High-School Students D-age Rarely Use E-Cigarettes T-etc Alone: A Sociodemographic D-soc Analysis of Polysubstance Use Among Adolescents D-age in the United States L-loc . Introduction Most adolescents D-age reporting e-cigarette use B-use have also used combustible tobacco T-com ; however, the extent to which they use other substances is less R-rel clear. This study assessed e-cigarette use B-use with tobacco, alcohol C-flv , or cannabis C-chm and quantified the risk B-pcp of polysubstance use among adolescents D-age overall and by sociodemographic characteristics D-soc . Aims and Methods Using 2017 B-tme Youth D-age Behavioral Risk Factor Surveillance System M-dat data from adolescents D-age (grades 9â€“12) with complete substance use B-use information (n = 11 244), we examined e-cigarette T-etc poly-use status (none [referent], e-cigarettes T-etc only, or e-cigarettes T-etc other substances). We estimated the prevalence B-prv of substance use B-use and modeled odds of e-cigarette use B-use , alone or with other substances, by several sociodemographic characteristics D-soc . Analyses were completed in Stata version 15.1 using survey M-mth procedures to account for the complex survey M-mth design. Results Approximately 12% of adolescents D-age reported past 30-day B-tme e-cigarette use B-use . Almost all (93%) e-cigarette T-etc users also reported other substance use B-use ; alcohol C-flv appeared most frequently in combinations. Odds of e-cigarette T-etc single use and e-cigarette T-etc poly-use (vs. no use) were higher for males D-gen and adolescents D-age with lower grades (odds ratios M-sts [ORs] = 1.44â€“2.31). Racial/ethnic D-rac minorities D-rac had lower odds of e-cigarette T-etc poly-use than White D-rac peers (ORs = 0.18â€“0.61), and bisexual D-sxo (vs. straight D-sxo) adolescents D-age were more likely to R-rel be e-cigarette T-etc poly-users (OR = 1.62). E-cigarette use B-use increased from 9th grade (7%) to 12th grade D-age (16%). Conclusions Polysubstance use is highly prevalent among adolescents D-age who use e-cigarettes T-etc . Therefore, e-cigarette T-etc screening should include the assessment of other substances, especially alcohol C-flv . Early and comprehensive prevention efforts to reduce e-cigarette T-etc and other substance use B-use could have a substantial beneficial impact on population health over time. Implications This study extends knowledge about e-cigarette use B-use among adolescents D-age by exploring its use with alcohol C-flv , cannabis C-chm , and other tobacco products T-com . We found that e-cigarettes T-etc were very rarely used alone, and our analysis identified several sociodemographic D-soc factors associated with R-rel greater odds of e-cigarette T-etc polysubstance use. In response, we recommend that prevention interventions P-trt address multiple substances concurrently, screen repeatedly to detect new initiation B-use as age D-age increases, focus on e-cigarette use B-use as a less R-rel stigmatized entry point to discussions of substance use B-use , and target priority population subgroups.nan