

Reducing Nicotine in Cigarettes Will Reduce Addiction and Save Lives



The 2009 Family Smoking Prevention and Tobacco Control Act granted the Food and Drug Administration (FDA) the ability to require tobacco companies to reduce (but not eliminate) the nicotine content of cigarettes. In January 2025, the FDA issued a proposed rule to limit nicotine levels in cigarettes and certain other combustible tobacco products to minimally or non-addictive levels, advancing a policy first proposed during the first Trump Administration.¹

Nicotine is Highly Addictive

Nicotine is a highly addictive drug and is the fundamental reason people continue using tobacco products.² Most adult smokers (nearly 70 percent) want to quit, but overcoming an addiction to nicotine is difficult and often requires multiple quit attempts before succeeding.³ Smoking almost always begins in adolescence and adolescents are particularly vulnerable to the addictive effects of nicotine. Nicotine can have lasting damaging effects on brain development, which continues until age 25. Nicotine use can harm the parts of the adolescent brain responsible for attention, learning, mood and impulse control.⁴ Nicotine addiction can also make tobacco users more susceptible to addiction to other drugs.⁵

Impact of Reducing the Nicotine Content of Cigarettes

Tobacco use remains the leading cause of preventable death and disease in the United States, killing nearly half a million Americans each year.⁶ Reducing the nicotine content of cigarettes to minimally or non-addictive levels will prevent youth from becoming addicted, help smokers quit and save lives.

The FDA estimates that the proposed rule would prevent 48 million youth and young adults from starting to smoke and save 4.3 million lives by the end of the century. In the short term, it would lead 19.5 million smokers to quit within five years, including 12.9 million within one year.⁷

Reducing Nicotine Content Will Reduce Dependence and Increase Cessation

Research demonstrates that very low nicotine content cigarettes reduce dependence and increase cessation. For over a decade, the FDA and NIH have invested in research on the impact of very low nicotine content cigarettes. Research shows that cigarettes with 0.4 mg of nicotine per gram of tobacco—95% less nicotine than cigarettes on the market—produce the greatest decrease in dependence and increase in quit attempts. A large trial found that compared to smokers assigned to smoke normal nicotine content cigarettes, smokers assigned to reduced nicotine content smoked fewer cigarettes, reduced their exposure and dependence to nicotine, and reduced cravings.⁸ Smokers assigned to cigarettes with 0.4 mg/g nicotine content were twice as likely to report trying to quit in the 30 days after the study ended compared to those smoking normal nicotine content cigarettes.⁹

Reducing Nicotine Content Will Prevent Youth from Becoming Addicted

Ethically, it is not possible to conduct studies on non-smoking youth, but research suggests that very low nicotine content cigarettes will be even less addictive for adolescents than adults.¹⁰ As with adult smokers, studies with adolescent smokers find that very low nicotine content cigarettes reduce cravings and cigarette consumption.¹¹

Reducing Nicotine Content Will Advance Health Equity

A 2024 Surgeon General's report concluded that, "Reducing nicotine in cigarettes and other combustible tobacco products to minimally addictive or nonaddictive levels should reduce tobacco use among many

population groups experiencing tobacco-related disparities.”¹² Research shows that very low nicotine cigarettes can reduce smoking across a wide range of groups that are disproportionately impacted by tobacco use, including among low-income populations and those with mental health conditions and substance abuse disorders.¹³

Implementation Considerations for Reducing Nicotine Content

Immediate (vs. Gradual) Nicotine Reduction Will Maximize Impact

A research study comparing these two scenarios found that smokers assigned to use very low nicotine content cigarettes (0.4 mg/g) showed lower levels of exposure to carbon monoxide, smoked fewer cigarettes per day, were abstinent for longer durations and reported lower levels of nicotine dependence compared to those assigned to smoke cigarettes with the nicotine content gradually reduced over time.¹⁴

The Proposed Nicotine Reduction Rule Would Not Lead to Compensatory Smoking

Substantially reducing nicotine in cigarettes makes it almost impossible to compensate by smoking more cigarettes, taking more puffs, or inhaling more deeply. A smoker who typically consumes ten cigarettes per day would need to consume at least 100 reduced nicotine content cigarettes per day to compensate, which is prohibitive.¹⁵ Research studies confirm that smokers do not compensate when nicotine content is reduced to very low levels, particularly when the reduction is immediate rather than gradual.¹⁶

Reducing the Nicotine Content of Cigarettes Is Technically Feasible

There are a wide range of available technologies that can reduce the nicotine content of cigarettes to minimally or non-addictive levels. Since at least the 1980s, the tobacco companies have at various times marketed brands of low-nicotine cigarettes.

Reducing the Nicotine of Cigarettes Would Not Render Cigarettes Harmless

While nicotine is the primary addictive agent in cigarettes, the health consequences of smoking result from the more than 7,000 chemicals and 69 cancer-causing agents produced from combusted cigarettes.¹⁷ A final rule should be paired with additional investments in cessation resources and comprehensive public education to ensure adequate communication about the health risks of reduced nicotine content cigarettes.

The Proposed Rule Should Apply to All Combusted Tobacco Products

The proposed rule covers cigarette tobacco, roll-your-own (RYO) tobacco, cigars, cigarillos, large cigars and pipe tobacco. It is important for a nicotine reduction standard to cover all combusted tobacco products to prevent smokers from switching to other dangerous combustible products. The tobacco industry has a long history of manipulating loopholes in tobacco control regulation and will no doubt promote cigars or other combusted products as alternatives to cigarettes if the policy does not address all forms of combustible tobacco. Cigar smoke contains many of the same harmful chemicals as cigarette smoke.¹⁸

¹ U.S. Food and Drug Administration (FDA) Center for Tobacco Products, “FDA announces comprehensive regulatory plan to shift trajectory of tobacco-related disease, death,” July 28, 2017, <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm568923.htm>.

² HHS, *The Health Consequences of Smoking—50 Years of Progress, A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>. See also, HHS, *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General*, 2010, <http://www.ncbi.nlm.nih.gov/books/NBK53017/>.

³ VanFrank B, et al. “Adult Smoking Cessation — United States, 2022.” *MMWR* 2024;73:633–641, <https://www.cdc.gov/mmwr/volumes/73/wr/mm7329a1.htm>. Fong, G., et al., “The Near-Universal Experience of Regret Among Smokers in Four Countries: Findings from the International Tobacco Control Policy Evaluation Survey,” *Nicotine & Tobacco Research*, Vol. 6, Supplement 3, December 2004.

⁴ HHS, *The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General*, CDC, Office of Smoking and Health (OSH), 2014. See also: CDC Office on Smoking and Health, “Quick Facts on the Risks of E-cigarettes for Kids, Teens, and Young Adults,” March 2019. Accessed August 9, 2019.

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- ⁶ U.S. Department of Health and Human Services. *Eliminating Tobacco-Related Disease and Death: Addressing Disparities—A Report of the Surgeon General* (p.9). Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2024.
- ⁷ 90 Fed. Reg. 5,032 (January 16, 2026).
- ⁸ Donny, EC, et al., "Randomized trial of reduced-nicotine standards for cigarettes," *New England Journal of Medicine*, 373: 1340-1349, 2015.
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- ¹² HHS, *Eliminating Tobacco-Related Disease and Death: Addressing Disparities—A Report of the Surgeon General*, 2024, at 716.
- ¹³ Donny EC, White CM. A review of the evidence on cigarettes with reduced addictiveness potential, *Int J Drug Policy*. 2022;99:103436. Foulds J, et al. The effects of reduced nicotine content cigarettes on biomarkers of nicotine and toxicant exposure, smoking behavior and psychiatric symptoms in smokers with mood or anxiety disorders: a double-blind randomized trial. *PLoS One*. 2022;17 (11):e0275522. Meier E., et al. Immediate switching to reduced nicotine cigarettes in a US-based sample: the impact on cannabis use and related variables at 20 weeks. *Nicotine Tob Res.* 2023;25(5):867-874. Gaalema DE, et al. Potential effects of nicotine content in cigarettes on use of other substances. *Prev Med.* 2022;165(pt B):107290. Peters EN, et al., Effect of very low nicotine content cigarettes on alcohol drinking and smoking among adult smokers who are at-risk alcohol drinkers. *Exp Clin Psychopharmacol.* 2023;31(3):733-744. Higgins, ST, et al. (2017). Addiction potential of cigarettes with reduced nicotine content in populations with psychiatric disorders and other vulnerabilities to tobacco addiction. *JAMA Psychiatry*, 74(10), 1056. Higgins, S. T., et al. (2020). Changes in cigarette consumption with reduced nicotine content cigarettes among smokers with psychiatric conditions or socioeconomic disadvantage: 3 Randomized clinical trials. *JAMA Network Open*, 3(10), Article e2019311.
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- ¹⁵ Benowitz, NL, et al., "The Role of Compensation in Nicotine Reduction," *Nicotine & Tobacco Research*, 2019, S16-S19.
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