

Menthol And Flavors: Helps The Poison Go Down Easier!

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Menthol: What it is

What it Does

The Ultimate Candy Flavoring; Menthol Helps The Poison Go Down Easier

- Chief Constituent of Peppermint Oil; Minty-Candy Taste; Masks the Harshness of Smoking
- Cooling Sensation; activates taste buds; cold receptors; increases throat grab
- Anesthetic effects; Mimics Bronchial Dilatation; easier to inhale; deeper inhalation; more nicotine taken in.
- Mentholated cigarette smoking inhibits nicotine metabolism

The Ultimate Candy Flavoring; Menthol Helps The Poison Go Down Easier

- Independent Sensory Activation Neurotransmitters
- Increases Salivary Flow; Trans buccal Drug absorption
- Greater Cell Permeability
 - (Brody et al., 2013) (Ahijevych 2004 & Garrett) (Ferris, 2004; Benowitz, 2004)

Racial Differences Cotinine Clearance, Half-Life, and Nicotine

	Black	White
Cotinine	0.56 ml (p=.009)	0.68 ml
Half/Life	1064 min (p=.07)	950 min
Nic/Cig	1.41 mg (p=.02)	1.09 mg

(Perez-Stable, et al., 1998)

Melanin and Nicotine

- Melanin is the substance that gives color to our skin
- Nicotine is stored in tissues that contain melanin
- The darker your skin means that more nicotine is stored in your body
(King et al., 2009)

Menthol Harder to Quit!

	Quit Attempts	% Difference
Non-Menthol	38.1%	
Menthol	41.4%	+8.8%
	Cessation (>3 mo.)	% Difference
Non-Menthol	21.2%	
Menthol	18.3%	-13.8%

(Levy, et al., 2011)

Menthols: The New Cigarette of Choice

Although overall smoking prevalence has decreased, the prevalence of menthol cigarette use among past 30-day cigarette smokers increased significantly from

- **35% in 2008–2010 to**
- **39% in 2012–2014.**

(Villanti et al., 2016)

Menthols: Its Not Just Kids

- **Significant increases in menthol cigarette use among adults ages:**
 - 18–25
 - 26–34
 - 35–49
 - between the two time periods; 2008-2010 – 2012-2014
 - (Villanti et al., 2016)

All Smokers Choosing Menthols

- While menthol cigarette prevalence has remained constant among **African American** smokers, it has increased among:
 - **Whites**
 - **Asian Americans**
 - **Hispanics**
- (Villanti et al., 2016)

1st, 2nd and 3rd Generations: Talking About Flavors!



Flavors R Us!

All 15,000 of them and Counting

Flavorings GRAS? Not For Inhalation

- Aldehydes toxicologically are primary irritants of the mucosa of the respiratory tract
- The lungs have a different spectrum of toxicity than the intestinal tract, substances known to be safe when swallowed can still be dangerous when inhaled

- (Williams, James, and Robert, 2015)

Flavors = Aldehydes

- Cause Respiratory Inflammation
- Impairs Immune Cell Functions
- Dysregulates antioxidant Responses
- Increases Susceptibility to Infection
- Contribute to emphysema and COPD

Cinnamaldehyde in Flavored E-Cigarette Liquids

- Suppresses bronchial epithelial cell ciliary motility
- Dysregulation of mitochondrial function
- **With essential respiratory defenses down, inhalation of cinnamaldehyde may increase the risk of respiratory infections in e-cigarette users.**
 - (Clapp et al., 2019)

Cariogenic potential of sweet flavors in electronic-cigarette liquids

- “Aerosols have similar physio-chemical properties as high-sucrose, gelatinous candies and acidic drinks
- The combination of the viscosity of e-liquids and some classes of chemicals in sweet flavors may increase the risk of cariogenic potential.”
 - (Kim et al., 2018)
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0203717>

Diacetyl: Popcorn Lung

- “Popcorn lung” comes from inhaling diacetyl, a chemical widely used in the flavor industry to simulate dairy (e.g. butter, cheese, yogurt), fruit flavors (e.g. strawberry, bananas), and so-called brown flavors (e.g. coffee, butterscotch)
- In flavoring-induced lung disease, the tiny bronchiole passages located near the air exchanging alveoli become gradually scarred shut. One can become progressively shorter of breath due to poor oxygen absorption
- Diacetyl has been found in many e-cigarette vapors, especially sweet flavors.
 - (Tierney et al., 2015; Farsalinos, 2014)

Flavors and the Heart

- **The vape flavorings so popular with kids and young adults are cardiotoxic and disrupt the heart's normal electrical activity**
 - **Disrupts Rhythm**
 - **Increased toxicity in Cardio cells**
- “In Vitro and In Vivo Cardiac Toxicity of Flavored Electronic Nicotine Delivery Systems” by Obada Abou-Assali, Mengmeng Chang, Bojjibabu Chidipi, Jose L. Martinez-de-Juan, Michelle Reiser, Manasa Kanithi, Ravi Soni, Thomas Vincent McDonald, Bengt Herweg, Javier Saiz, Laurent Calcul and Sami F. Noujaim, 20 November 2020, *American Journal of Physiology-Heart and Circulatory Physiology*.
[DOI: 10.1152/ajpheart.00283.2020](https://doi.org/10.1152/ajpheart.00283.2020)

Menthol A Sacrificial Lamb



1823060 www.fotosearch.com

A Deal with the Devil?

- **Family Smoking Prevention and Tobacco Control Act**
 - Proposed in 2008; Enacted in 2009
 - Dealers: Philip Morris, Southern Senators and representatives of the tobacco control movement
 - Eliminate 13 flavors in cigarettes
 - **Excluded Menthol!!**
 - **African Americans, Women, Youth, Native Hawaiians, Filipinos, LGBTQ folks, Puerto Ricans, Behavioral Health issues**

Push Back: Amended FDA Bill

- NY Times, May 2008
- Califano and Sullivan Letter, July, 2008
- Donna Christensen, D-V.I., Amendment, August 2008
- TPSAC 1st order of business issue a report of **the impact of the use of menthol in cigarettes on the public health, including such use among African Americans, Hispanics, and other racial and ethnic minorities.** (HR 1256, Sec. 907 (e) (1))

Federal Inaction

- 2011 TPSAC Report “the removal of menthol products from the marketplace would be beneficial to the public’s health.”
The OMB sat on this report until early 2013.
- 2013/2014 FDA CTP Report Same conclusion as the TPSAC;
still no action

Stirring?

- 2014 The tobacco industry sued; **thus effectively blocking the use of the TPSAC report.**
- 2015 Ruling was overturned
- 2016 **FDA CTP took the bold step of including restrictions on the selling of menthol and all other flavors** in the new “deeming regulations” for e-cigs, hookah, cigars, cigarillos and the like.

Same Old, Same Old!

- However, to add insult to 7 years of inaction and injury, 16 pages of the new deeming regulations were **red-lined / deleted by the OMB that pertained to flavors and menthol, thus again exempting menthol.**

- (FDA, May 2016)

Snake in the Grass

- **Andrew Perraut** White House's Office of Information and Regulatory Affairs in the OMB from 2008 to 2014. He supervised FDA and USDA policies relating among other things, tobacco.
- Hired by the Cigar Association and NJOY in 2014
- Re-hired by the White house to serve in the OMB in 2015 (NY Times, September 2, 2016)

Where Are We Today? It's A Hot Mess!

- FDA policy does not allow:
 - Any pre-filled flavored vape pods that snap into vapes like Juul pods, but still except menthol or tobacco flavors.
- FDA policy allows:
 - All refillable flavored vapes, like Suorin and Smok.
 - All single-use disposable flavored vapes, like Puff Bar.*
 - Pre-filled menthol and tobacco-flavored pods.

Major Moments in the Fight Against Menthol

- **2009 Family Smoking Prevention and Tobacco Control Act**
 - 2013 Chicago
 - 2016 Deeming Regulations
 - 2018 San Francisco
- 2019 HR 2339 (Pallone) Bill Passes US House of Representatives
 - 2020 Massachusetts
 - 2020 FDA Sued
 - 2020 California SB-793*

Menthol Restrictions 2020

- 207 Jurisdictions Flavor Restrictions
- 65 Jurisdictions Menthol Restrictions
- 2 States Flavor/ Menthol Restrictions
 - Massachusetts
 - California

<https://no-smoke.org/wp-content/uploads/pdf/flavored-tobacco-product-sales.pdf>

Take Home Message: Menthol is a Social Justice Issue!

- The disproportionate marketing and targeting candy-flavored poison to African Americans and other specially oppressed sectors of our society, is out-right discriminatory and genocidal.
 - Poorest; least informed; fewest resources; indeed, the definition of preying on the most vulnerable sections of our society.

If Menthol Were Banned 100,000s of Lives Would Be Saved

2010 – 2050

All Menthol Smokers Black Menthol Smokers

10%	323,107	91,744
20%	478,154	164,465
30%	633,252	237,317

(Levy, et al., 2011)

What's at Stake?



Thank You!

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**African American Tobacco Control
Leadership Council (AATCLC)**

Saving Black Lives

www.savingblacklives.org