

Introduction to Heated Tobacco Products

Overview

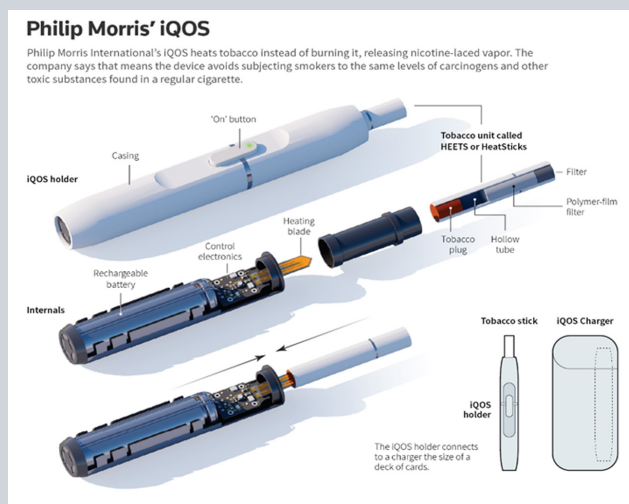
Heated tobacco products, also called heat-not-burn products, are electronic devices that heat tobacco leaves to produce an inhalable aerosol, instead of burning tobacco like regular cigarettes. Currently only one tobacco company, Philip Morris International (PMI), has heated tobacco products available on the U.S. market. This product, called IQOS, was approved by the U.S. FDA in April 2019. The FDA approved three IQOS products: one tobacco flavor (sold as Marlboro Heatsticks), and two menthol flavors (sold as Marlboro Smooth Menthol Heatsticks and Marlboro Fresh Menthol Heatsticks).⁽¹⁾ No other heated tobacco products are legal for sale in the U.S.

How Does Heated Tobacco Work?

Cigarettes burn tobacco leaves at a temperature of approximately 1300 degrees Fahrenheit. Heated tobacco products heat tobacco leaves to a temperature of approximately 600 degrees Fahrenheit, which does not burn the tobacco.⁽²⁾ Heated tobacco products are not like electronic cigarettes (e-cigarettes) because they contain tobacco leaf as the nicotine source, instead of liquid nicotine.⁽²⁾⁽³⁾

| | Cigarettes | Electronic Cigarettes | Heated Tobacco |
|-----------------|----------------|------------------------------|----------------|
| Nicotine Source | Tobacco leaves | Liquid nicotine | Tobacco leaves |
| Temperature | 1300° F | Varies from 300° F to 600° F | 600° F |
| Smoke Type | Smoke | Aerosol | Aerosol |

Most heated tobacco products work by heating tobacco-filled paper sticks. These sticks are placed in a holder, which includes a battery and a heating element. Once placed in the holder, the tobacco comes into contact with a heating element, which heats the tobacco, but does not produce enough heat for the tobacco to burn or produce smoke. Instead the heated tobacco produces an aerosol, which contains nicotine and is inhaled by the user. Heated tobacco products are generally made up of three main parts, much like the IQOS, which is shown in Figure 1:



1. Tobacco sticks, which are tobacco-filled sticks,
2. A device holder, and
3. A charger

The user inserts the tobacco stick into the holder and pushes a button to turn on the heater, which heats the tobacco leaves in the tobacco stick. IQOS devices are programmed to heat the tobacco stick for six minutes or 14 puffs, whichever comes first. The user can then inhale the aerosol that is produced. A tobacco stick can only be used once and in the case of IQOS, users must recharge the holder after using each tobacco stick.

Health Effects

There are no long-term studies on the safety of heated tobacco. The aerosol produced by the IQOS contains many of the same harmful chemicals as cigarette smoke, such as volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and carbon monoxide, but in lower concentrations. ⁽⁴⁾ heated tobacco products contain the same amount of nicotine as cigarettes, and can be just as addictive. ⁽⁵⁾

Heated Tobacco Use Among California Adults

Although heated tobacco products are new to the market, they are gaining in popularity. Just six months after the FDA allowed the sale of heated tobacco products, 18% of California adults were aware of them and 4% reported having tried heated tobacco. Two percent of California adults report currently using heated tobacco. ⁽⁶⁾ Research from Japan, where heated tobacco products have been available since 2013, show that nearly 70% of adult heated tobacco users also smoke cigarettes. ⁽⁷⁾ To date, there is little information about heated tobacco use among youth.

Sales and Advertising

IQOS devices were launched in the U.S. in October 2019 and are available at IQOS branded stores and mobile “pop-up” stores. Heatsticks are expected to be sold wherever cigarettes are sold. ⁽⁸⁾ Like cigarettes, IQOS advertising may not be aimed at anyone under the age of 21. The FDA is also requiring IQOS packaging to include warnings about the addictiveness of nicotine.

Federal and State Policies Regulating Heated Tobacco Products

Heated tobacco products meet the definition of cigarettes according to federal regulations and need to follow the same regulations as cigarettes, such as bans on television and radio advertising. ⁽⁹⁾ Under California law, IQOS and any other heated tobacco products which may be approved for sale by the FDA will be classified as a tobacco product. In December 2019, the U.S. Federal government banned the sale of all tobacco products to anyone under 21 years old across the country. This law includes all U.S. States and Territories, military bases and military personnel, and all Tribal lands. ⁽¹⁰⁾ Additionally, all California smoke-free laws, such as smoke-free workplaces, apply to heated tobacco products. ⁽¹¹⁾

Resources

For more information on heated tobacco products visit the websites listed below.

The Campaign for Tobacco Free Kids:

<https://www.tobaccofreekids.org/assets/factsheets/0404.pdf>

The U.S. Centers for Disease Control and Prevention:

https://www.cdc.gov/tobacco/basic_information/heated-tobacco-products/index.html

The Truth Initiative:

<https://truthinitiative.org/research-resources/emerging-tobacco-products/what-are-heat-not-burn-cigarettes>

References

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11. Cal. Bus. & Prof. Code §§ 22950. Stop Tobacco Access to Kids Enforcement Act.

