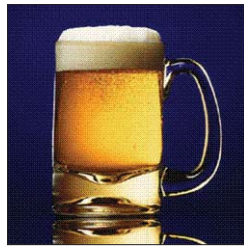


ALCOHOL

By: Bilesha Perera, M.Sc. and MuraliKrishna Tangirala, M.P.H.

THE DRUG

Alcohol (synonymous with ethanol, ethyl alcohol, algrain, jaysol, spirit of wine) is a colorless liquid, is completely soluble in water, and is one of the oldest drugs of abuse. Alcohol, without water molecules, is called pure or absolute alcohol (100% alcohol by volume). Alcohol is usually produced by fermenting cereals such as corn, rice and barley. Alcoholic beverages such as beer and wine contain 5% to 12% alcohol. Alcoholic beverages such as whisky, vodka and brandy contain 40% to 50% alcohol. Ethyl alcohol is the active psychoactive drug found in alcoholic beverages. Ethyl alcohol produces a sedative effect and has been used as a sedative-hypnotic for medical purposes in the past. Ethyl alcohol induces depression and is the most frequently used brain depressant in the United States.



INCIDENCE AND PREVALENCE

In 2003, the prevalence of monthly use of alcohol among 8th graders in Indiana was 24.3%, and the corresponding figure for 12th graders was 46.1% (National figures were 19.7% and 47.5%, respectively). Research indicates that the rates of alcohol use among students in Indiana are declining at present. Over the years, binge drinking gained much popularity, especially among college students across the country, but a downward trend of binge drinking among teenagers in Indiana has been observed in the last few years. In 2003, 29.3% of 12th graders in Indiana

reported binge drinking, a 6.1% reduction from 2000. In 1996, alcohol related mortality in Indiana was 30.3 people per 100,000 population, and the national rate was 32.2 people per 100,000 population.

EFFECTS

Research indicates that more than 40% of the individuals who start drinking before the age of thirteen develop alcohol abuse or alcohol dependency at some point in their lives.

Short term effects of alcohol include anxiety, restlessness, slowed heart and respiratory rates, blurred vision and poor motor coordination. Long term effects include severe adverse health problems such as cirrhosis, cancers, cardiac diseases, skin diseases, gastritis and sexual dysfunction as well as a number of other irreversible neurological and psychological health conditions.

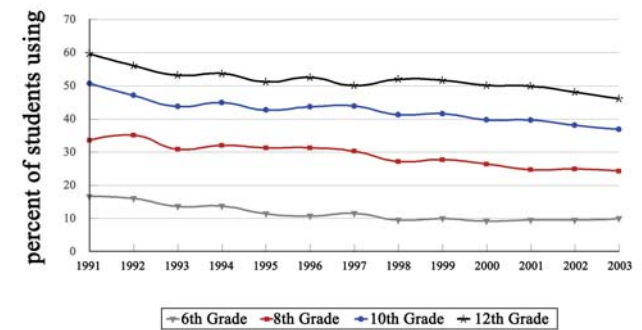
High school students who use alcohol experience an increased frequency of sleep disturbance, academic disruption, and verbal, physical or sexual violence. Additionally, pregnant mothers who consume alcohol, even in moderate levels, may harm their unborn children by inducing severe birth defects. Alcohol is also responsible for many interpersonal and environmental problems, such as traffic accidents, physical and sexual violence, property damage, family problems and divorces. Nationally, nearly 40% of admissions to mental hospitals and 50% of arrests are alcohol-related.

The effects produced by alcoholic beverages on humans are determined by the amount of alcohol

in the bloodstream (Blood Alcohol Concentration or BAC) of the user. Significant impairment of motor coordination and loss of good judgment occurs if BAC is 0.1% or over.

In 2000, alcohol related crashes cost Americans an estimated \$114 billion, including \$51 billion in monetary costs and an estimated \$63.2 billion in quality of life losses. Alcohol related crashes cost Indiana residents \$1 per drink. In 2001, the societal cost of underage drinking in Indiana was \$1.3 billion.

Trend of Monthly Alcohol Use among Indiana Students: 1991-2003



Source: 2003 ATOD Survey, Indiana Prevention Resource Center

THE LAW

Any liquid or solid that contains 0.5% alcohol by volume is considered to be an alcoholic beverage under Indiana law. The minimum drinking age is 21 years and it is illegal to sell, barter, exchange, provide or furnish an alcoholic beverage to a minor (a person less than 21 years of age). However, it is estimated that nearly 65% of alcohol outlets across the country sell alcohol to minors without asking for identification. It is illegal for a minor to knowingly: possess an alcoholic beverage, consume it, or transport it on a public highway when not accompanied by at least one of his parents or legal guardians. A person 21 years of age or older who knowingly or intentionally encourages, aids, or enables a minor to unlawfully possess an alcoholic beverage commits a class C infraction. According to Indiana law, a person with a

ALCOHOL

BAC of 0.08% or above is considered to be intoxicated, and it is illegal for a person with a BAC level of 0.08% or higher to drive. As of July 1, 2004, it is illegal to operate a vehicle in Indiana if an open container of alcohol is present in the vehicle.

DRINKING AND DRIVING

Alcohol impairs vision, hearing, reaction time and emergency responses. In 2002, 29% of 15-20 year old drivers killed in motor vehicle crashes had been drinking, and 24% were intoxicated. The latest data shows that motor vehicle crashes are the leading cause of death for people of ages 15-20. The risk of a driver being killed in a crash at 0.08% BAC is at least eleven times higher than that of drivers without alcohol in their system. In 2002, of the 792 traffic deaths that occurred in Indiana, 269 (34%) were alcohol-related.

PREVENTION AND RESEARCH

Individual and interpersonal alcohol preventive strategies, such as public health education campaigns designed to develop skills to resist social influence and peer pressure, and community level strategies, such as policies and regulations to discourage minors from accessing and consuming alcoholic beverages, are the primary preventive efforts implemented by government and community organizations in Indiana. The Indiana Prevention Resource Center (IPRC) conducts an annual survey on alcohol, tobacco and other drug use among 6th to 12th graders in Indiana. The aim of this survey is to identify prevalence rates and trends of substance use in this target population. This data can be used to develop evidence-based prevention programming in communities across Indiana.

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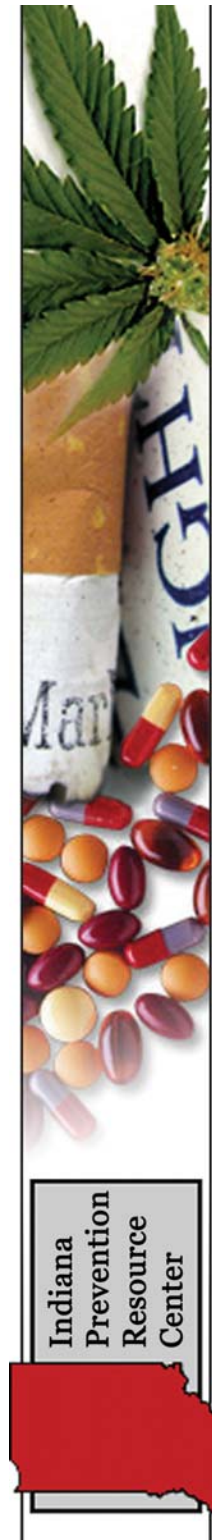
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