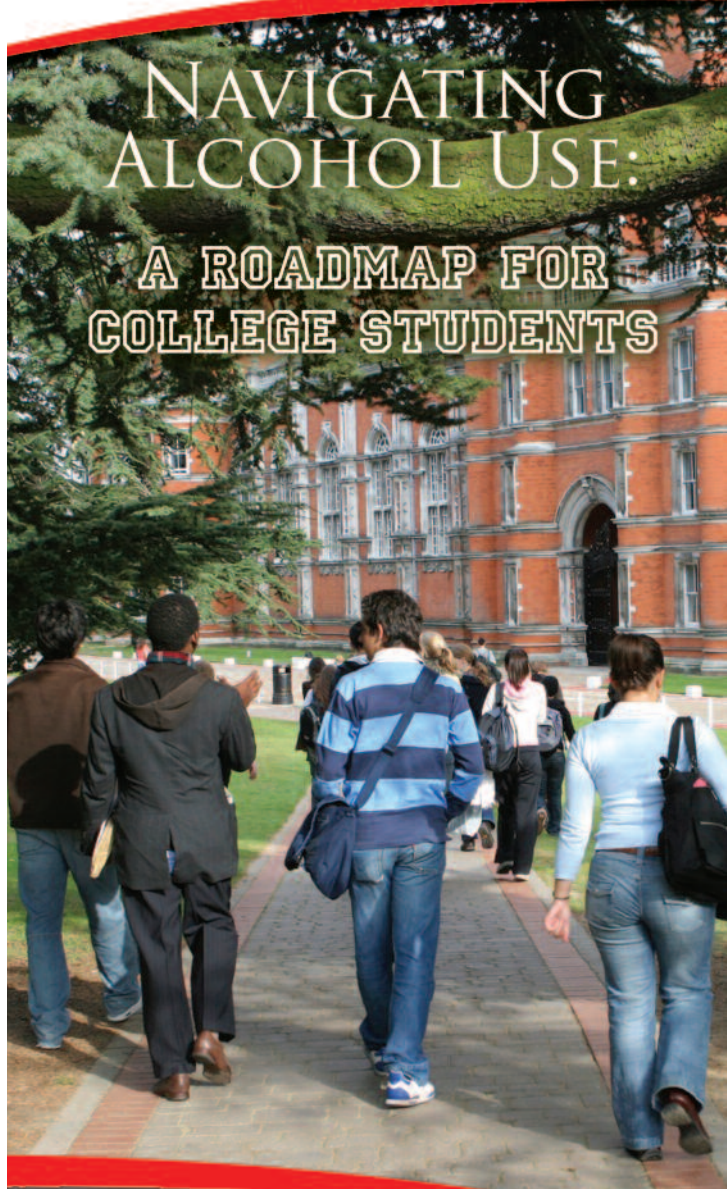




Tarrant County  
**CHALLENGE INC.**

# NAVIGATING ALCOHOL USE: A ROADMAP FOR COLLEGE STUDENTS



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THIS ROADMAP TO  
 NAVIGATING ALCOHOL  
 USE WILL PRESENT  
 NECESSARY AND  
 ACCURATE INFORMATION  
 FOR COLLEGE STUDENTS  
 TO CONSIDER  
 REGARDING THE  
 POTENTIAL USE  
 OF ALCOHOL.

1. Pace your drinking, allowing time between drinks.
2. Consider alternating between non-alcoholic "decoy" drinks with those containing alcohol, i.e. drinking plain juice every other drink.
3. Don't drink on an empty stomach. Foods with fats and/or proteins slow alcohol absorption.
4. Keep track of how much you are drinking. Know how much alcohol is poured into every glass.
5. Dilute shots of liquor, don't drink them straight. After the first few drinks, reduce the amount of alcohol in each drink. Your taste buds will be dulled and you won't be able to tell the difference. Switch to "light beer" (be sure it is a low alcohol one - or try the "non-alcohol" beers) or "low alcohol" wines after the first few drinks.
6. Be aware of possible interactions between alcohol & other drugs (including prescription & over-the-counter medications).
7. Drink only if YOU want to; don't let others dictate your choice.
8. Keep active. Don't just sit down and drink all night. If you keep active, you will drink less and will be more aware of your level of intoxication.
9. Avoid drinking "games." Stop drinking before the party is over, to allow your liver time to burn off some of the alcohol. Drink non-alcoholic beverages for at least the last hour or so.
10. Keep in mind that added ice cubes or a slightly smaller glass will go undetected by others. This may help you to resist the well-meaning efforts of others at the party who want everyone to be drinking.



# RESPONSIBILITY



## HOW TO DRINK RESPONSIBLY?

Responsible drinking is defined as the enjoyable consumption of alcohol beverages within the limits set by your health, circumstances and your obligations to family, friends and society. Irresponsible drinking is drinking beyond those limits and placing yourself and those around you at risk. As always, the appropriate and safe use of alcohol by those over 21 depends on the user's quality of consciousness and ability to make responsible decisions.

## KNOW HOW MUCH ALCOHOL IS SAFE?

In general, if you drink, you should only consume one drink per hour. A drink is defined as one 12-ounce beer, one 4-ounce glass of wine, one 10-ounce wine cooler or one 1-ounce of 80-proof hard alcohol. Factors such as body weight, height and body chemistry should also be considered. Many mixed drinks have more than one serving of alcohol. Be sure to know how much alcohol is in your drink.



## ALCOHOL: A COLLEGE TRADITION:

Drinking and higher education have long gone hand in hand in Western civilization, leading to more than a few notorious incidents. On February 10, 1355, a dispute about the quality of alcohol in the Swindlestock Tavern erupted between townspeople and two students at the University of Oxford. The insults that were exchanged grew into armed clashes between the locals and students, and over the following two days, 63 students and as many as 30 locals died as a result of the incident. Today, college students still have to contend with the myriad of risks inherent in alcohol use. In addition, there are mixed messages being sent regarding the potential risks of using alcohol. Primarily, the "rite of passage" mentality that is often glamorized by the media, portrayed as comedic bouts of drunkenness with ultimately harmless and often admirable results. For those students who are not 21, the only legal choice is to not drink. For those students over 21 who choose to consume alcohol, there are many factors to consider in the choice to drink.

## KNOW THE FACTS:

- 90% of students feel that they do not know how to drink responsibly.
- 1 out of 5 college students choose not to drink.
- Every year in the U.S. more than 150,000 college students develop health problems that are alcohol-related.
- 159,000 of today's first-year college students will drop out of school for alcohol- or other drug-related reasons.
- One night of heavy drinking can impair your ability to think abstractly for up to 30 days, limiting your ability to relate textbook reading to what your professor says, or to think through a football play.
- Alcohol consumption by college students is linked to at least 600,000 unintentional injuries each year.
- Every year, 1,400 American college students between the ages of 18 and 24 die from alcohol-related inadvertent injuries, including motor vehicle accidents.
- One drink puts about the same concentration of alcohol in the brains of women as two drinks for men.
- Approximately one in three 18 to 24 year olds admitted to emergency rooms for serious injuries is intoxicated.

# THE FACT IS

## ALCOHOL & THE EMERGING ADULT BRAIN

The brain goes through dynamic changes starting in adolescence (around age 12) and lasting into early adulthood (around age 24). During this time, there is a process which dictates, in a simple explanation, the speed in which the brain operates called myelination. When myelinated properly, messages and neuronal signals are transmitted more effectively through the brain. Alcohol is a leading cause of myelination destruction in the human brain. Damage from alcohol can cause these neuronal messages and signals along the pathway of the brain to be slowed or halted. Unfortunately, the “window of opportunity” for brain development ends in the mid twenties. Alcohol can disrupt this process, causing long-term and irreversible damage. Additionally, even short-term or moderate drinking impairs learning and memory far more in younger drinkers than in older adults because the myelination process has not been completed. Young adults need only drink half as much to suffer the same negative effects as a fully matured brain would experience. As a result of all this research, the logical conclusion is that there is no “safe level” of alcohol consumption for the adolescent and emerging adult brain.

### KNOW THE FACTS:

The emerging adult brain is far more vulnerable to certain effects from alcohol:

- *Loss of memory.*
- *Arrested brain development.*
- *Impairment in driving skills.*
- *Long-term learning difficulties.*
- *Development of life-long alcohol abuse problems.*

The emerging adult brain is also less sensitive to some of the natural occurring safety mechanisms the human body uses to know that too much alcohol has been ingested such as:

- *Sedation (sleepiness)*
- *Loss of balance*
- *Hangovers*

The two areas of the emerging adult brain to be most significantly impacted by alcohol use are:

- *Hippocampus: handles many types of memory and learning. Alcohol impairs memory formation, at least in part, by disrupting activity in the hippocampus. This area suffers from the worst alcohol-related brain damage, especially in adolescence. Those who drank heavily over an extended period of time had significantly smaller hippocampi, by about 10 %.*

## ONCE YOU HAVE CALLED 9-1-1

- *Stay with the person who is drunk. If you have been drinking, find a sober person to take over.*
- *If the victim is vomiting, try to keep them sitting up. If he or she must lie down, keep the person on his/her side with his/her head turned to the side. Watch for choking*
- *Provide as much information to the emergency responders as possible, including if the intoxicated person is on any medication that you are aware of or has used any other drug during the course of the evening.*

IF THERE IS ANY SUSPICION  
OF AN ALCOHOL OVERDOSE,  
**CALL 911.**

DON'T TRY TO GUESS THE  
LEVEL OF DRUNKENNESS.

ALWAYS BE AWARE THAT A PERSON WHO  
HAS PASSED OUT MAY DIE.



# WHAT TO SI

## ALCOHOL POISONING Q&A

### WHAT WILL HAPPEN TO SOMEONE WITH ALCOHOL POISONING THAT GOES UNTREATED?

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

### WHAT SHOULD I DO IF I SUSPECT SOMEONE HAS ALCOHOL POISONING?

Unfortunately, getting drunk is common among college students. Because of this you are likely to come into contact with a person who is intoxicated or experiencing an episode of life-threatening, alcohol poisoning. Listed below are some of the signs and symptoms of alcohol poisoning. This list is not all inclusive, and a person with alcohol poisoning needs immediate medical attention. If you suspect someone has alcohol poisoning, call 911 right away!

### KNOW THE DANGER SIGNALS:

- Mental confusion, stupor, coma, or person cannot be roused.
- Vomiting.
- Seizures.
- Slow breathing (fewer than eight breaths per minute).
- Irregular breathing (10 seconds or more between breaths).
- Hypothermia (low body temperature).
- Bluish skin color, paleness.

Any person that has altered consciousness, slowed respirations, or cool, pale skin is experiencing alcohol poisoning. This is a medical emergency and you **MUST** get help. Do not wait for all symptoms to be present, as people's response to alcohol poisoning can differ due to variety of factors. If there is any suspicion of an alcohol overdose, **call 911**. Don't try to guess the level of drunkenness. Always be aware that a person who has passed out may die.

- *Prefrontal cortex (PFC) - is often called the CEO of the brain and plays an important role in forming adult personality and behavioral patterns. It experiences the most change of any part of the brain during adolescence and young adulthood. Researchers found that drinking causes severe changes and disruptions in this area.*
- *The PFC is among the last parts of the brain to develop, and all development requires a healthy and functional Hippocampus. These two areas of the brain need extra protection and support during the adolescent and young adult years.*

### DRINKING STUDENTS vs.

### NON-DRINKING STUDENTS

Emerging adult brains and adolescent brains are negatively impacted by alcohol use in very significant ways:

- *Lower scores on testing of vocabulary, general information, memory, and memory retrieval.*
- *Verbal and nonverbal information recall is heavily affected, with a 10% performance decrease in alcohol users.*
- *Decreased school performance, including being more likely to fall behind and have an increased risk of social problems, depression, suicidal thoughts and violence.*
- *Difficulty in learning new ideas and concepts.*
- *Disruption of the sleep cycle, resulting in impaired learning and memory as well as disrupted release of hormones necessary for growth and maturation.*
- *Impaired judgment and the ability to make good choices.*
- *Weakened athletic performance.*
- *Serious legal ramifications due to failure to consider future consequences of actions.*

There is also research that shows 12-24 year olds who engage heavy drinking are unlikely to "catch-up" their learning abilities in adulthood. This increases the likelihood of difficulty in finding employment, continuing education, marriage/relationship issues, financial stability, and an increased chance of long-term alcohol abuse as an adult.

# SEX AND ALCOHOL

## SEX AND ALCOHOL

For better or for worse, there is a close relationship between sex and alcohol in our culture. Many people use alcohol to “loosen themselves up” in anticipation of having sex and it is a commonly held belief that alcohol is an aphrodisiac. Small amounts of alcohol can create a sense of “disinhibition” which is a state of relaxation and increased social confidence in initiating or engaging in social and sexual behavior, thereby making it easier for people to “hook up.” Alcohol is commonly reported to have a positive impact on sexual desire and arousal, but research shows that after a few drinks, sexual response is reduced. Shakespeare himself said of alcohol, “It provokes the desire but it takes away the performance.”

The truth is that the actual sexual effects of alcohol are complex, and there are many serious negative sexual consequences of drinking too much and too often.

## IMMEDIATE SEXUAL EFFECTS OF ALCOHOL

- *Alcohol can play a significant role impacting the decision-making process. It can lead to decreased inhibitions, therefore increasing the likelihood of unwanted pregnancy, sexually transmitted diseases, date-rape, and other risky behavior.*
- *Alcohol, in larger amounts, can reduce sexual arousal and increase difficulty in experiencing orgasm.*
- *Alcohol is a major cause of impotence (difficulty achieving and sustaining erections). A lot of younger men don't realize this, as alcohol initially increases sexual desire, but diminishes sexual performance.*
- *Heavy alcohol users are more likely to engage in risky sexual practices, unprotected sex, and have multiple sexual partners.*
- *Heavy alcohol users have a much higher incidence of sexually transmitted diseases and HIV.*



## ALCOHOL POISONING AND YOUR BODY

Alcohol is a central nervous system depressant. Alcohol depresses nerves that control involuntary actions such as breathing and the gag reflex (which prevents choking). A fatal dose of alcohol will eventually stop these functions. Even if the victim lives after an episode of alcohol poisoning, the overdose can lead to irreversible brain damage. Alcohol poisoning can only be treated in a hospital or other medical setting.

## MYTHS ABOUT ALCOHOL POISONING

**MYTH 1: Let them sleep it off** - It is difficult to know if someone has simply fallen asleep or if they are actually unconscious from drinking too much alcohol.

**MYTH 2: Coffee or caffeine will treat alcohol poisoning** - Coffee or caffeine does not sober a person up. Providing caffeine to an intoxicated person will only result in a “wide-awake” drunk.

**MYTH 3: Cold Showers will sober a person up** - A cold shower, or even exercise, also has no impact in reducing the level of blood alcohol concentration. An individual's reflexes and coordination can be severely impaired when intoxicated, so exercising is a bad idea. Additionally, a cold shower may cause an intoxicated person to pass out since high blood alcohol levels can lower body temperature, even if the person actually feels warm.

**MYTH 4: Vomiting from too much alcohol is a good thing** - It is never a good thing to be vomiting from drinking too much. It is the body's way of signaling that too much alcohol has been consumed. Vomiting will not reduce the level of blood alcohol concentration. Since alcohol poisoning severely impairs a person's gag reflex, it is possible that they may choke to death from throwing up, especially if unconscious.

**MYTH 5: Food will sober them up** - eating food will not speed up the process of getting sober. Eating food after getting drunk isn't the same as eating food before or while drinking, which may help in preventing consumption of too much alcohol. By the time someone is drunk, the alcohol has left the stomach and is being absorbed through the walls of the lower intestine — it's already too late to slow that down. Never, under any circumstances, force food or drink down an intoxicated person's throat. The swallowing/gag reflex may be not responding and this could cause choking.

# INTOXICATION



## STAGES OF ALCOHOL INTOXICATION

## LONG TERM SEXUAL EFFECTS OF ALCOHOL

| BAC (g/100 ml of blood or g/210 l of breath)   | Stage       | Clinical symptoms   |
|--|-------------|---|
| 0.01 - 0.05                                    | Subclinical | Behavior nearly normal by ordinary observation  |
| 0.03 - 0.12<br>.08 is considered legally drunk | Euphoria    | Mild euphoria, sociability, talkativeness<br>Increased self-confidence; decreased inhibitions<br>Diminution of attention, judgment & control<br>Beginning of sensory-motor impairment<br>Loss of efficiency in finer performance tests  |
| 0.09 - 0.25<br>Alcohol Poisoning begins        | Excitement  | Emotional instability; loss of critical judgment<br>Impairment of perception, memory and comprehension<br>Decreased sensory response; increased reaction time<br>Reduced visual acuity; peripheral vision and glare recovery<br>Sensory-motor incoordination; impaired balance and Drowsiness |
| 0.18 - 0.30                                    | Confusion   | Disorientation, mental confusion; dizziness<br>Exaggerated emotional states<br>Disturbances of vision and of perception of color, form, motion and dimensions; Increased pain threshold<br>Increased muscular incoordination; staggering gait; slurred speech<br>Apathy, lethargy             |
| 0.25 - 0.40                                    | Stupor      | General inertia; approaching loss of motor functions<br>Markedly decreased response to stimuli<br>Marked muscular incoordination; inability to stand or walk<br>Vomiting; incontinence<br>Impaired consciousness; sleep or stupor   |
| 0.35 - 0.50                                    | Coma        | Complete unconsciousness<br>Depressed or abolished reflexes<br>Subnormal body temperature<br>Incontinence<br>Impairment of circulation and respiration; Possible death  |
| 0.45 +   | Death       | Death from respiratory arrest   |

Chronic alcohol abuse inevitably has a devastating effect on sexuality. People who are long time heavy users of alcohol may experience the following:

- *Erectile disorders and dysfunction in men.*
- *Loss of sexual desire, significant decrease in sexual arousal for men and women.*
- *Difficulty experiencing orgasm for men and women.*
- *Decrease in testosterone both in alcoholic men and in non alcoholic men who drink enough to become intoxicated.*
- *Fewer long term relationships.*
- *Less able to find or maintain sexual partners.*
- *May have social, health, and financial difficulties that make them less desired sexual partners.*
- *Increased sexual aggression.*
- *Infertility.*

### KNOW THE FACTS:

- *Almost 50% of unplanned sexual encounters are under the influence of alcohol*
- *80% of first sexual experiences occur under the influence of alcohol*
- *College students who mix alcohol and sex report having more partners whom they know only "slightly" or "moderately"*
- *Alcohol impairment often leads to: not knowing your partner; not having a condom available; not using a condom; or not using it correctly*
- *In 2/3 of unplanned pregnancies, the woman was intoxicated during sex*
- *60% of college women who are infected with STDs, including genital herpes and AIDS, report that they were under the influence of alcohol at the time they had intercourse with the infected person*
- *75% of admitted date rapists said they used alcohol to get dates drunk so they would have sex*
- *90% of all campus sexual assaults occur under the influence of alcohol*
- *As many as 70% of college students admit to having engaged in sexual activity primarily as a result of being under the influence of alcohol, or to having sex they wouldn't have had if they had been sober.*
- *1 out of 5 college students abandons safe sex practices when they're drunk, even if they do protect themselves when they're sober.*
- *Birth control pills slow down the rate at which alcohol is eliminated from the body.*

Adapted from Virginia Tech Alcohol Abuse Prevention website

# POISONING



## ALCOHOL POISONING

Alcohol poisoning is a serious — and often deadly — consequence of consuming large amounts of alcohol in a short period of time. Every year, around 50,000 cases of alcohol poisoning are reported in the United States. That is approximately 960 people a week contracting alcohol poisoning. It is estimated that over 4000 people die each year from alcohol poisoning. One of the groups highest at risk for alcohol poisoning are people between the ages of 12 and 24. The primary causes of alcohol poisoning among young adults, college students and adolescents are binge drinking and drinking games. Binge drinking is defined as drinking 5 or more drinks for men /4 or more drinks for women within a 2 hour time frame. Drinking games are games which involve the drinking of alcoholic beverages, such as Thumper, Quarters, Beer Pong and “I never.” The reason binge drinking and drinking games are responsible for a majority of alcohol poisoning is that after the person stops drinking, the heart keeps beating, and alcohol in the stomach continues to enter the bloodstream and circulate throughout the body. What most people don’t understand, and is a contributing factor to alcohol poisoning deaths, is that a person’s blood alcohol concentration (BAC) can continue to rise even while he or she is passed out or has stopped drinking.

## BLOOD ALCOHOL CONTENT (BAC)

BAC is the concentration of alcohol in a person’s blood. All 50 states and the District of Columbia have laws defining it as a crime to drive with a BAC at or above a proscribed level of 0.08 %. A BAC rating of 0.20% represents very serious intoxication (most first-time drinkers would be unconscious by about 0.15%), and 0.35%–0.40% represents potentially fatal alcohol poisoning. 0.40% is the accepted lethal dose for adults.



## BAC CHART FOR MEN

| Drinks | Approximate Blood Alcohol Percentage |     |     |     |     |     |     |     |                                       |
|--------|--------------------------------------|-----|-----|-----|-----|-----|-----|-----|---------------------------------------|
|        | Body Weight in Pounds                |     |     |     |     |     |     |     |                                       |
|        | 100                                  | 120 | 140 | 160 | 180 | 200 | 220 | 240 |                                       |
| 0      | .00                                  | .00 | .00 | .00 | .00 | .00 | .00 | .00 | Only Safe Driving Limit               |
| 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 |
| 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 | Possible Criminal Penalties           |
| 6      | .23                                  | .19 | .16 | .14 | .13 | .11 | .10 | .09 | Legally Intoxicated                   |
| 7      | .26                                  | .22 | .19 | .16 | .15 | .13 | .12 | .11 |                                       |
| 8      | .30                                  | .25 | .21 | .19 | .17 | .15 | .14 | .13 | Criminal Penalties                    |
| 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.

## BAC CHART FOR WOMEN

| Drinks | Approximate Blood Alcohol Percentage |     |     |     |     |     |     |     |     |                                       |
|--------|--------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|---------------------------------------|
|        | Body Weight in Pounds                |     |     |     |     |     |     |     |     |                                       |
|        | 90                                   | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 |                                       |
| 0      | .00                                  | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | Only Safe Driving Limit               |
| 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 |
| 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 | Possible Criminal Penalties           |
| 6      | .30                                  | .27 | .23 | .19 | .17 | .15 | .14 | .12 | .11 | Legally Intoxicated                   |
| 7      | .35                                  | .32 | .27 | .23 | .20 | .18 | .16 | .14 | .13 |                                       |
| 8      | .40                                  | .36 | .30 | .26 | .23 | .20 | .18 | .17 | .15 | Criminal Penalties                    |
| 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.

## KNOW YOUR FACTS:

- Individuals with the same weight, but different muscle builds will differ in their BAC. Individuals with more muscle are less affected by alcohol because the muscle contains water that absorbs the alcohol from the bloodstream.