Live well to learn well

Why Gender Matters When It Comes to Drinking

We like to think men and women are equal in all things, right? When it comes to most of the A-words (like academics, athletics, arts), women and men are equal. Not so with alcohol. There are some important physiological and social differences that suggest alcohol has a different impact on men and women. Consider the following:

A woman will get drunk faster than a man consuming the same amount of alcohol.

Imagine you are a 130 pound female and you drink four 12 oz beers in 2 hours. Your estimated blood alcohol concentration (BAC) would be about .12. Most people feel very drunk at .12 BAC. Reaction time is delayed and muscle control is impaired. You might feel dizzy, nauseous, and have trouble walking.

What about the guys? If a guy is about 170 pounds and drinks an equal amount of alcohol in the same amount of time, his estimated BAC would be about .07, almost half the BAC of the female in this scenario. In other words, one drink for the woman in this scenario has the same impact as two drinks for a man.

What counts for this variation?
There are several factors to consider:

• First, there is the obvious size difference. By and large, guys have a bigger frame and build so the alcohol is diluted over a larger mass.

• Second, there are differences in body water content for men and women. The total body weight of a man is composed of 55-65% water and of a woman is 45-55% water; so alcohol is more diluted in men than in women.

• Third, men have higher levels of an enzyme (gastric alcohol dehydrogenase) that aids in the metabolism of alcohol. Having more gastric alcohol dehydrogenase enables men to more effectively break down alcohol in the stomach before it even reaches the blood stream and impacts BAC.

• Finally, hormonal changes in women affect BAC. Research has found that one week prior to menstruating, women maintain the peak degree of intoxication for longer periods of time than menstruating or post-menstruating women do. This same pattern of prolonged peak intoxication was also found among women using oral contraceptives.

All of this means women will experience greater impairment after drinking less alcohol than men. With that greater impairment comes an increased risk for harm, including hangovers, nausea and vomiting, memory loss and blackouts, and other regretted behavior.

You can see how your own BAC would change based on size, gender and drink choices with an online BAC calculator. Then, consider the impact of BAC on your body and functioning. (Visit www.gannett.cornell.edu and search for “BAC”).

Women develop alcohol-related organ damage at lower levels of alcohol consumption and after a shorter history of heavy drinking than men.

Women’s organs appear to be more vulnerable to alcohol-induced damage than men’s. Alcoholic women develop cirrhosis of the liver, alcohol-induced damage to the heart muscle (i.e. cardiomyopathy), and nerve damage (i.e. peripheral neuropathy) after fewer years of heavy drinking than do alcoholic men.

Talking about organ damage sounds awfully scary when thinking about typical college student drinking. But think about it: if women’s organs are at risk for damage from heavy drinking over shorter periods of time, four years of heavy college drinking may take a greater toll on a woman’s body than a man’s.

Alcohol affects both sexual intent and aggression
It is impossible to talk about alcohol and not talk about sex. Meeting potential partners (from steady dates to one night hook-ups) is a big part of the drinking scene. That alcohol makes it easier for some to meet and talk to new people is seen as a positive by most people who drink alcohol. The down side is that, by some accounts, alcohol is involved in as many as 75% of sexual assaults on a college campus.

The link between sexual aggression and alcohol use is multidimensional. Research tells us that women who are seen drinking alcohol are perceived to be more sexually available than they may actually be. Therefore, women can be targeted with unwanted attentions due to that misperception. One study found that, for women, the odds of experiencing sexual aggression were 9 times higher on days of heavy drinking compared to days when...
the women did not drink. Individuals who are even a little intoxicated are more likely to be victimized than those who are not drinking.

Other research studies have shown that men who think they have been drinking alcohol—even when they have only consumed a placebo—feel sexually aroused and are more responsive to erotic stimuli, including rape scenarios. For some, being drunk serves as a justification for behavior that is demeaning or insulting, including the use of others as sexual objects.

It’s important to take action to protect friends and others from potential assault or other regretted behavior as a result of drinking. Pay attention when you see a pal acting in inappropriate ways or about to take advantage in a drunken situation. Intervene when you are worried that an intoxicated individual may be making a choice that they could regret in the morning—or worse, making a choice that ends up hurting themselves or someone else.

If you decide to drink

One of the keys to a positive experience with alcohol is dosage. Like any other drug, you want to experience the optimal effect with the least amount of substance. If you have a headache, you might take one or two aspirin—not ten! The same concept applies to alcohol.

When a person consumes moderate amounts of alcohol slowly, the alcohol produces a mild “up” feeling—we call this a “good buzz.” There is a point when drinking—the point of diminishing returns, which is a BAC no higher than .06—when the buzz will not get better with more alcohol. In fact, drinking more alcohol at this point can lead to negative feelings—like fatigue, nausea and vomiting, and disorientation.

If you choose to consume alcohol, the way to experience your optimal high is to reach your buzz slowly and maintain it. This will also reduce the negative consequences from drinking. Here are some strategies other students who drink have found helpful for optimizing the positive effects of alcohol and avoiding negative consequences:

• Space and pace your drinking to about one per hour or less
• Decide before you go out how much you are going to drink—for women, a safe drinking limit is 3 to 4 drinks over the same number of hours
• Count your drinks
• Alternate between non-alcoholic and alcoholic drinks
• Drink for quality, not quantity

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• Eat before and during drinking
• Make a decision about sex that night before you go out; bring protection
• Avoid drinking games
• Avoid shots and/or mixed drinks
• Stop drinking when you feel dizzy, nauseated, or tired
• Use a designated driver, walk with a friend, or bring cab fare

When not to drink

Most people know it is important not to drink when they are pregnant or trying to get pregnant, or if they are on certain prescription medications, such as certain antibiotics or pain killers. However, there are other times when it is best to pass on alcohol. A good rule of thumb for when not to drink is “HALT.” HALT stands for feeling Hungry, Angry, Lonely or Tired. We may know to HALT intuitively but it can be easy to forget why HALT is a good idea once the weekend comes.

• Drinking on an empty stomach can lead to getting too drunk too quickly. Take time to eat before drinking.
• Drinking when you are feeling angry or lonely may initially seem like a good idea but as the intellectual processes in your brain are sedated by alcohol, your underlying emotions will come forward. This means that drinking when you are feeling in a good mood generally leads to a good time, but drinking when you are feeling blue or angry generally leads to feeling worse.
• Drinking when you are run down or tired is never a good idea. Alcohol is a depressant, so adding alcohol to a tired body can lead to feeling too drunk and passing out.

Women and Alcohol Emergencies

Alcohol poisoning can be fatal, so it’s vital for women to look out for one another while drinking, and intervene if someone has had too much to drink or has been hurt while drinking.

In an alcohol emergency, call 911 for help and stay with the person until help arrives. In cases of a potential head injury, even if the person regains consciousness, he or she must be evaluated immediately.

ABCD Signs of alcohol poisoning

• A (Alert): inability to rouse the person with loud shouting or vigorous shaking; inability of a person passed out to stay awake for more than 2-3 minutes; vomiting while passed out; not waking up after vomiting; incoherent while vomiting
• B (Breathing): slow or irregular breathing; lapses in breathing; weak pulse; very rapid or slow pulse
• C (Color): skin is pale or bluish; clammy or cold
• D (Doubt): unsure what’s happening; possible head injury; may have consumed other drugs

What to do (or not to do) while you’re waiting for help to arrive

• Do not let the person lie on his/her back. Turn the person on his/her side to prevent choking if the person vomits.
• Do not leave the person alone. The person may seem to be okay, but the alcohol ingested may take some time to be absorbed before peak levels are reached in the brain.
• Do not try to give the person anything to eat or drink.
• Do not put the person in a cold shower. He/she could fall or the shock could make the person pass out.
• Be prepared to give the emergency medical personnel as much information as possible, including any drugs or medications taken.

Remember: New York State’s Good Samaritan law and Cornell’s Good Samaritan Protocol can help reduce/eliminate legal/judicial consequences in alcohol or other drug emergencies. Get more info at GoodSam.cornell.edu

For more information

For more information about alcohol, and handling alcohol emergencies, visit Topics & Concerns at www.gannett.cornell.edu.