



As adolescents mature, they undergo complex developmental changes, especially in their brains. The widespread changes in the organization and functioning of the brain—which continue into a person’s mid-20s—bring about the cognitive, emotional, and social skills necessary for adolescents to survive and thrive. The nature of these rapid changes may also increase the adolescent brain’s vulnerability to alcohol exposure.

Patterns of Adolescent Drinking

People often begin to drink alcohol and use other substances during adolescence. About 40 percent of 12- to 20-year-olds reported having tried alcohol at least once.¹

While adolescents tend to drink alcohol less often than adults, they tend to drink more when they do drink. According to 2019 data, approximately 11 percent of people ages 12 to 20—or 4.2 million—reported binge drinking in the past month.^{1,2}

Relationship Between Adolescent Risk-Taking, Brain Plasticity, and Drinking

Adolescents are motivated to explore and take risks. These learning experiences, complemented by the adolescent brain’s increased ability to readily change in response to experiences (also known as *brain plasticity*), are key to developing the skills and knowledge to become independent. While this increase in brain plasticity and risk-taking can provide incredible opportunities for learning and personal growth, it also makes adolescents more vulnerable to both the short-term and long-term negative effects of alcohol.³

For example, a sizable body of research evidence links the early initiation of alcohol use to unsafe alcohol-related behaviors.³ In general, underage drinking can lead adolescents to make poor decisions and engage in potentially harmful behavior (e.g., drinking and driving, unsafe sexual behavior, and other substance use) that can result in a range of negative consequences such as injuries, sexual assaults, and even death.



Drinking Levels Defined

Binge Drinking: The National Institute on Alcohol Abuse and Alcoholism (NIAAA) defines binge drinking as a pattern of drinking alcohol that brings blood alcohol concentration (BAC) to 0.08 percent—or 0.08 grams of alcohol per deciliter—or higher. For a typical adult, this pattern corresponds to consuming five or more standard drinks (or alcoholic drink equivalents) for men, or four or more standard drinks for women, in about two hours. However, research shows that fewer drinks in the same time frame are necessary to reach the same BAC in adolescents (compared to adults): only three drinks for adolescent females and three to five drinks for adolescent males, depending on their age and size.¹⁰

Heavy Drinking: NIAAA defines heavy drinking for men as more than four drinks on any day or more than 14 drinks in a week, and for women as more than three drinks a day or more than 7 drinks per week.