

# Crushing cigarettes in a virtual reality environment reduces tobacco addiction

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Smokers who crushed computer-simulated cigarettes as part of a psychosocial treatment program in a virtual reality environment had significantly reduced nicotine dependence and higher rates of tobacco abstinence than smokers participating in the same program who grasped a computer-simulated ball, according to a study described in the current issue of *CyberPsychology and Behavior*.

Benoit Girard, MD, Vincent Turcotte, and Bruno Girard, MBA, from the GRAP Occupational Psychology Clinic (Quebec, Canada), and Stéphane Bouchard, PhD, from the University of Quebec in Gatineau, randomly assigned 91 smokers enrolled in a 12-week anti-smoking support program to one of two treatment groups. In a computer-generated [virtual reality environment](#), one group simulated crushing virtual [cigarettes](#), while the other group grasped virtual balls during 4 weekly sessions. The authors document the results in the article "Crushing Virtual Cigarettes Reduces [Tobacco](#) Addiction and Treatment Discontinuation."

The findings demonstrate a statistically significant reduction in nicotine addiction among the smokers in the cigarette-crushing group versus those in the ball-grasping group. Also, at week 12 of the program, the smoking abstinence rate was significantly higher for the cigarette-crushing group (15%) compared to the ball-grasping group (2%).

Other notable findings include the following: smokers who crushed virtual cigarettes tended to stay in the treatment program longer (average

time to drop-out > 8 weeks) than the ball-grasping group (

"It is important to note that this study increased treatment retention. All too often individuals drop out of treatment prior to completion. It will be interesting now to go further and compare this to other popular treatments such as the [nicotine](#) patch," says Brenda K. Wiederhold, PhD, MBA, BCIA, Editor-in-Chief of *CyberPsychology and Behavior*, from the Interactive Media Institute, San Diego, CA.

More information: The article is available free online at [www.liebertpub.com/cpb](http://www.liebertpub.com/cpb)

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