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- **Summaries of newsworthy papers:**

  Cholesterol meds to help smokers kick the habit

  What makes slacker rats work harder

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Cholesterol meds to help smokers kick the habit

DOI: 10.1038/NPP.2012.31

Fibrate medications, currently used to treat high cholesterol and cardiovascular disease, may also help cigarette smokers quit, according to an animal study published this week in *Neuropsychopharmacology*. Since smoking is highly addictive and increases the risk of cardiovascular disease and mortality, normalizing lipids and reducing smoking could be a dual benefit of fibrate treatment. The fact that fibrates are already approved for human use should speed up clinical trials and the subsequent implementation of any treatment based on this work.

Tobacco-related disease is one of the major causes of premature death in the United States. Although smoking cessation treatments are available, they are not effective in many smokers. Steven Goldberg and colleagues are investigating the use of fibrate drugs to reduce the rewarding effects of nicotine in rats and squirrel monkeys. Fibrates are known to activate a hormone receptor that regulates energy and lipid metabolism and that has recently been implicated in regulating the behavioral effects of nicotine. The team found that administering a fibrate prevented nicotine addiction, decreased nicotine intake, and protected against relapses in the animals tested. It is yet to be determined whether these results are replicated in humans, however if they prove to be, this may be an effective way to treat tobacco addiction while reducing the smoking-associated risk of cardiovascular disease and mortality.

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What makes slacker rats work harder

DOI: 10.1038/ NPP.2012.30

Feeding amphetamine to “slacker” rats motivates them to work harder, while “worker” rats slack off if given amphetamine or caffeine. These results, published online this week in *Neuropsychopharmacology*, may help in explaining why stimulant drugs affect people differently and could have important implications for our understanding the increases in mental fatigue and lack of motivation associated with many psychiatric illnesses, including depression.

Some individuals are more willing to concentrate and exert effort to achieve their goals than others. However, little is known about the brain mechanisms determining how much cognitive effort one will expend in order to reach the best decision, known as the cost/benefit ratio.

Jay Hosking, Catharine Winstanley and colleagues found that rats similarly could be classified into those that would expend high or low degrees of cognitive effort to obtain food rewards, termed “worker” and “slacker” rats, respectively. When presented with cognitively challenging tasks that were rewarded with food pellets, the “worker” rats were less motivated by caffeine or amphetamine, whereas “slacker” rats were more willing to try harder tasks if given either substance. The authors conclude that rats, like humans, are sensitive to the cognitive effort involved in decision making, and that these baseline differences can influence response to psychostimulants.

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