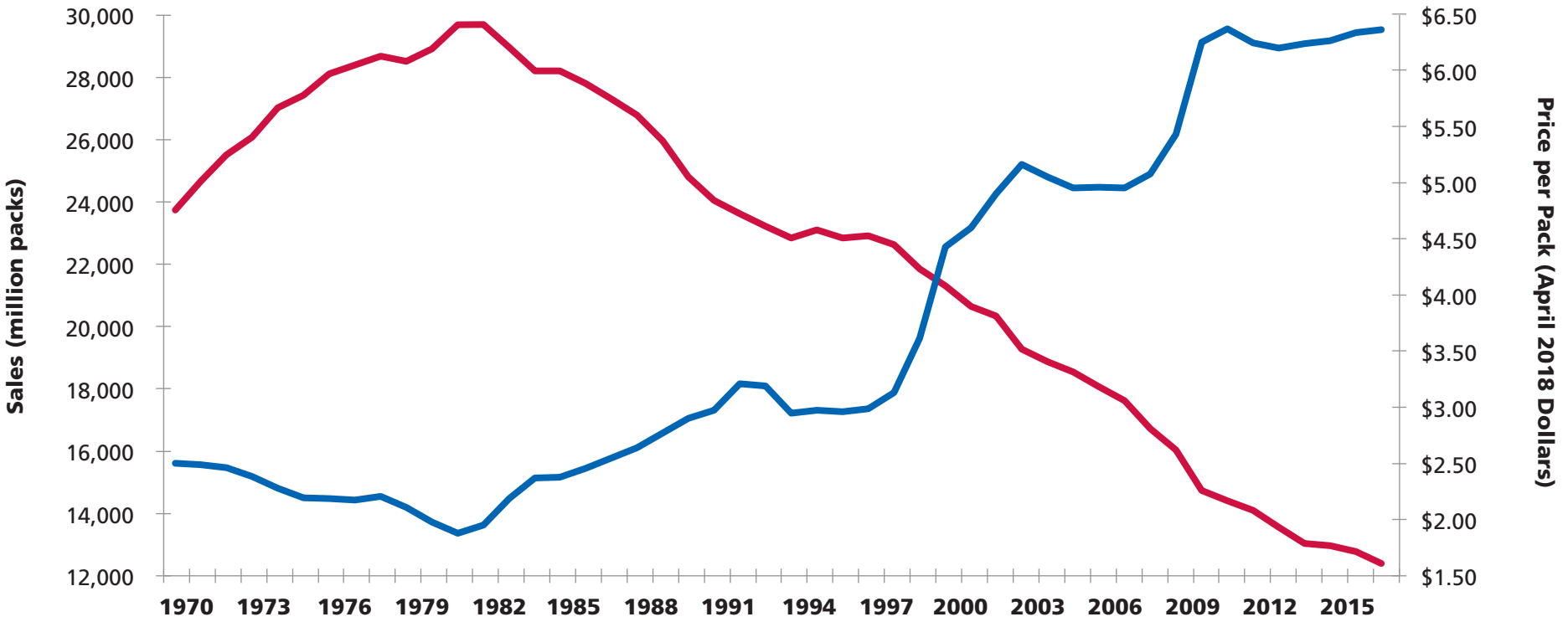
Cigarette Prices and Cigarette Sales, United States, 1970-2017



Source: Calculations by Chaloupka, FJ, and Tobacconomics, using *Tax Burden on Tobacco* monthly reports.

Alaska Department of Revenue
Tax Division
FY 2020 Cigarette and Other Tobacco Products Summary

All data is updated monthly. Any changes from previous months data can be due to late filing, amended filings or departmental adjustments.
Report Date: 9/8/2020

Cigarettes

Category	Jul - 2019	Aug - 2019	Sep - 2019	Oct - 2019	Nov - 2019	Dec - 2019	Jan - 2020	Feb - 2020	Mar - 2020	Apr - 2020	May - 2020	Jun - 2020	Grand Total
Total Cigarettes Purchased or Sold	46,257,320	35,686,624	35,971,219	37,323,600	31,327,440	30,880,860	35,959,560	28,243,800	39,651,300	31,130,280	39,298,080	46,815,000	438,545,083
Less Military Sales (See Note 1)	60,000	63,600	70,000	40,200	37,200	48,400	20,400	24,000	40,400	28,000	35,800	50,200	518,200
Less Indian Sales	350,800	346,000	322,580	351,600	288,600	321,800	276,200	222,200	292,000	417,800	413,000	528,800	4,131,380
Less Other Credits	208,020	366,940	171,620	145,820	132,440	150,790	89,320	139,240	142,020	139,400	252,260	88,330	2,026,200
Net Taxable Volume	45,638,500	34,910,084	35,407,019	36,785,980	30,869,200	30,359,870	35,573,640	27,858,360	39,176,880	30,545,080	38,597,020	46,147,670	431,869,303
Tax Rate Per Cigarette	$0.10	$0.10	$0.10	$0.10	$0.10	$0.10	$0.10	$0.10	$0.10	$0.10	$0.10	$0.10	
Gross Cigarette Tax Liability	$4,563,850	$3,491,008	$3,540,702	$3,678,598	$3,086,920	$3,035,987	$3,557,364	$2,785,836	$3,917,688	$3,054,508	$3,859,702	$4,614,767	$43,186,930
Less Cigarette Stamp Discount	$14,481	$8,502	$10,718	$4,050	$	$3,600	$103,794	$28,379	$49,577	$12,003	$21,832	$24,929	281,865
Net Cigarette Tax Liability	$4,549,369	$3,482,506	$3,529,984	$3,674,548	$3,086,920	$3,032,387	$3,453,570	$2,757,457	$3,868,111	$3,042,505	$3,837,870	$4,589,838	$42,905,065

Other Tobacco Products

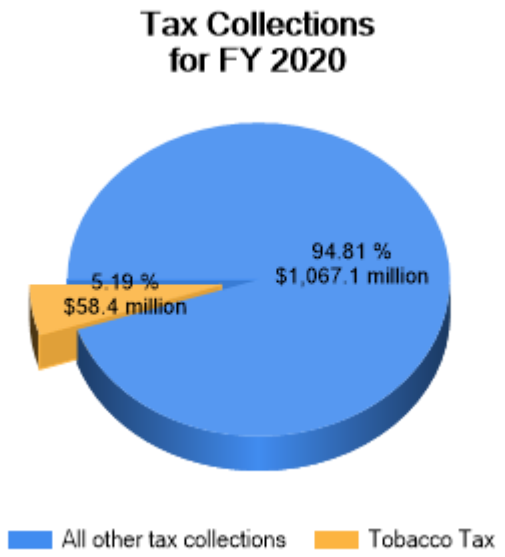
Category	Jul - 2019	Aug - 2019	Sep - 2019	Oct - 2019	Nov - 2019	Dec - 2019	Jan - 2020	Feb - 2020	Mar - 2020	Apr - 2020	May - 2020	Jun - 2020	Grand Total
Total Wholesale Value	$2,018,187	$1,757,589	$1,792,492	$1,749,652	$1,472,335	$1,499,516	$1,394,707	$1,450,770	$1,827,044	$1,600,438	$1,554,816	$1,995,338	$20,112,884
Less Military Sales	9,663	8,721	14,683	5,561	6,837	10,393	2,736	6,567	7,111	5,103	5,406	9,782	92,563
Less Indian Sales	12,048	13,192	13,504	9,185	9,801	7,811	8,586	9,407	9,776	18,218	15,041	17,762	144,331
Less Other Credits	11,685	21,937	4,515	7,986	16,502	15,934	27,037	10,125	2,171	9,774	6,747	6,654	141,067
Taxable Wholesale Value	1,984,791	1,713,739	1,759,790	1,726,920	1,439,195	1,465,378	1,356,348	1,424,671	1,807,986	1,567,343	1,527,622	1,961,140	19,734,923
Tax Rate	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	
OTP Tax Before Commission	$1,488,593	$1,285,304	$1,319,843	$1,295,190	$1,079,396	$1,099,034	$1,017,261	$1,068,503	$1,355,990	$1,175,507	$1,145,717	$1,470,855	$14,801,193
Less 0.4% Commission	$5,954	$5,141	$5,279	$5,181	$4,318	$4,396	$4,069	$4,274	$5,424	$4,702	$4,583	$5,883	59,204
Net OTP Tax Liability	$1,482,639	$1,280,163	$1,314,564	$1,290,009	$1,075,078	$1,094,638	$1,013,192	$1,064,229	$1,350,566	$1,170,805	$1,141,134	$1,464,972	$14,741,989
Net Cigarette and OTP Tax	$6,032,008	$4,762,669	$4,844,548	$4,964,557	$4,161,998	$4,127,025	$4,466,762	$3,821,686	$5,218,677	$4,213,310	$4,979,004	$6,054,810	$57,647,054

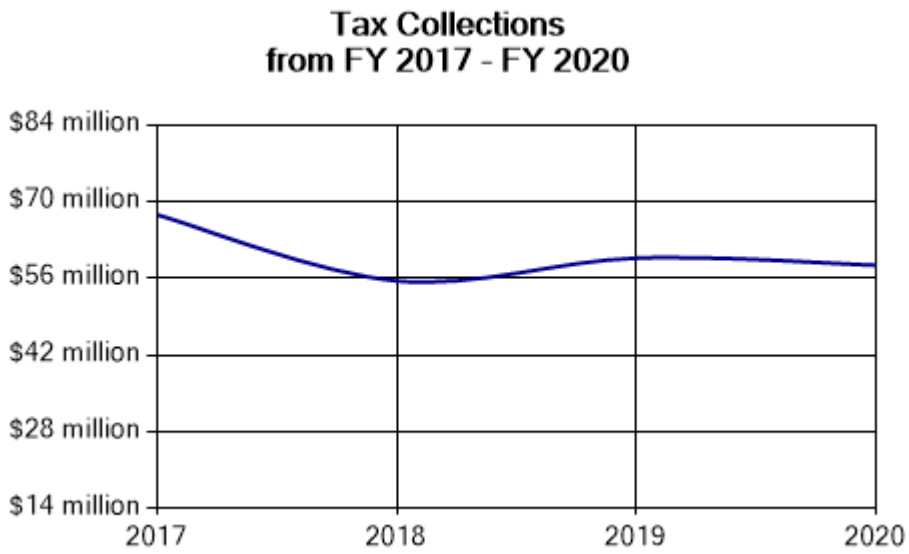
1) Direct military sales no longer reported effective March 1, 2017.

Hit Counter #: 1535

Tobacco Tax
Annual Report Data

2020 End Year





Collections Summary

	2020	2019	2018	2017
Cigarette Tax	$46,633,874	$46,478,333	$42,879,773	$54,443,728
OTP Tax	12,012,364	13,538,464	12,974,802	13,396,271
Penalties and Interest	48,552	27,121	6,846	86,706
License Fee	2,700	3,100	2,100	2,470
Accounting Expense and Stamp Deduction	(341,069.00)	(369,883.00)	(364,000.00)	(374,507.00)
Total Tax	$58,356,422	$59,677,134	$55,499,521	$67,554,668
General Fund	41,440,168	40,073,460	37,417,560	43,192,820
School Fund	14,771,627	17,119,232	15,782,189	21,280,324
Tobacco Use Education and Cessation Fund	2,144,627	2,484,442	2,299,773	3,081,524

Filing Information

	2020	2019	2018	2017
Number of Returns	634	542	483	525
Number of Taxpayers	48	47	41	57

Cigarettes	2020	2019	2018	2017
Total Cigarettes Reported on Tax Returns	438,545,083	454,103,360	461,916,080	498,951,760
Military and Indian Exempt Cigarettes	(4,649,580.00)	(4,532,660.00)	(4,587,600.00)	(4,454,400.00)
Cigarette Credits for Returns	(2,026,200.00)	(1,839,170.00)	(1,243,205.00)	(2,174,055.00)
Taxable Cigarettes	431,869,303	447,731,530	456,085,275	492,323,305

Value	2020	2019	2018	2017
Other Tobacco Products	$20,102,195	$19,858,947	$19,300,419	$19,528,270
Military and Indian Exempt OTP	(236,893.00)	(196,448.00)	(185,517.00)	(142,259.00)
OTP Credits for Returns	(141,068.00)	(194,582.00)	(129,210.00)	(444,161.00)
Taxable OTP Wholesale	19,724,234	19,467,877	18,985,692	18,941,849

Tobacco Facts: E-cigarette &vapor product use among Alaska youth

E-cigarettes are neither harmless nor healthy. They contain nicotine and chemicals, and can lead to addiction.

What are e-cigarettes?

- E-cigarettes are also known as e-cigs, vapes, vape pens, mods, tank systems, e-hookahs, and electronic nicotine delivery systems (ENDS).[1] E-cigarettes include products like JUUL, Vuse, Suorin, and blu.
- These battery-powered devices produce aerosol by heating a liquid.[1] The aerosol is then inhaled and usually contains nicotine, as well as other chemicals and flavors.[1] Using an e-cigarette is often called "vaping" or "juuling."
- Introduced in 2015, JUUL e-cigarettes are now the most common e-cigarette in the United States.[2] They are shaped like a USB flash drive, and are easy to conceal.[2] The liquid nicotine in a JUUL is equivalent to a pack of cigarettes and comes in a variety of flavors that appeal to youth.[2]

Types of vaping devices

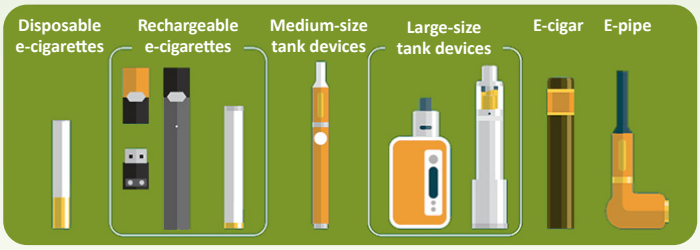


Image from CDC: Electronic Cigarettes, What's the Bottom Line?

What are the dangers?

E-cigarettes are particularly harmful to youth.

- The Surgeon General has declared e-cigarettes an epidemic among youth.[3]
- Most e-cigarettes contain nicotine, which is addictive and can harm the developing brain by negatively impacting memory, learning, and attention.[3]
- E-cigarette use among youth is associated with the use of other tobacco products, including regular cigarettes.[4]

Alaska high school students using e-cigarettes in 2017 16%

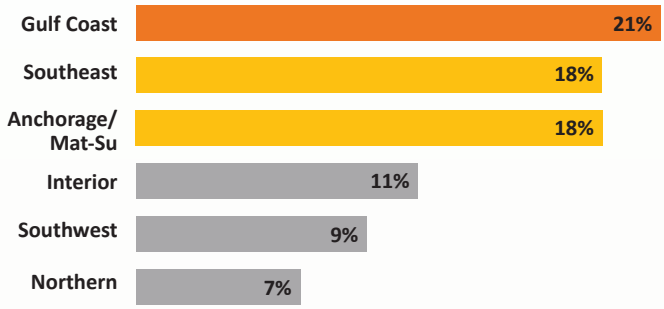
COMPARED TO

10% Alaska high school students smoking regular cigarettes

Many Alaska youth are using e-cigarettes.

- In 2017, 16% of Alaska high school students were using e-cigarettes.[5]
- This compares with 10% who were currently smoking traditional cigarettes.[5]

Current e-cigarette use among Alaska high school students varies widely by region.



Data Source: Alaska Youth Risk Behavior Survey (YRBS) 2017

- More youth in the Gulf Coast, Southeast, and Anchorage/Mat-Su regions used e-cigarettes in 2017 than those in the Interior, Southwest, and Northern regions.[5]
- About half of Alaska high school students who smoked cigarettes in 2017 were also using e-cigarettes.[5] Among students who did not smoke, 11% were using e-cigarettes.[5]

Alaska high school students who smoke cigarettes are more likely to use e-cigarettes than their peers who do not smoke cigarettes.

Data Source: Alaska Youth Risk Behavior Survey (YRBS) 2017

Tobacco Facts: E-cigarette & vapor product use among Alaska youth

What can we do?

Parents:

- Learn about the different types of e-cigarettes and how they are harmful.[3] Talk to your kids about the harms of e-cigarette use and the risk of getting addicted to nicotine.[4]
- Support tobacco-free policies that include e-cigarettes in schools and other public places.[3,4]
- Complete the YRBS parent permission form, if your student's school sends it to you. The YRBS is a survey that collects important information about youth health risk behaviors like e-cigarette use.
- Be a positive role model for your kids and other youth by being tobacco-free.[3] Set rules to keep your home and car free of tobacco products, including e-cigarettes.[3]
- If you or an adult friend/family member use any form of tobacco including e-cigarettes:
  - Ask your provider for tools and resources to help quit.
  - Enroll with Alaska's Tobacco Quit Line to get help quitting: **www.alaskaquitline.com.**
- If your teen or a teen you know uses any form of tobacco including e-cigarettes:
  - Ask your child's provider for tools and resources to help them quit.
  - Encourage your teen to use these tools for quitting: www.teen.smokefree.gov/become-smokefree/tools-for-quitting.

Tobacco Program grantees:

- Provide evidence-based messages about what e-cigarettes are and their health risks.[4] Educate health professionals and youth influencers — such as parents, teachers, and coaches — about how to talk to young people about the risks of e-cigarette use.[4]
- Incorporate e-cigarettes into tobacco policies in communities, schools, and other organizations.[3,4] These policies include smokefree indoor air policies, retail licensing, retail age requirements and enforcement, and price and tax policies.[3,4]
- Support local groups like AmeriCorps or Teen Ambassadors to prevent youth tobacco use.
- Eliminate advertising and marketing by e-cigarette companies that targets youth.[3,4]
- Reduce youth access to flavored tobacco products, including e-cigarettes.[3]
- Support the YRBS in your area. Improve the collection and sharing of data about e-cigarette use, related harms, and effectiveness of interventions to prevent use.[4]

School administration and staff:

- Learn about the different types of e-cigarettes and how they are harmful.[3] If you interact with youth in your role, talk to them about the harms of e-cigarette use and the risk of nicotine addiction.[4]
- Incorporate e-cigarettes into your school's or district's tobacco-free policy.[3]
- Support the Youth Risk Behavior Survey (YRBS) in your school and district. The YRBS is a survey that collects important information about youth health risk behaviors, such as e-cigarette use.

Helpful Resources:

- **Teen quit tools at Smokefree.gov: www.teen.smokefree.gov/become-smokefree/tools-for-quitting**
- **Alaska's Tobacco Quit Line: www.alaskaquitline.com**
- **Not Buying It! Youth prevention and education campaign: www.facebook.com/notbuyingit.alaska/**
- **Tobacco-Free Alaska: www.tobaccofree.alaska.gov**
- **Alaska Tobacco Prevention and Control Program: www.dhss.alaska.gov/dph/Chronic/Pages/Tobacco/**

References

1 CDC, Nov 8 2019. *About Electronic Cigarettes (E-Cigarettes)*. Accessed 11/14/19 via https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html.

2 Gentzke AS, Creamer M, Cullen KA, et al. *Vital Signs: Tobacco Product Use Among Middle and High School Students — United States, 2011–2018*. MMWR Morb Mortal Wkly Rep 2019;68:157–164. Accessed 11/14/19 via http://dx.doi.org/10.15585/mmwr.mm6806e1.

3 *U.S. Surgeon General's Advisory on E-cigarette Use Among Youth*. Dec 18 2018. Accessed 11/14/19 via https://www.cdc.gov/tobacco/basic_information/e-cigarettes/surgeon-general-advisory/index.html.

4 *U.S. Department of Health and Human Services. E-Cigarette Use Among Youth and Young Adults. A Report of the Surgeon General*. Atlanta, GA: 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, 2016. https://e-cigarettes.surgeongeneral.gov/documents/2016_sgr_full_report_non-508.pdf (see page 7 "E-cigarette Policy and Practice Implications").

5 YRBS 2017 data are referenced in this document, as reported in *Alaska Tobacco Facts - 2019 Update*: Alaska Department of Health and Social Services, Division of Public Health, Section of Chronic Disease Prevention and Health Promotion.

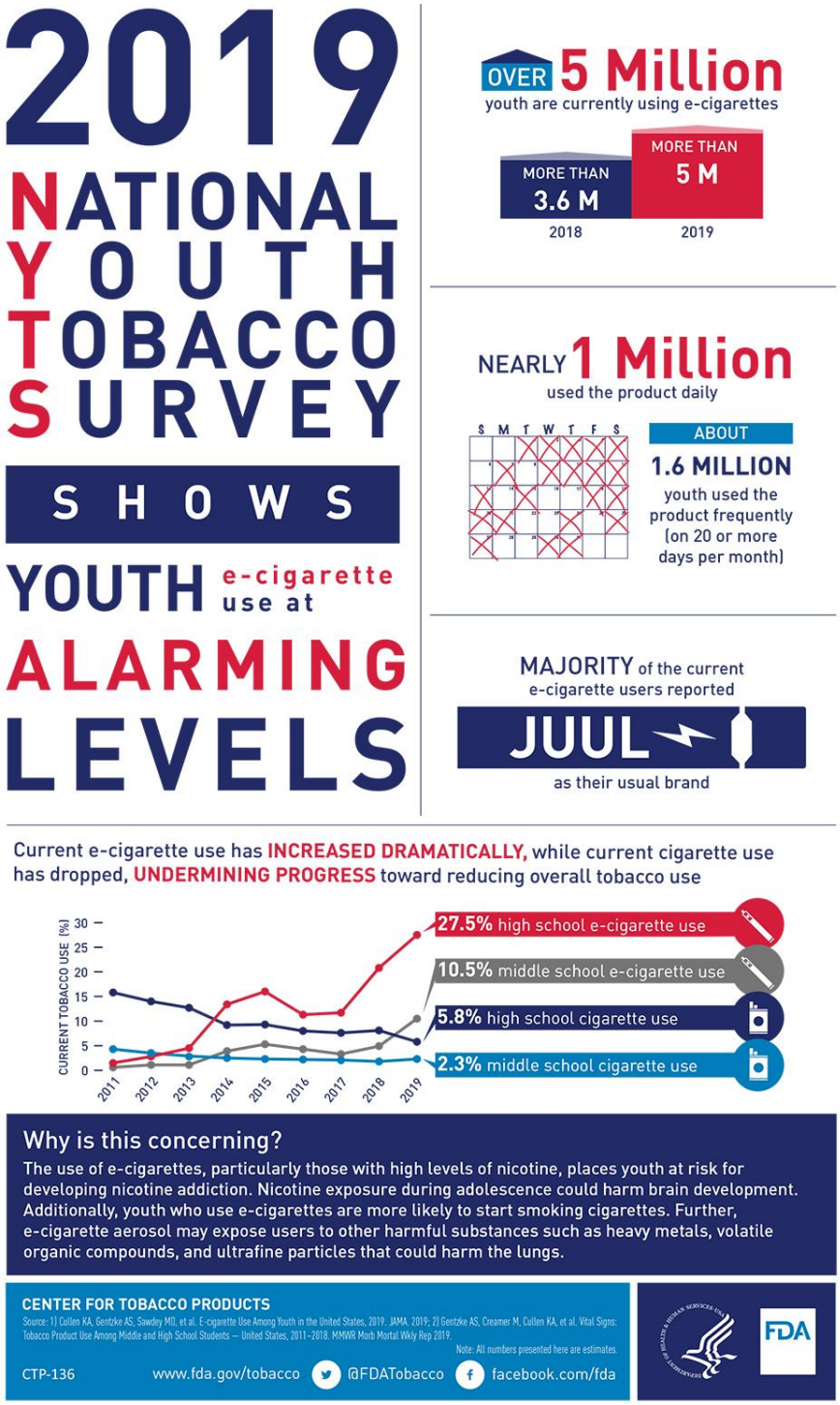
Publication date: February 2020.
Dist. by Rep. Sara Hannan.

https://www.fda.gov/tobacco-products/youth-and-tobacco/youth-tobacco-use-results-national-youth-tobacco-survey

Youth Tobacco Use: Results from the National Youth

2019 E-Cigarette Data

FDA and CDC released findings from the 2019 National Youth Tobacco Survey. The results show disturbing rates of e-cigarette use among both middle and high school students in 2019, with more than 5 million youth reporting having used e-cigarettes in the past 30 days and nearly one million reporting daily use. While cigarette smoking is at an all-time low among high school students, increases in e-cigarette use have reversed progress made in the decline of overall youth tobacco use. Download PDF



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https://www.fda.gov/tobacco-products/youth-and-tobacco/youth-tobacco-use-results-national-youth-tobacco-survey

Read the full reports:

- e-Cigarette Use Among Youth in the United States, 2019External Link Disclaimer
- Vital Signs: Tobacco Product Use Among Middle and High School Students — United States, 2011–2018

Learn about the Youth Tobacco Prevention Plan and FDA's ongoing strategies to reduce youth access and use of e-cigarettes.

Understanding Why Students Use E-Cigarettes

CDC and FDA analyzed data from NYTS 2016 to assess reasons youth use e-cigarettes. Among those who had ever used an e-cigarette, the most commonly selected reasons for use were:

- Use by "friend or family member" (39.0%)
- Availability of "flavors such as mint, candy, fruit, or chocolate" (31.0%)
- The belief that "they are less harmful than other forms of tobacco such as cigarettes" (17.1%)

Read the full report: Reasons for Electronic Cigarette Use Among Middle and High School Students—National Youth Tobacco Survey, United States, 2016

Goals of NYTS

FDA is committed to a science-based approach that addresses public health issues associated with tobacco use. We collaborate with CDC on this nationally representative survey of middle and high school students that focuses exclusively on tobacco use. NYTS was designed to provide national data on long-term, intermediate, and short-term indicators key to the design, implementation, and evaluation of comprehensive tobacco prevention and control programs.

Additional Resources

- Statement from FDA Commissioner Scott Gottlieb, M.D., on new data demonstrating rising youth use of tobacco products and the agency's ongoing actions to confront the epidemic of youth e-cigarette use
- Vital Signs: Tobacco Product Use Among Middle and High School Students — United States, 2011–2018
- CDC Press Release: Results from 2018 National Youth Tobacco Survey show dramatic increase in e-cigarette use among youth over past year
- MMWR: Tobacco Use Among Middle and High School Students—United States, 2011-2017
- Press Release: Results from 2018 National Youth Tobacco Survey show dramatic increase in e-cigarette use among youth over past year
- 2018 NYTS Data: A Startling Rise in Youth E-Cigarette Use
- 2018 NYTS InfographicExternal Link Disclaimer
- 2017 NYTS InfographicExternal Link Disclaimer
- 2016 NYTS Infographic External Link Disclaimer
- 2015 NYTS InfographicExternal Link Disclaimer
- MMWR: Reasons for Electronic Cigarette Use Among Middle and High School Students — National Youth Tobacco Survey, United States, 2016
- CDC Historical NYTS Data and Documentation
- National Youth Tobacco Survey at CDC
- Informing Tobacco Regulation through Research

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Invalidity of an Oft-Cited Estimate of the Relative Harms of Electronic Cigarettes

In July 2013, a group of 12 experts in decision science, medicine, pharmacology, psychology, public health policy, and toxicology rated the relative harm of 12 nicotine-containing products by using 14 criteria addressing harms to self and others.[1] The group concluded that combustible cigarettes were the most harmful and that electronic nicotine delivery systems (electronic cigarettes or e-cigarettes) were substantially less harmful than combustible cigarettes. These results have been characterized and repeated in the popular media as e-cigarettes are "95% less risky" or "95% less harmful" than combustible cigarettes. However, as the authors noted in a sweeping statement regarding the shortcomings of their own work, "A limitation of this study is the lack of hard evidence for the harms of most products on most of the criteria."[1(p224)]

Despite this lack of hard evidence, Public Health England and the Royal College of Physicians endorsed and publicized the "95% less harmful" assertion.[2,3] Senior Public Health England staff emphasized the "evidence" underlying the 95% figure, despite the evidence being lacking. Much has been written about the dubious validity of the "95% less harmful" estimate in 2014 to 2016, especially about the paucity of research on the health effects of e-cigarettes available in 2013. After six years of e-cigarette–focused research, which has yielded a growing body of hard evidence regarding harm (see Appendix A, available as a supplement to the online version of this article at http://www.ajph.org, for a nonexhaustive list), the time has come to re-examine that estimate.

TODAY'S ELECTRONIC CIGARETTES ARE DIFFERENT

There is ample evidence that the range of e-cigarette products available today is very different from that in July 2013. The differences are such that, even if the 2013 estimate was valid then, it can no longer apply today. For example, in addition to using different materials and more numerous heating coils, many e-cigarettes today can attain power output that exceeds that of most over-the-counter 2013 models by 10 to 20 times (i.e., up to and sometimes exceeding 200 watts). Greater power increases the potential harms of e-cigarette use because more aerosol is produced that exposes users to increased levels of nicotine and other toxicants. It also increases bystander exposure to any harmful aerosol constituents because users exhale more aerosol. In addition, greater power increases the potential for malfunction (e.g., the device exploding), which could harm users and bystanders.

Also, e-cigarette liquids have changed considerably from 2013, with widespread availability of thousands of flavors that use chemicals "generally recognized as safe" to eat but with unknown pulmonary toxicity. Perhaps the most striking change has been the pervasive marketing of liquids with protonated nicotine.[4] Protonated nicotine ("nicotine salt") is made by adding an acid to free-base nicotine, thus introducing another potential toxicant that was rare in 2013. Relative to free-base nicotine, aerosolized protonated liquid is less aversive to inhale, allowing users to increase the nicotine concentration of the liquid and likely increase their own nicotine dependence. Protonated nicotine e-cigarette liquids are available today in concentrations greater than 60 milligrams per milliliter, and these liquids have become very popular, sparking a "nicotine arms race."[4]

ELECTRONIC CIGARETTES CAUSE HARM TO CELLS

There is ample evidence, unavailable in 2013, that e-cigarette aerosols contain toxicants and that these aerosols are harmful to living cells in vitro and in vivo. For example, thermal degradation of e-cigarette liquid constituents can produce volatile aldehydes, which, at concentrations generated by e-cigarettes, display a variety of cardiorespiratory toxic effects. E-cigarettes can produce carcinogenic furans in addition to other toxicants such as chloropropanols. Even at room temperature, e-cigarette liquids can be unstable, producing irritating acetal compounds carried over into the aerosol. Numerous studies demonstrate that cell function is compromised following exposure to e-cigarette

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aerosol. Similarly, animals that are exposed to e-cigarette aerosols show clear indication of adverse consequences, including in models related to cardiovascular disease.

ELECTRONIC CIGARETTES HARM USERS

Recent evidence reveals that e-cigarette users show evidence of harm. For example, in a sample of healthy young occasional cigarette smokers who used an e-cigarette with or without nicotine, airway epithelial injury was observed in both conditions, with the authors concluding, "Thus, [e-cigarette] aerosol constituents could injure the respiratory system or worsen preexisting lung disease through a variety of mechanisms."[5(pL716)] Consistent with this report, wheezing, a symptom of potential respiratory disease, has been associated with e-cigarette use. E-cigarette use increases heart rate, blood pressure, and platelet activation, and decreases flow-mediated dilation and heart rate variability, effects that are prognostic of long-term cardiovascular risk. Indeed, a preliminary report indicates that e-cigarette users may be at increased risk for myocardial infarction and coronary artery disease.[6]

ELECTRONIC CIGARETTES INCREASE SMOKING RISK

Since 2013, numerous surveys have demonstrated that e-cigarette use is increasing among individuals who previously were naïve to nicotine and that these individuals are at increased risk for initiation of combustible cigarette smoking. As the US National Academies of Sciences, Engineering, and Medicine concluded, "There is substantial evidence that [e-cigarette] use increases risk of ever using combustible tobacco cigarettes among youth and young adults."[7(p532)] To the extent that initial e-cigarette use is a causal factor in subsequent combustible tobacco smoking for an individual who would have otherwise never initiated smoking, e-cigarette use could be considered to be as harmful as tobacco smoking for that individual.

ELECTRONIC CIGARETTE AEROSOL IS NOT HARMLESS

Differences in toxicant content between e-cigarette aerosol and cigarette smoke, by themselves, cannot convey lesser lethality because toxicity depends upon both the extent and mode of use. For example, propylene glycol (PG) is one of the primary constituents of e-cigarette aerosol and is generally recognized as safe when eaten but, when injected intravenously over a period of days, is toxic. E-cigarette aerosols containing propylene glycol and vegetable glycerin, another common constituent, cause inflammation in human lungs, suggesting differing safety profiles for inhaled versus ingested propylene glycol and vegetable glycerin. Furthermore, as the toxicants in e-cigarette aerosol sometimes differ from cigarette smoke, so might any resulting e-cigarette–caused disease states. There is little doubt that exclusive e-cigarette users are unlikely to die from lung cancer that is caused by carcinogenic tobacco-specific nitrosamines or polycyclic aromatic hydrocarbons, toxicants largely absent from e-cigarette aerosols. What diseases they may die of—and if their deaths are hastened by their e-cigarette use—will be part of the much-needed evidence base upon which valid risk estimates can be built.

CONCLUSIONS

In sum, a 2013 evidence-lacking estimate of the harm of e-cigarettes relative to combustible cigarettes has been cited often. However, since 2013, e-cigarette devices and liquids have changed. Evidence of potential harm has accumulated. Therefore, the evidence-lacking estimate derived in 2013 cannot be valid today and should not be relied upon further. Future estimates of the harm of e-cigarettes should be based on the evidence that is now available and revised accordingly as more evidence accrues.

CALL TO ACTION

The "95% safer" estimate is a "factoid": unreliable information repeated so often that it becomes accepted as fact. Public health practitioners, scientists, and physicians should expose the fragile status of the factoid emphatically by highlighting its unreliable provenance and its lack of validity today, noting the many changes in e-cigarette devices and liquids, the accumulation of evidence of potential harm, the increased prevalence of use, and the growing evidence that e-cigarette use is associated with subsequent cigarette smoking. AJPH

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Note. This content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health or the Food and Drug Administration. The sponsor had no role in the preparation of this work.

CONFLICTS OF INTERESTS

T. Eissenberg and A. Shihadeh are paid consultants in litigation against the tobacco industry and are named on a patent for a device that measures the puffing behavior of electronic cigarette users. In addition, as of September 2019, T. Eissenberg is a consultant in litigation against the electronic cigarette industry. S. Jordt reports receiving personal fees from Hydra Biosciences LLC and Sanofi SA and nonfinancial support from GlaxoSmithKline Pharmaceuticals outside the submitted work.

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