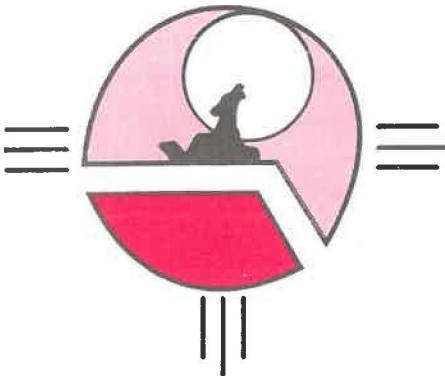


Mesa Family Counseling

1000 So, Third St., Suite F • Las Vegas, NV 89101 • (702) 383-6001

Mary McCrea Leonard, SW, MAJ, CADC
Director

TO:

FROM: Mesa Family Counseling

RE: DUI Correspondence Course

Dear Student:

Enclosed you will find your DUI Education Course packet consisting of the DUI manual and including the DUI Test, all for the course fee of $195. Please review the entire manual and take the test. The test must be fully completed in order to pass this course. When you have completed the test, please return it to our office and wait for your voucher. Your voucher should be taken to court with you. If you have any questions, please contact our office.

Thank you.

Sincerely,

MARY McCREA LEONARD, SW, MAJ, LADC
Director

Drunk Driving Fatality Statistics

Since 1982, drunk driving fatalities on our nation's roadways have decreased and fatal traffic fatalities have declined nearly 17%. Among persons under 21, drunk driving fatalities decreased 81%. Despite this progress, we still have more work to do, and our commitment to eliminate drunk driving is stronger than ever. Hardcore drunk drivers continue to wreak our nation's road accounting for 70% of drunk driving fatalities, where there is a known test result for the driver - a trend that has remained relatively unchanged for more than a decade.

Drunk Driving Fatalities - National Statistics

In 2018, the rate of alcohol-impaired driving fatalities per 100,000 population was 3.2, representing a 65% decrease since 1982, when record-keeping began, and a 49% decrease since the inception of The Foundation for Advancing Alcohol Responsibility in 1991. Alcohol-impaired driving fatalities accounted for 29% of the total vehicle traffic fatalities in 2018. Between 1991 and 2018, the rate of drunk driving fatalities per 100,000 population has decreased 49% nationally, and 71% among those under 21. These statistics and others are positive indicators of the gains being made to fight drunk driving.

According to the National Highway Traffic Safety Administration, 36,560 people died in traffic crashes in 2018 in the United States (latest figures available), including an estimated 10,511 people who were killed in drunk driving crashes involving a driver with an illegal BAC (.08 or greater). Among the people killed in these drunk driving crashes, 67% (7,051) were in cases in which at least one driver in the crash had a BAC of .15 or higher.

Underage Drunk Driving Fatalities - National Statistics

Since the National Highway Traffic Safety Administration (NHTSA) began recording alcohol-related statistics in 1982, the number of persons under 21, killed in drunk driving crashes decreased 81% from the record high of 5,215 in 1982 to 980 in 2018. These fatalities account for about 9% of the drunk driving fatalities in the U.S.

For every 100,000 Americans under the age of 21, 1.1 people were killed in drunk driving fatalities in 2018. The rate of under 21 drunk driving fatalities per 100,000 population has declined 31% over the past decade.

Drunk Driving Fatalities - State Statistics

Since the National Highway Traffic Safety Administration (NHTSA) estimates national and state alcohol-impaired statistics, drunk driving statistics can vary by state for many reasons. The rate of alcohol-impaired fatalities per 100,000 population represents the number of drunk driving arrests for every 100,000 persons in the population being measured (e.g., U.S. total vs. specifics) which allows for more like comparisons in the data.

In 2018, the drunk driving fatality rate was 3.2 per 100,000 population nationally. In 24 states and D.C., the drunk driving fatality rate per 100,000 population was at or below the national .08 BAC legal limit.

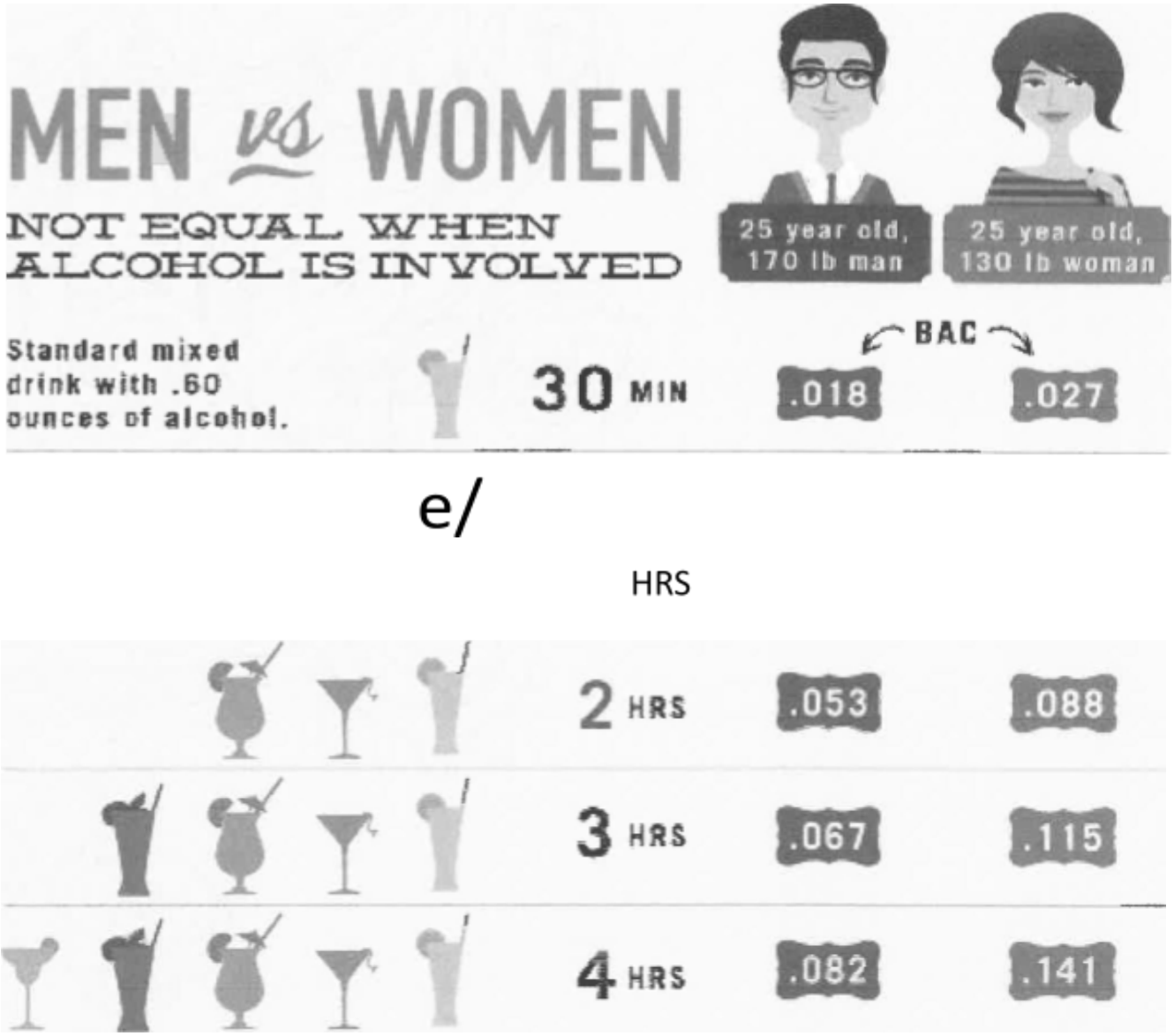
.08 BAC Legal Limit

Today, the United States has a national blood alcohol concentration (BAC) standard of .08 that is based on more than 30 years of scientific evidence. The nation has come a long way since the first commonly used legal limit for BAC, .15, was adopted in 1938.

The science on how alcohol affects a person's driving skills has evolved over the years. According to the National Highway Traffic Safety Administration (NHTSA), although outward appearances may vary, virtually all drivers are impaired at .08 BAC. Laboratory and on-road research show that the vast majority of drivers, even experienced drivers, are impaired at .08 BAC in critical driving tasks such as braking, steering, lane changing, judgment, and divided attention.

Responsibility.org led the distilled spirits industry in supporting the passage of .08 BAC laws as part of a comprehensive solution that included BAC education and public awareness of the law. They worked with Mothers Against Drunk Driving (MADD) to assist states in advocating for the passage of .08 BAC per se laws. By 2004, every state had passed a .08 BAC per se law. Delaware was the final state to enact the law.

To see how alcohol affects BAC levels, here is one example: A 170-pound man can consume approximately four drinks in an hour on an empty stomach before reaching a .08 BAC. A 137-pound woman could drink three drinks in one hour on an empty stomach before reaching a .08 level. Studies show that the fatal crash risk at .08 BAC is at least 1 1 times that of a sober driver.



DRIVING UNDER THE INFLUENCE

Alcohol is a mind-altering drug that works as a sedative, It changes the way you think and act. It affects judgment and coordination. In 1998, it was a factor in over 43 percent of Nevada's highway deaths.

Usually, the term "drugs". refers to controlled substances, such as cocaine, that is illegal. However, the term can also apply to prescription and over-the-counter medications. There are many drugs such as tranquilizers, sleeping pills, cold/allergy medicines, and pain medications that can affect your driving ability.

The effects of any drug can vary significantly from one person to another and can also vary in the same person at different times. Taking more than one drug at a time is particularly dangerous because each one can add to the impact of the other. This is especially true when one of the drugs is alcohol.

Nevada laws on driving under the influence (DUI) of alcohol or drugs are tough. Under these laws, there are 2 types of penalties:

1. *Administrative,* which is an action taken against a driver by the NV DMV, regardless of the court findings; and
2. *Criminal,* which is an action taken by the court system.

If an officer suspects you are driving under the influence, you will be asked to take blood, breath or urine tests. These tests are given to determine if you have used alcohol or drugs. An officer may direct that blood samples be drawn even on a first offense.

Under Nevada's Illegal Per Se Law, if chemical tests show an alcohol concentration of .08 percent or more, or any detectable amount of a controlled substance, your driving privileges will be revoked. If you are under the age of 21 and a chemical test shows an alcohol concentration of .02 percent, but less than .08 percent, your driving privilege will be suspended. This is an administrative penalty and the officer can take your license immediately.

Note: Even though an alcohol concentration of .08 percent is used as a guide, you can be arrested and convicted with a lover level.

Anytime you lose your license, you can ask for an administrative hearing through the Department of Motor Vehicles.

PENALTIES FOR DUI

- Administrative

Illegal Per Se (.08 alcohol concentration or detectable amount of controlled substance)

- Driver's license is revoked for 90 days.
- May be required to file an SR-22, Proof of Financial Responsibility)

Illegal Per Se (.02 alcohol concentration for drivers under 21 years of age)

— Driver's license is suspended for 90 days.

— May be required to file an SR-22, Proof of Financial Responsibility

- Criminal

First DUI offense:

— Driver's license revoked for 90 days. After half the revocation period has been completed, a restricted license may be issued.

— Jail sentence of 2 days to 6 months, or 96 hours of community service.

— Fine of $400 to $1,000

— Payment of tuition for DUI school, (approx. $200)

— May be ordered to attend a program of treatment when the concentration of alcohol in your blood or breath is .08 or more.

Second DUI offense *within 7 years*:

— Driver's license revoked for a year; not eligible for restricted license.

— Jail sentence or residential confinement of 10 days to 6 months.

— Fine of $750 to $1000.

— 100 to 200 hours of community service.

— Possible vehicle registration suspension.

— May be ordered to attend a program of treatment or be placed under clinical supervision of a treatment facility for treatment for up to one year.

Subsequent DUI offense *within 7 years*:

— Driver's license revoked for 3 years; a restricted license may be issued.

— Prison sentence of 1 to 6 years.

— Fine of $2000 to $5000.

— 100 to 200 hours of community service.

— Possible vehicle registration suspension.

DUI *causing death or serious injury.*

— Driver's license revoked for 3 years.

— Prison sentence of 2 to 20 years.

— Fine of $2000 to $5000.

DUI Laws for Young Drivers

Tough DUI laws also apply to young drivers. A licensed driver under the age of 18 found by juvenile court to have been driving under the influence of alcohol or a controlled substance will have his or her license revoked for 90 days. The DUI will be part of the driver's record for 7 years.

A driver under the age of 18 who is found by juvenile court to have been driving under the influence, or a driver under the age of 21 who is convicted of a DUI, will be required the court to undergo evaluation for alcohol or drug abuse. The judge may, based upon the evaluation report, order alcohol or drug treatment for the offender.

Other DUI Laws

- Nevada's open container law makes it illegal to have alcoholic beverages that have been opened in the driver or passenger areas when a vehicle is being driven. It does not apply to the living quarters of motor homes or house trailers, or to the passenger areas of commercial buses, limousines or taxis.
- If you are found guilty of a DUI offense and you had passengers under the age of 15 in the vehicle you were driving, the court will consider that as an aggravating factor in determining your sentence.

If you plead guilty or are found guilty of DUI (alcohol or drugs) and a test was conducted, the court will impose an additional $60 fine to cover the costs of the chemical analysis.

Clues That A Driver May Be Under the Influence or Impaired

Knowing what to look for in another driver's behavior may keep you from being a DUI victim. If you see a driver doing any of the following, watch out! These are all clues to driving under the influence of alcohol or drugs:

- Making a tum too widely
- Using two lanes, straddling the centerline
- Almost hitting someone or something
- Driving with tires on centerline/lane markers
- Weaving or drifting from one side of the lane or road to another
- Driving off the road, or going straight through turn lanes
- Driving too slowly for speed limit/traffic conditions
- Stopping in traffic without a reason
- Following too closely
- Erratic braking
- Driving into oncoming traffic
- Responding slowly to traffic signals

- Sudden changes in speed
- Turning abruptly or illegally
- Driving at night with headlights off
- Swerving to correct course

Note: You can report a suspected drunk driver or any highway emergency on a cellular phone anywhere in Nevada by dialing *NHP (*647)

INTRODUCTION

THE DUI PROBLEM IN AMERICA

__ Every Friday and Saturday night, in our city, it is estimated that 2 in every 10 drivers on the road are drunk.

__ One in every 2 Americans will be involved in an alcohol-related crash during their lifetime.

__ The US has the most serious drunk driving problem of any country in the world.

__ 100 to 200 hours of community service.

__ Drunk driving is the nations's #1 highway safety problem.

__ Drunk driving is the most often committed violent crime.

Nationally, it is estimated that about one-half of all traffic fatalities are caused by alcohol impaired drivers. Of all the other driving accidents, approximately 50% of those are alcohol related. Many people still feel they can drink and drive safely. They are wrong.

PERSONAL RESPONSBLITY

There is a problem in America, and on all levels, steps are being taken to make a difference. We can give you knowledge and awareness, but only you can make the difference. This program is designed to give you an opportunity to examine attitudes, feelings and behaviors that will emphasize and reinforce a personal need for change.

DEALING WITH DENIAL

The events and circumstances surrounding your DUI arrest are now part of your life. Your experience may feel unique, and in fact, maybe the circumstances were very special. Nonetheless, it is time to look at the basics. There is a significant difference between the person who, on a special occasion, has a few too many drinks and decides to drive and the individual who has had a pattern of substance use and abuse. Whatever you may think about your drinking behavior, the reality is the end result has been a **DUI conviction**.

When alcohol impacts on the functioning of your daily life or causes you problems, then you have an alcohol problem. It is not the intention of this program to attack, shame or emotionally downgrade you. Our goal is to educate you, challenge your misconceptions and help you develop a plan of action so you may never find yourself in this position again.

SYMPTOMS OF CHEMICAL DEPENDENCY

ALCOHOLISM

Signs of alcoholism

A. Growing preoccupation
    1. Anticipation of drinking
        a. During daytime activities
        b. Vacation times (ex.: fishing trips become drinking binges)
        c. Growing involvement in drinking activities
    2. Growing Need during times of stress
        a. On job
        b. Family and marriage problems
        c. Emergencies
B. Growing Rigidity in life-style
    1. Particular times for drinking during the day
    2. Self-imposed rules beginning to change
    3. Will not tolerate interference during drinking times
    4. Limits social activities to those involving drinking
C. Growing tolerance
    1. Wooden leg syndrome (ability to drink without showing it)
    2. Ingenuity around obtaining alcohol without other's awareness
        a. Gulping drinks
        b. Ordering stiffer drinks
        c. Self appointed bartender at social gatherings
        d. Sneaking drinks
        e. Drinking prior to social engagements
        f. Purchasing liquor in greater quantities
        g. Protecting supply
            1. Purchasing more before current supply is exhausted
            2. Hiding bottles
D. Loss of Control
    1. Increasing blackouts
    2. Drinking a larger quantity than planned
    3. Binge drinking
    4. Morning drinking
    5. Repeated harmful consequences resulting from chemical use
        a. Family
            1. Broken promises involving "cutting down"
            2. Drinking during family rituals
            3. Sacrificing other financial needs
            4. Fights about usage
            5. Threats of divorce
        b. Legal
            1. Traffic violations

2. Drunk and disorderly
3. Lawsuits caused by impaired judgement
4. Divorce proceedings

c. Social
   1. Loss of friendships
   2. Neglect of previous hobbies or activities resulting from increased usage

d. Occupational
   1. Absenteeism during to hangovers
   2. Lost promotions due to poor performance
   3. Threats of termination
   4. Loss of job

e. Physical
   1. Numerous hospitalizations
   2. Medical advice to cut down
   3. Using alcohol to medicate
   4. Using alcohol as sleep aid
   5. Using alcohol to relieve stress

f. Growing defensiveness
   1. Vague or evasive answers
   2. Inappropriate effect around consequences of usage
   3. Frequent attempts at switching to other concerns

CHEMICAL DEPENDENCY (ALCOHOLISM)

What is alcoholism?

1. It is a disease as formally recognized by the American Medical Association in 1956.
2. Chemical dependency is the *overwhelming urge* to drink *regardless* of the consequences. As the illness progresses, it produces a *negative impact* in all areas of the affected person's life.

family	physical	social	financial
mental	legal	spiritual	occupational

3. It affects *1 out of 10* drinking adults and *1 out of 5* drinking adolescents
4. It does not respect any of social, cultural, ethnic, economic or religious boundaries
5. It is the *largest* neglected health problem in America
6. It is the *3rd largest* cause of death (only cancer and heart disease kill more)

What makes chemical dependency (alcohol and/or drugs) an illness?

1. The illness can be described (ex. Identifiable symptoms)
2. The course of the illness is predictable and progressive
   A. Judgment
   B. Behavior
   C. Performance
   D. Health
3. It is primary (not a symptom of an underlying disease)
4. It is permanent (it cannot be cured, only stopped/slowed)
5. It is fatal (if left untreated, it will result in premature death)

DRUNK DRIVING STATISTICS

For more than 2 decades, the Foundation for Advancing Alcohol Responsibility has been leading the fight to eliminate drunk driving and underage drinking. During this time, drunk driving arrests have declined 34% and among those under 21 the number of fatalities has decreased 66%.

Underage drinking among the nation's youth has continued to decline with fewer arrests for drinking each year – past month consumption decreasing 54% since 1991 – while the number of conversations among parents and kids has increased.

Numerous organizations have transformed lives through programs that have contributed to these historic lows in drunk driving and underage drinking. National and state level statistics assist them in their efforts to eliminate drunk driving and underage drinking. As part of a commitment to guiding a lifetime of conversations around alcohol responsibility, including responsible decision-making regarding alcohol and reducing the prevalence of underage drinking, they track driving and underage drinking trends.

NEVADA LAW

ALCOHOL AND OTHER DRUGS

Alcohol is a mind-altering drug that works on the body as a sedative. It changes the way we perceive, think and act. Alcohol affects judgment and coordination.

Each year nearly 50% of Nevada's traffic deaths are alcohol-related. Nearly half of those killed in alcohol-related accidents **HAD NOT** been drinking. Each driver is responsible for his/her own emotional and physical abilities while behind the wheel of a motor vehicle. Yet everyday, people choose to drive while under the influence.

BLOOD ALCOHOL CONTENT (BAC) is the method by which law enforcement agencies determine the level of legal impairment. Upon suspicion of DUI, a driver can be asked to participate in one of the following tests:

1. Field sobriety check
2. Chemical analysis of blood, urine
3. Breathalyzer

Nevada no longer has an **Implied Consent** (refuse testing) law. Law enforcement officers may direct that reasonable force be used to obtain a blood sample or conduct a blood, breath or urine test. This removes an individual's option to refuse a test.

Nevada's BAC level for DUI is .08%.

DUI AND THE LAW

The **Illegal Per Se** law requires a BAC of .08% or more.

Illegal Per Se

- **1st Offense**
  - Driver's license revoked for 90 days to one year
  - Incarceration for 2 days to 6 months or 48 hours minimum of community service
  - Fine of $200 to $1,000
  - Substance Abuse Evaluation*
- **2nd Offense within 7 years**
  - Driver's license revoked for 1 year, not eligible for restricted license
  - Incarceration for 10 days to 6 months
  - Fine of $500 to $1,000
  - Substance Abuse Evaluation*
- **Subsequent Offenses within 7 years**
  - Driver's license revoked for 3 years
  - Incarceration for 1 to 6 years
  - Fine of $2,000 to $5,000
- **DUI Causing Death of Serious Injury**
  - Driver's license revoked for 3 years
  - Incarceration for 1 to 20 years
  - Fine of $2,000 to $5,000

*Also required by law for 1st offenders with a BAC of .18 or more.

OPEN CONTAINER LAW

- It is unlawful for a person to drink an alcoholic beverage while driving or in actual physical control of a motor vehicle.

- It is unlawful for a person to have an open container of an alcoholic beverage within the passenger area of a motor vehicle while the motor vehicle is upon a highway. Exceptions are made for taxis, limousines and RV's/trailers.

- An "Open Container" is defined as a container which has been opened or the seal is broken. "Passenger area" is defined as that area of a vehicle which is designed for the seating of the driver or a passenger.

YOUR DRIVING RECORD

In Nevada, getting a driver's license is a **privilege**. Once you have your license, you need to continue to drive safely, obey the rules and respect the rights of other drivers. If you do not, your license may be suspended, revoked or cancelled.

Information about traffic accidents and convictions becomes part of your driving record. Even traffic violations that occur in other states are added to your Nevada driving record.

Most moving violations are reportable to your insurance company for about 3 years. DUI-related convictions stay on your record for 7 years. As part of our safe driving standards, we have a **demerit point system**. That is, each traffic law violation has a point value that is entered on your record when you receive a conviction notice. Demerit points are counted for any 12-month period.

- If you receive 12 or more points in any 12-month period, your license will be suspended.

YOUR DRIVING RECORD (cont.)

- You may remove 3 points from your driving record by completing a traffic safety course from a school which is approved by DMV&PS. You may attend a traffic safety course for point reduction purposes once in any 12-month period.

- You may be offered the option of attending the Clark County Court Education Program Traffic School as part of an agreement with Justice Court to reduce your fine and/or avoid or reduce the number of demerit points being entered on your record.

- When your driving record and total points show you may be having trouble driving safely, you will be contacted by the Department of Motor Vehicles' license review section.

NEVADA CODE	DEMERIT POINTS	VIOLATION DESCRIPTION
831	8	Reckless Driving
701	7	Driving while Ability Impaired
612	6	Careless Driving
601	6	Speeding in a School Zone 16 mph or more over the posted Speed limit
501	5	Drinking an Alcoholic Beverage While Driving
453	4	Disregard Official Traffic Control Device Exhibiting Colored Lights
433	4	Changing Lanes Improperly
431	4	Speeding 21 mph or more Over the posted speed limit
428	4	Passing School Bus with Signal Flashing
422	4	Failure to Yield to Emergency Vehicle
410	4	Following Too Closely
319	3	Improper or Prohibited U-Turn
300	3	Speeding 16-20 mph Over Speed Limit
233	2	Failure to Dim Headlights

223	2	Speeding 11-15 mph Over Speed Limit
100	1	Speeding 1-10 mph Over Speed Limit

HOW ALCOHOL IS ABSORBED

How is alcohol absorbed and then distributed throughout the body? A small percentage, 2-4%, is absorbed through the membranes of the mouth. The common misconception is that all alcohol is absorbed in the stomach, but only 20-25% is absorbed there. When alcohol is in the stomach, it isn't readily available for an effect on the brain; it's mostly in a holding state. After the alcohol leaves the stomach, it is pushed into the intestine where 75-80% of the absorption takes place. Because alcohol is water-soluble, and the body is almost entirely made up of water, it can be absorbed very easily and quickly.

FOOD

Many factors can affect the absorption of alcohol once it is in the stomach. The most important factor is food.

At the base of the stomach is a control valve called the "pyloric valve". When this valve is open, the contents of the stomach are passed into the intestine, where most of the absorption into the bloodstream takes place. By itself, alcohol does not remain in the stomach very long. It will pass very rapidly into the intestine and into the bloodstream.

Food – of any kind – will slow down the absorption rate of any alcohol that has not already passed into the intestine. Putting food into the stomach causes

the pyloric valve to close until the food is digested. When the valve opens again, the intestine receives a mixture of food and alcohol. This further slows down the alcohol absorption since it is dispersed in the food mixture.

Some foods are better than others in slowing down the absorption rate of alcohol. Fatty foods such as nuts, french fries, olives and cheese are harder to digest, and cause the stomach to work harder and longer before the pyloric valve will open. On the other hand, a large meal with a high amount of carbohydrates (such as a pasta dinner) will tend to "dump" into the intestine and thus may actually speed up the absorption rate of alcohol.

There is another way in which food may act to speed up the absorption rate of alcohol. If a meal has been consumed two to three hours before drinking, most food will be digested, and the pyloric valve will be open. The alcohol will then pass directly into the intestine, where it is available for immediate absorption.

When to eat is as important as what to eat. The most effective way to slow the absorption of alcohol is to eat fatty food immediately before drinking, and continue to munch during the course of drinking.

OTHER FACTORS

Alcohol irritates the stomach. If a large quantity of alcohol accumulates there, the stomach will shut down and no digestion will take place. The pyloric valve will stay closed and the alcohol will not pass into the intestine. The result is that very little absorption will take place. The alcohol just sits in the stomach and continues to irritate it, until the stomach finally rejects the source of irritation – through vomiting.

Anxiety is a condition which requires great caution when drinking. When a person is anxious about something, the stomach secretes a mucus coating which slows down or stops digestion or absorption. The anxious drinker will find that he is not getting the expected "high" from alcohol and may drink more or faster, to "get drunk". Eventually, the drinker will relax, the mucus disappears and a large

quantity of alcohol will be dumped into the intestine, seemingly causing the drinker to become instantly drunk.

The most common example of the anxiety syndrome is the first timer in a strange bar. Feeling out of place and alone, he may experience anxiety. He drinks and doesn't feel the effect, so he continues to drink until he relaxes and becomes rapidly intoxicated.

Champagne, sparkling wines or drinks mixed with soda, often intoxicate people at a faster rate. This is due to the carbonation contained in these drinks which tends to open the pyloric valve from the stomach to the intestine and speed up alcohol absorption.

DISTRIBUTION AND BLOOD ALCOHOL LEVEL (BAL)

Once alcohol is absorbed, it is distributed throughout the body by way of the bloodstream. BAL or BAC is the measure of alcohol in the bloodstream. After alcohol is in the blood, a certain percentage of it that passes through the lungs is exhaled. Because this percentage is relatively constant, BAL/BAC can be determined by simply measuring the alcohol in the exhaled air. Breathalyzers work by measuring the concentration of alcohol in the breath, which comes from the lungs which get alcohol through the bloodstream.

The way alcohol is used and disposed of consists of 4 phases:

1. Absorption, which takes place in the stomach and small intestine where alcohol enters the bloodstream.

2. Distribution, in which alcohol travels in the blood to each organ, tissue and cell. By simple diffusion, alcohol leaves the bloodstream and enters the cells.

3. Oxidation, in which the chemical structure of alcohol is remodeled to release the heat and energy, or calories, which is used by the body cells. Whereas most foods may be metabolized in any cell of the body, alcohol is chiefly metabolized in the cells of the liver.

4. Elimination, during which about two to five percent of the alcohol escapes unused via the breath, urine or sweat glands.

WHAT IS ALCOHOL?

Alcohol (also called ethanol or ethyl alcohol) is a very small organic molecule available in liquid form, a chemical substance and a drug. Alcohol is also a food containing carbohydrates with 7 calories per gram. Congeners, which give alcohol its color and taste, may be responsible for the hangover the next morning.

Alcohol is produced by fermentation, a normal by-product of yeast. Alcoholic beverages are derived from berries, grapes and other fruits/grains, each of which produce a different form of beverage. The amount of alcohol in a beverage depends on the amount of sugar converted by yeast and distillation. . Whiskey is a form of beer in which alcohol is concentrated through distillation. Beer contains 3-6% alcohol, wine contains 9-14%, liqueurs/cordials have 20-40% and liquor generally contains 40-50%. The proof of alcohol is twice the alcohol content. For example, whiskey that is 80 proof is actually 40% alcohol. The highest possible proof is 200 which means alcohol content is 100%. It is important to understand that a 12 ounce beer, 3-4 ounce glass of wine and a 1 ounce shot of 80 proof whiskey, all contain roughly the same amount of alcohol – about half an ounce.

THE EFFECTS OF ALCOHOL AND OTHER DRUGS

EFFECTS ON CENTRAL NERVOUS SYSTEM

- Judgment and Reason (1-3 drinks)
    - Decreases ability to reason clearly and make social judgments
    - Creates false perception of sharper thinking/judging abilities
    - Often results in aggressive driving
- Voluntary Muscle Movement (3+ drinks)
    - Creates slowed body control, muscular movements

    - Impairs coordination
- Involuntary Muscle Movement (3+ drinks)
    - Slows information processing
    - Slows reaction time
- Vital Functions (5+ drinks)
    - Impairs peripheral/night vision and color/depth perception
    - Impairs hearing
    - Excessive consumption may cause breathing to slow/stop
    - Excessive consumption will eventually cause loss of heart function

EFFECTS ON HEALTH

- Brain/Central Nervous System
    - Decreases amount of oxygen supplied to brain
    - Kills 10,000 brain cells per ounce of alcohol consumed
    - Excessive bleeding inside the brain
    - Atrophy/shrinkage of brain
    - Disrupts connections between nerve cells
    - Severe alcohol withdrawal may cause hallucinations/tremors
- Liver
    - Acute fatty liver caused when 30-50% of dietary calories are derived from alcohol
    - Alcohol hepatitis characterized by inflammation of the liver
    - Cirrhosis causes liver to no longer process food nutrients
- Stomach
    - Lining becomes inflamed causing peptic ulcers to form
    - Impairs ability to pass food to intestine, resulting in malnutrion
- Heart
    - High blood pressure, increased risk of stroke/heart attack
    - Arrhythmia or other cardiac rhythm abnormalities
    - Alcoholic Cardiomyopathy
    - Inhibits red/white blood cell manufacturing

- Reproductive System
    - Men – impotence, diminished sex drive, sterility, loss of testosterone
    - Women – fertility changes, skipped periods, fetal damage during pregnancy
- Skin
    - Chronic flushed skin color, itching, jaundice, spider angiomas, rosacea and rhinophyma
- Pancreas
    - Acute pancreatitis, nausea, vomiting, diarrhea, severe abdominal pain

ALCOHOLISM

KEY FACTORS

1. CHANGE IN LIFESTYLE
   Crazy, erratic behavior; “that just isn’t me”; trusting your gut feelings
2. TOLERANCE
   What do they use now compared to what they were using then?
3. TROUBLE
   Social drinkers do not get into trouble; if they do, they aren’t likely to repeat it.
4. CHANGE IN VALUE SYSTEM
   The use costs them something they value – rules, ethics, relationships, self-worth
5. DENIAL
   Defensiveness about use, rationalizations, anger, aggression

PROGRESSIVE STAGES

1. EARLY
   Frequent relief use, increased tolerance, memory blackouts, feelings of guilt
2. MIDDLE

Gradual social withdrawal, grandiose and aggressive behavior, broken promises to stop using, unable to control use, persistent remorse, decreased tolerance

3. LATE
   Work/school/money problems, moral deterioration, impaired thinking, obsession with drinking, neglect of physical needs, physical deterioration

ALCOHOL

What is alcohol?

The term “alcohol” has been synonymous with “spiritous” liquids for the past 300 years. The history of alcohol consumption, along with codes limiting its consumption go back to 1700 BC. There are 4 types of alcohol: methyl alcohol, ethyl alcohol, propyl alcohol and butyl alcohol. Ethyl alcohol (ethanol) is the type used in the production of alcoholic beverages. The other 3 types, can result in blindness or death if consumed, even in small doses.

Alcohol is the intoxicating agent in beer, wine and liquor. Alcohol is produced by fermentation of yeast, sugars and starches. Fourteen grams (0.6 ounces) of pure alcohol equals one drink. Examples of this amount may include one 12 ounce beer (5% alcohol), 8-9 ounces of malt liquor (7% alcohol), 5 ounces of wine (12% alcohol) or a 1.5 ounce shot of 80 proof liquor (40% alcohol).

The Federal Uniform Drinking Age Act of 1984 raised the legal minimum drinking age to 21 years. All states now prohibit the purchase of alcohol by persons under the age of 21 years since 1988. It is illegal to sell or buy alcohol for anyone under the age of 21. According to the Office of the Surgeon General, alcohols is used by more young people in the U.S. than tobacco or other illicit drugs.

ALCOHOL PHARMACOLOGY

Alcohol is a clear, volatile liquid that is highly soluble in water. The absorption of alcohol is decreased by food. Absorption occurs primarily from the intestine. Alcohol distributes into body water. BAC is dependent upon weight and body fat, amount and time frame of consumption and food effects. Drinking alcohol over shorter time periods or in larger quantities and on an empty stomach will lead to a higher BAC. In all 50 U.S. states, the legal limit is .08. Regulations are stricter in many states for drivers less than 21 years of age.

Alcohol is primarily metabolized (90%) in the liver, where alcohol enzymes are converted, causing a toxin often blamed for the hangover effect. Excretion of small amounts of alcohol occur through urine, breath and sweat. Alcohol excretion by the lungs is the basis for the Breathalyzer test given by law enforcement agencies.

Alcohol reduces nerve signals, which is why it is classified as a central nervous system depressant. It lowers both cognitive and physical capacities. The combination of alcohol with other depressants, such as opiates or barbiturates, can have dangerous even addictive effects.

HEALTH HAZARDS DUE TO ALCOHOL ABUSE

Long term alcohol misuse is associated with liver disease, cardiovascular disease, cancer and nervous system damage as well as psychiatric problems such as depression, anxiety and antisocial personality disorder(s).

The consumption of alcohol can cause behavioral changes. Even low doses can significantly impair judgment and coordination. As the dosage is increased, pleasant feelings give way to depression. Intoxication occurs because the liver can only metabolize 1 ounce per hour. Intoxication can last from 1-12 hours and the after-effects can last 24 hours or more. Repeated use leads to increased tolerance which leads to increased amounts to achieve the desired effect.

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Once the body develops an alcohol dependence, stopping consumption will likely lead to withdrawal symptoms, such as anxiety, tremors, hallucinations and convulsions, which can be life threatening. Alcohol can be lethal if it reaches a concentration above 460mg per 100ml of blood (0.46). Death from respiratory depression can occur with severe intoxication, hastened if combined with depressant medications.

Mixing alcohol with caffeine has become a common way for youth consumption. This combination may cause drinkers to feel less intoxicated, but they are just as impaired and more likely to take risks. Excessive use leads to alcoholism (alcohol dependence). There are 4 constant symptoms of alcoholism: craving, loss of control, tolerance and dependence.

Drinking and driving results in numerous accidents, injuries and death each year. In 2009, ther were over 10,800 fatalities involving a driver with a BAC of .08 or higher (32% of the total yearly traffic fatalities), and 56% of these drivers had a BAC of .15 or greater.

Alcoholism is a treatable disease, but is also considered a lifelong, chronic illness that requires counseling, support and even medication to control cravings. Relapses are common. Risks of developing alcoholism include a general pre-disposition and lifestyle practices. Stress, ease of availability and peer groups can increase the risk of alcoholism.

EXTENT OF USE/ABUSE

Prevalence of alcohol use in the U.S. is widespread. According to the Department of Health and Human Services 2010 Summary Health Statistics, adults 18 years of age or older who were current drinkers (at least 12 drinks in the past 12 months) was 50.9%.

Alcohol use and binge drinking among teenagers is now a major public health concern. In 1999, 1 of every 2 students reported alcohol use. In 2009, this usage decreased to 42% with 24% reporting heavy or binge drinking. In 2009, 10% of high school students reported driving when they had consumed alcohol with 28% reporting of riding in a vehicle being driven by someone who had consumed alcohol.

ALCOHOL USE IN PREGNANCY

No amount of alcohol is considered safe in pregnancy (or earlier, if a woman does not know she is pregnant) as it is quickly transferred from the mother to the fetus. Alcohol is toxic to a developing baby, due to organ development as well as brain damage, and can result in miscarriage, birth defects, growth retardation and mental defects. Women who are planning to become pregnant should not drink alcohol. Consuming alcohol during pregnancy can cause fetal alcohol syndrome, or other disorders leading to lifetime learning disabilities, poor memory, hyperactivity, poor attention span, skeletal and facial abnormalities, heart defects and speech/language delays.

BENEFICIAL EFFECTS OF ALCOHOL

It has been reported that there are cardiovascular benefits of alcohol use, however only SMALL AMOUNTS are reported to have any beneficial effect. It is NOT suggested to start drinking for prevention of heart disease as drinking leads to other health issues and may be addictive. Much more research is needed as it can be argued that simply eating grapes or drinking grape juice produces the same result.

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TREATMENT OPTIONS FOR ALCOHOL ABUSE AND ALCOHOLISM

Treatment requires strong family, social and medical support and usually involves a wide array of interventions, including step therapy, group counseling/support, individual counseling/support and medication.

Some individuals may opt to join Alcoholics Anonymous (AA), a group support organization nationally recognized since 1935. Over 2 million recovered alcoholics belong to AA.

Medical treatment (oral medications such as disulfiram, naltrexone and acamprosate) may work to help reduce drinking, relapses and can lead to full recovery/abstinence from alcohol. Use of medication is commonly coordinated with behavioral therapy.

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