Alcohol and You: Effects on the Body

Alcohol is the most widely used drug by American university students. Usually attention is paid to the physical impact of chronic use or what happens with excessive use. Often overlooked are the normal, routine effects on anyone who uses alcohol. The intent of this article is not to scare you or say drinking is bad, but rather to provide you with some facts that maybe you didn’t know.

When you have a drink, the majority of alcohol goes into the stomach where up to 20% can be absorbed directly. The remainder passes into the small intestine, where it is very rapidly absorbed into the bloodstream and carried to all the parts of the body. No one body cell is resistant to alcohol! The presence of alcohol in the blood, and hence the brain, is responsible for its intoxicating effects.

The higher the concentration of alcohol in a beverage, the more quickly it is absorbed. Carbon dioxide, found in Champagne, sparkling wines, or drinks mixed with carbonated soda, also speeds up the rate of absorption in the bloodstream. The presence of food in the stomach dilutes the alcohol—thus the advice, “Don’t drink on an empty stomach.”

What is the immediate effect of alcohol on various body organs and functions? Alcohol irritates the intestinal system and increases acid secretion by the stomach. It leads to increased production of urine by the kidneys. It interferes with the liver’s ability to maintain stable blood sugar. Alcohol has few effects on the heart or lungs, except in high amounts, when it may cause death. The central nervous system, particularly the brain, is the organ system most sensitive to the presence of any alcohol. Alcohol interferes with brain activity, affecting first judgment, then muscular coordination, then sensory perception. The common misconception that alcohol is a stimulant comes from the fact that it disinhibits many higher cortical functions. Through the depressant effects of alcohol, parts of the brain are released from their normal inhibitory restraints. Thus, behavior that would ordinarily be “censured” can occur.

Only 5% of alcohol is eliminated unmetabolized through sweat, breath, and urine. The rest has to be changed chemically (metabolized) to be removed from the body. The stomach can only break down one half an ounce of alcohol per hour—roughly equivalent to a 4-ounce glass of wine or one 12-ounce beer. Nothing can speed up this rate! No cup of coffee and no cold shower will help in this situation. This is not news to anyone who has tried to sober up someone who is drunk!

For further information, see Loosening the Grip by Jean Kinney.

Did You Know?

- Between 2% and 3% of the current American college population will die from alcohol related causes.
- Drinking and driving is the number one killer of Americans between the ages of 17-24.
- One in every three suicides involves alcohol.
- The average DUI arrest costs the charged person $3000.
- 0% of the vandalism that occurs on college campuses is as a result of alcohol use.
- 75% to 90% of campus rapes involve alcohol use.
- One out of every three American’s doesn’t drink – and that’s okay!
It’s a Fact...

...that new drinks, including Red Bull, Adrenaline Rush, and Jones-Whoop-Ass drink, are the fastest growing segment of the beverage industry. Most energy drinks contain large amounts of caffeine, and other legal stimulants, such as ephedrine, guarana, taurine, and ginseng, which when mixed with depressants like alcohol could cause cardiopulmonary or cardiovascular failure.