertness.

To further investigate a gene variant that has been linked with caffeine-induced anxiety, Peter Rogers and colleagues asked 379 individuals to abstain from caffeine for 16 hours, and then gave them either caffeine or a placebo. Study participants rated their personal levels of anxiety, alertness and headache. Approximately half of the participants were non/low caffeine

consumers and the other half were medium/high caffeine consumers. The medium/high caffeine consumers who received placebo reported a decrease in alertness and an increase in headache, neither of which were reported by those who received caffeine. However, their post-caffeine levels of alertness were no higher than the non/low consumers who received a placebo, suggesting caffeine only brings coffee drinkers back up to 'normal'.

The authors also found that the genetic predisposition to anxiety did not deter coffee drinking. In fact, people with the gene variant associated with anxiety tended to consume slightly larger amounts of coffee than those without the variant, suggesting that a mild increase in anxiety may be a part of the pleasant buzz caused by caffeine.

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