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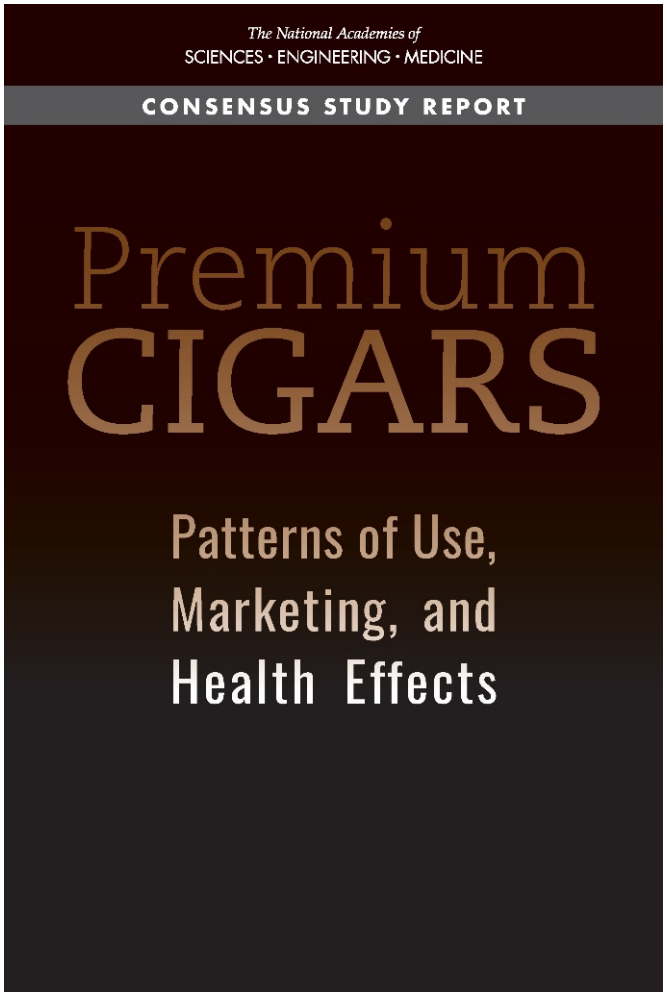
HEALTH AND MEDICINE DIVISION

Premium Cigars: Patterns of Use, Marketing, and Health Effects

Report Release
March 10, 2022



Committee

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Statement of Task

- Conduct a **comprehensive and systematic assessment and review** of the scientific literature
- Describe **patterns of use** for premium cigars and how those may differ among cigar subtypes and other tobacco products as well as by different populations (types of tobacco users, age, and other demographics)
- Evaluate the available evidence of the **short- and long-term health effects** related to the use of premium cigars
- Make **prioritized recommendations** for future federally funded **research** on premium cigars

From left to right: premium cigar, premium cigar, traditional cigar, cigarillo, cigarillo, filtered/little cigar, filtered/little cigar, cigarette. Photo: S. Yassin.

Committee Process

- 5 virtual meetings
  - Information gathering
    - Input from a broad range of invited stakeholders; open to the public
  - Deliberative

- FDA and NIH provided an initial list of research objectives and questions
  - Received written and oral input from stakeholders

- Literature review and quality assessment
  - Little research specific to premium cigars

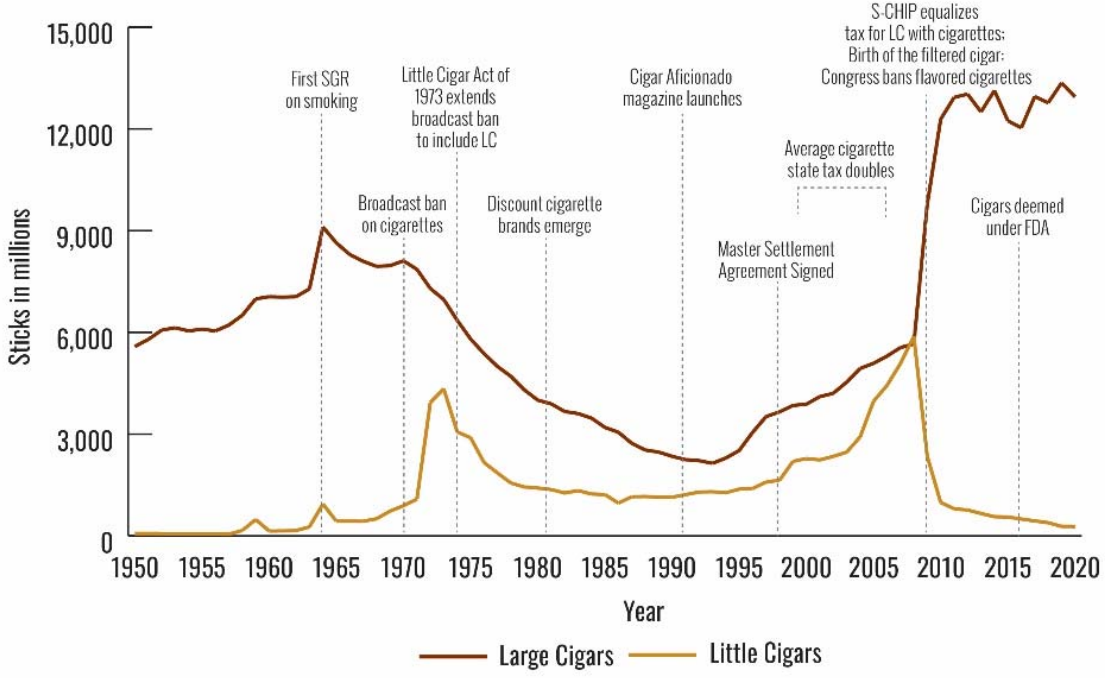
- Levels of evidence and conclusions

- Commissioned analyses

- Prepared 6-chapter report with 13 findings, 24 conclusions, and 9 priority **research** recommendations for federal support
  - External peer review by 12 expert reviewers mirroring committee's expertise

Background

- Surge of cigar consumption in mid-1990s
  - Last comprehensive review of cigars: 1998 NCI monograph
- No single, consistent definition of premium cigars
- Cigars deemed under FDA authority in 2016



Consumption of little and large cigars in the United States, 1950–2020. Source: Adapted from Delnevo et al., 2017.

Overarching Messages

- The committee identified no material difference between products typically considered premium and other cigar types in terms of harmful or potentially harmful constituents.
- However, a meaningful difference exists in how products typically considered premium are currently used (e.g., frequency of use, depth of inhalation). Premium cigars are used less frequently than other combustible products, and are likely less intensively inhaled.
- Premium cigar patterns of use could change due to many factors, including regulatory changes, marketing practices, consumer awareness, or prices.
- Tobacco products are inherently harmful, but their patterns of use are mutable, including how and by whom they are used, which ultimately determines their health effects. If the patterns of use of premium cigars change, the health effects will change as well.

Definition

The committee was not tasked with recommending a regulatory definition of a premium cigar.

For the purposes of its work, the committee defined a premium cigar as having all of the following characteristics:

1) handmade,
2) filler composed of at least 50 percent natural long-leaf filler tobacco,
3) wrapped in whole leaf tobacco (i.e., not reconstituted tobacco),
4) weight of at least 6 pounds per 1,000 units,
5) no filters or tips, and
6) no characterizing flavor other than tobacco.

Why not price?

- Affected by taxation
- Can be changed by industry
- Serves as a proxy for the first three attributes of the committee's definition

Report Focus Areas

1) Characteristics of cigars

2) Patterns of use

3) Marketing and perceptions

4) Health effects

Evidence Framework

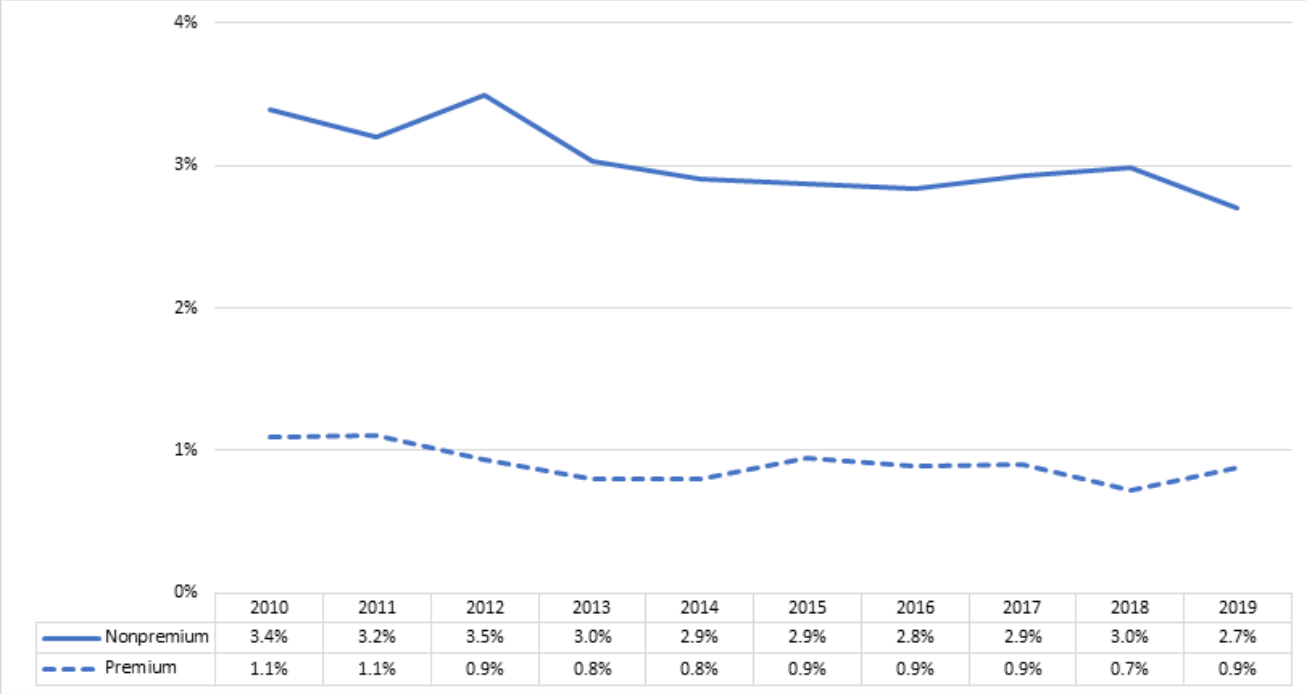
- Conclusive
- Strongly suggestive
- Moderately suggestive
- Insufficient/ no available evidence

Conclusive evidence implies the observed associations between premium cigar use and a given outcome are very unlikely to change with new evidence, whereas other categories provide progressively less evidence.

- "Premium cigar" not used systematically in research
- Committee extrapolated data from other tobacco product as appropriate
- Relied heavily on biological mechanisms

Patterns of Use Findings

- Wide variety of cigar products on market
  - Premium cigars weigh more than typical definition of 6 lbs per 1000 units
  - Premium cigars make up small percent of total cigar market
- About 1% of the U.S. adult population smoke premium cigars

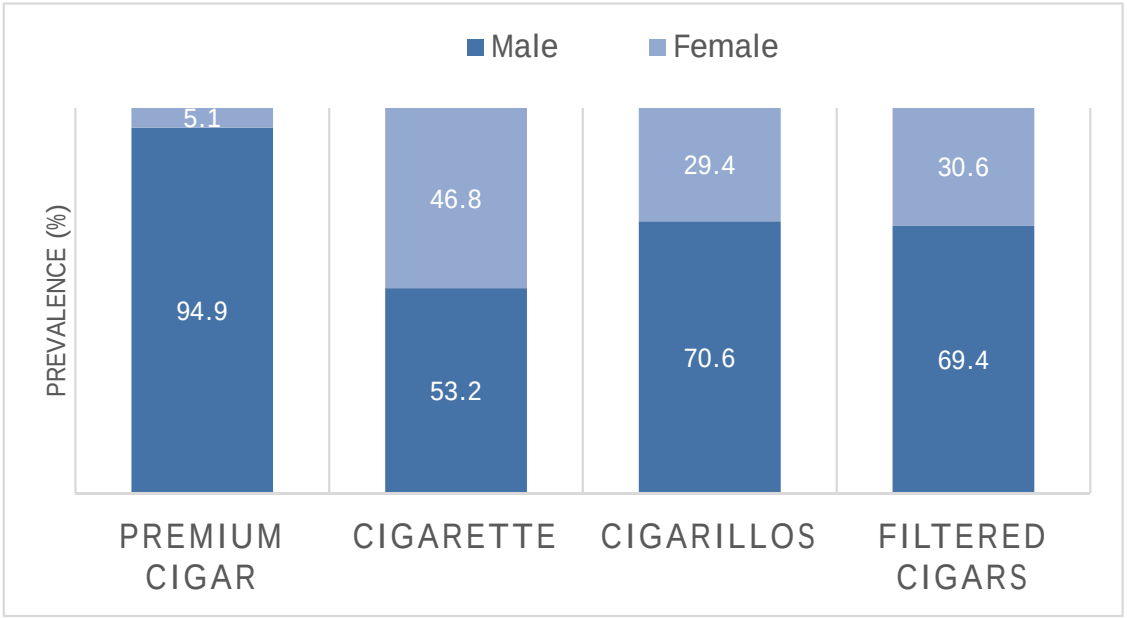


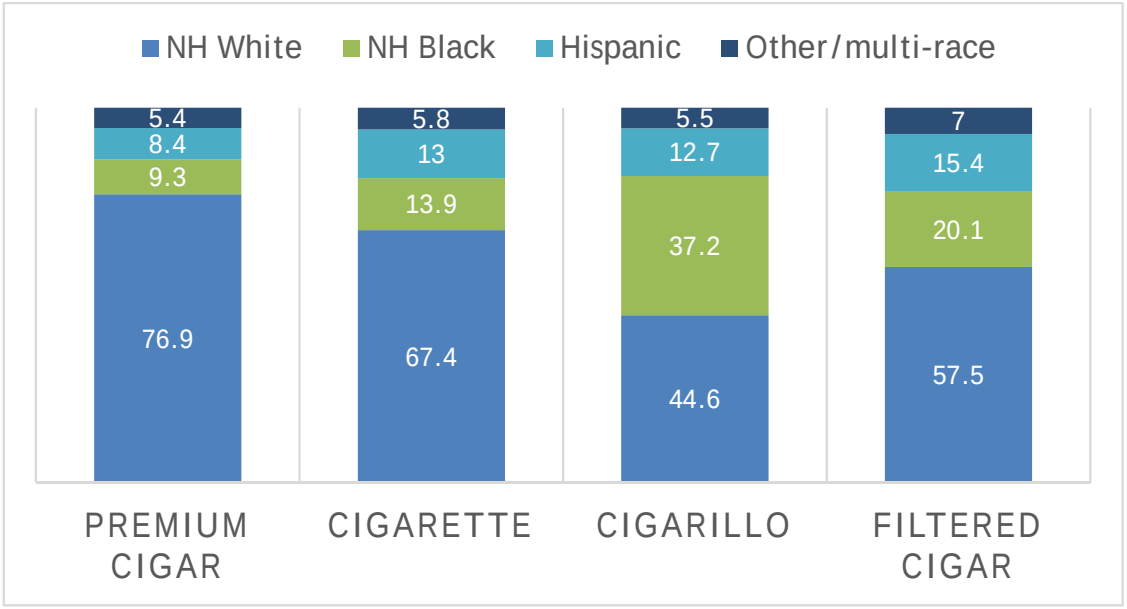
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Nonpremium	3.4%	3.2%	3.5%	3.0%	2.9%	2.9%	2.8%	2.9%	3.0%	2.7%
Premium	1.1%	1.1%	0.9%	0.8%	0.8%	0.9%	0.9%	0.9%	0.7%	0.9%

Prevalence of premium verses nonpremium current cigar smoking (past-30-day use), NSDUH 2010-2019. Source: Bover Manderski et al., 2022.

Patterns of Use Findings

- Majority of premium cigar users are male, white, with higher income and education levels
- At present, frequency and intensity of smoking is lower for premium cigars compared to other types of cigars and cigarettes
- At present, premium cigar users are less likely to smoke cigarettes or other cigar types concurrently than other cigar type users





Sex and race/ethnicity distribution by cigar type, PATH Wave 5.
Source: Data from Jeon and Mok, 2022.

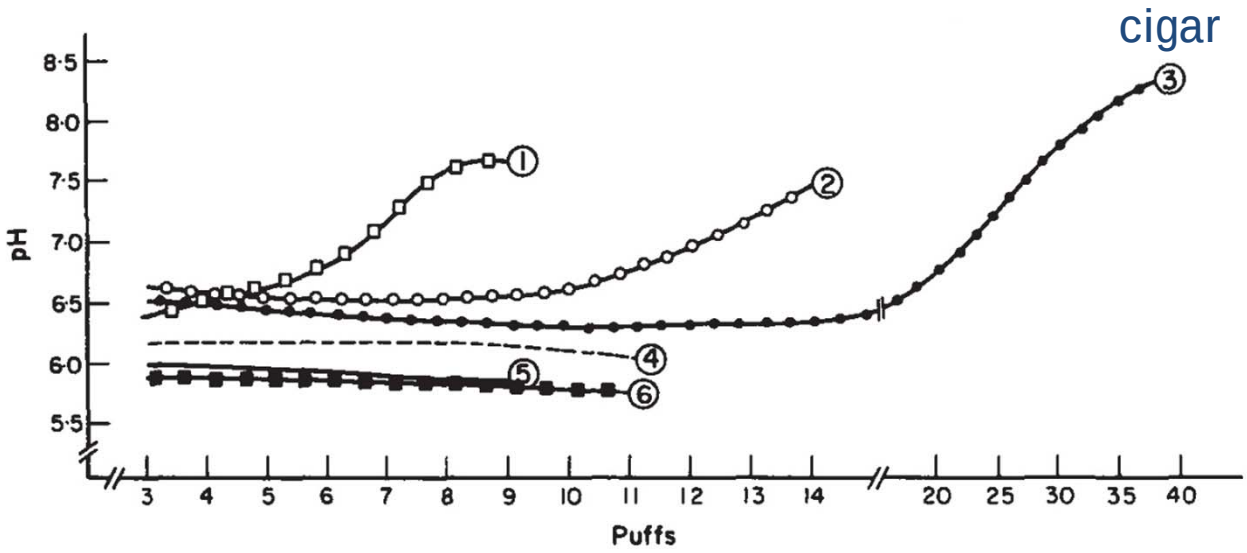
Report Conclusions

Cigar Characteristics

The toxic constituents in premium cigar **tobacco** are similar to cigarettes and other cigars. *[2-1]*

Toxicants and carcinogens in cigar **smoke** are the same as those in cigarette smoke; premium cigar smoke is likely the same as other cigar smoke. *[2-2]*

Cigar tobacco pH varies; higher pH has been noted in premium cigar tobacco. Large cigar smoke pH is higher than cigarette smoke, which can increase nicotine absorption through the oral mucosa. There is insufficient evidence to determine the association between premium cigar tobacco pH and smoke pH. *[2-3]*



pH of total mainstream smoke of various tobacco products. Source: Brunnemann and Hoffmann, 1974.

Cigar Characteristics (cont.)

Cigar smokers are exposed to significant amounts of nicotine and harmful and potentially harmful constituents. *[2-4]*

Inhalation patterns affect exposure to toxic constituents; concurrent or past cigarette smokers likely inhale more premium cigar smoke than exclusive premium cigar users. *[2-5]*

	Weight (g)	Nicotine Concentration (mg/g tobacco)	Total Nicotine per Premium Cigar (mg/stick)
Mean	14.42	19.91	297.89
Range	6.60 – 25.80	8.51 – 33.26	98.62 – 629.26

Tobacco Nicotine Content in a Sample of Premium Cigars

N=44; Brands: Arturo Fuente, Ashton, CAO, Cohiba, Davidoff, K. Hansotia Gurkha, La Gloria Cubana, Macanudo, Montecristo, My Father, Padron, Partagas, Punch, Rocky Patel, Romeo y Julieta.

Source: Yassin et al., 2022.

Health Effects Summary

- Premium cigars are not inherently less risky than other cigar types.
- Premium cigars can cause disease.
- Health risk is directly tied to how often premium cigars are used and inhalation patterns.
- If cigars are used regularly and the smoke is inhaled, the health risks are likely to be similar to cigarette smoking.
- Users who also smoke cigarettes are more likely to inhale cigar smoke, leading to greater health risk.
- Premium cigars have the potential to be addictive.
- Adding flavors to premium cigars could increase their use and therefore health effects.

Health Effects

Cigar smoke contains constituents that can cause cardiovascular and lung disease, cancer, and other negative health effects. *[5-1]*

Cigar emissions are similar to that of cigarettes; exposure to these chemicals can cause disease.

- If cigars are used regularly and the smoke is inhaled, the health risks are likely to be qualitatively similar to cigarette smoking. *[5-2]*

The health risks of premium cigar use depend on the frequency, intensity, and duration of use and inhalation depth. *[5-3]*

Health Effects (cont.)

There is insufficient data to determine if occasional exclusive cigar use increases health risks. *[5-4]*

Since most premium cigar users smoke infrequently, and are less likely to inhale the smoke, the health risks of such users are likely less than those who smoke other cigar types.

- This is not because the cigars themselves are inherently less dangerous, it is due solely to how they are smoked, and how often. *[5-5]*

Health risks of daily exclusive cigar smoking are higher than not smoking, but lower than daily cigarette smoking. *[5-6]*

Health risks in cigar users who have never smoked cigarettes are lower than in those who have smoked cigarettes because they are less likely to inhale smoke. Health risks are higher in concurrent users of premium cigars and other combustible tobacco products than exclusive premium cigar users. *[5-7]*

Health Effects (cont.)

More research is needed on the health effects of premium cigars in priority populations, including

- Youth or young adults,
- Racialized and ethnic populations,
- Pregnancy,
- Those with underlying medical conditions,
- People with occupational exposures to premium cigars. *[5-8]*

Adding flavors to premium cigars could result in greater appeal to nonusers and more frequent use, thereby increasing nicotine intake, addiction potential, and exposure to smoke constituents. *[5-9]*

Premium cigars generate secondhand smoke; more research is needed on exposure and health risks. *[5-10]*

It is biologically plausible that regular cigar smoking can be addictive, including premium cigars. The magnitude of dependence appears to be less than that of cigarette and smokeless tobacco, and patterns of use likely affect dependence. *[5-11]*

Marketing and Perceptions

Third-party retailers use direct-to-consumer marketing methods for premium cigars. *[4-1]*

Premium cigar companies use lifestyle magazines and festivals to promote premium cigars, which may appeal to young people. *[4-2]*

Premium cigar companies have online and social media presences not captured by traditional methods of tracking marketing expenditures. *[4-3]*

Email advertisement promoting an in-person entertainment event. Source: Mintel Comperemedia, 2021.

Marketing and Perceptions (cont.)

Premium cigars are advertised as less harmful than other tobacco products, having benefits that outweigh health risks, and as an integral part of a luxurious lifestyle. *[4-4]*

Premium cigar users typically purchase online or from cigar bars or specialty shops, while nonpremium large cigar users typically purchase from convenience stores. *[4-5]*

Consumer knowledge of premium cigars, including the definition and whether consumers distinguish premium cigars from other cigars, is unknown. *[4-6]*

Cigars are perceived as harmful and addictive, but there is no research about knowledge on specific health effects of premium cigars. *[4-7]*

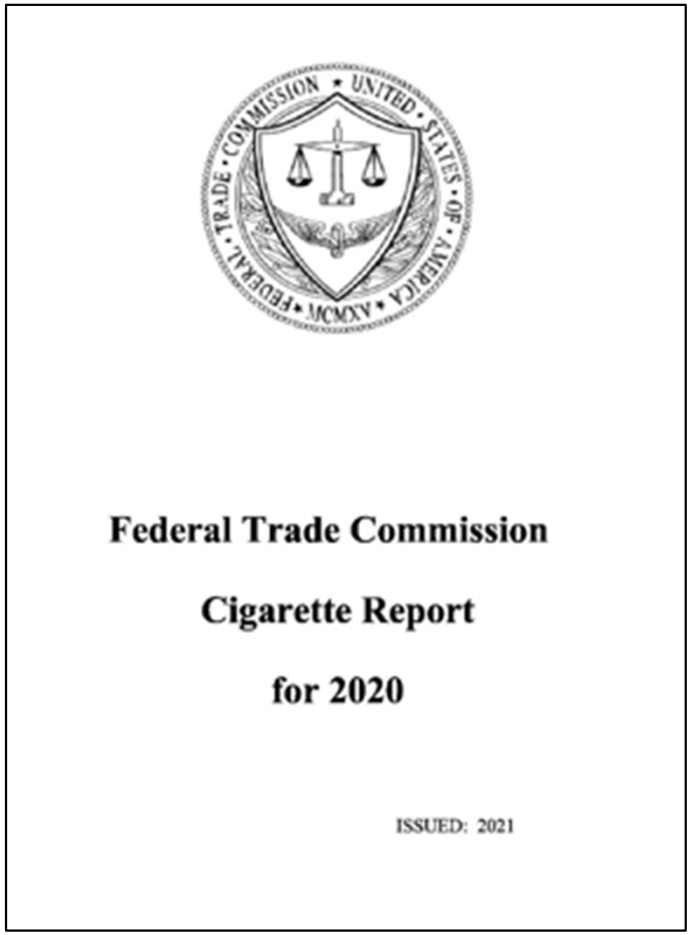
Lower perceived harm and addictiveness of cigars is associated with cigar use behaviors. *[4-8]*

Recommendations for Priority Research

Recommendation 1: FDA, with other federal agencies, should **develop formal categories and definitions for cigars to be used for research** to ensure consistency among studies.

Recommendation 2: Using agreed-upon definitions of each cigar type, HHS, TTB, and FTC should establish **surveillance and evaluation systems** for use patterns, product characteristics, industry marketing and promotion, sales, knowledge and perceptions, and health outcomes by cigar type, and make data public.

Recommendation 3: HHS should **improve measures of premium cigar use in national surveys** such as PATH, TUS-CPS, and NSDUH, including lifetime use and smoking practices.



Recommendation 6: FDA, NIH, and other federal agencies should conduct or fund research to determine the **unique type of marketing, advertising, and promotional practices** used by companies that manufacture, distribute, and sell premium cigars; they should also **identify strategies for tracking these activities**, especially those that may appeal to youth.

Recommendation 9: FDA, NIH, and other federal agencies should assess **consumer knowledge, awareness, and perceptions** of premium cigars.

Recommendation 4: FDA, NIH, and other federal agencies should **expand research on the association between premium cigar use and health outcomes** and **establish dose-response relationships** and the **effect of modifying factors**.

Recommendation 5: FDA, NIH, CDC, and other federal agencies should **improve the quality and expand the range of premium cigar studies** on characteristics, chemistry, and how users smoke the product.

Example smoking machine. Photo: C. Watson.

Recommendation 7: FDA, NIH, and other federal agencies should study **cigar addiction potential**, including the effects of **co-use of other tobacco products, flavors, and nicotine content**.

Recommendation 8: FDA, NIH, and other federal agencies should investigate **comparative health effects of cigar types in priority populations**, including:

- Youth and young adults
- Racialized and ethnic populations
- During pregnancy
- Those with underlying medical conditions
- People with occupational exposures to premium cigars.

Concluding Observations

- There is no material difference between cigar products in terms of harmful or potentially harmful constituents.
- There is a meaningful difference in how premium cigars are used (e.g., frequency of use, depth of inhalation).
- These patterns of use could change over time. If the patterns of use of premium cigars change, the health effects will change as well.

To review the report (free PDF download) and related resources see:

nationalacademies.org/premium-cigars-study

Suggested citation:

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#PremiumCigarStudy

Extra Slides:
Commissioned Analyses; Full Conclusions and Recommendations

Commissioned Analyses

- **Cross-Sectional Patterns of Cigar Use by Type in NSDUH**
  - Patterns of use over time; demographic characteristics, tobacco use patterns, and health indicators of premium vs nonpremium cigar smokers
- **Cross-Sectional Patterns and Longitudinal Transitions of Cigar Use by Type in PATH**
  - Annual estimates of premium and other cigar type use prevalence and patterns of use for Waves 1-5; longitudinal transitions between premium and other cigar types and cigarettes; analyses of tobacco dependence for cigar use groups
- **Cigar Physical Characteristics**
  - Weight, length, diameter, nicotine content of top cigar brands
- **Exploratory Spatial Analyses of the Locations of Premium Cigar Association Retailers, United States**
  - Census tract density of premium cigar retailers; correlations between tract sociodemographic characteristics and retailer density; associations between sociodemographic characteristics and presence of retailer in tract
- **Social media environmental scan**
- **Cigar magazine content analysis**

Characteristics of Cigars

Conclusion 2-1: There is **conclusive evidence** that the addictive, toxic, and carcinogenic **constituents of cigar tobacco in general** are the same as those present in cigarette tobacco. There is **strongly suggestive evidence** that **constituents of premium cigar tobacco** are similar to constituents of other cigars because all tobacco contains nicotine, carcinogenic tobacco-specific nitrosamines, metals, and precursors to toxic and carcinogenic compounds formed during the combustion process.

Conclusion 2-2: There is **conclusive evidence** that the **toxicants and carcinogens in cigar smoke in general** are qualitatively the same as those in cigarette smoke. There is no reason to believe that **toxicants and carcinogens in premium cigar smoke** are any different from those in other types of cigars. Additionally, it is likely that the total toxic and carcinogenic constituent yields will increase with the mass of tobacco filler in the cigar.

Conclusion 2-3: There is **strongly suggestive evidence** that there is a wide variety of **pH levels of tobacco used in cigars overall**; however, higher pH has been noted in premium cigar tobacco than for other cigar types. While there is **insufficient evidence** on the **pH of premium cigar smoke**, the **pH of large cigar smoke** is generally higher than cigarette smoke, which can decrease depth of inhalation and increase nicotine absorption through the oral mucosa. There is **insufficient evidence** on the relationship between the pH of premium cigar tobacco and smoke.

Characteristics of Cigars (cont.)

Conclusion 2-4: There is **conclusive evidence** that **cigar smokers in general** are exposed to significant amounts of nicotine and numerous harmful and potentially harmful constituents.

Conclusion 2-5: There is **strongly suggestive evidence** that the **inhalation patterns of cigar smokers in general** significantly affect their exposure to nicotine and harmful and potentially harmful constituents. At present, the extent to which **premium cigar users who do not inhale** have systemic exposure to nicotine and harmful and potentially harmful constituents remains unknown. It is likely that **smokers of premium cigars who concurrently smoke cigarettes or smoked cigarettes in the past** inhale more smoke compared to exclusive users of premium cigars.

Marketing and Perceptions

Conclusion 4-1: Based on the committee's primary data collection, there is c**onclusive evidence** that third-party cigar retailers use direct-to-consumer methods to market **premium cigars** using similar strategies as the nonpremium cigar industry.

Conclusion 4-2: Based on the committee's primary data collection, there is **conclusive evidence** that **premium cigar** companies use lifestyle magazines and festivals to promote premium cigars. Some of these marketing strategies, such as sponsoring music festivals and promoting their products with an urban lifestyle and hip-hop and rock music, may appeal to young people.

Conclusion 4-3: Based on the committee's primary data collection, there is **conclusive evidence** that **premium cigar** companies have online and social media presences not captured by traditional methods of tracking marketing expenditures.

Marketing and Perceptions (cont.)

Conclusion 4-4: Based on the 1998 NCI monograph on cigars, subsequent publications, the committee's primary data collection, and consistent with research on the "premiumization" of tobacco products that purport better quality and less harm, there is **conclusive evidence** that **premium cigars** are advertised and promoted as less harmful than other tobacco products and as having benefits that outweigh their adverse health effects. Premium cigars are also marketed as an integral component of a successful, luxurious lifestyle, used at upscale social events, and by influential celebrities and individuals.

Conclusion 4-5: There is **strongly suggestive evidence** from survey data that consumers of **premium cigars** who buy in person typically purchase their cigars from cigar bars or smoke/tobacco specialty shops or outlet stores, whereas **nonpremium large traditional cigar** users typically purchase their cigars at convenience stores/gas stations. A lower proportion of premium cigar users buy their cigars in person than nonpremium large traditional cigar users. Data from online cigar retailers shows that a large proportion of premium cigar sales occur online, though this is not directly captured in current surveys of cigar users.

Marketing and Perceptions (cont.)

Conclusion 4-6: There is **no research** that examines whether consumers distinguish **premium cigars** from large cigars or other cigar types, consumers' knowledge of premium cigars, or what defines premium cigars.

Conclusion 4-7: There is **strongly suggestive evidence** that the U.S. population perceives **cigar products overall** to be harmful and addictive. However, there is **no research** that examines the knowledge of the specific health effects of **premium cigars**.

Conclusion 4-8: There is **strongly suggestive evidence** from prospective studies that lower perceived harm and addictiveness of **cigars in general** is associated with cigar use behavior, including current use in adults and initiation in youth.

Health Effects

Conclusion 5-1: There is **conclusive evidence** that **smoke** from **cigars in general, including premium cigar smoke,** contains many hazardous and potentially hazardous constituents, capable of causing cardiovascular disease, lung disease, cancer, and multiple other negative health effects.

Conclusion 5-2: There is **conclusive evidence** that the chemical nature of emissions from **cigars in general, including premium cigars,** are similar to those of cigarette smoke. There is strong biological plausibility that exposure to these chemicals will cause disease. Thus, if cigar smoke is inhaled and cigars are smoked regularly, the risks are likely to be qualitatively similar to those of cigarette smoking.

Conclusion 5-3: There is **strongly suggestive evidence** that the health risks of **premium cigar use** (overall mortality; cardiovascular disease; lung, bladder, and head/neck cancer; chronic obstructive pulmonary disease; and periodontal disease) depend on frequency, intensity, duration of use, and depth of inhalation.

Health Effects (cont.)

Conclusion 5-4: There is **insufficient evidence** to determine if occasional or **nondaily exclusive cigar use in general** is associated with increased health risks.

Conclusion 5-5: There is **strongly suggestive evidence** that health consequences of **premium cigar smoking overall** are likely to be less than those smoking other types of cigars because the majority of premium cigar smokers are nondaily or occasional users and because they are less likely to inhale the smoke.

Conclusion 5-6: There is **strongly suggestive evidence** that many of the health risks of **daily exclusive cigar use in general** (overall mortality; cardiovascular disease; lung, bladder, and head/neck cancer; chronic obstructive pulmonary disease; and periodontal disease) are significantly higher than those of never-smokers and lower than those of daily cigarette smokers.

Health Effects (cont.)

Conclusion 5-7: There is **moderately suggestive evidence** that the health risks among **primary cigar users in general** (those who were never established cigarette users) are generally lower than among secondary cigar users (those who were former users of cigarettes) because secondary cigar users may be more likely to inhale the smoke. Likewise, **concurrent users of premium cigars** and other combustible tobacco products would experience greater health risks than those smoking only premium cigars.

Conclusion 5-8: There is **insufficient evidence** to draw conclusions on the health effects of **premium cigars** on

- Youth or young adults,
- Racialized and ethnic populations,
- Pregnancy,
- Those with underlying medical conditions,
- People with occupational exposures to premium cigars (e.g., cigar lounges, manufacturing), and
- Health effects compared to other cigar types.

Health Effects (cont.)

Conclusion 5-9: Based on the extensive literature on the effects of flavors on cigars and other tobacco products, there is **moderately suggestive evidence** that **adding characterizing flavors** (that is, flavors added to the product that are not inherent to the tobacco itself) **to premium cigars** could result in a greater appeal to nonusers and lead to more frequent use with potentially increased nicotine intake, increased addiction potential, and increased exposure to harmful and potentially harmful constituents present in premium cigar smoke.

Conclusion 5-10: There is **sufficient evidence** that **premium cigars** generate considerable levels of secondhand smoke; however, there are **insufficient data** on the health risks associated specifically with exposure to **premium cigar secondhand smoke**. It is plausible that since the constituents emitted from premium cigars are similar to constituents from other tobacco products, the health risk might be the same, but the extent of secondhand premium cigar exposure is unknown.

Conclusion 5-11: There is **moderately suggestive evidence** to support the biological plausibility that **regular cigar smoking in general** can be addictive. It is likely that this is also true for **premium cigar** smoking, based on nicotine delivery characteristics, abuse liability studies, and epidemiological data. The magnitude of **premium cigar** dependence appears to be less than that of cigarette smoking and smokeless tobacco use dependence. The extent of addiction is likely to depend on the patterns of use.

Recommendations for Priority Research

Recommendation 1: FDA, in consultation with other federal agencies, should develop formal categories and definitions for cigars to be used for research to ensure consistency among studies.

Recommendations for Priority Research (cont.)

Recommendation 2: HHS, in partnership with the Alcohol and Tobacco Tax and Trade Bureau and the Federal Trade Commission (FTC), should implement a strategic plan to develop surveillance and evaluation systems that regularly monitor patterns of use, product characteristics, and related knowledge and perceptions by cigar type. These systems should also measure exposure to cigar smoke; track health outcomes; monitor tobacco industry marketing and promotion strategies; track sales and marketing expenditures; track cigar prices by cigar type; make data available; and define other indicators of monitoring to inform public health research and practice. These efforts should include but are not limited to

- Agreed-upon definitions of each cigar type (see Recommendation 1), and
- Development of annual FTC sales and marketing expenditure reports on all cigar product types, as is done for cigarettes, smokeless tobacco, and electronic cigarettes.

Recommendations for Priority Research (cont.)

Recommendation 3: HHS should ensure that the tobacco research it supports, including surveys such as the Population Assessment of Tobacco and Health Study, the Tobacco Use Supplement to the Current Population Survey, and the National Survey on Drug Use and Health:

- Measure ever use, ever regular use, and past 12-month use to better capture lifetime use of each type of cigar product.
- Ask participants about use of premium cigars, employing commonly used terminology (e.g., "Have you ever smoked premium cigars?") in addition to asking about brands used.
- Ask participants about self-reported inhalation patterns, how cigars are typically smoked (e.g., in one session or partial/relighting), and where cigars are smoked (e.g., indoors at home) to assess secondhand smoke exposure.
- Include paradata (administrative data about the survey), such as survey date and geographic location in publicly available datasets to improve understanding of patterns of use and/or exposure

Recommendations for Priority Research (cont.)

Recommendation 4: FDA, NIH, and other federal agencies should ensure that the research they support on the associations between cigar, including premium cigar, use and health effects

- Reports the frequency of use, duration, intensity, cumulative exposure, pattern of inhalation, and the number of years smoking cigars to inform potential dose–response relationship and modifying factors (e.g., co-use of alcohol, cannabis, and other substances);
- Distinguishes primary, secondary, and dual use cigar smokers;
- Examines co-use of alcohol and premium cigars;
- Estimate the associations between cigar use and specific lung cancer histological types;
- Includes questions on the type of cigar, including premium cigars, separated from large cigars and other cigar types; and
- Uses the definitions of cigar types provided by FDA (see Recommendation 1).

Recommendations for Priority Research (cont.)

Recommendation 5: To improve knowledge of premium cigar characteristics, FDA, NIH, CDC, and other federal agencies should support

- The development of reproducible methods for machine smoking of premium cigars;
- Laboratory studies to measure nicotine, toxicants, and carcinogens in tobacco and smoke emitted from premium cigars;
- Studies to assess how the pH of premium cigar smoke affects puff topography and extent of inhalation;
- Comparative biomarker studies, both of toxicant exposure and of potential harm, in smokers of premium, large, and other cigar type smokers;
- Studies that precisely measure "real-life" puff topography and patterns of use;
- Studies that systematically evaluate how various premium cigar characteristics (e.g., size, shape, type of tobacco, added flavoring, sugar content, moisture, smoke pH) affect puffing topography; and
- Observational studies to assess patterns and intensity of secondhand smoke exposure to premium cigar smoke.

Recommendations for Priority Research (cont.)

Recommendation 6: FDA, NIH, and other federal agencies should conduct or fund research to determine the unique type of marketing, advertising, and promotional practices used by companies that manufacture, distribute, and sell premium cigars. FDA, NIH, and other federal agencies should also identify strategies for tracking these activities, especially those that may appeal to youth.

Recommendations for Priority Research (cont.)

Recommendation 7: FDA, NIH, and other federal agencies should support research that

- Provides data on the level of dependence in relation to patterns of premium and other cigar type use;
- Measures dependence on cigars and other tobacco products in dual and/or poly-tobacco users;
- Compares dependence on large cigars with flavors to dependence on premium cigars (which, by definition in this report, do not include flavors); and
- Studies the impact on dependence of reduced nicotine content in cigars, per proposed FDA policy to reduce nicotine to 0.4 mg/g for all cigarettes, to make them minimally addictive.

Recommendations for Priority Research (cont.)

Recommendation 8: FDA, NIH, and other federal agencies should support research on the comparative health effects of cigar types, including premium cigars, in priority populations (as needed based on prevalence and trends), including

- Women, racialized and ethnic populations, sexual and gender minority groups, adolescents/young adults, and during pregnancy, including studies on the impact on nondaily users of cigars;
- People with vascular disease, including assessments of their cardiovascular risk, as this population would be especially vulnerable to the adverse effects of acute short-term smoke exposure;
- People with respiratory diseases, such as chronic obstructive pulmonary disease and asthma;
- Cancer survivors; and
- People with occupational exposures to premium cigars (e.g., in cigar lounges, manufacturing).

Recommendations for Priority Research (cont.)

Recommendation 9: FDA, NIH, and other federal agencies should support research to assess consumer knowledge and awareness of premium cigars in the U.S. population. Specifically, these studies should

- Develop and implement specific measures that capture awareness of premium cigars as a tobacco product category, perceived risks and benefits of using premium cigars, and knowledge of the risks of premium cigar use; and
- Gather data regarding consumer knowledge about different cigar types and how, why, and where people start, continue, and discontinue using premium cigars (including perceived benefits and harms).