

Trouble Quitting? New Pitt-Carnegie Mellon Smoking Study May Reveal Why

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A new study from researchers at the University of Pittsburgh and Carnegie Mellon University sheds light on why smokers' intentions to quit "cold turkey" often fizzle out within days or even hours.

If a smoker isn't yearning for a cigarette when he makes the decision to kick the habit — and most aren't — he isn't able to foresee how he will feel when he's in need of a nicotine buzz.

Published in the September issue of *Psychological Science*, a journal of the Association for Psychological Science, the study, "Exploring the Cold-to-Hot Empathy Gap in Smokers," bolsters the theory that smokers not in a state of craving a cigarette will underestimate and underpredict the intensity of their future urge to smoke.

"We have observed previously that the idea of smoking a cigarette becomes increasingly attractive to smokers while they are craving," said the study's lead investigator and University of Pittsburgh Professor of Psychology Michael Sayette. "This study suggests that when smokers are *not* craving, they fail to appreciate just how powerful their cravings will be. This lack of insight while not craving may lead them to make decisions — such as choosing to attend a party where there will be lots of smoking — that they may come to regret."

The study looked at the cold-to-hot empathy gap — that is, the tendency for people in a "cold" state (not influenced by such visceral factors as hunger, fatigue) to mispredict their own behavior when in a "hot" state (hungry, fatigued), in part because they can't remember the intensity of their past cravings.

The researchers gathered 98 male and female smokers for two experimental sessions and placed them in one of three groups: "hot," "cold" and a comparison group. Those in a "hot" state were asked to abstain from smoking for 12 hours prior to Session 1 and then were induced to crave a cigarette by holding but not smoking a lit one.

Those in a "cold" state smoked up until Session 1 began and did not hold a lit cigarette. The comparison group did not attend Session 1.

During Session 1, "hot" and "cold" participants were asked to indicate the minimum amount of money they would need to delay smoking for five minutes in Session 2, when all participants would be in a "hot" state. Smokers in all three groups were required to abstain from smoking for 12 hours prior to Session 2 and would experience the lit cigarette cue described above.

During Session 2, when all the subjects in all three groups were craving, they were given the chance to revise the amount of money they would need to delay smoking for five minutes. As expected, the "cold" smokers from Session 1 now significantly increased the amount of money they would need to

delay smoking for just five minutes, while those originally in a “hot” state during Session 1 did not request an increase.

The study participants from the “cold” group were much less likely to accurately predict the amount of money they would need to put off lighting up. In fact, in Session 2, nearly half of the “cold” smokers requested an amount of money higher than what they had initially predicted, while only a quarter of the “hot” group did the same.

“These findings suggest that smokers are likely to underpredict their own future desire to smoke when they’re not craving a cigarette,” said study coauthor George Loewenstein, the Herbert A. Simon Professor of Economics and Psychology at Carnegie Mellon.

“The research not only has implications for helping smokers quit, but it also enlightens us on how nonsmokers may pick up the habit. If smokers can’t appreciate the intensity of their need to smoke when they aren’t currently craving, what’s the likelihood that people who have never smoked can do so,” said Loewenstein.