



KAREN L. SMITH, MD, MPH
Director and State Public Health Officer

State of California—Health and Human Services Agency California Department of Public Health



EDMUND G. BROWN JR.
Governor

Menthol Fact Sheet

What is Menthol and How is it Used?

Menthol is a naturally occurring compound derived from mint plants and is also synthetically produced. [1] Because of its cool, minty candy-like flavor and fresh odor, it is used as an additive in many products including tobacco, lip balm, cough medication, mouthwash, toothpaste, chewing gum, and candy, as well as in beauty products and perfumes. [2]

Menthol's anesthetizing effect makes the smoke "smooth" and easier to inhale while masking the harshness of tobacco, making menthol cigarettes more appealing to young and beginner smokers. [1]

Menthol in cigarettes has an anesthetic effect on the throat, bronchi, and lungs, allowing smokers to inhale deeper and for harmful particles to settle deeper inside the lungs. [2] By reducing airway pain and irritation, continuous menthol smoking can mask the early warning symptoms of smoking-induced respiratory problems. [3]

Menthol also decreases the metabolism of nicotine and increases the amount of the addictive substance in the blood, making cigarettes even more dangerous and difficult to quit. [4]

By decreasing a new smoker's initial negative reactions to nicotine, menthol facilitates continued smoking, which in turn facilitates addiction.[5]

Many menthol-only smokers underestimate the dangers of menthol in cigarettes and actually hold stronger beliefs that menthol cigarettes are less harmful than regular cigarettes compared to non-menthol-only smokers. [6]

Menthol-only smokers also have stronger beliefs in the medicinal effects of menthol cigarettes relative to non-menthol smokers. [6] Despite these beliefs, menthol cigarettes are not safer than regular cigarettes. Menthol cigarettes only mask the harshness of tobacco smoke making it easier for new smokers to start and more challenging to quit. [7]

Menthol smokers show greater signs of nicotine dependence, have higher rates of quit attempts, [8] but are less likely to successfully quit smoking than other smokers. [9]



Menthol cigarettes are not safer than regular cigarettes. Menthol cigarettes have been shown to increase youth initiation, inhibit cessation, and promote relapse. [10] Scientific studies have shown that because of its sensory effects and flavor, menthol may enhance the addictiveness of cigarettes. [11]

Although the use of cigarettes is declining in the United States (U.S.), sales of menthol cigarettes have steadily increased in recent years, especially among young people and new smokers. [12]

Menthol cigarettes account for approximately 25 percent of all cigarette sales in the U.S. [13] Moreover, more than 90 percent of all tobacco cigarettes contain menthol, regardless of being marketed as a mentholated cigarette. [14]

Who Smokes Menthol?

Approximately 19 million Americans smoke menthol cigarettes, including 1.1 million adolescents. [12]

More than 50 percent of menthol cigarette smokers are female (52.2 percent) and nearly 30 percent of all menthol smokers are African American (29.4 percent). [15]

A 2013 study found that, among cigarette smokers, menthol cigarette use was more common among 12-17 year olds (56.7 percent) and 18-25 year olds (45 percent) than among older persons (30.5-34.7 percent). [16]

In 2015, 54.5 percent of high school current tobacco users and 48.4 percent of middle school current tobacco users smoked menthol cigarettes. [17]

Menthol cigarettes are used disproportionately in communities of color. In combined 2004 to 2008 data, 82.6 percent of African American, 53.2 percent of Native Hawaiian/Pacific Islander, 32.3 percent of Hispanic/Latino, 31.2 percent of Asian, 24.8 percent of American Indian/Alaska Native, and 23.8 percent of white smokers aged 12 years and older reported using menthol cigarettes in the past month. [12]

In a national study conducted in 2009-10, 71 percent of lesbian, gay, bisexual, and transgender young adult smokers (18-25) reported smoking menthol cigarettes. [18]

Generally, menthol smokers tend to be female, younger, members of ethnic minorities, have only a high school education, and buy packs rather than cartons. [19]

Predatory Marketing Tactics Target Young, Female, and Minority Populations

Mentholated cigarettes, or menthols, were originally developed and promoted to women. [20] In order to appeal to women, menthol cigarette advertisements often contain images of romantic couples, flowers, and springtime. [21]

Menthol brands like Newport have specifically targeted adolescents and young adults with their marketing messages [21], and the Tobacco Products Scientific Advisory Committee (TPSAC) found “substantial evidence” that menthol products have been targeted towards youth through “youthful imagery, messages promoting an appealing sensory experience, and peer group acceptance.” [7]

Cigarette packaging design and color are carefully chosen by the tobacco industry to create specific associations. An example of this is the green packages for mentholated cigarettes which suggest coolness and freshness. [20]

Tobacco retailers in low income, urban communities having high menthol sales are more likely to place larger exterior tobacco advertisements and have more menthol advertisements on their store fronts. [1]

Tobacco retailers in low income, urban communities offer higher discount rates on mentholated cigarette brands, including between \$1.00 and \$1.50 off per pack or buy one (1) get one (1) free promotions, while more affluent white neighborhoods see discounts on menthols of only about \$0.50 off per pack or buy two (2) get one (1) free offers. [10]

Camel brand smokers and menthol smokers (Newport and Kool), who are more often young adults and African Americans, are much more likely to use promotional offers than those who smoke other brands. [22]

Young adults and African Americans are also less likely to switch from menthol to non-menthol cigarettes regardless of higher product price. [23]

Why Mentholated Tobacco Products Matter to the Health of the African American Community

Tobacco use is the number one cause of preventable death and disease and the key contributor in the three major causes of death among African Americans: heart disease, cancer, and stroke. [24]

According to a 2010 study by the Centers for Disease Control and Prevention (CDC), African Americans have a 26 percent higher smoking-related death rate for cancer and a 53 percent higher smoking-related death rate for circulatory diseases. [25]

Deaths from smoking-related diseases are higher among African Americans than among whites, despite the fact that African Americans typically smoke less and try to quit more often. [26]

African Americans have almost twice the risk of stroke compared to whites in the U.S. [27] Combined with the fact that smoking more than doubles a person's risk of stroke; the risk for stroke is even greater for African Americans. [28]

Lung cancer rates are extremely high in the African American community, with African American men 36 percent more likely than white men to have the disease. [29]

Heavy smoking doubles the rheumatoid arthritis risk among African Americans. The risk increases to more than fourfold for those heavy smokers who also have a genetic risk factor for the disease.[30]

African Americans have been one of the main target groups of menthol cigarette advertising. [31] Tobacco industry documents reveal aggressive menthol tobacco product marketing in urban, low-income, African American neighborhoods through marketing such as advertising more desirable menthol promotions, dedicating a greater store display space for menthol products, and allowing more menthol interior and exterior signage in stores. [32]

Historically, African Americans have been exposed to hundreds of tobacco advertisements and the tobacco industry has placed proportionately more menthol cigarette advertisements in African American magazines than in mainstream magazines. [26] Many of these targeted advertisements incorporate elements of African American culture, music, and messages related to racial identity and urban nightlife. [32]

The tobacco industry has been highly influential in the African American community for decades, providing funding and other resources to community leaders and emphasizing publicly its support for civil rights causes and groups, while ignoring the negative health effects of its products on those it claims to support. Tobacco industry support for African American communities is estimated to be as high as \$25 million per year. [33]

Today, menthol cigarettes are the overwhelming favorite tobacco product among African Americans. A 2015 CDC report found that among current cigarette smokers, 70.5 percent of African Americans reported menthol cigarette use; about 20 percentage points higher than whites and Hispanics. [17]

According to the Food and Drug Administration's (FDA) TPSAC, by 2020 the African American population will have suffered more than 4,700 excess deaths due to menthol in cigarettes, and more than 460,000 more African Americans will have started smoking due to the impact of menthol. [5]

For decades, the tobacco industry has donated generous amounts of money to members of the Congressional Black Caucus Foundation, the National Urban League, the National Association for the Advancement of Colored people and the United Negro College Fund. [34]

Many African American organizations opposing the ban on menthol in tobacco products continue to receive money from the tobacco industry. In 2014, Lorillard Tobacco donated campaign cash to half of all African American members of Congress, making African American lawmakers (all but one of whom are Democrats) 19 times as likely as their Democratic peers to get a donation. [35]

Menthol and Cessation

A leading model of smoking in the U.S. predicts that a 10 percent quit rate among menthol smokers would save thousands of lives, preventing more than 4,000 smoking-attributable deaths in the first ten years, and then more than 300,000 lives would be saved in over 40 years. Approximately 100,000 of those lives saved would be African Americans. [36]

Another model predicts that if menthol were prohibited, between 2010 and 2020, over 2.2 million people would not start smoking. By 2050, the number of people who would not start smoking would reach 9 million. [7]

Among African American smokers, menthol cigarette smoking is negatively associated with successful smoking cessation. [37]

Quitting menthol cigarettes is particularly difficult, because menthol smokers have to get over the dependency on nicotine as well as positive associations with menthol itself such as the minty taste, cooling sensation, and sensory excitation. [10]

Youth who initiate smoking with menthol cigarettes are more likely to become regular, addicted smokers and are more likely to show higher measures of dependence than youth who initiate with non-menthol cigarettes. [38]

Menthol smokers in the U.S. who report consuming 6-10 cigarettes per day show greater signs of nicotine dependence (i.e., shorter time to first cigarette in the day) than comparable non-menthol smokers. [39]

Menthol smokers in general and African American smokers in particular, have a difficult time quitting despite smoking significantly fewer cigarettes per day compared to non-menthol smokers. [26], [40] Compared to non-menthol African American light smokers, menthol smokers are younger and have less confidence to quit smoking. [41]

More than half of Americans support a ban on menthol [42], and a national study found that 44.5 percent of African Americans and 44 percent of females would quit smoking if menthol cigarettes were prohibited. [5]

Food and Drug Administration Regulation of Menthol Tobacco Products

In 2009, Congress passed the Family Smoking Prevention and Tobacco Control Act (FSPTCA) granting the FDA with regulatory authority over tobacco products. [43]

Effective September 22, 2009, the FSPTCA banned artificial or natural flavorings, as well as herbs or spices, which produce characterizing flavors in cigarettes. This included flavors such as strawberry, grape, orange, clove, cinnamon, pineapple, vanilla, coconut, licorice, cocoa, chocolate, cherry, and coffee. Menthol, however, was exempt from the ban. [44]

The FDA has the ability to prohibit menthol as an ingredient in cigarettes and other tobacco products. TPSAC was established and charged with developing a report assessing the impact of the use of menthol in cigarettes on public health and proposing recommendations to the FDA on whether menthol should be regulated or not. [43]

The TPSAC report and recommendations were submitted to the FDA on March 23, 2011. The TPSAC report found that the availability of menthol cigarettes has an adverse impact on public health in the U.S. and recommended removal of menthol cigarettes from the marketplace. [43]

On April 12, 2013, 20 leading national organizations and advocates filed a formal Citizen Petition urging the FDA to prohibit menthol as a characterizing flavoring in cigarettes. More than 1,000 public comments were submitted to the FDA. [43]

In July of 2013, the FDA released a preliminary scientific review that found that menthol made it easier to start smoking and allowed for a faster progression to regular use of cigarette smoking; it also found that menthol made it harder to quit smoking, especially among African American menthol smokers. The FDA solicited public comment on the “potential regulation” of menthol cigarettes. [45]

In July of 2014, a Federal District Court Judge, Justice Richard Leon, issued a decision requiring the FDA to appoint new members to the TPSAC and to prohibit the agency from using the 2013

scientific review prepared by the TPSAC. The judge ruled that the new TPSAC members must be unbiased and impartial, following a 2011 lawsuit by Lorillard Tobacco Company and R.J. Reynolds Tobacco Company against the FDA. The lawsuit sought a court order to require the FDA to reconstitute the TPSAC's membership, alleging that three TPSAC members had conflicts of interest because of their ongoing work as expert witnesses against tobacco companies in tobacco litigation and due to their consulting fees paid by pharmaceutical companies in connection with certain smoking cessation products. The FDA was ordered to reconstitute the advisory panel's membership and refrain from using the prior advisory panel's report on menthol cigarettes. [45]

In September of 2014, the U.S. Department of Justice filed an appeals motion on behalf of the FDA in response to Circuit Court Justice Leon's ruling in favor of the Tobacco Industry. [46]

In January 2016, a panel for the U.S. Court of Appeals for the District of Columbia Circuit overturned the lower Federal District Court ruling, holding that Lorillard and R.J. Reynolds Tobacco Companies lacked standing to bring the case to the courts. The court found that the injuries alleged by the plaintiffs were "too remote and uncertain...insufficiently imminent" and that the inclusion of the three members of the TPSAC committee with an alleged conflict of interest "by no means rendered the risk of eventual adverse FDA action substantially probable or imminent." [47]

The FDA has still not made a recommendation on whether to ban or limit menthol cigarettes. [45]

References

1. Kreslake, J.M., et al., *Tobacco industry control of menthol in cigarettes and targeting of adolescents and young adults*. American Journal of Public Health, 2008. **98**(9): p. 1685.
2. Kreslake, J.M. and V.B. Yerger, *Tobacco industry knowledge of the role of menthol in chemosensory perception of tobacco smoke*. Nicotine & Tobacco Research, 2010. **12**: p. 98-101.
3. Garten, S. and R.V. Falkner, *Continual smoking of mentholated cigarettes may mask the early warning symptoms of respiratory disease*. Preventive Medicine, 2003. **37**(4): p. 291-296.
4. Benowitz, N.L., B. Herrera, and P. Jacob, *Mentholated cigarette smoking inhibits nicotine metabolism*. Journal of Pharmacology and Experimental Therapeutics, 2004. **310**(3): p. 1208-1215.
5. Tobacco Control Legal Consortium et al., *Citizen Petition to Food and Drug Administration, Prohibiting Menthol As A Characterizing Flavor in Cigarettes* (April 12, 2013).
6. Unger, J.B., et al., *Menthol and non-menthol cigarette use among Black smokers in Southern California*. Nicotine & Tobacco Research, 2010.
7. Tobacco Product Scientific Advisory Committee (TPSAC), *Menthol cigarettes and the public health: Review of the scientific evidence and recommendations.*, U.S. Department of Health and Human Services Food and Drug Administration, Editor. 2011: Rockville, MD.
8. Levy, D.T., et al., *Quit attempts and quit rates among menthol and nonmenthol smokers in the United States*. 2011.
9. U.S. Food and Drug Administration, *Preliminary scientific evaluation of the possible public health effects of menthol versus nonmenthol cigarettes*. July 2013.
10. Gardiner, P. and P.I. Clark, *Menthol cigarettes: moving toward a broader definition of harm*. Nicotine & Tobacco Research, 2010. **12**: p. 85-93.
11. Henningfield, J.E., et al., *Does menthol enhance the addictiveness of cigarettes? An agenda for research*. Nicotine & Tobacco Research, 2003.
12. Substance Abuse and Mental Health Services Administration, *The NSDU Report: Use of Menthol Cigarettes*. 2009: Rockville, MD.
13. Giovino, G.A., et al., *Epidemiology of menthol cigarette use*. Nicotine & Tobacco Research, 2004. **6**: p. 67-81.
14. Wickham, R., *Focus: Addiction: How Menthol Alters Tobacco-Smoking Behavior: A Biological Perspective*. The Yale Journal of Biology and Medicine, 2015. **88**(3): p. 279.
15. Rock, V.J., et al., *Menthol cigarette use among racial and ethnic groups in the United States, 2004–2008*. Nicotine & Tobacco Research, 2010. **12**: p. 117-124.
16. Giovino, G.A., et al., *Differential trends in cigarette smoking in the USA: is menthol slowing progress?* Tobacco Control, 2013.
17. Corey, C.G., et al., *Flavored tobacco product use among middle and high school students—United States, 2014*. Morbidity Mortality Weekly Report, 2015. **64**(38): p. 1066-1070.

18. National Youth Advocacy Coalition, *Coming Out about Smoking: A Report from the National LGBTQ Young Adult Tobacco Project* 2010: Washington, DC.
19. Fernander, A., et al., *Are age of smoking initiation and purchasing patterns associated with menthol smoking?* *Addiction*, 2010. **105**(1): p. 39-45.
20. Davis, R.M., et al., *The role of the media in promoting and reducing tobacco use*. 2008.
21. Sutton, C.D. and R.G. Robinson, *The marketing of menthol cigarettes in the United States: populations, messages, and channels*. *Nicotine & Tobacco Research*, 2004. **6**(1): p. 83-91.
22. White, V.M., et al., *Cigarette promotional offers: who takes advantage?* *American Journal of Preventive Medicine*, 2006. **30**(3): p. 225-231.
23. Tauras, J.A., et al., *Menthol and non-menthol smoking: the impact of prices and smoke-free air laws*. *Addiction*, 2010. **105**(1): p. 115-123.
24. Surgeon General, *Tobacco use among U.S. racial/ethnic minority groups*. *The Journal of the American Medical Association*, 1998. **279**(22): p. 1776.
25. Centers for Disease Control and Prevention, *Racial disparities in smoking-attributable mortality and years of potential life lost---Missouri, 2003-2007*. *MMWR. Morbidity and Mortality Weekly Report*, 2010. **59**(46): p. 1518.
26. American Heart Association, *Tobacco industry's targeting of youth, minorities and women*.
27. Go, A., et al., *Heart Disease and Stroke Statistics*, American Heart Association Statistics Committee and Stroke Statistics Subcommittee, Editor. 2013, American Heart Association.
28. U.S. Department of Health and Human Services, *The health consequences of smoking: a report of the Surgeon General*. 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, 2004. **62**.
29. American Cancer Society, *Cancer Facts & Figures*, American Cancer Society, Editor. 2009, American Cancer Society: Atlanta, GA.
30. *News Release*. 2010, Arthritis & Rheumatism.
31. Gardiner, P.S., *The African Americanization of menthol cigarette use in the United States*. *Nicotine & Tobacco Research*, 2004. **6**(1): p. 55-65.
32. Cruz, T.B., L.T. Wright, and G. Crawford, *The menthol marketing mix: targeted promotions for focus communities in the United States*. *Nicotine & Tobacco Research*, 2010. **12**(suppl 2): p. S147-S153.
33. Yerger, V.B. and R.E. Malone, *African American leadership groups: smoking with the enemy*. *Tobacco Control*, 2002. **11**(4): p. 336-345.
34. Myron Levin, *Lorillard, other tobacco companies use politics to protect menthol brands*, in *Fairwarning*. November 18, 2015, News and Record: Greensboro, North Carolina.
35. Levin, M., *Racial Politics Flavor Debate Over Banning Menthol Cigarettes*, in *Fair Warning* November 17, 2015.
36. Pearson, J.L. and K. Blackman, *Modeling the future effects of a menthol ban on smoking prevalence and smoking-attributable deaths in the United States*. *American Journal of Public Health*, 2011. **101**(7): p. 1236.

37. Stahre, M., et al., *Racial/ethnic differences in menthol cigarette smoking, population quit ratios and utilization of evidence-based tobacco cessation treatments*. *Addiction*, 2010. **105**(1): p. 75-83.
38. Nonnemaker, J., et al., *Initiation with menthol cigarettes and youth smoking uptake*. *Addiction*, 2013. **108**(1): p. 171-178.
39. Fagan, P., et al., *Nicotine dependence and quitting behaviors among menthol and non-menthol smokers with similar consumptive patterns*. *Addiction*, 2010. **105**(1): p. 55-74.
40. Trinidad, D.R., et al., *Menthol cigarettes and smoking cessation among racial/ethnic groups in the United States*. *Addiction*, 2010. **105**(1): p. 84-94.
41. Okuyemi, K.S., et al., *Relationship between menthol cigarettes and smoking cessation among African American light smokers*. *Addiction*, 2007. **102**(12): p. 1979-1986.
42. Hartman, A.M. *What menthol smokers report they would do if menthol cigarettes were no longer sold*. in *FDA Tobacco Products Scientific Advisory Committee Meeting*. 2011.
43. Public Health Law Center. *Federal Regulation of Menthol Tobacco Products*.
44. *Family Smoking Prevention And Tobacco Control Act*, in *Public Law No. 111-31, 123 Stat. 1776 (codified, in relevant part, at 15 U.S.C.A. §§ 1333-34 and 21 U.S.C.A. § 301 et seq.)*. 2009.
45. Sabrina Tavernise, *F.D.A. Closer to Decision About Menthol Cigarettes*, in *The New York Times*. July 23, 2013.
46. *FDA Appeals Court Ruling on TPSAC Conflict of Interest*, in *American Thoracic Society News*. September 22, 2014.
47. Stern, M.B., et al., *R.J. Reynolds Tobacco Company, et al. v. United States Food and Drug Administration, et al.*, in *14-5226*, United States Court of Appeals for the District of Columbia Circuit, Editor. January 15, 2016.