



## Alcohol Overdose: The Dangers of Drinking Too Much

Celebrating at parties, cheering a favorite sports team, and simply enjoying a break from work are common activities throughout the year. For some people, these occasions also may include drinking—even drinking to excess. And the results can be deadly.

Although many people enjoy moderate drinking, defined as 1 drink per day for women or 2 for men, drinking too much can lead to an overdose. An overdose of alcohol occurs when a person has a blood alcohol content (or BAC) sufficient to produce impairments that increase the risk of harm. Overdoses can range in severity, from problems with balance and slurred speech to coma or even death. What tips the balance from drinking that has pleasant effects to drinking that can cause harm varies among individuals. Age, drinking experience, gender, the amount of food eaten, even ethnicity all can influence how much is too much.

Underage drinkers may be at particular risk for alcohol overdose. Research shows that people under age 20 typically drink about 5 drinks at one time.<sup>1</sup> Drinking such a large quantity of alcohol can overwhelm the body's ability to break down and clear alcohol from the bloodstream. This leads to rapid increases in BAC and significantly impairs brain function.

As BAC increases, so do alcohol's effects—as well as the risk for harm. Even small increases in BAC can decrease coordination, make a person feel sick, and cloud judgment. This can lead to injury from falls or car crashes, leave one vulnerable to sexual assault or other acts of violence, and increase

### Identifying Alcohol Poisoning

#### Critical Signs and Symptoms of Alcohol Poisoning

- » Mental confusion, stupor, coma, or inability to wake up
- » Vomiting
- » Seizures
- » Slow breathing (fewer than 8 breaths per minute)
- » Irregular breathing (10 seconds or more between breaths)
- » Hypothermia (low body temperature), bluish skin color, paleness

12 fl oz of  
regular beer



about 5%  
alcohol

=

8–9 fl oz of  
malt liquor  
(shown in a  
12 oz glass)



about 7%  
alcohol

=

5 fl oz of  
table wine



about 12%  
alcohol

=

1.5 fl oz shot  
of 80-proof  
distilled spirits  
(gin, rum, tequila,  
vodka, whiskey, etc.)



40% alcohol

The percent of "pure" alcohol, expressed here as alcohol by volume (alc/vol), varies by beverage.

Although the "standard" drink amounts are helpful for following health guidelines, they may not reflect customary serving sizes. In addition, while the alcohol concentrations listed are "typical," there is considerable variability in alcohol content within each type of beverage (e.g., beer, wine, distilled spirits).

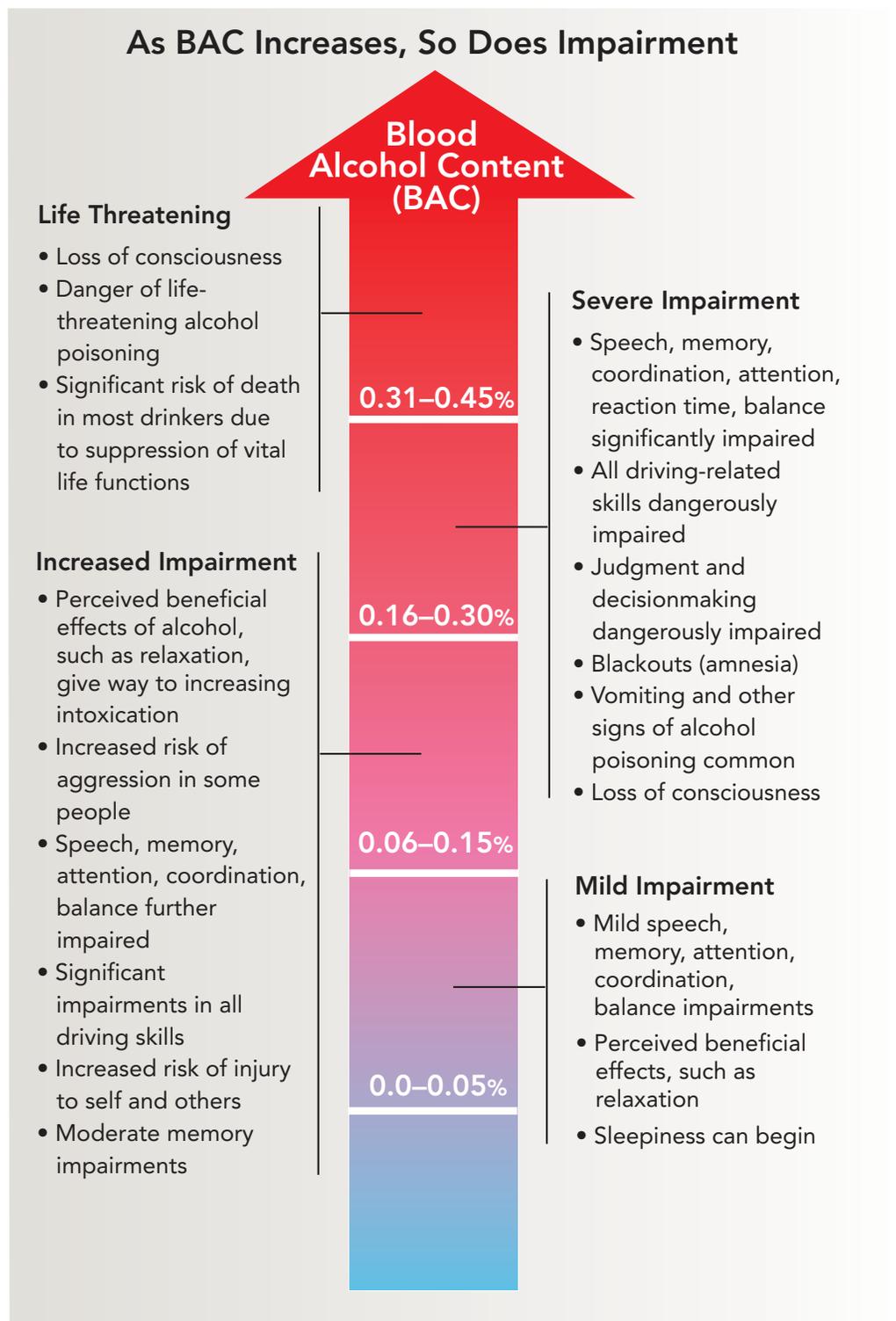
the risk for unprotected or unintended sex. When BACs go even higher, amnesia (or blackouts) can occur.

Continuing to drink despite clear signs of significant impairments can result in a potentially deadly type of overdose called alcohol poisoning. (See the table for tips on identifying alcohol poisoning.)

Alcohol poisoning occurs when there is so much alcohol in the bloodstream that areas of the brain controlling basic life-support functions—such as breathing, heart rate, and temperature control—begin to shut down. Symptoms of alcohol poisoning include confusion; difficulty remaining conscious; vomiting; seizures; trouble with breathing; slow heart rate; clammy skin; dulled responses, such as no gag reflex (which prevents choking); and extremely low body temperature.

BAC can continue to rise even when a person is unconscious. Alcohol in the stomach and intestine continues to enter the bloodstream and circulate throughout the body.

It is dangerous to assume that an unconscious person will be fine by sleeping it off. Alcohol acts as a depressant, hindering signals in the brain that control automatic responses such as the gag reflex.



NIH . . . Turning Discovery Into Health®

National Institute on Alcohol Abuse and Alcoholism

[www.niaaa.nih.gov](http://www.niaaa.nih.gov) • 301.443.3860

Alcohol also can irritate the stomach, causing vomiting. With no gag reflex, a person who drinks to the point of passing out is in danger of choking on vomit, which, in turn, could lead to death by asphyxiation. Even if the drinker survives, an alcohol overdose can lead to long-lasting brain damage.

If you suspect someone has alcohol poisoning, get medical help immediately. Cold showers, hot coffee, or walking will not reverse the effects of alcohol overdose and could actually make things worse.

At the hospital, medical staff will manage any breathing problems, administer fluids to combat dehydration and low blood sugar, and flush the drinker's stomach to help clear the body of toxins.

The best way to avoid an alcohol overdose is to drink responsibly if you choose to drink.

According to the Dietary Guidelines for Americans,<sup>2</sup> moderate alcohol consumption is defined as up to 1 drink per day for women and up to 2 drinks per day for men. Know that even if you drink within these limits, you could have problems with alcohol if you drink too quickly, have health conditions, or take medications. If you are pregnant or may become pregnant, you should not drink alcohol.

Heavy or at-risk drinking for women is the consumption of more than 3 drinks on any day or more than 7 per week, and for men it is more than 4 drinks on any day or more than 14 per week. This pattern of drinking too much, too often, is associated with an increased risk for alcohol use disorders. Binge drinking for women is having 4 or more drinks within 2 hours; for men, it is 5 or more drinks within 2 hours. This dangerous pattern of drinking typically results in a BAC of .08% for the average adult and increases the risk of immediate adverse consequences.

#### What Should I Do If I Suspect Someone Has Alcohol Poisoning?

- » Know the danger signals
- » Do not wait for someone to have all the symptoms
- » Be aware that a person who has passed out may die
- » If you suspect an alcohol overdose, call 911 for help

#### What Can Happen to Someone With Alcohol Poisoning That Goes Untreated?

- » Choking on his or her own vomit
- » Breathing that slows, becomes irregular, or stops
- » Heart that beats irregularly or stops
- » Hypothermia (low body temperature)
- » Hypoglycemia (too little blood sugar), which leads to seizures
- » Untreated severe dehydration from vomiting, which can cause seizures, permanent brain damage, and death

**For more information, please visit: [www.niaaa.nih.gov](http://www.niaaa.nih.gov).**

<sup>1</sup> Chen, C.M.; Yi, H-y.; and Faden, V.B. *Surveillance Report No. 101: Trends in Underage Drinking in the United States, 1991–2013*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism, 2015. Available at: <http://pubs.niaaa.nih.gov/publications/surveillance101/Underage13.htm>.

<sup>2</sup> U.S. Department of Agriculture (USDA) and U.S. Department of Health and Human Services (HHS). *Dietary Guidelines for Americans, 2010*. 7<sup>th</sup> Edition. Washington, DC: USDA and HHS, 2010, p. 31. Available at: <http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf>.



NIH . . . Turning Discovery Into Health®

National Institute on Alcohol Abuse and Alcoholism

[www.niaaa.nih.gov](http://www.niaaa.nih.gov) • 301.443.3860

October 2015