# Reasons for Vaping Among US Adolescents

Megan E. Patrick, PhD, Yvonne M. Terry-McElrath, MSA, Brooke Arterberry, PhD, Richard A. Miech, PhD

Adolescent use of electronic nicotine delivery systems or e-cigarettes—known as vaping—is prevalent[1] and of critical public health importance because of dependence risk[2] and respiratory, neurologic, and cardiovascular problems.[3] Vaping is marketed as a less harmful alternative to smoking combustible cigarettes. However, a large population of nicotine-naïve consumers, including adolescents, vape.[4] In 2015, US adolescents in eighth, 10th, and 12th grades most frequently endorsed experimentation, taste, and boredom as reasons for vaping.[4] Adolescents rarely endorsed cigarette cessation as a reason to vape.[4] In the past decade, adolescent nicotine vaping has become a primary concern.[1] Understanding why adolescents vape nicotine, specifically, is important for informing prevention and intervention. This study examined reasons for vaping nicotine among eighth-, 10th-, and 12th-grade US students, focusing on differences by vaping frequency and grade.

## METHODS

Monitoring the Future data were collected from 2021 to 2023 using in-school web surveys,[1] based on annual nationally representative samples of US eighth-, 10th-, and 12th- grade students. A University of Michigan institutional review board approved the study.

Questions were asked of a randomly selected one-third of respondents ($N$ = 28 522; average response rate 79%); 1890 (0.7%) were excluded because of missing data on vaping. Students were asked if they vaped nicotine in the past 12 months (yes/no) and how many days they vaped nicotine in the past 30 days (recoded as any/none, and near-daily [20+ occasions]/not). Those who vaped ($N$ = 5082) were asked about their most important reasons for vaping nicotine (selecting all that apply from a list of 13). Analysis weights accounted for Monitoring the Future's complex sample design in prevalence and mean estimates and $\chi^2$ comparisons of group differences.

## RESULTS

Prevalence levels for near-daily vaping in the past 30 days were 1.7%, 4.2%, and 7.8% for eighth-, 10th-, and 12th-grade students, respectively (Table 1). Near-daily analyses were limited to 12th graders ($N$ = 637) because of low prevalence in younger grades.

Vaping nicotine to "relax" was the most commonly cited reason (Table 2), reported by 48.7% of those vaping in the past 12 months and 71.1% vaping near-daily. Second and third most commonly cited were "experiment" and "boredom" among those vaping in the past 12 months or 30 days; among those vaping near-daily, respective reasons were "boredom" and "hooked." Across groups, "taste" was fourth. Among adolescents who vaped near-daily, roughly one-third endorsed "feel good" and "more convenient than cigarettes"; 8.9% endorsed "help quit cigarettes." Mean number of reasons endorsed was higher

*Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

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Address correspondence to Megan E. Patrick, PhD, University of Michigan, Institute for Social Research, 426 Thompson St, Ann Arbor, MI 48106-1248. E-mail: meganpat@umich.edu

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**TABLE 1** Prevalence of Vaping Nicotine for Grades 8, 10, and 12: 2021–2023

| | Grade 8 | | | Grade 10 | | | Grade 12 | | |
|---|---|---|---|---|---|---|---|---|---|
| | *n* (yes) | % | (SE) | *n* (yes) | % | (SE) | *n* (yes) | % | (SE) |
| Any past 12-mo vaping | 1064 | 12.1 | (0.68) | 1911 | 18.9 | (0.91) | 2107 | 25.6 | (1.08) |
| Any past 30-d vaping | 671 | 7.5 | (0.50) | 1297 | 13.0 | (0.71) | 1588 | 19.4 | (0.97) |
| Near-daily vaping (20+ of the past 30 d) | 155 | 1.7 | (0.23) | 419 | 4.2 | (0.36) | 637 | 7.8 | (0.63) |

Overall *N*s (unweighted) = 8663 for eighth grade; 9963 for 10th grade, and 8011 for 12th grade. *N*s shown unweighted; percentages and standard errors shown as weighted estimates. Prevalence estimates based on randomly selected subsample that received questions on reasons for nicotine vaping.

(non-overlapping confidence intervals) for those reporting near-daily vaping (Supplemental Table 3).

Eighth graders endorsed "boredom" and "feel good" significantly more than 10th or 12th graders and "taste," "good time," and "control weight" more than 12th graders (Supplemental Table 4). Twelfth graders endorsed "more convenient than cigarettes," "hooked," and "help quit cigarettes" more than eighth or 10th graders. Tenth graders endorsed "to avoid getting caught smoking" more than 12th graders.

## DISCUSSION

US adolescents who vaped nicotine endorsed a wide range of reasons for the behavior. Vaping to relax was the most commonly cited reason among all frequency groups; boredom was in the top 3 reasons for all use categories. Nearly half of adolescents who vaped nicotine in the past year or month (and >70% who vaped near-daily) reported doing so to relax or relieve tension. Screening for nicotine vaping alongside stress and anxiety may be an important tool for early intervention efforts because using to relax is associated with increased risk of future dependence.[7]

This represents a shift in adolescent vaping reasons over the past decade. In 2015, relaxation was the fifth-most common reason (reported by 22% of adolescents who vaped, behind experimentation, taste, boredom, and fun with friends).[4] However, available data in 2015 differed in that the prompt was vaping in general (not just nicotine) and the surveys included only 10 reasons (compared with 13 in the current analysis). Data limitations include using a nationally representative school-based sample; future research among those not in school is needed because dropout is associated with substance use.[6]

Among adolescents who vaped near-daily, other reasons reported by more than 40% included boredom, being hooked, and taste. Vaping for smoking cessation was rare.[8] Additional research is needed regarding vaping among adolescents for weight management,[5] which was reported by nearly one-fifth of adolescents who vaped near-daily.

**TABLE 2** Prevalence of Reasons for Vaping Nicotine Endorsed by US Adolescents, 2021–2023

| | Among Those Reporting Any Past 12-mo Vaping (Grades Combined) | | Among Those Reporting Any Past 30-d Vaping (Grades Combined) | | Among Those Reporting Near-Daily[a] Vaping (12th Grade) | |
|---|---|---|---|---|---|---|
| Reasons for Nicotine Vaping | % | (95% CI) | % | (95% CI) | % | (95% CI) |
| To relax or relieve tension | 48.7 | (46.5–50.8) | 56.4 | (54.0–58.8) | 71.1 | (66.6–75.6) |
| To experiment—to see what it's like | 48.7 | (46.8–50.6) | 42.1 | (39.9–44.4) | 28.1 | (22.4–33.8) |
| Because of boredom, nothing else to do | 36.4 | (34.5–38.3) | 39.3 | (37.2–41.4) | 42.8 | (37.1–48.6) |
| Because it tastes good | 34.0 | (32.2–35.7) | 38.5 | (36.3–40.7) | 41.4 | (35.4–47.4) |
| To have a good time with my friends | 30.4 | (28.3–32.5) | 30.5 | (28.2–32.8) | 20.9 | (17.1–24.7) |
| To feel good or get high | 28.3 | (26.5–30.0) | 32.4 | (30.2–34.5) | 33.7 | (28.6–38.9) |
| Because it is more convenient than smoking cigarettes | 14.3 | (12.8–15.7) | 17.4 | (15.4–19.3) | 33.1 | (27.4–38.8) |
| Because it looks cool | 13.4 | (11.9–14.8) | 13.1 | (11.5–14.7) | 13.1 | (8.6–17.7) |
| Because I am "hooked"—I have to have it | 13.0 | (11.5–14.4) | 17.0 | (15.1–18.9) | 42.7 | (36.9–48.6) |
| To lose or control my weight | 11.4 | (10.2–12.7) | 13.7 | (12.1–15.3) | 18.5 | (14.4–22.5) |
| To avoid getting caught smoking | 5.7 | (4.9–6.5) | 7.1 | (6.0–8.2) | 9.5 | (6.9–12.1) |
| Because regular cigarette use is not permitted | 3.1 | (2.4–3.8) | 3.8 | (2.9–4.7) | 6.0 | (3.0–9.0) |
| To help me quit regular cigarettes | 2.9 | (2.0–3.9) | 3.6 | (2.3–4.9) | 8.9 | (4.7–13.2) |

*N* (unweighted) = 5082 for 12-mo nicotine vaping, 3556 for 30-d nicotine vaping, and 637 for 20+ days nicotine vaping. All estimates weighted using multigrade weights.
a Near-daily vaping defined as vaping on 20+ days within the past 30 d and is shown only for 12th grade because of the low levels of near-daily vaping among eighth and 10th graders.

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