

## Alcohol Poisoning-Associated Deaths, 2013-2017

### What is alcohol poisoning?

**Alcohol poisoning** is a serious and potentially lethal consequence of drinking too much alcohol in a short period of time. Alcohol is a depressant drug, and ingesting too much alcohol can affect your breathing, heart rate, body temperature, gag reflex, and in extreme cases, it can lead to coma or death.<sup>1</sup> This fact sheet reports on alcohol poisoning-associated deaths (AP-associated deaths) between 2013 and 2017.

### Alcohol poisoning-associated deaths are more common among men

AP-associated deaths, by gender, 2013-2017

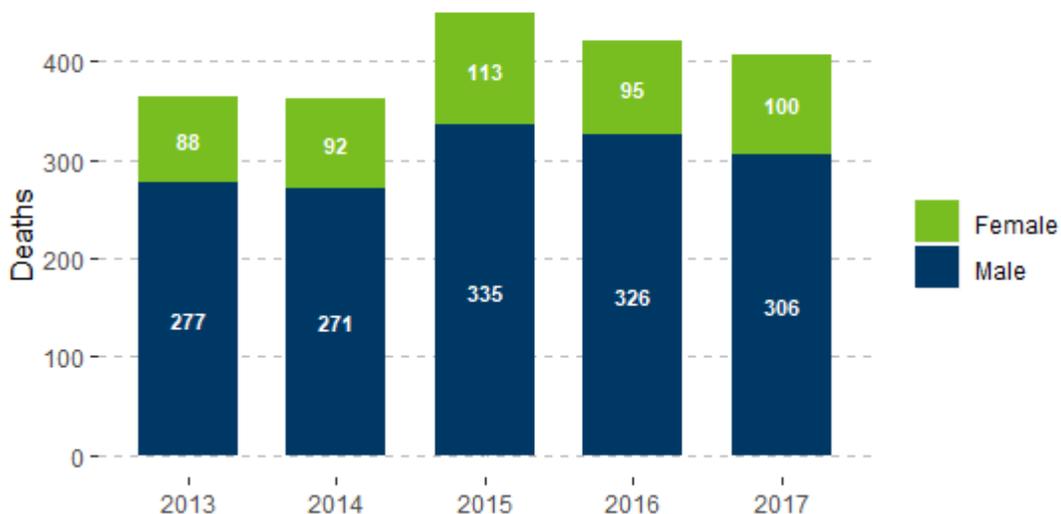


Figure 1: AP-associated deaths in Minnesota by gender, 2013-2017

### What are the symptoms?

Signs and symptoms of alcohol poisoning include:<sup>1</sup>

- Confusion
- Vomiting
- Seizures
- Slow breathing (less than eight breaths per minute)
- Irregular breathing (a gap of more than 10 seconds between breaths)
- Low body temperature
- Passing out (unconsciousness)

For information on how to prevent alcohol poisoning, visit [MDH's Alcohol and your Health](#).

## Who is at risk?

The main cause of alcohol poisoning is binge drinking – a pattern of heavy drinking in which a male consumes five or more drinks in two hours or less, or a female has four or more drinks in the same time span. Alcohol poisoning can also occur by ingesting large amounts of alcohol-containing household items like mouthwash, cooking extracts, and some cleaning supplies. There are a number of factors that impact the risk of alcohol poisoning, including:<sup>1</sup>

- Your gender, size, weight, and overall health
- Whether you’ve eaten recently
- If you’ve combined alcohol with other drugs, including opioids
- The alcohol content (ABV) of your drinks
- The rate and amount of alcohol consumption
- Your tolerance level

### Alcohol poisoning-associated deaths are most common in middle-aged adults

AP-associated deaths, by age group, 2013-2017

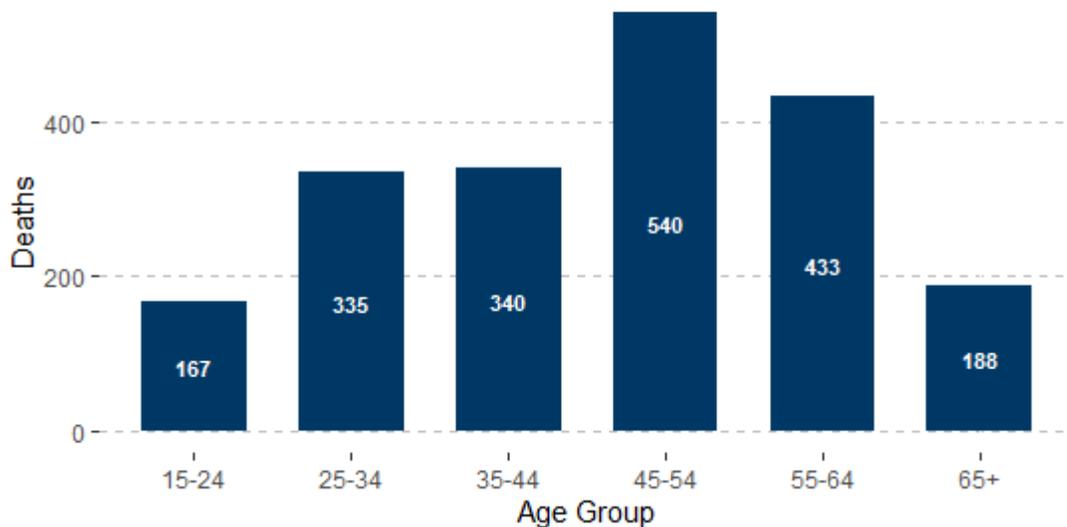


Figure 2: AP-associated deaths in Minnesota by age group, 2013-2017. Note: no deaths under the age of 15 were reported.

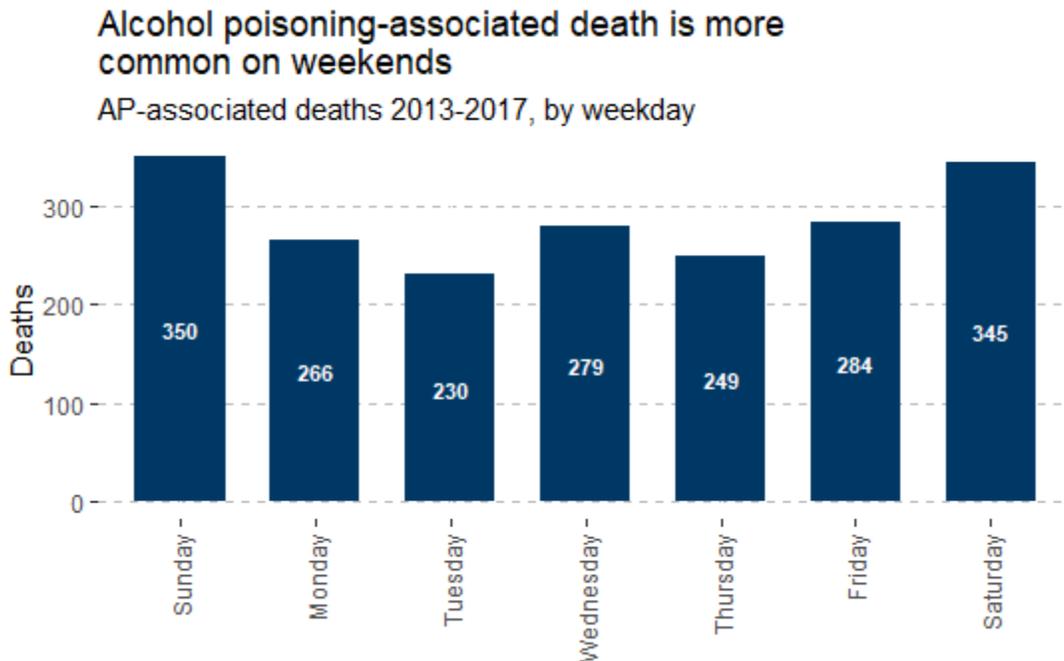
During 2013-2017, 2,003 Minnesotans died from alcohol-associated poisoning. About 75% of those deaths were among males (**Figure 1**). This is likely due to differences in risky drinking behaviors and total alcohol consumption, as men have a physiologically higher alcohol tolerance on average.<sup>2</sup> During that same time, 75% of Minnesotan alcohol poisoning-associated deaths were among those aged 35 years and older (**Figure 2**).

Alcohol misuse and abuse differs by race and ethnicity. **Table 1** shows alcohol poisoning-associated death rates by race and ethnicity in the last five years. The rate of alcohol poisoning-associated deaths is significantly higher among American Indians than other racial and ethnic groups.

**Table 1:** AP- associated deaths per 100,000 by race/ethnicity, 2013-2017.

Racial/Ethnic group	# deaths per 100,000
White	7.1
Black/African American	8.4
Hispanic/Latinx	4.2
American Indian	29.7
Asian	1.7

Although the two most common days for alcohol poisoning-associated deaths are Saturday and Sunday, collectively, more deaths actually occur during the week than on the weekends (**Figure 3**).



**Figure 3:** AP-associated deaths in Minnesota, by day of the week, 2013-2017.

### Alcohol poisoning-associated deaths are preventable

Deaths due to excessive alcohol use are preventable. The [Community Guide](#)<sup>6</sup> includes several evidence-based recommendations to reduce the likelihood of binge drinking, alcohol-related harms, and deaths associated with alcohol poisoning:

- Increase the price of alcohol by increasing alcohol taxes
- Regulate alcohol outlet density
- Dram shop (commercial host) liability

## MINNESOTA ALCOHOL POISONING ASSOCIATED DEATHS, 2013-2017

- Avoiding privatization of retail alcohol sales
- Maintain limits on the days and hours when alcohol is sold (in settings such as liquor stores, restaurants, and bars)
- Enhanced enforcement of laws prohibiting alcohol sales to minors
- Electronic screening and brief intervention to reduce excessive alcohol use. These screening and brief intervention programs can be integrated into clinic and emergency department services, at work places, or in other community settings using mobile devices or computers.

### Methods

All data were obtained from *CDC WONDER Multiple Cause of Death, 1999-2017*.<sup>3</sup> Data were filtered to include Minnesotans of all ages during the years 2013-2017. To identify alcohol poisoning associated deaths, the underlying cause of death filter was set to include all causes of death, and the multiple cause of death filter was set to flag records that included any of the following codes to represent alcohol poisoning: X45 (Accidental poisoning by and exposure to alcohol), Y15 (Poisoning by and exposure to alcohol, undetermined intent), X65 (Intentional self-poisoning by and exposure to alcohol), T51.0 (Toxic effect of ethanol), T51.1 (Toxic effect of methanol), or T51.9 (Toxic effect of alcohol, unspecified).

### References

1. Mayo Clinic. (2019). *Alcohol Poisoning – Symptoms & causes*. [online] Available at: <https://www.mayoclinic.org/diseases-conditions/alcohol-poisoning/symptoms-causes/syc-20354386> [Accessed 5 Dec. 2019].
2. MT Schulte, D Ramo, SA Brown. Gender differences in factors influencing alcohol use and drinking progression among adolescents. *Clinical Psychology Review*. 29, 535-547 (2009).
3. Wonder.cdc.gov. (2019). *Multiple Cause of Death Data on CDC WONDER*. [online] Available at: <https://wonder.cdc.gov/mcd.html> [Accessed 25 Nov. 2019].

### Suggested Citation

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