

What Alcohol Does to the Body

Chapter 25 Lesson 2

Short-Term Effects of Drinking

- The short-term effects of alcohol on the body depend on several factors including: amount of alcohol consumed, gender, age, size, food intake.
- **Brain-** alcohol reaches the brain almost as soon as it's consumed. It depresses the activity of the brain, slowing the work of the central nervous system. Thought processes are disorganized, and memory and concentration are dulled, along with decision-making.
- **Liver-** in a process called *oxidation*, the liver changes alcohol to water, carbon dioxide, and energy. The liver can only oxidize about one half an ounce of alcohol an hour. There is no way to speed up this process. Until the liver has oxidized all the alcohol, the alcohol keeps circulating through all the body parts. Neither a cold shower or coffee can sober a person up.

Short-Term Effects of Alcohol cont.

- **Blood Vessels-** when alcohol enters the blood, it causes the blood vessels to dilate, or widen. The result is increased blood flow of blood, especially to the skin. This makes the skin feel flush and warm, however it is an artificial warmth. This increased blood flow to the surface causes the body to lose heat by radiation. Body temperature actually decreases. Drinking and going out into the cold puts people at an increased risk for hypothermia.
- **Heart-** alcohol causes an increased heart rate and increase in blood pressure. It can lead to arrhythmias, or abnormal heartbeats. This can cause scar tissue to build up in the muscle fibers of the heart. The risk of heart attack and stroke increase.

Short-Term Effects cont.

- **Kidneys**- alcohol affects the pituitary gland, which in turn acts on the kidneys, causing them to produce more urine. It is for this reason that a person feels dehydrated the day after he or she has been drinking heavily.
- **Stomach**- because the alcohol molecule is very small and water-soluble, it does not have to be digested. It can be immediately absorbed from the stomach into the blood. Having food in the stomach slows the absorption process, although food will not keep a person from getting drunk. Alcohol also increases the flow of gastric juices in the stomach which can cause irritation.

Driving Under the Influence

- One of the most serious problems related to short-term drinking is driving under the influence (DUI). A person is said to be driving under the influence if their blood alcohol concentration exceeds the limit allowable by that state.
- **Blood Alcohol Concentration-** *the amount of alcohol in a persons blood expressed as a percentage.*
- Signs of being intoxicated begin to appear with BAC as low as .02.
- Factors effecting BAC include: age, gender, metabolism, weight, number of drinks, and food consumed.

Driving Under the Influence cont.

- Driving experts and medical researchers have found that drinking on any level:
- Reduces the ability to judge distances, speeds, and turns
- Reduces the ability to accurately judge one's own capabilities, and limitations
- Increases tendency to take risks
- Slows reflexes
- Reduces the ability to concentrate
- Driving while intoxicated is the leading cause of death among teenagers. Each day 11 teenagers are killed and over 350 are injured in alcohol related motor vehicle crashes.
- Almost 50% of all crashes in which teenagers die occur because drivers were legally drunk.

Other Costs of DWI

- Immediate confiscation of drivers license
- Arrest, a trip to jail, court appearance, and fine
- Possible suspension of drivers license
- Possible mandatory jail sentence
- Cost of bail to get out of jail
- Higher insurance rates
- Possible lawsuits
- In most states (like Ohio) drivers with a .08 BAC are considered driving while intoxicated.

Other costs of DWI

- Many states have laws making it illegal to have an open alcohol container inside the car
- Most states have mandatory tests for blood, breath, or urine to determine BAC. Refusal to submit to a test can mean automatic suspension of one's drivers license.
- Increasingly, the idea of identifying **designated drivers**- *people in social settings who choose not to drink so that they can safely drive themselves or others*- is becoming a popular trend in the drinking society.

Long-Term Effects of Drinking

- Long-term effects of alcohol on the body can include vitamin deficiency, stomach and skin problems, and loss of appetite.
- Prolonged alcohol use can also do permanent damage to the liver and nervous system.

Brain Damage

- Long-term, excessive use of alcohol invariably leads to major brain damage. Some studies show it may even lead to a decrease in brain size. People have been hospitalized in mental institutions for severe brain damage caused by excessive alcohol use. Even moderate drinking can destroy brain cells. Memory and problem solving skills are affected early.

Chronic Liver Problems

- Long-term, alcohol interferes with the liver's ability to break down fats. **Fatty liver**, *a condition in which fats build up in the liver and cannot be broken down*, develops. This increased amount of fat prevents the liver from functioning normally. It also interferes with the growth of new liver cells.
- Prolonged heavy use can result in **cirrhosis**, *a condition in which liver tissue is destroyed and then replaced with useless scar tissue*.
- Alcohol use can lead to **hepatitis**, *an inflammation or infection of the liver that causes weakness, jaundice, and sometimes death*. Recovery can be very slow, and death sometimes results.

Tolerance and Dependence

- Because alcohol is a drug, people who use it regularly may develop a tolerance, making it necessary to drink more and more in order to produce the same desired effects.
- As tolerance increases, a person may drink more without appearing to be intoxicated, while at the same time damage is being done.
- If for some reason a person must be hospitalized, he/she will experience the symptoms of withdrawal including: jumpiness, sleeplessness, sweating, severe tremors, convulsions, and hallucinations.
- Some people become physiologically dependant on alcohol. The body develops a chemical need for alcohol. Physiological dependence is marked by tolerance and withdrawal.

The Multiplier Effect

- Similar to the synergistic effect that occurs when two or more medicines are taken simultaneously, alcohol combined with other drugs or medicines produces a reaction known as the multiplier effect.
- When alcohol is mixed with another depressant, such as a tranquilizer, the effects can be deadly.
- Aspirin and other over the counter medicines, as well as prescription medicines can alter the way alcohol affects the body.
- Most medicines warn against the use of alcohol on their labels.

Alcohol and Pregnancy

- **Fatal Alcohol Syndrome-** *a condition in which the fetus has been adversely affected mentally and physically by its mothers heavy alcohol use during pregnancy.*
- FAS babies may experience: low birth weight, impaired speech, cleft palate, general weakness, slow body growth, poor coordination, and slow body growth.
- The alcohol a pregnant female drinks moves into her blood, then across the placenta and through the umbilical cord into the unborn child. Any effects felt by the pregnant female are also experienced by the child.
- FAS is 100% preventable, yet each year there are over 5,000 FAS babies born in this country, many undiagnosed.