Unit V – Wellness, Fitness and First Aid

Chapter 9 - Drug Awareness

Section 1 – Substance Use, Abuse and Misuse; Alcohol

What You Will Learn to Do

Assess the effects of drug and substance abuse on life today

Objectives

1. Identify commonly abused substances
2. Recognize the differences among drug use, misuse and abuse
3. Explain the reasons why people might use, misuse or abuse alcohol or drugs
4. Identify the risks associated with alcohol and various drugs

Key Terms

Drugs - Chemicals that cause a change in a person's body or behavior

Misuse - The incorrect or improper use of a substance

Abuse - Improper or excessive use or treatment

Substance - Something, such as a drug or alcohol, deemed harmful and usually subject to legal restrictions

Key Terms

Controlled Substance -	A substance whose manufacture, possession, or sale is controlled by the law
Addiction -	Physical or psychological dependence on a substance, habit, or behavior that can lead to health, social or economic problems; dependence on a drug
Ferment -	To produce a chemical change in a carbohydrate material, resulting in alcohol

Key Terms

Distilled - Heated and condensed to purify, form a new substance, or concentrate

Gateway - A term attached to alcohol and tobacco due to the fact that their use often leads to further drug abuse

Intoxicated - Drunk; affected by alcohol to the point that physical and mental control are significantly impaired

Introduction

TeenGetGoing (www.teengetgoing.com) notes that 90 percent of teens will “use” alcohol and/or other drugs during adolescence.

In the next few sessions, we will review the latest information about alcohol and drugs, define drugs and explain the difference between drug use, drug misuse and drug abuse.

Drug Use, Misuse and Abuse

Used under proper conditions, drugs can:

- Relieve pain
- Cure illness
- Save lives

However, drugs can ruin lives and even cause death when abused.

Drug Use, Misuse and Abuse

All of these things are technically a “drug”

- Over the counter aspirin
- Cocaine
- Prescription from your doctor
- Medical research drugs

A drug is any substance taken into the body that changes how the body functions, mentally or physically.

This includes medication used for the prevention and treatment of disease, as well as any controlled substance to which a person can become addicted. Many medications, when misused or abused, can cause addiction.

Drug Use, Misuse and Abuse

Drug use is taking a legal drug as it in intended to be used.

Drug misuse is taking a legal drug for medical reasons but not as recommended or prescribed.

Drug abuse is taking a legal or illegal drug for a nonmedical reason in a way that can injury your health or your ability to function.

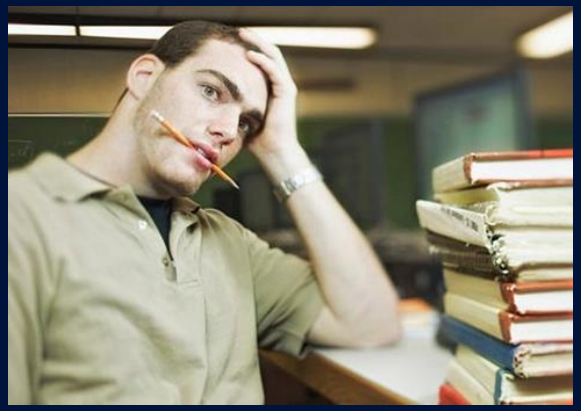
What Can You Do to Remain Drug-Free?

- Fill your life with activities and people you enjoy.
- Believe in yourself.
- Practice saying no before you are actually in a situation where someone offers you drugs, so you will not hesitate to say no when the time comes.
- Think through the consequences of abusing drugs.
- Remember that drugs do not solve problems; they create them.

Why Do People Abuse Drugs?

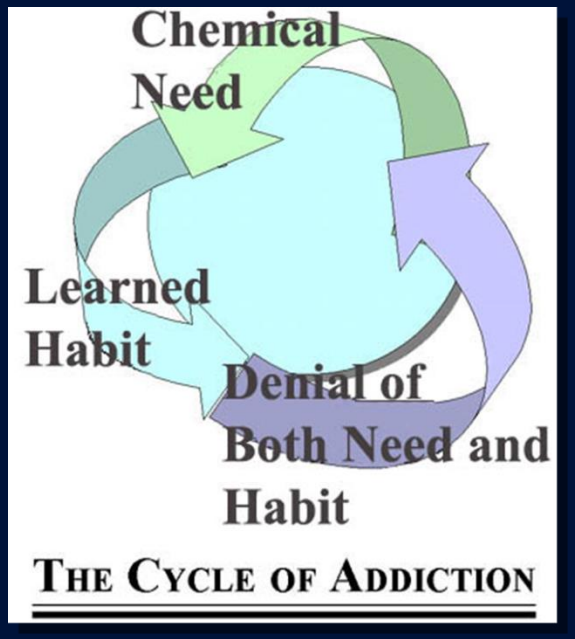
Some people try drugs out of curiosity, as an act of rebellion, or because they cannot resist peer pressure.

People also use drugs because they may be unhappy, lonely, stressed, or missing something in their lives.



Once the effects of the drugs wear off, they realize the problems are still there. So they turn to the drug again.

Why Do People Abuse Drugs?



The cycle is what leads to addiction. Some drugs are far more addictive than others.

A first time user of crack cocaine has a 1 in 3 chance of becoming an addict.

Many people take drugs without knowing what kinds of effects they could have on their mind and body.

Alcohol

The legal drinking age is 21 years and older.

Alcohol is the most widely consumed and abused drug in the United States.

Many people take drugs without knowing what kinds of effects they could have on their mind and body.

Alcohol

- Alcohol is a dangerous drug when used excessively.
- Heavy alcohol use kills about 50 high school and college each year because of alcohol poisoning.
- Drinking and driving remains the number one cause of death among high school students.

Alcohol Statistics

- 90% of teenage automobile accidents involve alcohol.
- Drinking and driving accidents are the leading cause of death among 15-24 year olds.
- 70% of teenage suicide attempts involve alcohol.

Alcohol

Alcohol is a natural substance formed when sugar and yeast react and ferment.

Some alcohols are distilled; others are simply fermented.

Alcohol

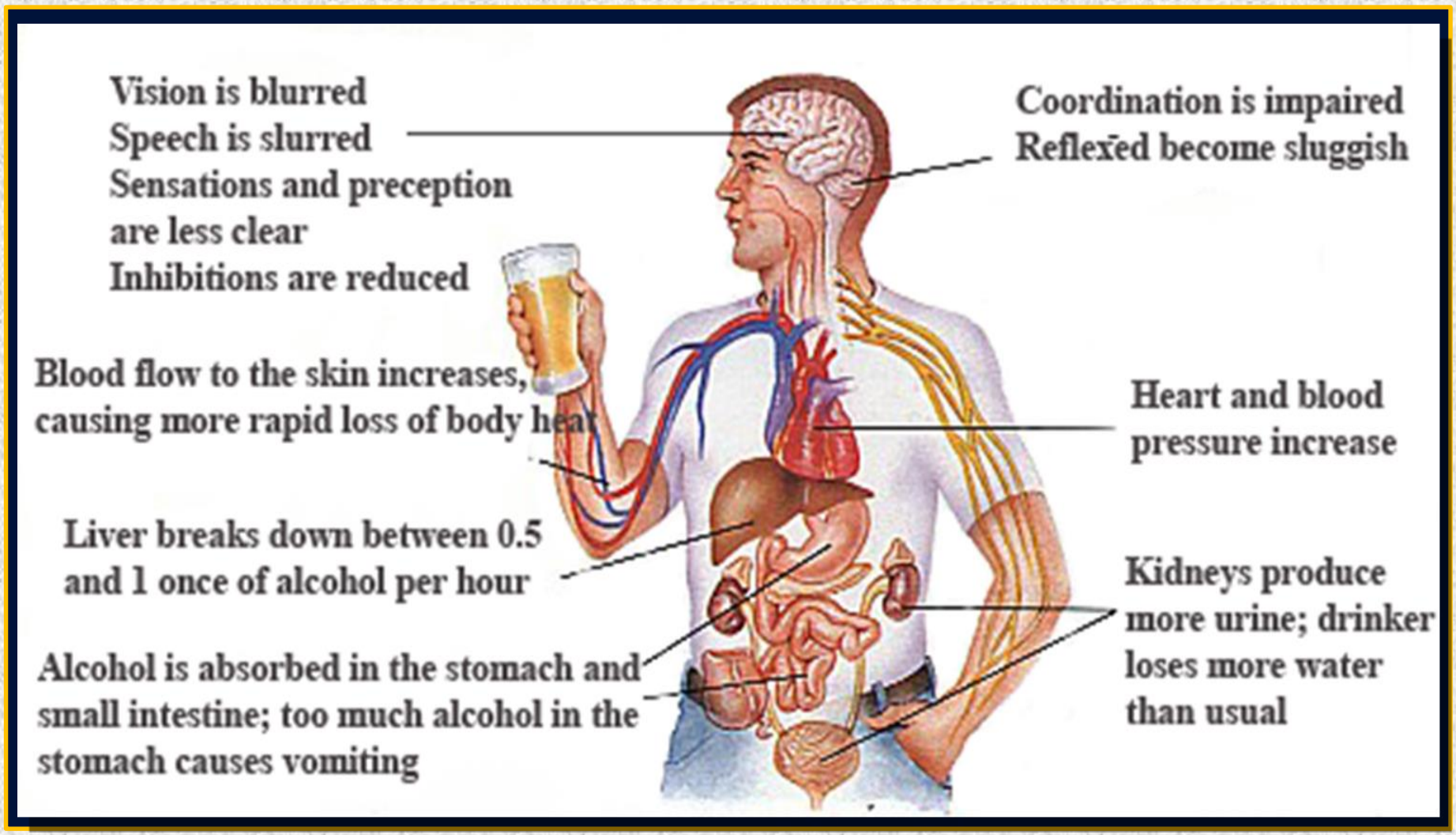
The use of alcohol can cause addiction and often progresses to further drug abuses, leading some experts to attach the term gateway to this substance.

Alcohol abuse can cause serious chemical dependency and other harmful physical and psychological effects.

Alcohol

When one drinks alcohol, it follows the same path as food through the digestive system, but it does not have to be digested to be absorbed by the blood stream. It affects every part of the body.

Alcohol


Vision is blurred
Speech is slurred
Sensations and preception are less clear
Inhibitions are reduced
Coordination is impaired
Reflexed become sluggish
Blood flow to the skin increases, causing more rapid loss of body heat
Heart and blood pressure increase
Liver breaks down between 0.5 and 1 once of alcohol per hour
Kidneys produce more urine; drinker loses more water than usual
Alcohol is absorbed in the stomach and small intestine; too much alcohol in the stomach causes vomiting

Alcohol's Effects on the Body

The effects of ethyl alcohol (ethanol) on the body can vary depending on the:

- Size of the individual
- How empty the stomach is at the time of alcohol consumption
- State of health and fatigue
- Mental attitude
- Speed and amount of consumption

Alcohol's Effects on the Body

The three most common types of drinks – beer, liquor and wine – contain the same amount of alcohol.

Alcohol's Effects on the Body

Alcohol slows down or depresses the central nervous system, causing:

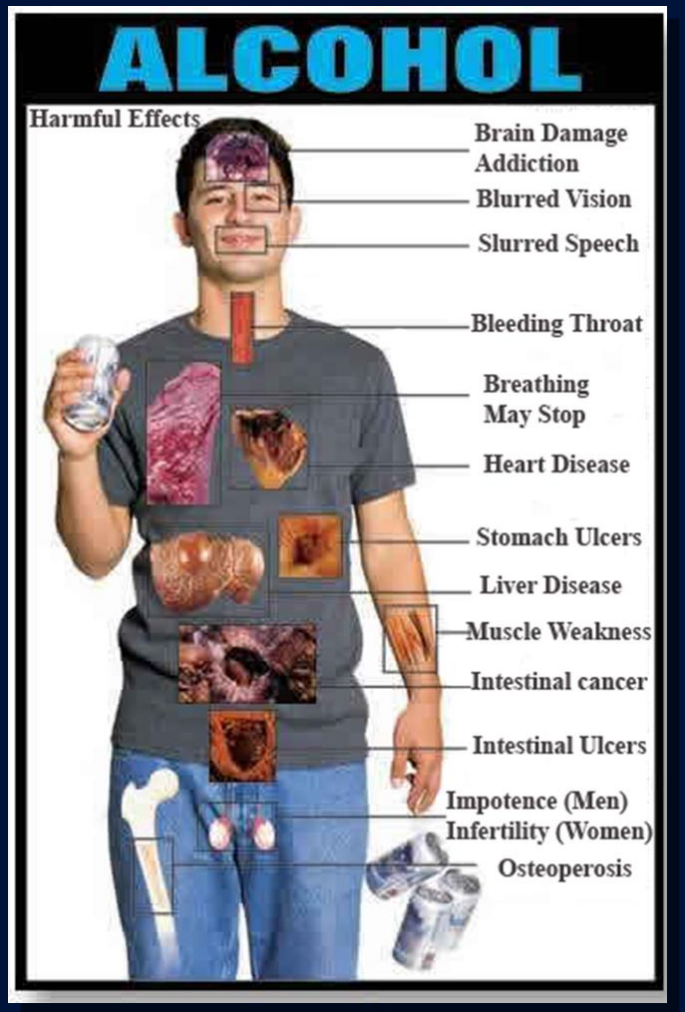
- Slowed reaction
- Slurred speech
- Impaired coordination
- Impaired judgment
- Sometimes - unconsciousness

Alcohol's Effects on the Body – Long Term

Long term effects of alcohol abuse include:

- Alcoholism
- High blood pressure
- Heart attacks
- Strokes
- Stomach ulcers
- Birth defects
- Cancers of the
  - Liver
  - Stomach
  - Colon
  - Larynx
  - Esophagus
  - Breast

Alcohol's Effects on the Body – Long Term



The list of effects also includes shrinking of muscles – including the heart, kidney and bladder – and pancreas damage.

Long term damage from abuse can be irreversible and result in death.

Alcohol's Effects on the Body – Long Term

Tolerance is when a drinker's body needs increasing amounts of alcohol to achieve the effect that was originally produced.

The drinker's body develops a chemical need for alcohol. Dependence is also called addiction.

Alcohol's Effects on the Body – Long Term

A person who is dependent on a drug will suffer from withdrawal without it.

Signs include:

- Shakiness
- Sleep problems
- Irritability
- Rapid heartbeat
- Sweating

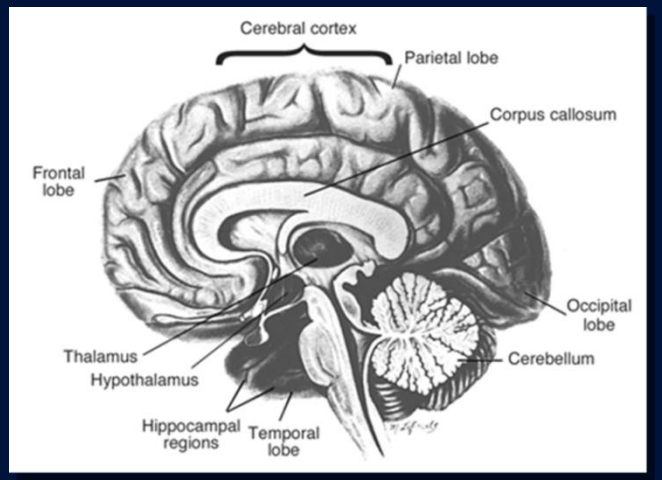
Alcohol's Effects on the Body – Long Term

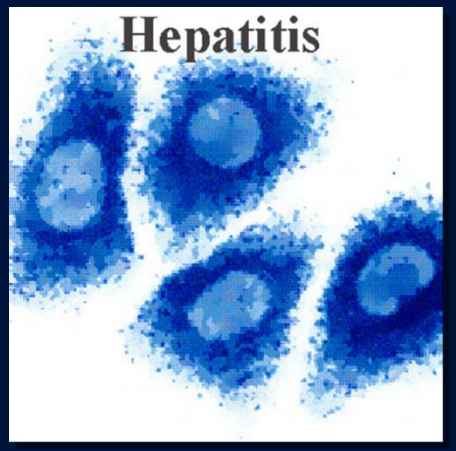
The major psychological symptom of dependence is a strong desire or emotional need to continue using a drug.

This desire is often the strongest when an addict is facing a difficult task or feels angry about something.

Alcohol's Effects on the Body – Long Term

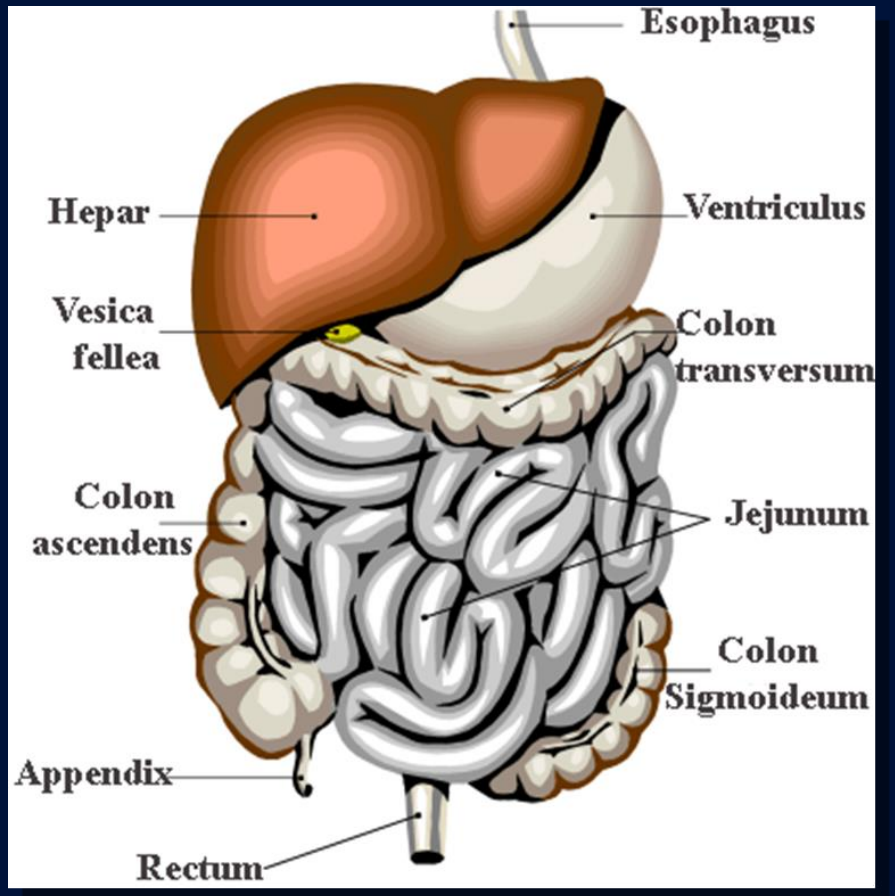
Long term alcohol abuse destroys nerve cells in the brain, causing brain damage. The losses interfere with normal everyday functions.





Heavy drinkers often develop alcoholic hepatitis, or inflammation of the liver, caused by the toxic effects of alcohol.

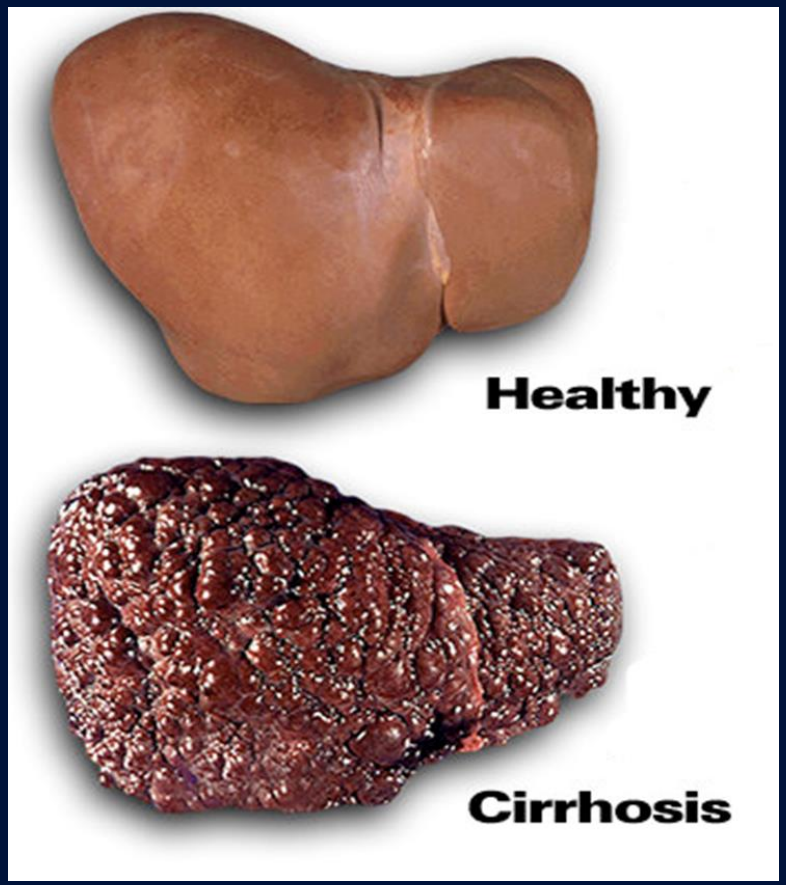
Alcohol's Effects on the Body – Long Term



Ongoing drinking irritates the tissues lining the mouth, throat, esophagus and stomach, leading to digestive problems.

Large amounts of alcohol cause the stomach to produce too much acid, which can lead to indigestion, heartburn or ulcers.

Alcohol's Effects on the Body – Long Term



As a result of heavy drinking, liver damage occurs.

The liver begins to fill with fat. The excess fat blocks the flow of blood in the liver and the fat-filled cells die.

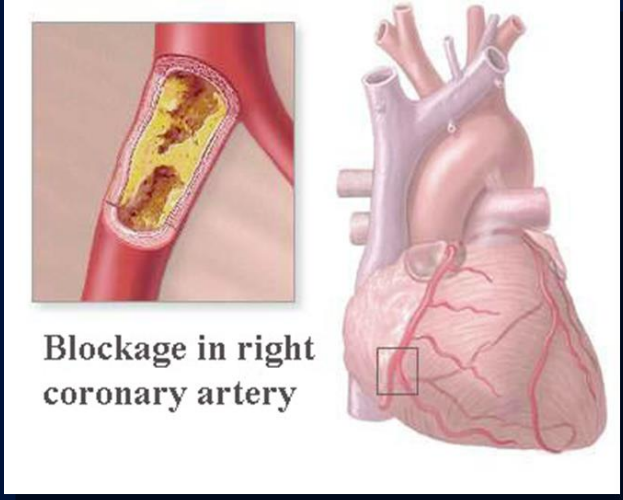
Alcohol's Effects on the Body – Long Term

Heavy drinkers suffering from cirrhosis may:

- Have high blood pressure
- Get infections easily
- Have swelling of the abdomen
- Show yellowing of the skin and eyes

Alcohol's Effects on the Body – Long Term

Heart disease is the leading cause of death in the United States. Increased blood pressure and heart rate, and irregular heartbeat are some of the effects caused by excessive drinking.



Alcohol causes fat to be deposited in the heart muscle. This causes the heart to pump blood through the body less effectively causing heart disease.

Alcohol's Effects on the Body – Short Term

There are many short term effects of alcohol that happen within minutes and sometimes within days of drinking alcohol.

When alcohol enters the bloodstream, it causes the blood vessels to widen, causing more blood to flow to the skin's surface. This causes heat to escape the body, resulting in a drop in body temperature.

Alcohol's Effects on the Body – Short Term

When alcohol reaches the brain, it immediately has a depressant effect and slows the speed of some brain activities, causing loss of sensation and decreasing sharpness of vision, hearing and other senses.

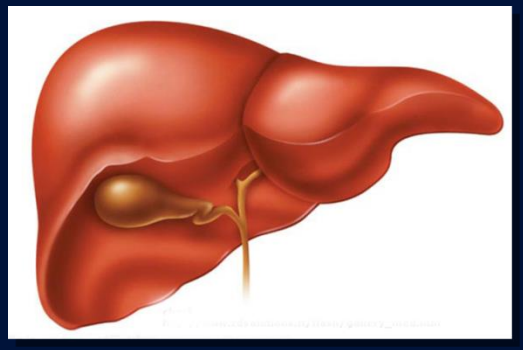
Alcohol's Effects on the Body – Short Term

If drinking continues, breathing rates, pulse rates and blood pressure (which initially increased), now decrease and may cause loss of consciousness, coma or death.

Heavy drinkers or first-time drinkers may experience blackouts or period of time for which they cannot recall what happened.

Alcohol's Effects on the Body – Short Term

The liver converts alcohol into energy, and the waste produces carbon dioxide and water. When one drinks alcohol faster than the liver can break it down, they become intoxicated.



When a person drinks, the kidneys produce more urine than usual, losing more water than normal.

Alcohol's Effects on the Body – Short Term

In the United States, almost half of fatal crashes and about 2/3 of all crashes involving personal injury are related to alcohol.

Drivers who cause motor vehicle accidents usually take a blood, urine, breath or saliva test to determine their Blood Alcohol Concentration (BAC).

Alcohol's Effects on the Body – Short Term

Known as synergism, some drugs can interact to produce effects that are many times greater than if taken alone.

When a person drinks alcohol and takes another depressant such as sleeping pills, the combination can cause drastic changes in the body.

Alcohol's Effects on the Body – Short Term

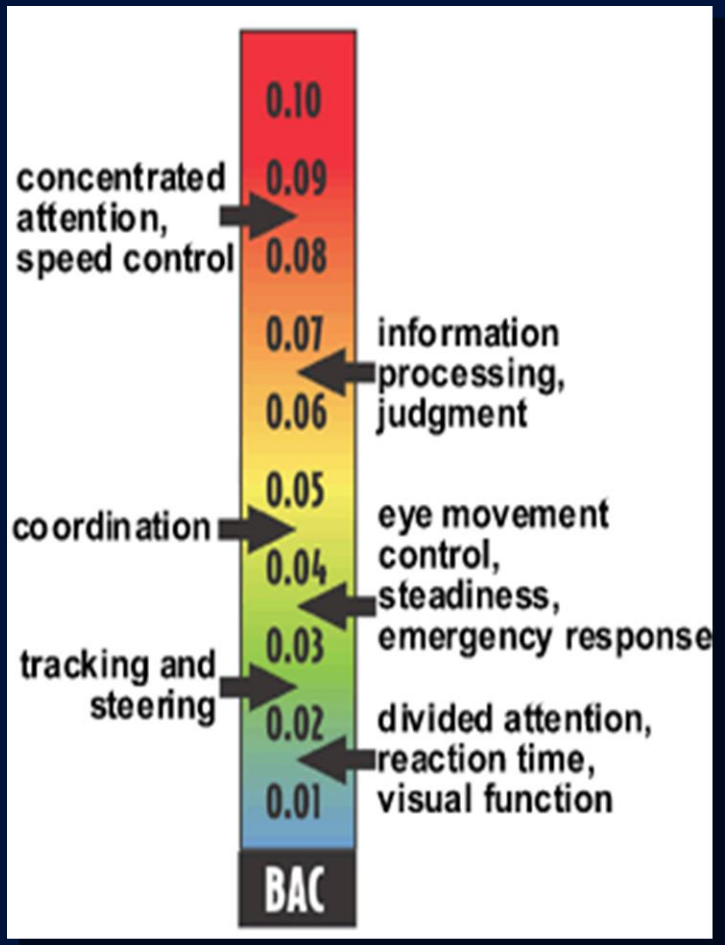
An overdose is caused by taking an excessive amount of a drug, leading to coma or death. Severe intoxication causes the heart and breathing to stop, resulting in death from alcohol overdose.

Blood Alcohol Concentration

BAC measures number of milligrams of ethanol per 100 milliliters of blood.

Factors that can affect BAC:

- Gender
- Age, weight, height
- Amount of food in the stomach
- Concentration of alcohol in beverages consumed
- Volume of alcohol consumed
- Rate of consumption and absorption



Blood Alcohol Concentration: Effects on the Body

Number of Drinks	Effects	BAC Range	Approximate Time to Eliminate Alcohol
	Judgment and reasoning affected	.02 - .03%	90 minutes
	Self-control declines	.04 - .06%	3 hours
	Unable to think clearly	.06 - .09%	4 to 5 hours
	Hearing, speech, vision affected	.08 - .12%	5 to 7 hours

Drinking and Driving?

Consider this situation:

Janelle attended a party with some of her friends. She planned to get a ride home with Dave but had seen him drink four beers since arriving. Dave was showing signs of intoxication. Janelle wasn't sure he should drive.

Unfortunately she didn't know anyone else at the party who could give her a ride, and she knew that her parents had gone out with friends for the evening.

Besides, three of her friends were also getting a ride from Dave. She thought she might be over-reacting and thought, *"What could happen in the few miles to my house?"*

Drinking and Driving?

DEFINE the problem

EXPLORE alternatives

CONSIDER consequences

IDENTIFY values

DECIDE and act

EVALUATE results

Use the DECIDE process to decide what you would do if you were in Janelle's position – then explain your decision.

What role might peer pressure play in influencing her decision?

Suggest a realistic plan that you and your friends could use to avoid a similar situation.

Blood Alcohol Concentration

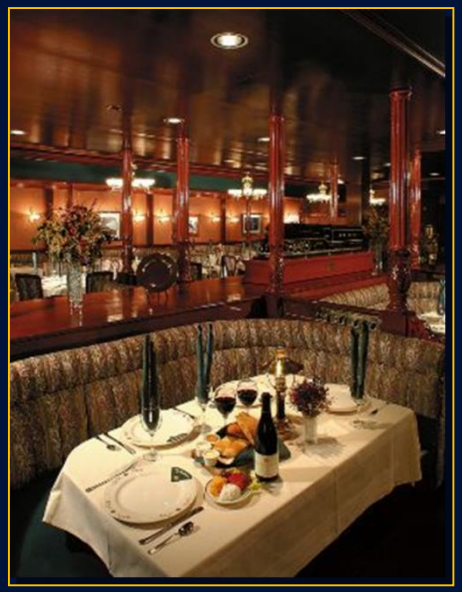
When a person stops drinking, BAC decreases and reflexes and coordination return to normal. This is referred to as "sobering up."

Cold showers, exercise, fresh air and coffee will not help a person sober up more quickly. Nothing can speed up the liver's ability to break down alcohol.

Behavioral Effects

A person's mood and reason for drinking can alter the effects of alcohol. Sometimes the mood and the reason for drinking can make the effects stronger or weaker.

For example, family members having a quiet dinner can consume wine with no negative effects. This creates an environment where people drink responsibly.



Behavioral Effects

If “getting drunk” is the main theme at a party, alcohol consumption often leads to negative behaviors.

Drinkers begin to lose judgment and self-control when alcohol takes effect.

Alcohol also decreases drinkers’ natural fears. After they lose their inhibitions, they may behave in ways they normally wouldn’t.

Alcoholism

People who have an addiction to alcohol suffer from the disease of alcoholism.

Physically, an alcoholic's body requires alcohol to function.

Because alcoholism tends to run in families, there appears to be some genetic basis for it.

Questions?


Bell Ringer:
Lesson Objective
A. Average American Diet
B. New American Diet
C. Lifetime Eating
D. U.S. Dietary Goals