**Alcohol Health Topic**

**Overview of Alcohol**

Alcohol is a central nervous system depressant. In alcoholic beverages, ethyl alcohol is the main ingredient. It is fermented from the sugar or other carbohydrates found in grapes, other fruits, vegetables, and grains. A single standard drink consists of: one 12 ounce bottle of beer, one 4-5 ounce glass of wine, 1.5 ounces of 80 proof hard alcohol.

**Effects of Alcohol**

A person under the influence of alcohol may have slurred speech, poor motor coordination, and an unsteady appearance. Alcohol at high doses may lead to loss of consciousness, coma (chances of possible brain damage), and death from respiratory shut down. Other effects of alcohol include:

- **Dehydration** - Cause of the hangover
- **Increased blood flow through capillaries**
- **Decrease in body temperature**
- **Depression of many organs and functions of the body including the central nervous system**
- **Stomach irritation**
- **Anesthesia** - Gray outs (not being able to remember parts of the evening until someone reminds the individual) or blackouts (not being able to remember events of the night due to one's brain cells going to sleep). Can be prevented by drinking water.
- **Alcohol combined with other drugs** - Alcohol consumed with other central nervous system (CNS) depressants (narcotics, sedatives, and tranquilizers) may have a synergistic effect. In other words, drugs react with alcohol creating a stronger effect than when each is consumed separately (A+B>C).

**Long Term Effects**

After continuous alcohol use, brain cells begin to die. Prolonged alcohol use can also result in addiction, liver disease, digestive system problems, cardiovascular disease and reproductive problems. Alcohol use is also associated with an increased risk of some cancers. The risk of mouth, throat, and esophageal cancer is 6 times greater for smokers and 38 times greater for smokers and drinkers.
Blood Alcohol Content (BAC)

Blood Alcohol Content (BAC) is the percent of alcohol in one's blood. In California it is illegal to drive with a BAC of 0.01 or greater for people under 21 and 0.08 or greater for people 21 and over.

Intoxication Rate Factors:

Alcohol will not affect everyone equally. Several factors contribute to an individual’s blood-alcohol content and how quickly the individual becomes intoxicated. Intoxication rate factors are factors that affect how quickly BAC rises. Below are some common intoxication rate factors.

- **Weight** - Since alcohol travels through the blood stream, the more someone weighs, the more alcohol it is going to take to get that person drunk. Body composition also contributes. Fat does not absorb alcohol, therefore a person with more body fat will become intoxicated faster than an individual who weighs the same amount but has less body fat (hypothetically neglecting other factors). Tolerance (absence of resistance to effects), does not affect BAC, but when someone has a high tolerance it will take more of the drug to reach the desired effect.

- **Amount of food and water in the stomach** - This can slow the absorption of alcohol into the blood stream.

- **Rate of consumption** - The human body, on average, can metabolize approximately 1/2 ounce of alcohol per hour, so if a person drinks rapidly, there is an accumulation of alcohol in the body creating a blood alcohol level (BAL). This excess of alcohol in the body continues to circulate until the body can metabolize it.

- **Carbonated alcoholic beverages** - Sparkling wine or champagne speed up the absorption of alcohol into the bloodstream. Similarly, mixing alcohol with other carbonated drinks will also increase the rate of absorption of alcohol into the bloodstream.

- **Medication** - Medication of any kind can have a synergistic effect. We recommend avoiding any alcoholic beverages while taking medication.

- **Sex** – See “Women and Alcohol” below.

Women and Alcohol

Some characteristics in women affect BAC and the way alcohol interacts in the body. Women have more body fat and less alcohol dehydrogenase (ADH), the enzyme that breaks down alcohol, so they get drunker faster. If a woman is on hormonal birth control, the birth control slows down the rate in which alcohol is eliminated from the body so they will feel the effects longer. When a woman has her menstrual cycle, she releases more hormones and tends to stay intoxicated longer.
**Signs of Alcohol Poisoning**

There are 4 signs of alcohol poisoning. If an individual sees any one of these signs, 911 should be called immediately.

- Cold, clammy, pale or bluish skin
- Unconscious or unable to be roused
- Puking repeatedly
- Slow or irregular breathing - less than 13 breaths per minute, more than 8 seconds between breaths

More information is provided on our topic about [Alcohol Poisoning: How to Help a Drunk Friend](#).

**Prevention**

The consumption of alcohol can be associated with many negative consequences. The steps below can keep someone safe and reduce the potential harms that may result from alcohol use.

- Drink one drink or fewer per hour.
- Eat a meal with protein and carbohydrates before going out.
- Drink water in between drinks and before bed.
- Avoid play drinking games.
- Do not mix alcohol with other drugs.
- Use the buddy system.
- Set a drink limit.
- Plan to have a designated driver or safe ride home.

**Treatment**

If you think you or a friend may have an issue with alcohol, please call (310-825-0768) to schedule an appointment at [CAPS](#)

For more information:

- [National Institute on Alcohol Abuse and Alcoholism](#)
- [College Drinking: Changing the Culture](#)
- [Rethinking Drinking](#)