

Alcohol Fact Sheet

Drinking and Driving

Driving a vehicle involves multiple tasks. To drive safely requires maintaining alertness and making decisions based on an ever changing environment. Drinking alcohol impairs a wide range of skills necessary for carry-

ing out these tasks. This Fact Sheet examines alcohol impairment of driving skills and discusses approaches to impairment testing.



Alcohol-Related Impairment

Alcohol consumption is associated with a range of accidents and injuries resulting from the impaired performance of complex mental and motor functions.

and aircraft accidents. The subtlety and complexity of skills required to operate these vehicles makes them susceptible to impairment by low doses of alcohol.

The relationship between alcohol and motor vehicle crashes is well known. Alcohol also has been implicated in many railroad, boating

This discussion is limited to the acute impairment that results from episodes of intoxication, rather than the chronic impairment developed after years of heavy drinking.

Extent of the Problem

National research studies reveal the significant extent of alcohol's effect on transportation safety in the United States.

A recent review of Coast Guard reports suggests alcohol involvement in 60 percent of all boating fatalities (including persons falling overboard.

As many as 40 percent of all traffic fatalities (the leading cause of accidental death) are alcohol related.

Although alcohol has not been directly implicated in U.S. commercial airline crashes, typical estimates of alcohol involvement by pilots in fatal general aviation crashes range from as low as 10 percent to a high of 30 percent.



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A testing study of railroad employees in 1990, showed 3.2 percent testing positive for alcohol or other prohibited drugs.

Improved intervention and education programs have helped reduce alcohol-related driving fatalities.

Blood Alcohol Concentration (BAC)

Blood alcohol concentration (BAC) is identified as the proportion of alcohol to blood. In the field of traffic safety, BAC is expressed as the percentage of alcohol in deciliters of blood—for example, 0.10 percent (i.e., 0.10 grams per deciliter).

All state laws identify driver BAC limits, which now vary by state. According to these laws, operating a vehicle while having a BAC over the given limit is illegal.

The BAC limit for drivers age 21 and older in most states is 0.10 percent, although some states have now reduced the limit to 0.08 percent.



Many of the skills involved in driving are not all impacted at the same BAC levels. For example, a driver's ability to divide attention between two or more sources of

visual information can be impaired by BAC's of 0.02 percent or even lower.

When BAC's greater than 0.05 are reached, impairment occurs consistently in eye movements, glare resistance, visual perception, reaction time, steering tasks, information processing, and other psychomotor skills.

Risks of a motor vehicle crash increases as the person's BAC increases.

Compared with drivers who have not consumed alcohol, the risk of a fatal crash for drivers with BAC's between 0.02 and 0.04 percent is 1.4 times higher. **Drivers with BAC's between 0.10 and 0.14 percent have the risk of a fatal crash that is 48 times greater.**

Youth. Youth has been cited as one of the most important variables related to crash risk. Teenage drivers are inexperienced not only in driving but in drinking and in combining the two activities.

Driving inexperience and immaturity are the two major causes of motor vehicle crashes among young drivers. Drivers in the 16-20 age group have shown a much greater risk than older drivers of being in a fatal crash.

Experience. Young people's lack of driving experience renders

them less likely than more experienced drivers to cope successfully with hazardous situations.

Risk-taking behaviors such as speeding, as well as a tendency to underestimate the dangerous consequences of such behaviors contributes to their higher crash rates.

Gender. Twenty-nine percent of male drivers involved in fatal motor vehicle crashes had BAC's of 0.01 percent or greater, compared with 15 percent of female drivers.

Medications and Alcohol. Combining certain medications with alcohol increases crash risks. Sedatives and tranquilizers alone impair driving skills and can impair them even more when taken with alcohol.

Driving skills can be impaired by other medications, such as codeine, prescribed to treat moderately severe pain.

When combined with alcohol, medications' adverse effects on driving skills are multiplied. This includes the effects of antidepressants, most antihistamines, certain cardiovascular medications, and some antipsychotic medications.

The more demanding the driving task, the greater the impairment caused by low doses of alcohol.

Research shows that women metabolize alcohol differently from men, causing women to reach higher BAC's at the same doses.

Legal Sanctions

Legal sanctions, such as driver's license suspensions and court-ordered alcoholism treatments, are designed to deter drinking and driving.

A driver's license suspension and license revocation seem to be the most effective deterrents among the driving population.



Analysis of the drinking-and-driving population has concluded that the most effective means for reducing re-arrests for DUI's was a combination of license suspension and interventions. Programs such as education, psychotherapy counsel-

ing, and follow-up sessions were considered very helpful.

Treatment of convicted drinking drivers normally emphasizes abstinence from drinking behaviors. The type and duration of treatment depends on factors such as the severity of the person's drinking problem and DUI history.

DUI convictions should serve to identify problem drinkers, then guide them into an alcohol treatment program.

DUI offenders with less severe drinking problems have seen real benefits from educational programs. At this time, no one particular model is thought to be most effective in reducing recidivism and/or alcohol-related crashes.

For repeat offenders or people with severe drinking problems, treatment therapies lasting for at least 12 months, appear to be most effective.

The National Highway Traffic Safety Administration credits raising the state legal drinking age to 21 with preventing almost 1,000 traffic deaths annually.

Legislation reducing the BAC limit to 0.02 percent or lower, is referred to as the "zero tolerance law". It has been passed by 29 States for young drivers in an effort to further reduce alcohol-related fatalities.

Alcohol treatment for DUI offenders can range from short-term educational sessions to therapy programs lasting 1 year.

Assessments

Once a person has a DUI and is referred for an evaluation, clinicians use assessment techniques to define the problem. This includes identifying treatment recommendations.

The goal of an assessment is determining characteristics that can assist in identifying, then diagnosing an individual's alcohol addiction.

Reaching a chemical dependency diagnosis can be a complex analytical process. To do it well there needs to be a thorough examination of a person's life — health, medical, psychological, social and chemical use.

Assessments focus on four important objectives:

1. Determining a formal diagnosis of a person's alcohol problem.
2. Establishing the severity of the alcohol problem.
3. Developing a viable treatment plan.
4. Defining a baseline of the patient's health in which future conditions can be compared.

Assessments are also used as an ongoing, interactive process to evaluate an individual's progress while in treatment.

Questions answered through the assessment process include:

- What level of care and intensity of services is necessary?
- Are there any co-existing psychiatric problems, such as depression, needing attention?

The clinician's perception and judgment are greatly enhanced by the application of formal assessment instruments.

Varieties of methods are involved in comprehensive patient assessments, including medical examinations, clinical interviews, and formal testing instruments.

Each has specific strengths, and the approaches should complement each other as they address this comprehensive assessment process.

General psychological instruments can be used to assess personality, cognition, and neuropsychological characteristics.

Most assessment instruments are standardized offering comprehensiveness, consistency, ease of administration, and low cost.

Standardized instruments provide a quantitative scale of alcohol problems, which are useful in measuring the patient's need for treatment.

Patients usually place greater confidence in treatment strategies when they are based on results of standardized quantifiable tests rather than on clinical judgment alone.

The Path to Healing

Reaping the benefits of treatment begins by recognizing the signs of alcohol addiction. This step is best facilitated by having a comprehensive evaluation done by an addictions healthcare professional.

Although alcohol addiction can be diagnosed by primary care physicians, most often they will refer the patient to a psychiatrist, psychologist or clinical counselor specializing in addictions.

Treatment is a partnership between the patient and the healthcare provider. It is important that informed consumers understand their treatment options and fully discuss all their concerns with a treatment provider as they arise.

A key element of Rimrock's treatment programs is the active involvement of patients in the management of their own illness.

Empowerment is developed through the use of patient education, skills training and a strong emphasis on encouraging the individual patient to accept responsibility in managing



their own condition. Along with the empowerment of our patients, we offer a treatment regimen which includes comprehensive clinical assessments, individualized treatment plans and services for the whole family.

Another important part of Rimrock's program is the emphasis we place on the integration of a broad spectrum of community health and human services for the benefit of the patient. This includes addressing a patient's physical, psychological, social and economic needs, which improves the likelihood of a successful treatment experience.

Successful recovery principles in addiction treatment are characterized by the integration of personal, family, professional and other community resources toward the goal of enhancing the duration and quality of life of those we serve.

For further information about treatment for Alcoholism, please call Barbara Hansen, Rimrock Foundation Admissions Supervisor at 1-800-227-3953 or 1-406-248-3175.

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