

CONCLUSIONS: CHARACTERISTICS OF CIGARS

MARCH 2022 • PREMIUM CIGARS: PATTERNS OF USE, MARKETING, AND HEALTH EFFECTS

In the report *Premium Cigars: Patterns of Use, Marketing, and Health Effects* an expert committee of the National Academies of Sciences, Engineering, and Medicine presents 24 conclusions about cigar characteristics and constituents, marketing and perceptions, and the human health effects. The conclusions provided here are about cigar characteristics and constituents.

To see the conclusions about the other topic areas and to read the full report and related resources, please visit nationalacademies.org/premium-cigars-study.

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.

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.

Levels of Evidence Defined

Conclusive evidence: The available evidence (including biologic plausibility when appropriate here and in the categories below) usually includes consistent results from well-designed, well-conducted studies in representative relevant settings and/or populations. These studies assess the effects on relevant outcomes. The conclusion is therefore unlikely to be strongly affected by the results of future studies.

Strongly suggestive evidence: The available evidence is sufficient to determine the effects on relevant outcomes, but confidence in the estimate is constrained by such factors as:

continued

Levels of Evidence Defined (continued)

- The number, size, or quality of individual studies;
- Inconsistency of findings across individual studies;
- Limited generalizability of findings to routine practice/populations; and/or
- Lack of coherence in the chain of evidence.

As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.

Moderately suggestive evidence: The available evidence is sufficient to determine the effects on relevant outcomes, but confidence in the estimate is significantly constrained by such factors as:

- The number, size, or quality of individual studies;
- Inconsistency of findings across individual studies;
- Limited generalizability of findings to routine practice/populations; and/or
- Lack of coherence in the chain of evidence.

As more information becomes available, the magnitude or direction of the observed effect could change, which could alter the conclusion.

Insufficient/no available evidence: The available evidence is insufficient to assess effects on relevant outcomes. Evidence is insufficient because of:

- The limited number or size of studies;
- Important flaws in study design or methods;
- Inconsistency of findings across individual studies;
- Gaps in the chain of evidence;
- Findings not generalizable to the general population; and/or
- Lack of information on important outcomes.

Conclusive evidence implies that 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. The categorizations for each conclusion are based on the committee's overall assessment of the body of evidence. For all categories, the evidence includes, when appropriate, literature on nonpremium cigars.

To read the full report, please visit
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