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Be a Piece of the Puzzle ~ Science of Drugs: Alcohol



Ethyl alcohol, or ethanol, is an intoxicating ingredient found in beer, wine, and liquor. Alcohol is produced by the fermentation of yeast, sugars, and starches. It is a central nervous system depressant that is rapidly absorbed from the stomach and small intestine into the bloodstream. A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol or 12 ounces of beer; 8 ounces of malt liquor; 5 ounces of wine; or 1.5 ounces (a "shot") of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).

It is the amount of alcohol consumed that affects a person most, not the type of alcoholic drink. An individual's reaction to alcohol vary, and are influenced by many factors; such as age, gender, race or ethnicity, physical condition, amount of food consumed before drinking, how quickly alcohol is consumed, use of drugs or prescriptions, family history of alcohol problems.(1)

Alcohol affects every organ in the body. It is metabolized in the liver by enzymes, however, the liver can only metabolize a small amount of alcohol at a time, leaving the excess alcohol to circulate throughout the body. The intensity of the effect of alcohol on the body is directly related to the amount consumed.

According to the *Dietary Guidelines for Americans*, moderate alcohol consumption is defined as having up to 1 drink per day for women and up to 2 drinks per day for men. This definition is referring to the amount consumed on any single day and is not intended as an average over several days.

"Getting drunk" or intoxicated is the result of consuming excessive amounts of alcohol. Binge drinking, (drinking alcoholic beverages with the primary intention of becoming intoxicated by heavy consumption of alcohol over a short period of time) typically results in acute intoxication: Coma and death can occur if alcohol is consumed rapidly and in large amounts. This is compounded in adolescents due to lack of brain development to recognize levels of inebriation. (2) Local: 14% of 8th and 37% 11th graders reported they have participated in binge drinking the last 30-days. (3)

Further, alcohol intoxication can be harmful for a variety of reasons including impaired brain function resulting in poor judgment, reduced reaction time, loss of balance and motor skills, or slurred speech. Alcohol also dilates blood vessels causing a feeling of warmth but resulting in rapid loss of body heat, thus resulting in hypothermia of individuals whom are "sleeping" it off in their cars or outdoors. The *Dietary Guidelines* also state that it is not recommended that anyone begin drinking or drink more frequently on the basis of potential health benefits because moderate alcohol intake also is associated with increased risk of breast cancer, violence, falling injuries and drowning.

Any alcohol use slows reaction time and impairs

judgment and coordination, which are all skills needed to drive a car safely. The more alcohol consumed, the greater the impairment. The legal limit for drinking is the alcohol level above which an individual is subject to legal penalties (e.g., arrest or loss of a driver's license). All states in the United States have adopted 0.08% (80 mg/dL) as the legal limit for operating a motor vehicle for drivers aged 21 years or older. However, driver's younger than 21 are not allowed to operate a motor vehicle with any level of alcohol in their system. Note: Legal limits do not define a level below which it is safe to operate a vehicle or engage in some other activity. Impairment due to alcohol use begins to occur at levels well below the legal limit.

According to the National Institute on Alcohol Abuse and Alcoholism binge drinking is defined as a pattern of alcohol consumption that brings the blood alcohol concentration (BAC) level to 0.08% or more. This pattern of drinking usually corresponds to 5 or more drinks on a single occasion for men or 4 or more drinks on a single occasion for women, generally within about 2 hours.

Studies have shown that alcohol use by youth and young adults increases the risk of both fatal and nonfatal injuries. Research has also shown that youth who use alcohol before age 15 are five times more likely to become alcohol dependent than adults who begin drinking at age 21. Other consequences of youth alcohol use include increased risky sexual behaviors, poor school performance, and increased risk of suicide and homicide. Local: 3% of 6th, 19% of 8th and 51% 11th graders reported they have used alcohol in the last 30-days.(3)

Mixing alcohol and medicines can be harmful. Alcohol, like some medicines, can make you sleepy, drowsy, or lightheaded. In some cases, alcohol interactions may decrease the effectiveness of medications or render them useless. In other cases, alcohol interactions may make drugs harmful or even toxic to the body. Local:

34% of 11th graders reported they have used illicit drugs, other than marijuana, in their lifetime while 14% report use in the last 30 days. (3)

Some medicines that you might never have suspected can react with alcohol, including many medications which can be purchased "over-the-counter"—that is, without a prescription. Even some herbal remedies can have harmful effects when combined with alcohol. Even in small amounts, alcohol also may intensify medication side effects such as sleepiness, drowsiness, and light-headedness, which may interfere with your concentration and ability to operate machinery or drive a vehicle, and lead to serious or even fatal accidents.

Article, Local and State Data Obtained from:
National Institute of Drug Abuse, Updated in Dec. 2012
1. Centers for Disease Control, Updated in Jan. 2013
2. Marisa M. Silveri, Ph.D.. (2006, October 29). "Adolescent Brains Are Insensitive To Alcohol For A Short Time, But At Great Cost." Medical News Today.
3. Vernonia 2012 Student Wellness Survey



Summer Meal Program

"Follow the Pin Wheels to Free Summer Meals!"

Vernonia Community Church

State and A Street

Join Us for Lunch
11:30
 1-18yr Eat Free
 Adults \$2.00

June 17th
— Aug. 16th

Questions? Please contact:
 Nic Welch (503) 369-6734
Volunteers Needed

USDA and the State of Oregon are equal opportunity Providers and employers

1 out of 5
6th and 8th graders has tried inhaling household products to get high.



Parents, want to learn how to keep your kids away from inhalant abuse? Go to:
www.InhalantAbuseTraining.org



The conversation starts here.

PARENTS:
THE ANTI-DRUG

89.5% of 6th graders in Vernonia Elementary School report they haven't tried inhalants in the last 30 Days!
(Student Wellness Survey, May 2013)



THOSE WHO HOST LOSE THE MOST

Don't be a party to teenage drinking.

Its against the law.

Prom and graduation season is upon us. Of those teens whom choose to drink, they are more likely to drink 5x's more per incident than adults.

Unfortunately, 1500 teens are killed every year due to underage drinking during prom and graduation season combined.

We need never to lose another youth to Underage Drinking

Spencer Health and Wellness

School Based Health Center

open Tuesdays and Fridays from 7:30 AM - 1:30 PM