

Smokers consume same amount of cigarettes regardless of nicotine levels

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Professor David Hammond found that smokers did not increase their consumption of cigarettes when using a reduced nicotine brand. Credit: Photo credit: Jonathan Bielaski, Light Imaging

Cigarettes with very low levels of nicotine may reduce addiction without increasing exposure to toxic chemicals, according to a new study from the University of Waterloo.

The study published in the journal *Cancer Epidemiology* monitored the smoking behaviours of 72 adults as they switched to three types of [cigarettes](#) with markedly reduced nicotine levels.

Unlike when smokers switch between conventional cigarette brands—all of which have very similar levels of nicotine content—the study found no change in participants' puffing behaviour, number of cigarettes consumed or levels of toxic chemicals in their systems.

The landmark findings may ease concerns that smokers would increase their consumption of cigarettes or puff harder if governments reduced nicotine levels to negligible amounts.

"One of the primary barriers to reducing nicotine levels is the belief that individuals who continue to smoke will smoke more cigarettes in an effort to extract the same nicotine levels, thereby exposing themselves to greater amounts of [toxic chemicals](#). Our findings suggest this is not the case," said Professor David Hammond, of the Faculty of Applied Health Sciences at Waterloo, and lead author on the paper. "The smokers were unable or unwilling to compensate when there was markedly less nicotine in the cigarette and when the experience of smoking is far less rewarding."

The cigarettes used in the study—Quest 1, Quest 2 and Quest 3—had a nicotine content of 8.9, 8.4 and 0.6 mg, respectively, as opposed to an average of 12 mg in a regular cigarette.

"There is ample evidence from inside and outside the tobacco industry that major reductions in the nicotine content of cigarettes would result in a less-addictive product," said Professor Hammond. "Overall, the impact of a less-addictive cigarette on reducing smoking uptake and cancer prevention is potentially massive."

At time of the study, Quest cigarettes were the only commercially available cigarettes in the world with significantly reduced nicotine levels.

Provided by University of Waterloo

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