TOBACCO FACT SHEET

MENTHOL



OVERVIEW

- Menthol is a chemical compound extracted from the peppermint or corn mint plant or created synthetically. It reduces the harshness of cigarette smoke due to its characteristic cooling effects on the mouth and throat.^{1,2}
- Although most cigarettes contain some menthol, certain brands use menthol in greater quantities as a characterizing flavor, and market and advertise those brands as "menthol." Menthol was first added to cigarettes in the 1920s and 1930s, and became widespread in the 1950s and 1960s.^{1,3,4}
- The 2009 Family Smoking Prevention and Tobacco Control Act's ban on the use of characterizing flavors in cigarettes did not include menthol, although the U.S. Food and Drug Administration (FDA) does have the authority to implement a ban through regulations. There are currently no restrictions on characterizing flavors, including menthol, in other tobacco products, such as little cigars, cigarillos, and smokeless tobacco.⁵

PREVALENCE AND MARKET SHARE

- Menthol cigarettes made up 32.0% of the cigarette market in the U.S. in 2011, up from 22.0% in 2010.6
- From 2000 to 2011, the decline in cigarette consumption was greater among non-menthol cigarettes (37% decline) than for menthol cigarettes (20% decline). 89% of the total decline in cigarette consumption is attributed to non-menthol cigarettes.⁷
- $\circ\,$ In 2010, there were an estimated 20 million menthol cigarette smokers in the U.S. $^{\rm s}$
- The prevalence of menthol cigarette use is higher in youth than young adults and adults.
 - From 2008 to 2010, 56.7% of youth smokers smoked menthol cigarettes, which compares with an overall menthol cigarette prevalence of 35.2% among youth and adult smokers.⁹
- A recent nationally representative study found that among youth and young adults, non-menthol cigarette prevalence declined from 2004 to 2010. By contrast, menthol cigarette prevalence remained constant among youth and increased among young adults over this period.⁹
- Women are 1.6 times more likely than men to smoke menthols.¹⁰

AFRICAN AMERICAN MENTHOL USE

- Almost one in five (19.1%) African Americans smoke menthol cigarettes.⁸
- Among African Americans who smoke, 84.5% use menthols, compared to 26.9% of White and 33.6% of Asian American smokers.⁸
- African American smokers are nearly 11 times more likely to use menthol than White smokers.¹⁰

MENTHOL: A STARTER PRODUCT FOR YOUTH

• Menthol reduces the harshness of cigarette smoke, which appeals to young, inexperienced smokers.^{1,11,12}

- Data from nationally representative samples show that the youngest age groups use menthol at the highest rates.^{9,13}
 - From 2008 to 2010, 56.7% of teenage smokers (aged 12 to 17) smoked menthol cigarettes, compared to 45.0% of 18 to 25 year-old smokers and 34.5% of smokers aged 26 to 34.9
 - Data combined for years 2004, 2006, and 2009 of the National Youth Tobacco Survey (NYTS) showed that 49.4% of middle school current smokers and 44.9% of high school current smokers reported smoking mentholated cigarettes.¹³
- Youth who have recently started smoking are significantly more likely to use menthol cigarettes than youth who have smoked longer than one year.^{8,14,15}
- Young people are likely to remain with their "starter" type of cigarette over time.^{16,17}
- Longitudinal studies show that initiation with menthol cigarettes facilitates progression to established cigarette use in young smokers.^{16,18}
- The proportion of smokers using menthol cigarettes is increasing. While use of non-menthol cigarettes decreased from 2004 to 2010, the percentage of youth (12 to 17 year-olds) who use menthol cigarettes remained constant and the percentage of young adults (18 to 25 year-olds) who use menthol cigarettes increased.^{8,9}

INDUSTRY TARGETING AND MANIPULATION

- The tobacco industry has a well-documented history of developing and marketing mentholated brands to racial and ethnic minorities and youth.^{12,19-22}
- Evidence from tobacco industry documents shows that the industry studied smokers' menthol preferences and manipulated menthol levels to appeal to a variety of smokers, including adolescents and young adults.^{11,12,19,23}
- Evidence from tobacco industry documents also shows that tobacco companies specifically targeted African Americans with menthol cigarette advertising.^{22,24-26}
- A recent review found that menthol marketing is higher in publications and venues that target African American audiences.²⁷
- Numerous studies show targeted marketing of menthol cigarettes at the point-of-sale in African American communities throughout the U.S.²⁸⁻³²

ADDICTION AND QUITTING

- Menthol flavoring contributes to addiction in youth smokers.^{1,33,34}
- Youth who smoke menthol cigarettes are significantly more likely to show signs of nicotine addiction than their peers who smoke non-menthol brands.^{15,16,35-37}
- Adult menthol smokers report shorter time to first cigarette after waking than non-menthol smokers.
 Time to first cigarette is an important measure of nicotine addiction.³⁸⁻⁴⁰
- Despite some variation in the findings across studies of cessation among menthol smokers,⁴¹⁻⁴⁴ the weight of the scientific evidence shows that adult menthol smokers are less likely than non-menthol smokers to successfully quit smoking⁴⁵⁻⁵³ despite increased quit intentions⁵⁰ and quit attempts.^{47,50,51} Studies show significantly reduced cessation among African-American^{45,46} and Hispanic menthol smokers compared to non-menthol smokers.⁴⁶

EFFECTS OF A POSSIBLE MENTHOL BAN

- One in five Americans agree that menthol flavoring in cigarettes should be banned.⁵⁴
- Support for the ban of menthol cigarettes is highest among Hispanics (36.4%), African Americans (29.0%), never smokers (26.8%), and respondents with less than a high school education (28.8%).⁵⁴
- If menthol cigarettes were banned, 38.9% of all menthol smokers, 44.5% of African American menthol smokers, and 64.6% of young adult menthol smokers report they would try to quit smoking.^{54,55}
- If a menthol ban had gone into effect in 2011, researchers estimate conservatively that over 320,000 smoking-attributable deaths would be averted by 2050, almost a third of them among African Americans.⁵⁶

- ⁵ H.R. 1256--111th Congress: Family Smoking Prevention and Tobacco Control Act. 2009; <u>http://www.govtrack.us/congress/bills/111/</u> hr1256. Accessed April 2, 2012.
- ⁶ Federal Trade Commission. Federal Trade Commission cigarette report for 2011. Washington, DC 2013.
- ⁷ Delnevo CD, Villanti AC, Giovino GA. Trends in menthol and non-menthol cigarette consumption in the USA: 2000-2011. *Tob Control.* Dec 13 2013.
- ⁸ Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. *The NSDUH Report: Recent Trends in Menthol Cigarette Use*. Rockville, MD November 18 2011.
- ⁹ Giovino GA, Villanti AC, Mowery PD, et al. Differential trends in cigarette smoking in the USA: is menthol slowing progress? *Tob Control.* Sep 27 2013.
- ¹⁰ Lawrence D, Rose A, Fagan P, Moolchan ET, Gibson JT, Backinger CL. National patterns and correlates of mentholated cigarette use in the United States. *Addiction*. 2010;105:13-31.
- ¹¹ Klausner K. Menthol cigarettes and smoking initiation: a tobacco industry perspective. *Tob Control.* May 2011;20 Suppl 2:ii12-19.
- ¹² U. S. Department of Health and Human Services. *Preventing tobacco use among youth and young adults: a report of the Surgeon General.* Atlanta, GA: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health;2012.
- ¹³ Caraballo RS, Asman K. Epidemiology of menthol cigarette use in the United States. *Tob Induc Dis.* 2011;9 Suppl 1:S1.
- ¹⁴ Substance Abuse and Mental Health Services Administration, Office of Applied Studies. *The NSDUH Report: Use of Menthol Cigarettes*. Rockville, MD 2009.
- ¹⁵ Hersey JC, Ng SW, Nonnemaker JM, et al. Are menthol cigarettes a starter product for youth? *Nicotine & Tobacco Research*. 2006;8:403-413.
- ¹⁶ Nonnemaker J, Hersey J, Homsi G, Busey A, Allen J, Vallone D. Initiation with menthol cigarettes and youth smoking uptake. *Addiction.* Jan 2013;108(1):171-178.
- ¹⁷ Villanti AC, Giovino GA, Barker DC, Mowery PD, Sevilimedu V, Abrams DB. Menthol brand switching among adolescents and young adults in the National Youth Smoking Cessation Survey. *Am J Public Health*. 2012;102(7):1310-1312.
- ¹⁸ Dauphinee AL, Doxey JR, Schleicher NC, Fortmann SP, Henriksen L. Racial differences in cigarette brand recognition and impact on youth smoking. *BMC Public Health*. 2013;13(1):170.
- ¹⁹ Kreslake JM, Wayne GF, Connolly GN. The menthol smoker: tobacco industry research on consumer sensory perception of menthol cigarettes and its role in smoking behavior. *Nicotine Tob Res.* Apr 2008;10:705-715.

¹ Tobacco Products Scientific Advisory Committee. *Menthol Cigarettes and Public Health: Review of the Scientific Evidence and Recommendations*. Rockville, MD: Center for Tobacco Products, Food and Drug Administration;2011.

² Yerger VB, McCandless PM. Menthol sensory qualities and smoking topography: a review of tobacco industry documents. *Tob Control.* May 2011;20 Suppl 2:ii37-43.

³ Ogden M. Senior Director of Regulatory Oversight, R. J. Reynolds Tobacco Company. Tobacco Products Scientific Advisory Committee Meeting Minutes. 40-60: Available at: <u>http://www.fda.gov/downloads/AdvisoryCommittees/</u> <u>CommitteesMeetingMaterials/TobaccoProductsScientificAdvisoryCommittee/UCM229742.pdf</u>.

⁴ Reid JR. A History of Mentholated Cigarettes: "This Spud's For You". Phillip Morris. Legacy Tobacco Documents Library. Bates No. 2081595850/5863. Available at: <u>http://legacy.library.ucsf.edu/tid/tvj86c00</u>.

- ²⁰Cruz TB, Wright LT, Crawford G. The menthol marketing mix: Targeted promotions for focus communities in the United States. *Nicotine Tob Res.* 2010;12(SUPPL. 2).
- ²¹ Anderson SJ. Marketing of menthol cigarettes and consumer perceptions: a review of tobacco industry documents. *Tob Control.* 2011;20 Suppl 2:ii20-28.
- ²² U.S. Department of Health and Human Services. Tobacco Use Among U.S. Racial/Ethnic Minority Groups- African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders and Hispanics: A Report of the Surgeon General. Atlanta, Georgia: 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, 1998.: U.S. Department of Health and Human Services;1998.
- ²³ Sutton CD, Robinson RG. The marketing of menthol cigarettes in the United States: populations, messages, and channels. Nicotine Tob Res. 2004;6 Suppl 1:S83-S91.
- ²⁴Gardiner PS. The African Americanization of menthol cigarette use in the United States. *Nicotine & Tobacco Research*. 2004;6(Suppl 1):S55-65.
- ²⁵ MSA Inc. The Growth of Menthols, 1933-1977. 1978. Brown & Williamson. Legacy Tobacco Documents Library. Bates No. 621053370/3446. Available at: <u>http://legacy.library.ucsf.edu/tid/rqp21f00</u>.
- ²⁶ The Beaumont Organization. 1979 Consumer Wants Study: Areas of Opportunity for R. J. Reynolds. 1980. R. J. Reynolds. Legacy Tobacco Documents Library. Bates No. 500098049/8054. Available at: <u>http://legacy.library.ucsf.edu/tid/oqx89d00</u>.
- ²⁷ Rising J, Alexander L. Marketing of menthol cigarettes and consumer perceptions. *Tob Induc Dis*. 2011;9 Suppl 1:S2.
- ²⁸ Yerger VB, Przewoznik J, Malone RE. Racialized geography, corporate activity, and health disparities: tobacco industry targeting of inner cities. *J Health Care Poor Underserved*. Nov 2007;18(4 Suppl):10-38.
- ²⁹ Widome R, Brock B, Noble P, Forster JL. The relationship of neighborhood demographic characteristics to point-of-sale tobacco advertising and marketing. *Ethnicity & Health*. Apr 2013;18(2):136-151.
- ³⁰Henriksen L, Schleicher NC, Dauphinee AL, Fortmann SP. Targeted advertising, promotion, and price for menthol cigarettes in California high school neighborhoods. *Nicotine & Tobacco Research*. Jan 2012;14(1):116-121.
- ³¹ Seidenberg AB, Caughey RW, Rees VW, Connolly GN. Storefront cigarette advertising differs by community demographic profile. *Am J Health Promot.* 2010;24(6):e26-31.
- ³² Pearson JL, Cantrell J, Ganz O, et al. Lorillard brands' availability, price and advertising: association with neighborhood. 19th Annual Society for Research on Nicotine and Tobacco Research Meeting. Boston, MA2013.
- ³³ Yerger VB. Menthol's potential effects on nicotine dependence: A tobacco industry perspective. *Tob Con*. May 1, 2011 2011;20(Suppl 2):ii29-ii36.
- ³⁴ Hoffman AC, Simmons D. Menthol cigarette smoking and nicotine dependence. *Tob Induc Dis*. 2011;9 Suppl 1:S5.
- ³⁵Hersey JC, Nonnemaker JM, Homsi G. Menthol cigarettes contribute to the appeal and addiction potential of smoking for youth. *Nicotine Tob Res.* Dec 2010;12 Suppl 2:S136-146.
- ³⁶ Collins CC, Moolchan ET. Shorter time to first cigarette of the day in menthol adolescent cigarette smokers. *Addictive Behaviors*. 2006;31:1460-1464.
- ³⁷ Wackowski O, Delnevo CD. Menthol cigarettes and indicators of tobacco dependence among adolescents. *Addictive Behaviors*. 2007;32:1964-1969.
- ³⁸ Ahijevych K, Parsley LA. Smoke constituent exposure and stage of change in black and white women cigarette smokers. *Addict Behav.* 1999;24:115-120.
- ³⁹ Muscat JE, Liu HP, Stellman SD, Richie JP, Jr. Menthol smoking in relation to time to first cigarette and cotinine: results from a community-based study. *Regul Toxicol Pharmacol*. Jun 2012;63(1):166-170.
- ⁴⁰Rosenbloom J, Rees VW, Reid K, Wong J, Kinnunen T. A cross-sectional study on tobacco use and dependence among women: Does menthol matter? *Tob Induc Dis*. 2012;10(1).
- ⁴¹ Cubbin C, Soobader M-J, LeClere FB. The intersection of gender and race/ethnicity in smoking behaviors among menthol and non-menthol smokers in the United States. *Addiction*. 2010;105:32-38.
- ⁴²Hyland A, Garten S, Giovino G, Cummings K. Mentholated cigarettes and smoking cessation: findings from COMMIT. *Tob Control*. 2002;11:135 139.
- ⁴³Fu SS, Okuyemi KS, Partin MR, et al. Menthol cigarettes and smoking cessation during an aided attempt. *Nicotine & Tobacco Research*. 2008;10:457-462.
- ⁴⁴Fagan P, Moolchan ET, Hart A, et al. Nicotine dependence and quitting behaviors among menthol and non-menthol smokers with similar consumptive patterns. *Addiction*. 2010;105:55-74.
- ⁴⁵Stahre M, Okuyemi KS, Joseph AM, Fu SS. Racial/ethnic differences in menthol cigarette smoking, population quit ratios and utilization of evidence-based tobacco cessation treatments. *Addiction*. 2010;105:75-83.
- ⁴⁶Gundersen DA, Delnevo CD, Wackowski O. Exploring the relationship between race/ethnicity, menthol smoking, and cessation, in a nationally representative sample of adults. *Prev Med*. Dec 2009;49(6):553-557.

- ⁴⁷ Pletcher MJ, Hulley BJ, Houston T, Kiefe CI, Benowitz N, Sidney S. Menthol cigarettes, smoking cessation, atherosclerosis, and pumonary function: the Coronary Artery Development in Young Adults (CARDIA) study. *Archives of Internal Medicine*. 2006;166:1915-1922.
- ⁴⁸Gandhi KK, Foulds J, Steinberg MB, Lu SE, Williams JM. Lower quit rates among African American and Latino menthol cigarette smokers at a tobacco treatment clinic. *Int J Clin Pract.* 2009;63:360-367.
- ⁴⁹ Okuyemi KS, Faseru B, Sanderson Cox L, Bronars CA, Ahluwalia JS. Relationship between menthol cigarettes and smoking cessation among African American light smokers. *Addiction*. 2007;102:1976-1986.
- ⁵⁰ Trinidad DR, Pérez-Stable EJ, Messer K, White MM, Pierce JP. Menthol cigarettes and smoking cessation among racial/ethnic groups in the United States. *Addiction*. 2010;105:84-94.
- ⁵¹ Levy DT, Blackman K, Tauras J, et al. Quit attempts and quit rates among menthol and nonmenthol smokers in the United States. *Am J Public Health.* Jul 2011;101(7):1241-1247.
- ⁵² Okuyemi K, Ahluwalia J, Ebersole-Robinson M, Catley D, Mayo M, Resnicow K. Does menthol attenuate the effect of bupropion among African American smokers? *Addiction.* 2003;98(10):1387-1393.
- ⁵³ Delnevo CD, Gundersen DA, Hrywna M, Echeverria SE, Steinberg MB. Smoking-cessation prevalence among U.S. smokers of menthol versus non-menthol cigarettes. *Am J Prev Med*. Oct 2011;41(4):357-365.
- ⁵⁴Pearson JL, Abrams DB, Niaura RS, Richardson A, Vallone DM. A ban on menthol cigarettes: impact on public opinion and smokers' intention to quit. *Am J Public Health*. 2012;102(11):e107-114.
- ⁵⁵ Wackowski OA, Manderski MT, Delnevo CD. Young Adults' Behavioral Intentions Surrounding a Potential Menthol Cigarette Ban. *Nicotine Tob Res.* Feb 10 2014.
- ⁵⁶Levy DT, Pearson JL, Villanti AC, Blackman K, Vallone D, Abrams D. Modeling the future effects of a menthol ban on reduced smoking prevalence and deaths averted in the United States. *Am J Public Health*. 2011;101(7):1236-1240.