Helping ex-smokers resist the urge

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A new inhibitor helps previously nicotine-addicted rats stay on the wagon, according to a study published on October 22nd in the *Journal of Experimental Medicine*.

Kicking the cigarette habit is difficult enough, but resisting the urge to light up in situations previously associated with smoking can be a quitter's downfall. But help may be at hand. A new inhibitor developed by Fang Liu and colleagues at the Centre for Addiction and Mental Health in Toronto helped ex-smoker rats resist that urge.

Liu and colleagues found that long-term nicotine exposure caused two neurotransmitter receptors to interact in the brain, and their inhibitor prevented this interaction. In rats trained to self-administer nicotine, the inhibitor had no effect on their propensity to indulge. But in "ex-smoker" rats (those weaned off nicotine), the inhibitor decreased the number of relapses after exposure to environmental cues previously associated with a nicotine fix.

If the inhibitor works the same way in humans, it may provide a powerful new way to reduce relapses in people who have quit smoking or chewing tobacco.

More information: Li, S., et al. 2012. *J. Exp. Med.* doi: 10.1084/jem.20121270

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