

# Alcohol



# Awareness Handbook



**Indiana State  
University**

*More. From day one.*



# Alcohol Quiz

Please circle true or false:

- T or F** 1. Alcohol is a drug.  
**T or F** 2. Alcohol is a stimulant.  
**T or F** 3. Alcohol is a depressant.  
**T or F** 4. If a male and female are the same weight, alcohol affects them in the same way.  
**T or F** 5. Most students in college drink more than 5 drinks when they go out.  
**T or F** 6. The average college student drinks about 15 gallons of alcohol per year.

## Facts about Alcohol

There are a lot of misconceptions about alcohol. In actuality, alcohol is a drug. Although many people do not think of it in those terms, alcohol is a powerful mood-altering substance. Alcohol falls under the class of drugs known as “depressants” or sedatives. As with other drugs, its effects depend on the dosage.

Also, alcohol can affect men and women differently. Women’s bodies have less water than men’s. Because alcohol mixes with water in the body, it becomes more concentrated in a woman’s body than a man’s (*NIAAA FAQ*).

## Alcohol in College

Although there is a widespread misconception that all college students binge drink, national statistics show that most college students drink moderately. Most college students have 0-4 drinks when they consume alcohol and about 1 in 5 choose not to drink at all. It is estimated that college students drink more than 34 gallons of alcohol per year and can account for about 20% of the calories they consume.

A survey of over 17,000 students at 140 different campuses found (*Harvard*):

- 1 in 6 college students were nondrinkers.
- 2 in 5 students reported using alcohol, but did not binge drink.
  - ◆ Fewer than half (44%) the students that drank were binge drinkers.
  - ◆ Half of this group, or 1 in 5 students overall, were **frequent** binge drinkers.

How does that compare to your perception of college drinking? The previous study also had some important findings about difficulties that students face when they abuse alcohol:

- A strong relationship was found between how often students binge drink and the types of problems they experienced.
  - ◆ These students were 7-10x **more** likely to not use protection while having sex, engage in unplanned sexual activity, get into trouble with campus police, damage property, or get hurt/injured.

- ◆ A large proportion of students reported driving after drinking.
  - Frequent binge drinkers had higher frequencies of this behavior.
- ◆ About ½ of frequent binge drinkers had **5 or more of these problems**:
  - Having a hangover
  - Doing something you regret
  - Missing a class
  - Forgetting where you were or what you did
  - Getting behind in school work
  - Arguing with friends
  - Engaging in unplanned sexual activity
  - Getting hurt or injured
  - Damaging property
  - Not using protection when having sex
  - Getting into trouble with campus/local police
  - Requiring medical treatment of alcohol overdose

*(How many of the problems above have you faced? Circle them.)*
- ◆ Despite all of these negative effects, few students described themselves as having a drinking problem.
  - Less than 1% of the total sample and only 0.6% of frequent binge drinkers believed they had a drinking problem (NIAAA).

Here are some statistics from a 2009 study (Hingson et al., 2009/College Drinking Snapshot):

- 1,825 students (18-24 years old) die from alcohol-related unintentional injuries per year.
- Almost 600,000 students are injured under the influence of alcohol per year.
- About 696,000 students are assaulted by someone who has been drinking per year.

Another study of college students showed that there has been an increase of alcohol-related **unintentional injuries and deaths** over time (*Hingson et al., 2005*).

- Numbers went up from approximately 1,600 in 1998 to 1,700 in 2001.
- Drunk driving in college students has also increased from 26.5% to 31.4% (2.3 to 2.8 million).
- In 1998 and 2001, there were more than 500,000 students unintentionally injured due to drinking.
- In 1998 and 2001, more than 600,000 students were hit/assaulted by another drinking student.

Overall, alcohol is one of the leading causes of death in the U.S. and contributes to half of motor vehicle fatalities (*Wechsler, 1994*).

What constitutes **one** drink of alcohol?

- 12 oz. of beer (5% alcohol)
- 5 oz. of wine (12% alcohol)
- 1.5 oz. of liquor/ 1 shot (40% alcohol-80 proof)
  - ◆ Mixed drinks often have more than 1 shot of alcohol in them

# Blood Alcohol Content (BAC)

BAC is the grams of alcohol present in 100 ml of blood.

In order to determine approximate BAC, use the proper chart (male/female); find the number of drinks consumed and body weight. (Note: These calculations are for people of normal body weight, neither unusually thin nor obese, and not under the influence of any other drugs.) The table assumes that all drinks are consumed within one hour. If drinking takes place over a longer time period, subtract .02 from the chart for each additional hour.

Example: If drinking took place over three hours, you would subtract .04 to account for the additional two hours.

Individual effects may vary depending on the tolerance and other factors discussed in this booklet. (Shaded indicates legally drunk BAC level. Bold areas indicate BAC levels where deaths begin.)

## BAC Chart for Men

Body Weight in Pounds	100	120	140	160	180	200	220	240	
Drinks	Approximate Blood Alcohol Percentage								
0	.00	.00	.00	.00	.00	.00	.00	.00	Only Safe Driving Limit
1	.04	.03	.03	.02	.02	.02	.02	.02	Driving Skills Significantly Affected Possible Criminal Penalties
2	.08	.06	.05	.05	.04	.04	.03	.03	
3	.11	.09	.08	.07	.06	.06	.05	.05	
4	.15	.12	.11	.09	.08	.08	.07	.06	
5	.19	.16	.13	.12	.11	.09	.09	.08	
6	.23	.19	.16	.14	.13	.11	.10	.09	Legally Intoxicated Criminal Penalties
7	.26	.22	.19	.16	.15	.13	.12	.11	
8	.30	.25	.21	.19	.17	.15	.14	.13	
9	.34	.28	.24	.21	.19	.17	.15	.14	
10	.38	.31	.27	.23	.21	.19	.17	.16	Death Possible
Subtract .01% for each 40 minutes of drinking. One drink is 1.25 oz. of 80 proof liquor, 12 oz. of beer, or 5 oz. of table wine.									

*This information is taken from Virginia Tech Alcohol Abuse Prevention website.[DC2]*

## BAC Chart for Women

Body Weight in Pounds	90	100	120	140	160	180	200	220	240	
Drinks	Approximate Blood Alcohol Percentage									
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	Only Safe Driving Limit
1	.05	.05	.04	.03	.03	.03	.02	.02	.02	Driving Skills Significantly Affected  Possible Criminal Penalties
2	.10	.09	.08	.07	.06	.05	.05	.04	.04	
3	.15	.14	.11	.10	.09	.08	.07	.06	.06	
4	.20	.18	.15	.13	.11	.10	.09	.08	.08	
5	.25	.23	.19	.16	.14	.13	.11	.10	.09	
6	.30	.27	.23	.19	.17	.15	.14	.12	.11	Legally Intoxicated  Criminal Penalties
7	.35	.32	.27	.23	.20	.18	.16	.14	.13	
8	.40	.36	.30	.26	.23	.20	.18	.17	.15	
9	.45	.41	.34	.29	.26	.23	.20	.19	.17	
10	.51	.45	.38	.32	.28	.25	.23	.21	.19	Death Possible
Subtract .01% for each 40 minutes of drinking. One drink is 1.25 oz. of 80 proof liquor, 12 oz. of beer, or 5 oz. of table wine.										

*This information is taken from Virginia Tech Alcohol Abuse Prevention website.[DC2]*

## Effects of Alcohol on Behavior—BAC

- .02: Slight mood changes, few obvious effects to others.
- .02- .05: Impairment begins here! Lowered inhibition, impaired judgment and rational decision making ability. Emotions and behaviors are exaggerated.
- .08: **Legally drunk**. Deterioration of reaction time and control. Recognition of deficits is lost; the drinker believes he/she is functioning better than he/she really is. Driving is dangerous. This is the designation for a DUI in the states of Indiana and Illinois.
- .10-.12: Memory, motor skills and judgment are markedly impaired (warning: legally, impaired sexual consent is the same as no consent); lack of coordination and balance; recognition of impairment is lost; impotence can occur; increasing belligerence in some. Driving is extremely dangerous.
- .15: Impaired balance, movement and coordination. Standing, walking, or even talking is difficult. **Blackouts** occur for some starting as low as .14 BAC.

- .20: Decreased pain and other sensations. Erratic emotions. Nausea and vomiting may begin, and there is risk of **asphyxiation** on one's own vomit.  
**Note:** Place a vomiting person on his/her side to decrease the risk of vomit clogging the air passages.)
- .30: Most are **semi-conscious**. Reflexes diminish.
- .35: this is equivalent to surgical anesthesia. Deaths begin at this level.
- .40: Loss of consciousness. Very limited reflexes. Anesthetic effects. Death is possible due to respiratory arrest.
- .50: Deep coma and death due to anesthesia of the nerve centers responsible for controlling respiration and heartbeat.
- >.50: Half of the people who reach this BAC level die.

## Alcohol and Academics

- A quarter of college students face academic consequences due to drinking (e.g., doing poorly on tests, missing class, having lower grades). (*Snapshot*)
- Alcohol inhibits the brain's ability to learn and store new information. Much of memory formation occurs when you sleep and alcohol negatively impacts this process (*Princeton*).
- Having 5 or more drinks in 1 night can affect your brain/body for up to 3 days later (*Princeton*).
- 2 consecutive nights of drinking 5 or more drinks in one night can affect you up to 5 days later.
- Weekend drinking can impact your abilities in class or on tests later that week (*Princeton*).

## Factors Influencing Alcohol's Effect

### Rate of Consumption

- The faster a person drinks, the quicker they become intoxicated, the more impaired one becomes, and the faster the BAC rises.
- If a student drinks 1 drink an hour for 3 hours, his/her peak BAC will be LESS than if he/she drank 3 drinks all at once/in a row, even though the total amount of alcohol consumed was the same.

### Gender

- Females have more body fat and less water in their bodies than males. Alcohol is not fat-soluble, so women have a higher BAC than men of the same weight after the same number of drinks.
- When a woman is premenstrual or if she is using hormonal birth control (pills, patch, ring), alcohol is absorbed more rapidly, leading to higher BAC levels.
- Men have higher levels of the enzyme responsible for alcohol metabolism in their stomachs, meaning that up to 25% of the alcohol consumed by men never enters their bloodstream.

## Food

- The presence and type of food in the system influences the alcohol absorption process.
- The higher the dietary fat content, the more time the stomach will take to empty alcohol into the intestine.
- However, food only slows down the process; once your blood is saturated with alcohol it will still affect your body and your behavior.

## Biological Predisposition

- Genetic factors also account for differences in alcohol's effects.
- People may be more susceptible to the effects of alcohol due to predispositions to alcoholism or other related diseases.

## Illness

- If a person is feeling ill due to any health issues he/she will be more sensitive to the effects of alcohol.

## History

- Prior excessive or binge drinking forces the body to adapt and thereby increases tolerance (see discussion below).

## Mood

- Your mood, whether positive or negative, influences the effects of alcohol.
- Stress, fatigue, and depression, when combined with alcohol, can increase one's impairment level.
- Also, as a depressant, alcohol use can increase a negative mood, even if it started out positive.

## Strength of Drink

- What is in your drink?
- Sometimes untrained servers pour more than the correct proportion for a standard drink.
- Be aware of mixed drinks: they may contain more alcohol than you bargained for.
- Beware of mixers too. Carbonization speeds up alcohol absorption. [DC3]

## Other Drugs

- If you are taking other medications, it can be very dangerous to drink alcohol.
- Also, the effectiveness of your medications can be changed as well.
- "Downers" such as tranquilizers, painkillers, and sleeping pills are dangerous when mixed with alcohol. Effects can be fatal.
- If one mixes alcohol with "uppers" like cocaine, speed or Ritalin, there may be a range of reactions from being an "awake drunk" to being out-of-control and violent.
- Mixing alcohol with marijuana is not advisable either. Marijuana can suppress the gag reflex that causes one to vomit. If a person has overdosed on alcohol and needs to vomit but is unable to, they are in a very dangerous medical situation.



# Health Effects of Alcohol Consumption

<b>Arthritis</b>	Increases risk of gouty arthritis
<b>Cancer</b>	Increases the risk of cancer in the liver, pancreas, rectum, breast, mouth, pharynx, larynx and esophagus
<b>Fetal Alcohol Syndrome</b>	Causes physical and behavioral abnormalities in the fetus
<b>Heart Disease</b>	Raises blood pressure, blood lipids and the risk of stroke and heart disease in heavy drinkers. Heart disease is generally lower in light to moderate drinkers.
<b>Hyperglycemia</b>	Raises blood glucose
<b>Hypoglycemia</b>	Lowers blood glucose, especially for people with diabetes
<b>Kidney Disease</b>	Enlarges the kidneys, alters hormone functions, and increases the risk of kidney failure
<b>Liver Disease</b>	Causes fatty liver, alcoholic hepatitis, and cirrhosis
<b>Malnutrition</b>	Increases the risk of protein-energy malnutrition, low intakes of protein, calcium, iron, vitamin A, vitamin C, thiamine, vitamin B6 and riboflavin, and impaired absorption of calcium, phosphorus, vitamin D and zinc.
<b>Nervous Disorders</b>	Causes neuropathy and dementia; impairs balance and memory
<b>Obesity</b>	Increases energy intake, but not a primary cause of obesity
<b>Psychological disturbances</b>	Causes depression, anxiety and insomnia

*cited from: HealthChecks Systems (2012)*

Here are some other interesting facts about how alcohol can affect your health:

## **Fat Storage** *(UC-San Diego)*

- Alcohol has 7 calories per gram while fat has 9 calories per gram.
- In the body, alcohol tends to be stored similarly to fat and it increases fat storage.
- Since alcohol impairs energy pathways, such as glycolysis, people tend to have decreased energy and muscle recovery.

## **Sleeping Problems**

- Although people may fall asleep easily when drinking, they actually have a less restful sleep and wake often.
- Alcohol disrupts the quality of sleep and sleep cycles *(UC San Diego)*.
- These problems continue into the night, even when the alcohol is no longer in your system *(UC San Diego)*.

## **High blood pressure**

- Individuals who excessively consume alcohol tend to have higher blood pressure than those who do not.

## Chronic Use

- Chronic alcohol use can also lead to the following long-term health risks (in addition to those previously stated): (NIH- Medline Plus)
  - ◆ bleeding in the digestive tract
  - ◆ brain cell damage
  - ◆ dementia/memory loss
  - ◆ heart damage
  - ◆ pancreatitis
  - ◆ Alcoholic liver disease
    - swelling and inflammation (hepatitis) of the liver
    - can lead to scarring and cirrhosis
    - can be caused by binge drinking and family history
  - ◆ Alcoholic neuropathy
    - the direct poisoning of the nerve by alcohol coupled with poor nutrition associated with alcoholism
    - ½ of all long-term drinkers develop this
  - ◆ Alcoholic Ketoacidosis
    - buildup of ketones in the blood (**Ketones**: an acid that forms when the body breaks down fat)
    - see malnourished individuals

## Impairment and Tolerance

### Impairment:

- Impairment is any time you have consumed or ingested enough of any substance to alter physical, mental and/or emotional functioning.
- Impairment may cause accidents, drinking and driving crashes, legal problems, a decrease in job performance, fights, property destruction resulting from poor judgment
- Impairment involving alcohol begins at a BAC of .05 grams percent for adolescents and adult females and at .08 grams percent for adult males.
- Impairment occurs much sooner than a person feels or looks drunk. It tends to affect vision, reaction time and perception (especially of time and space).

### Tolerance:

- Tolerance means that it takes more of a drug to produce the same effect with repeated administration, and that higher and higher doses are needed.
- The DSM-IV defines Substance Dependence as the following:
  - ◆ Tolerance as defined by either
    - a need for markedly increased amounts of the substance to achieve intoxication or desired effect.
    - markedly diminished effect with continued use of the same amount of the substance.
  - ◆ Withdrawal, as manifested by either of the following:
    - The characteristic withdrawal syndrome for the substance
    - The same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms.

- ◆ The substance is often taken in larger amounts or over a longer period than was intended.
- ◆ There is a persistent desire or unsuccessful efforts to cut down or control substance use.
- ◆ A great deal of time is spent in activities necessary to obtain the substance (such as visiting multiple doctors or driving long distances), use the substance (such as chain smoking) or recover from its effects.
- ◆ Important social, occupational, or recreational activities are given up or reduced because of substance use.
- ◆ The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
- Tolerance is the body's way of adapting to having a foreign and toxic substance in the system.
- People develop a high tolerance to alcohol when they drink a great deal over an extended length of time.
- While tolerance may seem to some to be a desirable state, it significantly increases the risk of alcoholism, long-term health problems, and social problems.
- A person with high tolerance may not feel or look intoxicated when consuming large amounts of alcohol, but his or her cognitive and psychomotor skills are nevertheless impaired.
- For example, a heavy drinker could still be lucid at 0.25%, whereas the average person would barely be able to function. Even so, the heavy drinker would be extremely dangerous on the highway.

## Alcohol and Mental Health

- In one year, 1.2-1.5% of students have tried to commit suicide while under the influence of alcohol or drugs (*Preslet et al., 1998; Snapshot*).
- 31% of college students met a diagnosis for alcohol abuse and 6% for alcohol dependence in the past 12 mos (*Knight et al., 2002; Snapshot*).
- Many times we think of "alcoholics" as people who drink alone during the day.
- Actually, alcoholism is when you have a physical addiction to alcohol and you keep drinking despite the problems it may cause in your life (e.g., academics, family, physical health, etc.) (*NIH- Medline Plus*).
- Alcohol Abuse is when your drinking lead to problems, but not necessarily a physical addiction (*NIH- Medline Plus*).
- Alcohol Withdrawal usually occurs 5-10 hours after the last drink.
- Symptoms: anxiety, depression, fatigue, irritability, shakiness, insomnia, headache, etc.
- 1 in 6 people in the US has a drinking problem (*NIH- Medline Plus*).

# Responsible Drinking Tips

- **Know your limit.** If you do not already know how much alcohol you can handle without losing control, try it out one time at home with your parents or a friend present.
- **Eat food while you drink.** It is particularly good to eat high protein foods such as cheese and peanuts, which help to slow the absorption of alcohol into the circulatory system. Many cultures consume alcohol only with food to prevent various problems.
- **Sip your drink.** If you gulp a drink for the effect, you are losing the pleasure of drinking and will become impaired very quickly, sometimes making you lose control before you are aware of your level of intoxication
- **Accept a drink only when you really want one.** If someone is trying to force another drink on you, ask for ice or drink a non-alcoholic beverage.
- **Skip a drink now and then.** When at a party, have a nonalcoholic drink between the alcoholic ones to keep your blood alcohol concentration down. Space your alcoholic drinks out to keep the desired blood alcohol concentration.
- **Appoint a Designated Driver.** When drinking out, have a designated driver or get a cab. Make arrangements to get home **before** you begin drinking.
- **Beware of unfamiliar drinks.** Drinks such as zombies and other fruit/rum drinks can be deceiving, as the alcohol is not always detectable, and it is difficult to space them out.
- **Make sure that drinking improves social relationships rather than impairs them.** Serve alcohol as an adjunct to an activity rather than as the primary focus.
- **Use alcohol carefully in connection with other drugs.** This includes over-the-counter drugs such as sleeping pills and cold/cough medicines. Alcohol should be avoided while taking certain antibiotics, arthritic medications, anti-depressants, and many other prescription medications. Check with your physician or pharmacist before you drink while on any prescription drug.
- **Respect the rights of individuals who do not wish to drink.** It is considered impolite to attempt to get people to drink who do not wish to. They may abstain for religious or medical reasons, because they are recovering alcoholics, or they just may not like the taste and effect it has on them.
- **Avoid drinking mixed drinks on an empty stomach on a hot day.** This might produce hypoglycemia, which can cause dizziness, weakness, and mood change.
- **If you know that you will have to drive after consuming alcohol, limit your consumption to no more than one drink an hour.** In reality many people who have a drink with a meal have no other option other than to drive home. Consuming **NO MORE** than one glass of wine, beer or mixed drink with a meal in a hour is generally safe for driving.
- **Upper limit of drinks for males is 21 and for females is 14 drinks per week.** Most studies suggest that these limits are safe for health. In older individuals moderate drinking may help prevent against heart disease. This amount, of course, is spread out over a week's period and is not a limit for one night of drinking. This means for **males no more than 2-3 drinks and for females 1-2 drinks per day** preferably with meals.

## Hints for Party Hosting

Most people love to go to parties, and most find that parties are fun to host. The following tips for being a responsible host will give more pleasure to you and your guests.

- **Plan people movement.** Make sure that people can move around and meet each other. If it means putting the sofa in a corner, do so.
- **The bartender.** If you plan to have a friend act as “bartender,” make sure that he or she is not an eager pusher who uses the role to put an extra shot in everyone’s glass or keeps filling up half empty cups with more beer.
- **Pace the drinks.** Serve drinks at regular, reasonable intervals. A drink-an-hour schedule usually means that good company prevails and you can avoid intoxication. Use small cups for beer drawn out of kegs rather than large ones.
- **Don’t double up.** Many mature and wise people count and pace their drinks. If you serve doubles, they will be drinking twice as much as they planned.
- **Push the snacks.** Make sure that people are eating along with drinking. Have plenty of high quality snacks such as cheese, meats, nuts, etc.
- **Don’t push the drinks.** Let the glass be empty before you offer a refill.
- Serve non-alcoholic beverages also. Remember that many people do not drink for a variety of reasons. Make sure that you have something non-alcoholic to drink such as soft drinks and juice. Non-alcoholic wine is great for a formal dinner.
- **Closing the party.** Decide, in advance, when you want your party to end. At this time, stop serving alcohol and serve coffee and a substantial snack. This provides some non-drinking time before your guests drive home. Coffee does not “sober up” intoxicated people and neither do cold showers. All you get is a “wide awake and freezing drunk.”
- **Don’t allow intoxicated guests to drive home.** If you find that one of your friends has consumed too much alcohol, let them sleep at your house, have someone else drive them home, or call a taxi. Some areas offer free taxi services on special holidays (e.g., New Years Eve).

Alcohol has been used by most cultures and if you do chose to drink, please do so in a responsible, safe, sensible, and healthy way.

## Alcohol’s Effects on Drugs/Medications

- Mixing medications with alcohol can lead to increased risk of illness, injury, or death (*NIAAA FAQ*).
- Effects are heightened by medicines like sleeping pills, antihistamines, antidepressants, anti-anxiety drugs, or pain killers (*NIAAA FAQ*).
- Medicines for certain disorders like heart disease, diabetes, and high blood pressure have very harmful effects with alcohol (*NIAAA FAQ*).
- Alcohol can have the following effects when mixed with alcohol:
  - ◆ Alcohol can change the amount of medicine the body absorbs.
    - This can cause a toxic amount of the drug to accumulate in the body.
  - ◆ Alcohol’s effects on the central nervous system can make the risk of drowsiness and impaired motor function caused by medicine more likely.

- ◆ Alcohol can increase the risk of side effects from medicines (e.g., lowered blood pressure and stomach irritation).
- ◆ Keep in mind that drug interactions with alcohol may not affect everyone the same way.
- The following list indicates the effects that alcohol can have on the body when mixed with particular types of medication:
  - ◆ Medications that cause drowsiness:
    - Alcohol may make you drowsier and more likely to be impaired.
    - Ex: cough/cold medicine and over-the-counter sleep aids.
  - ◆ Medications for anxiety, stress, depression, mood control, seizure control or pain control:
    - Alcohol may increase drowsiness, dizziness and impairment, and can place you at risk for life-threatening breathing difficulties.
    - Ex: Prozac, Klonopin, Xanax, Hydrocodone, Oxycodone, or Morphine
  - ◆ Medications designed to treat stomach pain:
    - Alcohol can make stomach pain worse and make the drug less effective.
    - Ex: Tums or Pepto-Bismol
  - ◆ Medicines that causes you to have stomach pain or nausea:
    - Drinking alcohol will likely make your stomach pain and nausea worse.
    - Ex: Aspirin or Ibuprofen
  - ◆ Medications designed to lower your blood pressure:
    - Alcohol may increase the chance for your blood pressure to drop too low.
    - Ex: Accupril
  - ◆ Medications for diabetes:
    - Alcohol can make your blood sugar fall too low and can cause flushing, nausea, vomiting, confusion, low blood pressure, and abnormal heart rhythms.
    - Ex: Chlorpromamide
  - ◆ Some antibiotics: alcohol can cause flushing, nausea, vomiting, confusion, low blood pressure and abnormal heart rhythms.
    - Ex: Metronidazole
  - ◆ Marijuana:
    - Alcohol can suppress the gag reflex that causes one to vomit. If a person has overdosed on alcohol and needs to vomit but is unable to, they are in a very dangerous medical situation.

## Alcohol and Sex

- Unsafe sex and transmission of STDs has been associated with alcohol intoxication (*Wechsler, 1994*).
- According to one study, **400,000** students (18-24) had unprotected sex and **100,000** were too drunk to know if they consented to have sex (*Hingson et al., 2002; Snapshot*).
- **97,000** students (18-24) are victims of alcohol-related sexual assault or date rape every year (*Hingson et al., 2009; Snapshot*).
- Alcohol is well known to alter your ability to think clearly. When you drink, at some point you will begin to see the world through “beer goggles”; i.e., you will likely become less picky about selecting whom you hook up with, how you go about having sexual experiences, and when you have sex with someone.

- A study conducted in Great Britain revealed that:
  - ◆ After drinking alcohol, one in seven 16-to-24-year-olds have had unprotected sex.
  - ◆ One in five have had sex that they regretted.
  - ◆ One in ten have been unable to remember if they had sex the night before.
- Mixing sex with alcohol or other drugs increases the chances of unintended pregnancy, and exposure to sexually transmitted infections. This is because if you have sex when you are drunk or high, you are much less likely to be thinking clearly enough to use condoms or to use them correctly.
- One study has shown that **60 percent** of young adult women who are infected with a sexually transmitted infection report that they were under the influence of alcohol at the time that they had sex with the infected person.
- The issue of sexual assault may be one of the most well-known dangers involved in mixing alcohol and sex. The most important aspect of this topic to understand is actually a very basic point: **No one ever “asks” or “deserves” to be sexually assaulted.**
- It is against the law to have sexual contact with a person who is incapacitated due to the use of drugs, alcohol, or prescription medications.
  - ◆ Incapacitated is another way to say “really out of it”, as in a situation where someone has passed out, or is just too drunk or high to think clearly. Making the choice to use alcohol or other drugs does not mean that you forfeit the sexual decision-making rights to your body.

## How to Minimize your Risks when Consuming Alcohol

### Use the Buddy System

- Don't go to parties by yourself if you know that alcohol is going to be served.
- Make sure one of your friends is designated to stay sober for the night.
- Whether or not you are driving to where you are going, it's a good idea to make sure that at least one person that you trust will be thinking clearly all night.

### Watch your drinks and your friend's drinks

- If you are going to put your drink down, only leave it with someone you know very well who you can trust to watch it reliably.
- Don't ever leave drinks unattended, and don't take drinks from people that you don't know.

### Make your decisions while you are sober, before you even begin to drink

- If you are going to be partying with your boyfriend or girlfriend, or even just someone you may hook up with, talk about what boundaries feel comfortable for both of you before you start drinking.
- If you are uncomfortable doing something when you are sober, your body and mind are probably giving you messages about who is a safe person to share your experiences with, how to best protect your health, and when to make decisions that you are truly ready for.
- Don't let alcohol or drugs change your mind.

# Alcohol and Physical Performance

Whether you're an athlete or not, it can be important to recognize the effects alcohol has on your athletic performance. In general, drinking 5 or more drinks can still affect your brain AND body for a few days after you drink (UGA).

## Exercising with alcohol in your system

When exercising with even low levels of alcohol in your system, you may experience a slower reaction time and decreased hand-eye coordination. Also, you may notice hand tremors. With higher levels of alcohol, you will likely notice a decrease in your overall performance as well as slowed running and cycling times. Alcohol can cause your body to have difficulty regulating body temperature as well as increasing your fatigue during intense exercises.

Individuals also experience dehydration and a weakening of how hard their heart pumps blood through the body (UGA). Moderate use (2-3 drinks) can result in a loss of motor coordination for up to 12 to 18 hours after drinking. Moderate use (2-3 drinks) can also result in depleted aerobic capacity and negative impact on endurance for up to 48 hours after the last drink has been consumed.

## Exercising with a hangover

Hangovers result from alcohol toxicity and dehydration. People tend to experience headaches, feelings of negativity, and hypersensitivity to external stimuli (e.g., sound). Exercising with a hangover can decrease your aerobic performance by 11%. Also, if you are working on conditioning, a hangover disrupts this process. Being dehydrated puts athletes at greater risk for musculoskeletal injuries (e.g., cramps, muscle strains, and muscle pulls).

In other words, it is not good to drink the night before you will be competing athletically or engaging in physical activities; it will impact your performance (UGA). The American College of Sports Medicine recommends that athletes do not consume alcohol 48 hours before an event.

# Long-term Effects of Alcohol on Athletic Performance

Heavy and chronic use of alcohol leads to problems such as nutritional deficiencies, myopathy (muscle damage, wasting, weakness), hormonal changes (making it harder to increase strength and muscle mass), and decreased cardiovascular/muscular performance (UGA).

It is interesting to note that women are likely than men to be more sensitive to the toxic effects of alcohol and their muscular strength is inversely correlated to their total lifetime alcohol intake (UGA).



Here are some other interesting facts:

- Athletes who drink 1x/week are at a higher risk of injury compared to those who do not drink.
- Alcohol decreases the immune system's functioning and decreases the healing process for sports-related injuries.
- About  $\frac{1}{3}$  of college students have reported consuming alcohol while swimming or boating.
  - ◆ Over 50% of young adult drowning victims had been drinking at the time.
- Alcohol can actually cancel out gains from your workouts since it deters muscle growth (*Princeton*).

Binge drinking tends to **decrease testosterone levels**. This change leads to decreases in lean muscle mass, muscle recovery, overall athletic performance, testicular shrinkage, breast enlargement, and sperm development. It also tends to increase the risk of breast cancer (*UC San Diego*).

Sleep aids in muscle recovery and due to the effects alcohol has on sleep, the body has decreased secretion of HGH (human growth hormone). Thus, alcohol makes it **difficult to build muscle strength** (*Princeton*).

Alcohol also impacts **energy levels** and energy sources in the body (e.g., ATP- adenosine triphosphate) (*Princeton*).

## Alcohol and Academic Performance

- One of the most common consequences of alcohol abuse by students is **difficulty keeping up with academic responsibilities**.
- The number of drinks a student consumes is directly associated with the student's grades.
- Core Institute research shows the following correlation between grades and alcoholic drink consumption:
  - ◆ Students with B averages consume 1.1 more drinks per week than A students.
  - ◆ Students with C averages consume 2.7 more drinks per week than A students.
  - ◆ Students with D and F averages consume 6.4 more drinks per week than A students.
- According to the National Institute on Alcohol Abuse and Alcoholism, about 25% of college students report experiencing difficulty with academics due to alcohol use, including earning low grades, doing poorly on tests and papers, missing class, and falling behind.
- Even students who don't abuse alcohol may suffer academically as a result of their peers' drinking.
- **Secondary effects of drinking**, including taking care of a drunk friend, being the victim of an assault, and putting up with loud parties, can affect the school work of students who don't drink.
- Campus administrators report that a significant number of students who drop out of college do so because alcohol interfered with their academics.

# Warning Signs of Alcoholism

- Being violent or hostile when drinking.
- Unable to control your drinking or reduce your intake.
- Making excuses to drink.
- Hiding your alcohol use.
- Missing work or school due to drinking.
- Who are some individuals at risk for developing alcoholism? (NIH- Medline Plus)
  - ◆ Men drinking more than 14 drinks per week.
  - ◆ Women having more than 11 drinks per week.
  - ◆ Anyone who has 5 or more drinks per occasion at least 1x/week.

## Where to Get Help

### **ISU Student Counseling Center: 812-237-3939**

<http://www.indstate.edu/cns/>

3rd Floor, Sycamore Center for Wellness and Applied Medicine  
567 North 5th Street  
Indiana State University  
Terre Haute, IN 47809

### **24/7 Addiction Helpline: 1-800-559-9503**

### **Terre Haute Drug and Alcohol Rehab Helpline: 812-496-5591**

<http://terrehaute.alcoholdrugtreatmenthelp.com/>  
5105 South US Highway 41  
Suite 227  
Terre Haute, IN 47802

### **Alcohol Treatment Center/Information Center: 1-877-377-0653**

[http://www.aboutdrugsonline.com/rehabs.php/US/Indiana/Terre\\_Haute](http://www.aboutdrugsonline.com/rehabs.php/US/Indiana/Terre_Haute)





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