JROTC Virtual Learning

LET 2 Wellness, Fitness, and First Aid
Use and effects of drugs, alcohol, and substances
[U4C3L1]

April 24, 2020

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Student Learning Plan

Unit 4: Wellness, Fitness, and First Aid
Use & Effect of Drugs, Alcohol, and Substances [U4C3L1]

What you will accomplish in this lesson:

Assess the impact of drug and substance abuse on life today

Why this lesson is important:

Studies suggest that 90 percent of teens will "use" alcohol and/or other drugs during adolescence. Fifty percent of teens will "abuse" alcohol and/or drugs and 15 percent will become "addicted" while still in adolescence! Look around your classroom. What kind of numbers does this represent? This learning plan will present the latest information about alcohol and drugs and allow you to process it in a way that is meaningful to both you and your community.

What you will learn in this lesson:

- Identify commonly abused substances
- Recognize the difference between drug use, misuse, and abuse
- Describe reasons why people might use, misuse, or abuse alcohol or drugs
- Identify the risks associated with alcohol and various drugs
- Associate the consequences of alcohol and drug use, misuse, and abuse to life
- Define key words: abuse, addiction, alcohol, controlled substance, dependency, depressed, distilled, drugs, ethyl alcohol, ferment, gateway, hallucinogens, inhalants, intoxicated, misuse, narcotics, nicotine, stimulants, substance, tobacco

You will have successfully met this lesson's purpose:

- by developing a proposal for educating others about a particular substance
- when the proposal identifies a target audience
- when the proposal identifies facts and current information about target substance(s)
- when the proposal identifies information supporting why there is a need for education
- when the proposal identifies types of education awareness tools: video, pamphlets, speakers, advertising, brochures

Learning Activities:

These learning activities are designed to help you learn the target skills and knowledge for this lesson. Your instructor may assign additional or alternative learning activities.

INQUIRE PHASE: What do you already know?

_____1. THINK ABOUT what you know about substance abuse. PREPARE for this lesson by discussing *What you will accomplish in this lesson; What you will learn in this lesson; Why this lesson is important,* and *When you will have successfully met this lesson's purpose*.

_____2. COMPLETE the TeenGetgoing Self-Assessment. When you have answered all of the questions, add up the scores for the first 30 questions. REVIEW your scoring profile.

_____3. ADD to a class Tree Map or KWL chart what you know about drugs and alcohol, as well as what you'd like to learn more about.

_____4. REFLECT on what you want to learn about substance abuse. ANSWER the reflection questions presented by your instructor.

GATHER PHASE: So, what else do you need to know or learn?

_____1. VIEW the presentation on alcohol and other drugs. TAKE NOTES to reinforce your learning about the harmful effects of alcohol and other drugs.

_____2. CONTINUE BUILDING on the Tree Map or KWL chart your class started. Add more information based on your notes.

_____3. REFLECT on what you learned about the harmful effects of substance abuse. ANSWER the reflection questions presented by your instructor.

PROCESS PHASE: Now what can you do with this new information you've learned?

_____1. VIEW the TeenGetgoing DUI Game.

_____2. PARTICIPATE in a discussion about driving under the influence.

_____3. REFLECT on drug education programs. ANSWER the reflection questions presented by your instructor.

Assessment Activities:

APPLY PHASE: What else can you do with what you've learned today?

_____1. COMPLETE the Use & Effect of Drug, Alcohol, and Substances Performance Assessment Task. SUBMIT your completed performance assessment task to your instructor for feedback and a grade.

_____2. REVIEW the key words of this lesson.

_____3. REFLECT on what you have learned in this lesson and how you might use it in the future.

Self-Paced Learning and Assessment Activities:

Independently complete the activities outlined below:

1. **Inquire Phase:** Complete the Learning Activities 1 – 4 or as modified by your instructor.
2. **Gather Phase:** Complete the Learning Activities 1 – 3 or as modified by your instructor.
3. **Process Phase:** Complete the Learning Activities 1 – 3 or as modified by your instructor.
4. **Apply Phase:** Complete the Learning Activities 1 – 3 or as modified by your instructor.

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Use and Effects of Drugs, Alcohol & Substances

Key Words:

Abuse
Addiction
Alcohol
Controlled Substances
Dependency
Depressed
Distilled
Drugs
Ethyl Alcohol
Ferment
Gateway
Hallucinogens
Inhalants
Intoxicated
Misuse
Narcotics
Stimulants
Substance

What You Will Learn to Do

Assess the impact of drug and substance abuse on life today

Linked Core Abilities

- Communicate using verbal, non-verbal, visual and written techniques
- Do your share as a good citizen in your school, community, country, and the world

Skills and Knowledge You Will Gain Along the Way

- Identify commonly abused substances
- Recognize the difference between drug use, misuse and abuse
- Describe reasons why people might use, misuse or abuse alcohol or drugs
- Identify the risks associated with alcohol and various drugs
- Associate the consequences of alcohol and drug use, misuse and abuse to life

Introduction

Data presented by the “Teengetgoing” Web site (www.teengetgoing.com) indicate that 90 percent of teens will “use” alcohol and/or other drugs during adolescence. Moreover, the site maintains that 50 percent of teens will abuse alcohol and/or drugs, and 15 percent will become addicted as adolescents.

Look around your classroom. What kind of numbers does this represent? This lesson presents the latest information about alcohol and drugs; explains the difference between drug use, misuse, and abuse; and clearly defines what drugs are. You will learn about several types of abused drugs and their side effects. You will also gain information about identifying drug overdoses and be able to process this in a way that is meaningful both to you and your community.

Drug Use, Misuse and Abuse

Used under proper conditions, drugs can relieve pain, cure illness, and save lives. When abused, however, drugs can ruin lives and cause death.

Think about the word drug for a moment. It can bring many images to mind, from over-the-counter aspirin for headaches; news reports about people in possession of drugs; prescriptions for antibiotics from your doctor; drug-related deaths in the newspaper; drug research to cure illnesses; the “war on drugs;” and so on ... So exactly what is a drug?

Broadly defined, a drug is any **substance** taken into the body that changes how the body functions, whether mentally or physically. This includes medications used for the prevention and treatment of disease, as well as any **controlled substance** to which a person can become addicted. Whether or not a drug is legal or illegal is no indication of whether or not it is addictive. For example, alcohol, and nicotine found in tobacco products are addictive drugs. And just because a drug has a medical purpose does not mean it is not addictive. Many medications, when misused or abused, can cause **addiction**.

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Drug use is taking a legal drug as recommended or prescribed for medical reasons. Drug **misuse** is taking a legal drug for medical reasons, but not as recommended or prescribed. For example, people who double the recommended dosage of a pain reliever because they think it will make their headache go away more quickly, are

misusing a drug. Drug **abuse** is using a legal or illegal drug for a non-medical reason in a way that can injure your health or ability to function.

Why Do People Abuse Drugs?

Some people try drugs out of curiosity or as an act of rebellion. Others cannot resist the peer pressure to try drugs. After people have tried a drug, whether or not they continue to abuse it depends on their individual personalities and situations, and on the kind of drug abused.

Most drugs that people abuse produce feelings of pleasure and well-being. When people are unhappy, lonely, stressed, or are missing something in their lives, such as friends, love, or satisfying work, they may abuse drugs to avoid their problems or fill a void. But when the effects of the drug wear off, they realize the problems and the voids are still there. So they turn to the drug again.

This cycle is what leads to addiction – a trap that can ruin a person emotionally, socially, economically, legally, and physically. Some drugs are far more addictive than others. For example, a first-time user of crack cocaine has a one in three chance of becoming an addict. This is why it is important to stop before you ever start taking drugs.

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. Where will drugs lead you in life?
- How long will your body remain healthy if you abuse drugs? How many of your plans can drugs ruin?
- Remember that drugs do not solve problems; they create them.

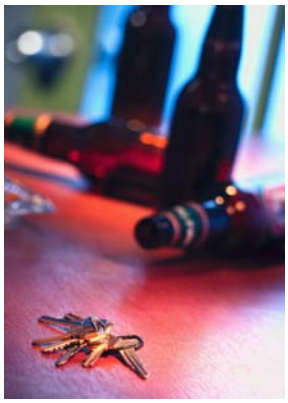
Many people take drugs without knowing what effect they have on the mind and body. Knowing ahead of time what a drug can do is often enough to convince a person not to try it, especially if one of the potential dangers of abusing a drug is death.

Alcohol

Alcohol, which is legal for those 21 years of age and older, is the most widely consumed and abused drug in the United States. It is socially acceptable in our society for adults to drink in moderation. In excess, however, alcohol is a dangerous drug.

Did you know …?

Drinking and driving remains the number one cause of death among high school students. Heavy alcohol use kills about 50 high school and college students each year because of alcohol poisoning.



Alcohol is a natural substance formed when sugar and yeast react and **ferment**. Some alcohols are **distilled**; others are simply fermented. Alcohol is a drug; it is a depressant that is absorbed into the bloodstream and transmitted to virtually all parts of the body. Many people don't realize that alcohol is a drug. Some hold the view that experimentation with or use of alcohol is considered normal or acceptable behavior. However, the use of alcohol can cause alcohol addiction and often progresses to further drug abuses. Accordingly, some experts attach the term **gateway** to this substance. The use of drugs such as cocaine and heroin is unusual in those who have not previously used alcohol.

Alcohol abuse can cause serious chemical dependencies, harmful physical and psychological effects, and much suffering by family and friends. As awareness of these ill effects reaches new heights, more and more Americans are joining forces to fight alcohol abuse every day.

When a person drinks alcohol, it follows the same pathway as food through the digestive system. Unlike food, however, alcohol does not have to be digested by the stomach to be absorbed into the blood. After alcohol reaches the blood, it is circulated throughout the body and affects every part, including the brain and the rest of the nervous system.

Alcohol Statistics

- Ninety percent of teenage automobile accidents involve alcohol.
- Drinking and driving accidents are the leading cause of death among 15- to 24-year-olds.
- Seventy percent of teenage suicide attempts involve alcohol.

The effects of **ethyl alcohol** (ethanol) on the human body can range greatly 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

NOTE:

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

Although alcohol may make a person feel “high,” alcohol is actually considered a “downer” drug. It slows down or depresses the central nervous system, causing slowed reactions, slurred speech, impaired coordination and judgment, and sometimes unconsciousness. Because alcohol affects reaction time, coordination, and judgment, people under its influence are more accident prone and less likely to make wise decisions. For these reasons, drinking and driving are a very dangerous combination, as well as illegal.

Long-Term Effects of Alcohol Abuse

Health

The long-term effects of alcohol abuse include alcoholism; cancers of the liver, stomach, colon, larynx, esophagus, and breast; high blood pressure; heart attacks; strokes; stomach ulcers; birth defects; premature aging; and a diminished immunity to disease due to non-function of infection-fighting cells. In men, hormone levels change causing lower sex drives and enlarged breasts; women’s menstrual cycles become irregular, possibly resulting in infertility.

The list of effects goes on to include shrinking of the muscles, including the heart; kidney, bladder, and pancreas damage; brain damage affecting vision and memory;

depression; and mental illness. Obviously, long-term damage from alcohol abuse can be irreversible and result in death.

Tolerance

When the body becomes accustomed to or builds up a resistance to a drug, the body has developed tolerance to the drug. Tolerance causes a drinker's body to need increasingly larger amounts of alcohol to achieve the effect that was originally produced.

Dependence

When the body develops a resistance to a drug and requires the drug to function normally, dependence occurs. The drinker's body develops a chemical need for alcohol.

Dependence occurs as tolerance builds. Dependence is also called addiction.

A dependent person who stops taking a drug will suffer from withdrawal. The signs of alcohol withdrawal include shakiness, sleep problems, irritability, rapid heartbeat, and sweating. The drinker also may see, smell, or feel imaginary objects.

The major psychological symptom of dependence is a strong desire or emotional need to continue using a drug. This need is often associated with specific routines and events. For example, some people drink whenever they face a difficult task or when they feel angry about something.

Brain Damage

Long-term alcohol abuse destroys nerve cells in the brain. Destroyed nerve cells usually cannot grow again. The loss of many nerve cells causes forgetfulness, an inability to concentrate, and poor judgment. These losses interfere with normal everyday functions.

Digestive Problems

Ongoing drinking irritates the tissues lining the mouth, throat, esophagus, and stomach. The irritation can cause the tissues to swell and become inflamed. Repeated irritation increases the risk of cancers of the mouth, tongue, esophagus, and stomach. Alcohol also affects the intestines and can cause recurring diarrhea. Large amounts of alcohol cause the stomach to produce too much stomach acid. The overproduction of acid may lead to indigestion, heartburn, or ulcers.

Liver Damage

Alcohol interferes with the liver's ability to break down fats. As a result of heavy drinking, the liver begins to fill with fat. The excess fat blocks the flow of blood in the liver, and the fat-filled liver cells die. Cirrhosis of the liver is a disease in which useless scar tissue replaces normal liver tissue. Because there is no blood flow in the scarred area, the liver begins to fail. Heavy drinkers suffering from cirrhosis may have high blood pressure, get infections easily, have swelling of the abdomen, and show a yellowing of the skin and eyes. Cirrhosis is the last stage of liver disease and can result in death.

Heavy drinkers often develop alcoholic hepatitis, or inflammation of the liver, caused by the toxic effects of alcohol. Hepatitis causes weakness, fever, yellowing of the skin, and enlargement of the liver. Recovery may take weeks. Sometimes hepatitis can lead to liver failure and even death.

Heart Disease

Excessive drinking contributes to increased blood pressure and heart rate, and irregular heartbeat. These problems can cause disruption in blood flow and possible heart damage. Also, alcohol causes fat to be deposited in heart muscle. Fatty heart muscle, in turn, causes the heart to pump blood through the body less efficiently. Alcohol abuse leads to heart disease, the leading cause of death in the United States.

Fetal Alcohol Syndrome

Pregnant women who drink put the health of their child at risk. A disorder called fetal alcohol syndrome (FAS) refers to the group of birth defects caused by the effects of alcohol on the unborn child. FAS occurs when alcohol in the mother's blood passes into the fetal, or unborn baby's blood. Babies born with FAS often suffer from heart defects, malformed faces, delayed growth, and poor motor development. Alcohol prevents FAS babies from ever developing the reasoning abilities of healthy babies. Tragically, it is the leading preventable cause of mental retardation in America.

Courtesy of Army JROTC

If a woman who is pregnant does not drink, her baby will not be born with FAS. Any woman who is pregnant or planning to become pregnant should not drink alcohol at all.

Short-term Effects of Alcohol on the Body

The short-term effects of alcohol include those that happen within minutes, and sometimes within days, of drinking alcohol.

Bloodstream

When alcohol enters the blood, it causes the blood vessels to widen. More blood flows to the skin's surface. The drinker feels warm for a short time as the skin flushes; however, the drinker's body temperature drops as the increased blood flow to the surface allows body heat to escape. People who drink alcohol in cold weather to get warm actually accomplish the opposite.

Brain

After reaching the brain, alcohol immediately has a depressant effect and slows the speed of some brain activities. People who drink alcohol may describe the change as relaxing. What they actually experience are physical changes such as a loss of sensation and a decrease in sharpness of vision, hearing, and other senses. Alcohol

also affects the parts of the brain that control muscle coordination, which is why drinkers may lose their balance or stumble.

If drinking continues, alcohol depresses the part of the brain that controls breathing and heartbeat. Breathing rates, pulse rates, and blood pressure, which initially increased, now decrease. A drinker may lose consciousness, slip into a coma, or die from alcohol poisoning.

Heavy drinkers and many first-time drinkers may suffer blackouts. Blackouts are periods of time that the drinker cannot recall. Other people recall seeing the drinker talking, walking, and in control. The following day, however, the drinker has no memory of some events from the day before.

Liver

In the bloodstream, alcohol is carried to the liver. The liver chemically breaks down alcohol into energy and the waste produces carbon dioxide and water. The carbon dioxide is released from the body in the lungs. The water passes out of the body as breath vapor, perspiration, or urine. When people drink alcohol faster than the liver can break it down, they become **intoxicated**.

Kidneys

Alcohol prevents the release of body chemicals that regulate how much urine the kidneys make. The kidneys produce more urine than usual, and the drinker loses more water than usual. The drinker becomes very thirsty. In extreme cases, a drinker may lose water needed for the body to function properly.

Motor-vehicle Crashes

Almost half of the fatal crashes and about two-thirds of all crashes involving personal injury in the United States are related to alcohol use. Additionally drunk drivers cause more than one-third of the deaths caused by pedestrians struck by motor vehicles.

Driving while intoxicated is illegal in all of the 50 states. Driving while intoxicated means a driver exceeds the level of blood alcohol concentration allowed by law in a state. Drivers who cause motor-vehicle crashes usually undergo blood, urine, breath, or saliva tests to determine their blood alcohol concentration (BAC). If their BAC is above the legal limit, drunk drivers can have their driver’s license taken away and can be prosecuted.

Synergism

Some drugs can interact to produce effects that are many times greater than the individual drugs would produce. When drugs increase each other’s effects when taken together, the interaction is called synergism.

As previously stated, alcohol is generally a depressant drug. When a person drinks alcohol and takes another depressant, such as sleeping pills, the combination can cause drastic changes in the body. Together the depressants’ effects are more than

doubled and can cause a dangerous slowing of breathing and heart rates. In extreme cases, synergism of alcohol and other depressants can lead to coma or death.

Overdose

Taking an excessive amount of a drug that leads to coma or death is called an overdose. Severe intoxication causes the heart and breathing to stop, resulting in death from alcohol overdose. Many drinkers assume that they will pass out before drinking a fatal amount. This is not necessarily true. Alcohol continues to be absorbed into the blood for 30 to 90 minutes after the last drink. The drinker's BAC can increase even if the drinker becomes unconscious. First-time drinkers who participate in a drinking contest may die from alcohol poisoning.

Blood Alcohol Concentration

The amount of ethanol in a person's blood is expressed by a percentage called the blood alcohol concentration (BAC). BAC measures the number of milligrams of ethanol per 100 milliliters of blood. A BAC of 0.1 percent means that 1/10 of 1 percent of the fluid in the blood is ethanol. A BAC of 0.1 percent reduces a person's muscle coordination, perception, and judgment.

A variety of factors can affect a person's BAC, including the following:

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

The rate at which a person's liver can break down alcohol is fairly constant. In one hour, the liver can break down the amount of ethanol in a can of beer, a shot of liquor, or a glass of wine. Thus, someone who has three cans of beer in the last 45 minutes of a three-hour party will become more intoxicated than someone who drinks those three cans of beer over the three-hour period.

Provided the person does not continue to drink, the BAC decreases. The intoxicating effects of alcohol slowly diminish. As reflexes and coordination return to normal, a person gradually becomes steadier. Many people refer to this process as "becoming sober" or "sobering up."

You may have heard that cold showers, exercise, fresh air, or coffee will help a person sober up more quickly. But this is not true. Nothing can speed the liver's ability to break down alcohol. Coffee or fresh air may keep a person awake, but they do not eliminate the intoxicating effects of alcohol.

Behavioral Effects of Alcohol

In addition to the physical effects of alcohol, certain behavioral, or learned, effects are connected to drinking. A person's mood and reason for drinking can alter the effects of alcohol. Sometimes the person's mood and reason for drinking make the effects stronger; sometimes they make the effects weaker. The environment in which alcohol is consumed may influence its effects as well.

At a quiet family dinner, family members may consume wine with no negative effects. The calm nature of the event and the fact that both parents and children expect each other to behave politely creates an environment in which people drink responsibly.

At a party in which "getting drunk" is the main theme, alcohol consumption often leads to negative behaviors. The loss of coordination may be exaggerated for comic effect. People who have been drinking may insist that they are still perfectly able to drive. They may not want to admit that they cannot drink as much as others.

As alcohol takes effect, drinkers begin to lose judgment and self-control. At the same time, alcohol decreases drinkers' natural fears. When these two effects are combined, the person's inhibitions are reduced. Inhibitions are the controls that people put on their emotions and behavior in order to behave in socially acceptable ways.

After they lose their inhibitions, drinkers may behave in ways they normally would never consider. For example, a person under the influence of alcohol may express danger in violent or destructive ways. Shy people may behave in outgoing ways, and serious people may act foolishly.

Alcoholism

Some drinkers cannot control their drinking. Their major goal in drinking is to get drunk. People who have an addiction to alcohol suffer from the disease of alcoholism.

Psychologically, alcoholics consider drinking a regular, essential part of coping with daily life. Physically, an alcoholic's body requires alcohol to function. An alcoholic's drinking patterns eventually control every aspect of life.

No one is sure why some drinkers become alcoholics, but anyone who drinks, even one drink, is at risk of becoming an alcoholic. Because alcoholism tends to run in families, there appears to be some genetic basis. On the other hand, the attitudes in the home in which a person grows up may play a role in whether or not a person develops a drinking problem

Drugs

A **drug** is any chemical substance that changes the function of the mind or the body. Aspirin is a drug; allergy medication is a drug; marijuana is a drug; beer is a drug; the nicotine in a cigarette is a drug. A drug is neither good nor bad; it is what a person does with a drug that makes the difference.

Use, misuse, and abuse are terms thrown around quite a bit when talking about drugs. Use is taking a legal drug as prescribed or recommended for medical reasons. Misuse is taking a legal drug for medical reasons but not as recommended or prescribed. Abuse is taking any drug, legal or illegal, for a non-medical reason in a way that can injure your health or ability to function. Taking drugs is a serious matter; there is no such thing as recreational drug use. Abusing drugs is not a sport or a hobby and always involves an unnecessary risk to your health.

When people talk about drugs, you often hear that someone is a drug addict or that a drug can or cannot cause dependence. Addiction and drug dependence mean basically the same thing; however, the term addict tends to make people think of a desperate individual living in the back alleys of a big city. But anyone from any background in any place can be addicted or drug dependent. People who are dependent cannot refuse the drug they have been abusing.

A person has a physical dependence on a drug when, after being deprived of the drug for any length of time, he or she experiences symptoms like nausea, vomiting, anxiety, watery eyes and nose, and an overwhelming desire to use the drug. Such symptoms are typical of withdrawal sickness. Withdrawal happens because the body's chemistry has been changed, causing the user to be unable to function comfortably without the drug.

Most people who are physically dependent are also psychologically dependent. Some have psychological dependence without the physical dependence, which can be an equally strong dependence. With this type of dependence, the user feels a powerful motivation to continue abusing a drug for the temporary pleasure or relief of discomfort the drug gives. Because the mind and the body work together very closely, it is often difficult to tell the difference between physical and psychological dependence. The mental craving for a drug may be so powerful that it seems to be a physical need.

Marijuana (Pot, Grass, Weed, Dope, Reefer)

Marijuana (Acapulco Gold, Ganja, Grass, Mary Jane, Pot, Weed, Reefer, Stick, Smoke) comes from the dried flowers, leaves, and small stems of the cannabis plant, as shown above. It is smoked in cigarettes, known as joints, and also in pipes. Marijuana use is illegal in the United States, but in the past it was used medicinally to reduce swelling of the eyes caused by glaucoma and to counteract the intense nausea brought on by certain

Courtesy of Army JROTC

cancer treatments. Its legalization, especially for these medical purposes, has been a controversial subject in this country for years.

The tetrahydrocannabinol (THC) produced by cannabis is the main psychoactive substance that produces marijuana's mind-altering effects. THC is quickly absorbed into the lungs and then travels through the blood to affect the brain. It distorts the senses, including hearing, taste, touch, and smell, alters the sense of time and place, and affects emotions. THC affects sleep patterns and remains in body fat for at least a month after only one joint has been smoked. It causes users to crave food (getting the munchies) and to enjoy eating, which is unusual for a drug. It also tends to dull sexual urges and pleasure.

There are several hundred other chemicals in marijuana that vary between different types of cannabis plants and between plants grown during different seasons. The active chemicals in marijuana affect the brain, altering hearing, taste, touch, smell, and a sense of time and space. The effects of marijuana vary from person to person depending on each person's expectations and how much they smoke and because the chemicals in different marijuana plants vary. People may experience anything from a mild euphoria to uncontrollable laughter to hallucinations. Marijuana can also contain dangerous substances such as pesticides and molds and is sometimes mixed with PCP to make the user believe it is more potent.

Courtesy of Army JROTC

Effects of Marijuana on the Body

Because marijuana is widely abused today and has been around for thousands of years, many people believe that its use poses no harm. However, research studies prove this notion wrong. The effects of marijuana use include the following:

- Short-term memory loss and shortened attention span, both of which interfere with the ability to learn. Heavy, long-term use is often called "burn out" because the user's thinking is slow and confused
- Increased heart rate and irregular heartbeat
- Weakening of the immune system
- Reduced hormone levels resulting in lower sperm counts in males and irregular menstrual cycles in females
- Development of "amotivational syndrome," which results in apathy and loss of ambition and drive
- Impaired judgment, unsteadiness, lack of coordination, and slowed responses, which make driving a dangerous activity

- Lung damage and increased risk of lung cancer. This risk is higher than that of smoking tobacco cigarettes because marijuana is inhaled more deeply and then held in the lungs for a longer period of time. Joints also lack filters to cut down on harmful chemical effects

- Possible depression and moodiness. Some users feel tired and unhappy the morning after smoking marijuana and may respond by smoking a joint to feel better. This cycle may lead to psychological dependency

- Possible intense fear and anxiety, called a “pot panic” and even paranoia and psychosis

- This may occur if the marijuana contains higher levels of THC

- Development of a tolerance to marijuana resulting in the need for greater amounts in order to feel any effects. This may also contribute to psychological dependence

The harmful health effects of marijuana use may include rapid and irregular heartbeat, short-term memory loss, shortened attention span, a weakened immune system, fatigue, and a higher risk of lung cancer. In extreme cases, marijuana abuse can result in paranoia and psychosis. Similar to alcohol, marijuana abuse can affect driving ability. As with any illegal drug, marijuana is not tested for safety and purity. It may contain pesticides and molds and may be mixed with other dangerous drugs.

Because of all the effects marijuana has on the mind, body, and the ability to learn, its use may be particularly harmful to young people since they are still maturing physically, sexually, and mentally. Marijuana’s effects may prevent you from becoming a healthy, normal adult.

Cocaine, Crack, and Bazuco

Cocaine hydrochloride (Cocaine, Coke, Peruvian marching powder, C, Snow, Flake, Rock, White, Blow, Nose Candy) comes from the leaves of the coca bush, and is an illegal drug that looks like white crystalline powder. It is often diluted with other ingredients and then inhaled through the nose, injected, or smoked.

Cocaine is a **stimulant** that affects the nervous system providing short bursts of euphoria, a feeling of excitement, increased blood pressure and pulse rate, and alertness. People often use it to increase mental activity and to offset drowsiness, fatigue, or as an appetite suppressant; however, the intense high of cocaine is followed by an intense low. Repeated abuse of cocaine can result in a strong physical and psychological **dependency**. The body will ignore all other drives, including hunger, in its drive for cocaine.

Regular use can lead to hallucinations of touch, taste, sound, or smell. Tolerance develops rapidly with repeated use. As the effects of cocaine wear off, the user feels

exhausted, depressed, and sometimes paranoid, similar to the crashing of amphetamines. Cocaine is considered to be one of the most potentially addictive drugs.

Effects of Cocaine on the Body

Cocaine stimulates the central nervous system. Immediate effects include dilated pupils and elevated blood pressure, heart rate, respiratory rate, and body temperature.

Occasional use results in a stuffy nose, while chronic use decays the mucous membranes of the nose. Injecting cocaine, or any drug, with a shared needle may spread AIDS, hepatitis, and other diseases. Cocaine produces both psychological and physical dependency.

Processing Cocaine and Dependency

Dealers cut cocaine with other substances, usually table sugar, mannitol, lactose, dextrose, and other drugs (PCP, lidocaine, amphetamines). Strychnine, a poison, has been found in cocaine; talc, which damages the lungs, is also often used.

Occasional use of cocaine can lead to heavy, uncontrollable use, with the dependence becoming so strong that users will not quit even when cocaine severely damages their lives. When users do quit, they may not experience strong physical withdrawal symptoms, but they become depressed and irritable, are tired but unable to sleep, and constantly crave the drug.

Crack (Crack, Freebase Rocks, Rock) looks like brown pellets or crystalline rocks that resemble lumpy soap and is often packaged in small vials. It is smoked. Bazuco is a drug similar to crack. Both of these drugs are illegal.

Crack is street cocaine commonly processed with boiling water and baking soda, which produces a very pure form of cocaine.

Did you know …?

The effects and the risk of addiction to crack are so great, that it is like a completely different drug than cocaine. It is many, many times more dangerous than cocaine hydrochloride. Its effects are felt within 10 seconds. Cocaine in this form creates a very intense high and a fast, strong addiction. The user also experiences an incredible low after the high has worn off, often throwing him or her into a deep depression. To offset this depression, the user then smokes more crack, which starts the compulsive cycle that leads to a severe dependency. The only person who benefits from this vicious cycle is the drug dealer who now has a desperate customer in constant need of his or her product.

The physical side effects of crack include dilated pupils, increased pulse rate, elevated blood pressure, insomnia, loss of appetite, hallucinations of touch, paranoia, and seizures. A major concern with crack is that dependency is almost immediate. The first experience is often very pleasurable. Then the extreme low afterward is a strong motivator to use the drug again right away, this time to relieve bad feelings. Users of crack are addicted before they know it, turning their lives upside down.

Bazuco, another form of cocaine, is equally if not more dangerous and addictive than crack. Its use originated in Colombia and other South American countries and has now made its way to the United States. It is made from the intermediate step between the coca leaf and the cocaine hydrochloride, called cocaine sulfate. It is mixed with a number of other substances, among them marijuana, methaqualone, and acetone. Its effects are similar to those of crack, as are its dangers and its quick addiction.

The use of any type of cocaine can cause death by disrupting the brain's control of the heart and respiration.

Amphetamines and Methamphetamines (Speed)

Amphetamines (Speed, Bennies, Glass, Uppers, Ups, Black Beauties, Pep Pills, Copilots, Bumblebees, White Crosses, Benzedrine, Dexedrine, Footballs, Biphetamine) look like capsules, pills, or tablets. Methamphetamines (Crank, Crystal, Meth, Crystal Meth, Methedrine, Ice) can be in the form of a white powder, pills, or a rock that resembles blue paraffin. Forms of both drugs are used medically to treat obesity, narcolepsy, and hyperactivity in children.

Amphetamines

Similar to cocaine, amphetamines are stimulants. They stimulate the nervous system, increasing physical activity, energy, mental alertness, self-confidence, and producing euphoria. Medically, amphetamines are used to treat obesity, narcolepsy, and hyperactivity in children. For example, the amphetamine Ritalin is used to stimulate the brain center that helps hyperactive children sit still and pay attention.

As a drug of abuse, amphetamines are often referred to as "speed." Many people abuse amphetamines to increase energy and alertness, and in some cases to combat fatigue brought on by use of alcohol, marijuana, or depressants. The body builds up tolerance to amphetamines, however, and greater and greater doses are required to achieve the same effects. Addiction may become severe.

Medically, amphetamines are taken orally, but many abusers inject the drug directly into a vein increasing the risk of overdose and infection. Needles shared to inject the drug can spread hepatitis and HIV. After an injection of amphetamines, the user experiences an intense, short-lived euphoria. An addict may inject the drug several times a day for several days feeling little need for food or sleep. Mental depression and overwhelming fatigue follow abuse, which may cause the abuser to turn to amphetamines again for relief.

Effects of Amphetamines on the Body

In addition to fatigue and depression, the other side effects of amphetamine abuse include extreme anxiety, temporary mental illness, and malnutrition. High doses can cause hallucinations, increased body temperature, high blood pressure, convulsions, kidney failure, lack of oxygen, bleeding of the brain, and death. Withdrawal symptoms include irritability, depression, disorientation, long periods of sleep, and not caring about anything.

Methamphetamines

Methamphetamine is a nervous system stimulant similar to amphetamines that is used medically in much the same way as amphetamines. This drug is abused to produce heightened awareness, alertness, and self-confidence. A smokable form of methamphetamine is “ice.” Like crack, it produces an intense high without the use of needles and is extremely addictive. Abuse of methamphetamines may result in bizarre behavior, sleeplessness, depression, high blood pressure, increased body temperature, convulsions, heart problems, seizures, and strokes. Methcathinone, also called “cat” and “star,” is a designer drug similar to methamphetamine that can cause paranoia, slurred speech, tremors, extreme weight loss, and sleeplessness

Barbiturates, Methaqualones, and Tranquilizers

Barbiturates (Downers, Barbs, Blue Devils, Red Devils, Yellow Jacket, Yellows, Nembutal, Seconal, Amytal, Tuinals, Luminal, Amytal, Pentothal, Phenobarbital) look like red, yellow, blue, or red and blue capsules. Methaqualones (Ludes, Quaaludes, Quads, Sopors, Sopes, 714s) look like tablets. Tranquilizers (Valium, Librium, Equanil, Miltown, Serax, Tranxene, Thorazine) look like tablets or capsules.

Barbiturates

Barbiturates are a group of depressant drugs that include phenobarbital (goofballs), pentobarbital (yellow jackets), amobarbital (blue devils), and secobarbital (red devils). They lower body temperature and blood pressure, slow breathing and heart rate, and as such, have many medical uses. For example, doctors prescribe phenobarbital to reduce the frequency of convulsions in epileptics. Barbiturates are also used medically as an anesthetic and to treat insomnia. The effects of barbiturates vary from person to person and even change within one person from one time to the next.

When abused, the symptoms they produce are similar to those of alcohol. Small amounts can produce calmness and relaxed muscles, but larger doses cause slurred speech and staggering walk. Like alcohol, they distort perception and slow reaction time, which can cause serious accidents like car crashes. Very large doses can cause respiratory depression, coma, and death.

Signs of barbiturate abuse include fatigue, blurred vision, confused or slurred speech, lack of coordination and balance, a reduction of mental and physical activity, and decreased breathing. Abusers will often act like they are drunk, but there will be no

smell of alcohol. Long-term abuse may result in double vision, depression, and forgetfulness.

Signs of an overdose of barbiturates include dilated pupils, a rapid pulse, shallow breathing, and clammy skin. An overdose can cause coma and death. Because barbiturates cause confusion and forgetfulness, accidental death occurs when a person has taken barbiturates, becomes confused, forgets, and takes more barbiturates. Accidental poisoning occurs when barbiturates are combined with alcohol. Withdrawal symptoms include anxiety, insomnia, tremors, delirium, and convulsions.

Did you know …?

Barbiturate abusers often become extremely **depressed**, tired, and hopeless. They may reach for the rest of the bottle to “end it all” when in this mental state, or they may become confused, forget how many pills they have taken, and accidentally overdose. For this reason, barbiturates are one of the leading causes of drug-related deaths. The combination of barbiturates and alcohol can multiply the effects of both drugs, thereby multiplying the risks. This multiplication of the effects of two separate drugs when taken together is called the synergistic effect. It can be fatal.

Methaqualone

Methaqualone production has been banned in the United States since 1984 due to its widespread misuse and minimal medical value. Abusers take it to produce a feeling of elation; however, its side effects are headaches, nosebleeds, dizziness, loss of coordination, and leg and arm pain. Tolerance and psychological dependence can develop when used regularly. Using methaqualone with alcohol is known as “luding out” and can cause death.

Tranquilizers

Tranquilizers are used medically to treat anxiety, insomnia, and convulsions. It is very easy to become both physically and psychologically dependent on them. When mixed with alcohol, they can cause death.

Narcotics

Most **narcotics** are opiates, which come from the seed pods of opium poppies. Many are used medically to relieve pain and treat insomnia. Narcotics abuse initially produces a feeling of euphoria that is often followed by drowsiness, nausea, and vomiting. Users also may experience constricted pupils, watery eyes, and itching. An overdose may produce

slow and shallow breathing, clammy skin, convulsions, coma, and death. Tolerance develops rapidly and dependence is likely. The use of contaminated syringes to inject certain kinds of narcotics may result in diseases such as AIDS and hepatitis. Narcotics include opium, codeine, morphine, and heroin. Other types of opiates include Percocet, Percodan, Tussionex, Fentanyl, Darvon, Talwin, and Lomotil and come as tablets, capsules, or liquids.

Opium

Opium (Paregoric, Dover's Powder, Parepectolin) can look like dark brown chunks or a powder. It comes from a specific type of poppy, generally grown in the Middle East. Opium is one of the weaker narcotics, but it has side effects that make it undesirable as a medication, including slowed heart rate, breathing, and mental abilities, and loss of appetite.

Codeine

Codeine comes in different drugs such as Empirin, Tylenol, and certain cough medicines. It is either a dark liquid varying in thickness or comes in capsules or tablets. Similar to opium, codeine is one of the weakest narcotics. Doctors prescribe it for coughs and pain relief.

Morphine

Morphine (Pectoral Syrup) is an opium derivative, and comes in the form of white crystals, hypodermic tablets, and injectable solutions. Morphine is a very strong painkiller, but because it is also very addictive, it is used in medicine only for severe cases, such as in the later stages of terminal cancer when patients are in extreme pain. Unfortunately, as a drug of abuse, morphine usually results in addiction. Withdrawal from it has painful and severe effects and generally requires the help of a professional to get an addict off the drug.

Heroin and Methadone

Heroin (Smack, Horse, Junk, Harry, H, Brown, Black Tar, Antifreeze) looks like a white to dark brown powder or a tar-like substance. Methadone Hydrochloride (Dolophine, Methadose, Methadone) comes in the form of a solution.

Heroin is a concentrated form of morphine and is so addictive that it is illegal in the United States even for medical use. Unfortunately, it is the most abused narcotic in this country, and its use is on the rise as of the late 1990s. Users of heroin often start by sniffing or smoking the drug in powdered form. Because tolerance develops quickly, they often turn to "mainlining," the practice of injecting a heroin solution into their veins to intensify the drug's effects.

Heroin dulls the senses, easing tensions, fears, and worries. A stupor follows that lasts for several hours in which hunger and thirst are reduced. After 12 to 16 hours without

heroin, the user will experience severe withdrawal symptoms, including sweating, shaking, chills, nausea, diarrhea, abdominal pain, leg cramps, and severe mental and emotional pain. To relieve these symptoms, the user must take another dose of the drug. People addicted to heroin often die young, some from overdoses caused by unreliable drugs, others because they cannot distinguish between safe and dangerous doses.

Signs of an overdose include shallow and slow breathing, clammy skin, and convulsions. An overdose can result in a coma and death. When addicted, a person must have more of the drug to keep from experiencing withdrawal symptoms, which are severe and can include panic, shaking, chills, sweating, cramps, and nausea.

Hallucinogens

Hallucinogens alter the physical senses, producing visions, sounds, and smells that are not real, and distorting the concepts of time and space in the user's mind. Because these drugs confuse fact and fantasy, a user may become irrational and resort to violence or suicide to avoid an imagined situation or attacker. Hallucinogens are not physically addictive, but users often become psychologically dependent on these drugs.

Lysergic Acid Diethylamide (Acid)

Lysergic acid diethylamide (LSD, Acid, White Lightning, Blue Heaven, Sugar Cubes, Microdot, Twenty-Five, Sid, Bart Simpsons, Barrels, Tabs, Blotter, L, Liquid, Liquid A, Microdots, Mind Detergent, Orange Cubes, Hits, paper Acid, Sugar, Sunshine, Ticket, Wedding Bells, and Windowpane) can come as brightly colored tablets, imprinted blotter paper, thin squares of gelatin, or as a clear liquid.

A "trip" from an average dose of LSD can last as long as eight to 10 hours. LSD's effects are unpredictable, tolerance to it develops quickly, and its use frequently results in psychological dependence.

LSD is a powerful hallucinogen that scrambles and confuses the senses. A tiny drop taken with sugar or food can cause a person to trip or experience false visions, smells, and sounds for hours. Sensations may be confused and feelings may change rapidly. Music may appear as colors and colors as flavors or odors. Some people say these experiences are exciting; others say they are nightmares. Those having a bad trip may take dangerous or irrational actions to escape from this imaginary situation. In addition to these affects, LSD can cause nausea, vomiting, and misinterpretations of time and distance. Some people experience flashbacks of LSD's effects days, weeks, and years after the original trip. An overdose of LSD can result in psychosis, accidental death, and suicide.

Phencyclidine Hydrochloride

Phencyclidine hydrochloride (PCP, Angel Dust, Hog, Superjoint, Busy Bee, Green Tea Leaves, DOA [dead on arrival]) can be in the form of a liquid, capsules, white crystalline powder, or pills. Of the various types of hallucinogens, only PCP has a medical use as a tranquilizer for animals.

PCP interrupts the functions of the neocortex, which is the section of the brain that controls the intellect and keeps instincts in check. The effects of PCP are unpredictable, but users frequently report a sense of distance and alienation from the world and others. Sometimes a user may feel drunk, but at other times the same dose may cause depression, paranoia, hallucinations, and suicidal thoughts. Time and movement are slowed down; muscular coordination worsens; senses are dulled; and speech is blocked and incoherent.

PCP stays in the system for a long time. Chronic users report persistent memory problems and speech difficulties as well as psychological and behavioral changes. Some of these effects may last six months to a year following prolonged daily use. Mood disorders such as depression and anxiety also occur, and users may exhibit paranoid and violent behavior. In fact, many deaths attributed to PCP do not occur from the drug itself, but from accidents, like falling from high places, drowning, or car wrecks, which are related to the behavior PCP produces. Large doses of PCP can cause convulsions and coma, heart and lung failure, or ruptured blood vessels in the brain. Treatment for an overdose is very difficult and requires hospitalization.

PCP, used as a tranquilizer for animals, can cause frightening hallucinations when used by humans. Abuse can result in seizures, coma, and death or in violent, unpredictable behavior. Some abusers have committed murder and suicide.

Psilocybin (Mushrooms, Shrooms) and Mescaline Mesc, Buttons, Cactus)

Two other hallucinogens are psilocybin, produced from a type of mushroom, and mescaline, produced from a type of cactus. Similar to other hallucinogens, use of these drugs can cause hallucinations, perception problems, nausea, vomiting, and, in extreme cases, mental illness, suicide, or accidental death. Mescaline effects, while compared to a mild LSD trip, are often accompanied by sweating and severe abdominal cramps. Eating mushrooms poses another danger because many mushrooms look alike and some are poisonous enough to cause death.

Inhalants (Air Blast)

Inhalants are toxic chemicals like glue, freon, nail polish, spray paint, and gasoline that are huffed (sprayed into a cloth and held over the mouth and nose) or bagged (sniffed from a bag, bottle, or can) to achieve a brief, mild euphoria. All of these products contain labels warning against inhaling their fumes because of the hazards involved. Some inhalants used medically are also abused, such as amyl nitrate which relieves heart pain and nitrous oxide which relieves anxiety.

Risks involved with inhaling these chemicals include nausea, dizziness, vomiting, headaches, unconsciousness, pneumonia, permanent brain and nerve damage; bleeding of the brain, eventual liver, brain, and kidney cancer; and death due to heart failure and suffocation. Effects of inhalants are unpredictable and depend on what chemical or chemicals are inhaled and how much. Brain damage and death may result after only one use depending on the inhalants involved.

Ecstasy (XTC, Love Drug)

Ecstasy (MBDB, MDE, MDEA, and 2CB) is a “designer drug” that closely resembles cocaine. It produces euphoria that lasts several hours, heightens pleasure, and may even produce hallucinations in high doses. Ecstasy is taken orally and may cause mood swings, overly friendly behavior, insomnia, anxiety, and nausea. In extreme cases, abuse may result in seizure and death.

Rohypnol (Roofies, Forget Pill, Date-Rape Pill)

Rohypnol (GHB include G, Liquid Ecstacy, Somatomax, Scoop, Georgia Home Boy, and Grievous Bodily Harm) is used legally as a medical sedative in Europe and Latin America. As a drug of abuse, it is called roofies, the forget pill, and the date-rape pill. At first, it produces an alcoholic type of high, but then heavy sedation and short-term memory loss that lasts up to eight hours. It earned its reputation as the date-rape pill by being slipped into the drinks of females, who were taken advantage of in a state of sedation brought on by the drug and then unable to remember exactly what happened to them. In addition to the drawback just discussed, dangers of abusing rohypnol include impaired motor skills and slow respiration.

Steroids

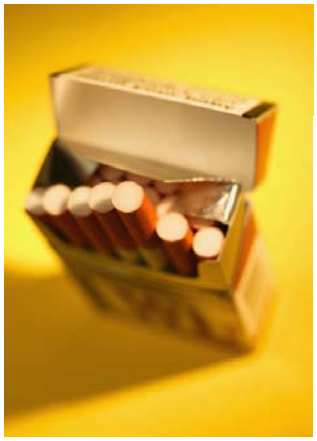
Although anabolic steroids are available only by prescription in the United States, many steroid supplements are available over the counter and are marketed under several names. Steroids and steroid supplements are often taken to increase performance in sports. Some people take them to develop muscles. Abusers of steroids take many times the recommended dosages in an effort to bulk up. Steroid abuse has been increasing in recent years, especially among middle-school students. Steroid use has been associated with chemical dependence and withdrawal syndrome. Athletes who turn to steroids risk permanent damage to their bodies and withdrawal syndrome.

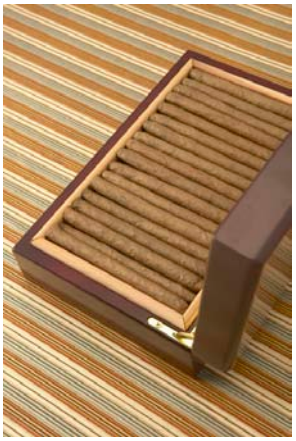
Tobacco

Many people hold the view that experimentation with, or use of tobacco, is considered normal or acceptable behavior. However, the use of tobacco often progresses to further drug abuses. Accordingly, some experts attach the term gateway to this substance. Use of drugs such as cocaine and heroin is unusual in those who have not previously used tobacco.

The hazards of tobacco include cancer and other diseases and can also have ill effects on others. As awareness of these ill effects reaches new heights, more and more Americans are joining forces to fight tobacco abuse every day.

In addition to smoking cigarettes, pipes, or cigars, people who use tobacco products can also do so orally in the forms of chewing tobacco (by placing a wad between the cheek and teeth and sucking on it) and snuff (by placing a pinch between the lower lip and teeth).





Three major components make up tobacco, each having their own ill effects. One such component, tar, causes a variety of cancers and contributes to emphysema and other respiratory problems. For this reason, people often choose to smoke low tar cigarettes, but even low-tar cigarettes can be unsafe because smokers often smoke more while using these brands. Carbon monoxide, also found in tobacco, restricts the oxygen-carrying capacity of the blood, and can often cause insufficient heart operation. Nicotine, the substance in tobacco believed to cause dependency, is absorbed into the bloodstream, reaching the heart and brain within a few seconds of the onset of smoking.

Note

Nicotine in its pure state is a toxic poison and is also used in insecticides.

Some of the diseases associated with long-term tobacco smoking include chronic bronchitis, emphysema, coronary heart disease, and lung cancer. Lung cancer is the leading cause of death among women today. Cigarette smoking is a major independent risk factor for heart attacks (sometimes fatal) in both men and women. Pipe and cigar smokers are more prone to dying from cancer of the mouth and throat than nonsmokers. Smoking also reduces the effectiveness of prescription and over-the-counter medications.

Note

Infections, especially pneumonia and acute bronchitis, are twice as common in young children whose parents smoke than children with nonsmoking parents.

Although chewing tobacco and snuff are not smoked, they increase the risk of disease and damage to the delicate lining of the mouth and throat. As a result, individuals who use these products are more likely than nonusers to develop mouth cancer, throat cancer, and gum disease. Chewing tobacco and snuff can also contribute to heart disease and strokes. The harmful effects of one can of snuff are equal to that of about 60 cigarettes.

Despite the labels required by federal law warning individuals about the hazardous effects of using tobacco products, use continues.

Recent research has indicated that non-smokers who breathe in second-hand smoke (smoke that escapes from the burning end of a cigarette as well as the smoke exhaled by the smoker), can have an increased risk of lung cancer, heart disease, and respiratory disorders. Inhaling second-hand smoke makes the heart beat faster, the blood pressure go up, and the level of carbon monoxide in the blood increase. Smoke from an idling cigarette contains even more tar and nicotine than an inhaled one, in addition to more cadmium, a substance which has been related to hypertension, chronic bronchitis, and emphysema.

As the public becomes more aware of the dangers of inhaling second-hand smoke, the legislation protecting the rights of nonsmokers continues to increase. Smoking is increasingly being banned in both public and private places.

The Chemicals in Tobacco Smoke

With each puff on a cigarette, cigar, or pipe, a smoker inhales over 4,000 different chemicals. Of these 4,000 chemicals, at least 1,000 are known to be dangerous. Among all the dangerous substances, nicotine, tar, and carbon monoxide can be identified as the most deadly ones found in tobacco smoke.

Nicotine and Addiction

The drug in tobacco that may act as a stimulant and cause addiction is nicotine. A stimulant is a drug that speeds up the activities of the central nervous system, the heart, and other organs. In its pure form, nicotine is one of the strongest poisons known. Taken in large amounts, nicotine can kill people by paralyzing their breathing muscles. Smokers usually take in small amounts of nicotine. However, over several years the effects on the body of much smaller amounts are numerous and severe.

When tobacco is smoked, nicotine enters the lungs, where it is immediately absorbed into the bloodstream. Seconds later, the nicotine reaches the brain. Chemical changes begin to take place. Nicotine causes the heart to beat faster, the skin temperature to drop, and the blood pressure to rise. Nicotine constricts blood vessels, which cuts down on the blood flow to hands and feet. Beginning smokers usually feel the effects of nicotine poisoning with their first inhalation. These effects include rapid pulse, clammy skin, nausea, dizziness, and tingling in the hands and feet. Nicotine and cigarettes have many adverse effects on the body.

The degree of reaction varies from person to person, depending on the person’s tolerance to nicotine. The effects of nicotine poisoning stop as soon as tolerance to nicotine develops. Tolerance can develop in new smokers after the second or third cigarette. The smoker begins to experience a “lift,” a physical reaction to the chemicals in nicotine. As tolerance builds, however, the user may need more and more tobacco to produce the same feeling. The Surgeon General, the country’s highest medical authority, has called nicotine an addicting drug, just like heroin and cocaine.

In a short time, tobacco users develop an addiction to nicotine. A tobacco addict who goes without tobacco for a short time may experience nicotine withdrawal. Nicotine withdrawal is a reaction to the lack of nicotine in the body, which causes symptoms such as headache, irritability, restlessness, increased coughing, nausea, vomiting, a general feeling of illness, and intense cravings for tobacco. Withdrawal effects may begin as soon as two hours after the last cigarette. Physical craving for a cigarette reaches a peak in the first 24 hours.

Tobacco users also suffer psychological withdrawal symptoms when they stop smoking. They feel emotionally and mentally uncomfortable without tobacco. By using tobacco at certain times—when under stress, for example—tobacco users actually condition themselves to rely on tobacco whenever a stressful situation arises. When tobacco users go without tobacco, they may feel unable to handle stress. Many tobacco users begin to depend on tobacco at particular times of the day, such as when they awaken or after they finish a meal. Others begin to depend on tobacco in social or work situations, such as parties or meetings.

Tar

The dark, sticky mixture of chemicals that is formed when tobacco burns is known as tar. Smokers can see evidence of this substance on their fingers and teeth, which turn brown when tar sticks to them. The tar also sticks to the cells of the respiratory system, where it damages the delicate cells that line the respiratory tract. The cells have tiny hair-like structures, or cilia. The cilia beat back and forth and sweep dust and other foreign particles away from the lungs. If the cilia are damaged, foreign particles can enter the lungs, leading to disease.

The tar in tobacco smoke contains hundreds of chemical carcinogens, or cancer-causing agents. Cancer of the lungs, throat, and mouth are caused by the inhalation of tar in tobacco smoke.

Carbon Monoxide

Carbon monoxide is a poisonous, colorless, odorless gas that is found in cigarette smoke. You may be familiar with the dangers of carbon monoxide. Deaths that result from leaving a car engine running in a closed area, are caused by carbon monoxide poisoning.

Carbon monoxide has a greater attraction for the oxygen-carrying molecules (hemoglobin) in the red blood cells than oxygen does. When carbon monoxide is inhaled, it takes the place of, or displaces, large amounts of oxygen from hemoglobin. The more carbon monoxide present in the blood, the less oxygen in the blood.

Carbon monoxide also makes it hard for the oxygen that is left in the blood to get to the muscles and organs. When a person smokes, the heart works harder but accomplishes less. Because their blood contains too little oxygen to function properly, smokers often experience shortness of breath when they are active.

Chemicals in Smokeless Tobacco

Most tobacco users smoke cigarettes, cigars, or pipes. And yet there has been an increase, especially among teenage boys, in the use of smokeless tobacco. Smokeless tobacco is tobacco that is chewed or sniffed through the nose. Some people who use smokeless tobacco think that the products are safe because no smoke is produced or inhaled. What they may not realize is that smokeless tobacco contains many of the same harmful chemicals found in tobacco smoke, including the highly addictive drug nicotine.

There are two different kinds of smokeless tobacco products. Chewing tobacco is poor-quality tobacco leaves mixed with molasses or honey and placed between the cheek and gums. Snuff is finely ground tobacco that may be held between the lower lip and teeth or sniffed through the nose. One can of snuff delivers as much nicotine as 60 cigarettes. The nicotine in chewing tobacco enters the bloodstream through the membranes of the mouth. The nicotine in snuff gets into the body through the membranes of either the mouth or the nose. After it has entered the body, nicotine from smokeless tobacco has the same effects as nicotine from cigarettes.

Conclusion

When drugs are properly used, they can cure illness and save lives. When abused, however, drugs and alcohol can destroy lives and cause death. It is important to understand that, although people often abuse drugs and alcohol to find happiness and fulfillment, these substances only create more problems and unhappiness. To keep from falling into the trap of drug and alcohol abuse, stay smart, strong, and active. Say “no.” Recognize the different drugs that are abused in our society and what affect they have on people’s health and lives. Understand the dangers of alcohol abuse, not only to the drinker, but to family and friends. You can set an example of an informed, drug-free individual.

Lesson Check-up

1. What is the difference between drug use, misuse, and abuse?
2. Describe the risks associated with the use of alcohol?
3. Is there any “safe” cigarette? Why or why not?

Exercise 1: Useful Websites

Web Site Address	Organization	Comments
http://www.healthfinder.gov/	U.S. Department of Health and Human Services	By going to **www.healthfinder.gov/**, Cadets can search for information on substances.
http://www.epa.gov/smokefree/index.html	U.S. Environmental Protection Agency	EPA link to document on second hand smoke; covers definition, health effects, steps to reduce; also PDF and fact sheets on effects on children and asthma
www.howstuffworks.com	HowStuffWorks.com is an amazing, award-winning, online destination for anyone who wants to know how anything works	Select from variety of articles: “How Performance-Enhancing Drugs Work”, “How Nicotine Works”, “How Alcohol Works”, “How Breathalyzers Work”
http://science.education.nih.gov/customers.nsf/HSBrain?OpenForm	National Institute on Drug Abuse	The Brain: Understanding Neurobiology Through the Study of Addiction Helps students discover the fundamentals of neurobiology and how drugs change the brain. Among the topics: functions of specific brain areas; anatomy of the neuron; neurotransmission; drug action on neurons; genetic, behavioral, and environmental influences on drug addiction; and addiction as a chronic disease. (National Institute on Drug Abuse, National Institutes of Health)
http://www.justthinktwice.com/	U.S. Drug Enforcement Administration	Just Think Twice is a website sponsored by the Drug Enforcement Administration. The site has many facts about illegal drugs.

Web Site Address	Organization	Comments
http://www.cdc.gov/tobacco/	Center for Disease Control	Provides educational materials that help to prevent tobacco use among youth, promote smoking cessation, and protect nonsmokers from environmental tobacco smoke. Visitors can order publications, read reports, gather data, and follow suggested guides for quitting smoking. (Centers for Disease Control and Prevention)

Performance Assessment Task

Unit 4: Wellness, Fitness, and First Aid

Use & Effect of Drugs, Alcohol, and Substances [U4C3L1]

This performance assessment task gives you an opportunity to document your achievement of the lesson's competency:

Assess the impact of drug and substance abuse on life today

Directions

For this performance assessment task, you will develop a proposal for educating others about a particular substance. For this assessment you will:

1. Choose one of the following substances as the focus of your proposal: alcohol, tobacco, marijuana, cocaine, crack, methamphetamine, heroin, LSD, inhalants, Ecstasy, Rohypnol, PCP, and psilocybin.

2. Use Exercises #1 – 4 to help you research your task.

3. Use the attached scoring guide criteria for what you need to do to complete this task.

4. Submit your completed performance assessment task and scoring guide to your instructor for evaluation and a grade.

RECOMMENDATION: It is recommended that you add this performance assessment task to your Cadet Portfolio.

Use & Effect of Drugs, Alcohol, and Substances Performance Assessment Task Scoring Guide

Criteria	*Ratings*
1. Your proposal identifies a target audience	met not met
2. Your proposal identifies facts and current information about target substance(s)	met not met
3. Your proposal identifies information supporting why there is a need for education	met not met
4. Your proposal identifies types of education awareness tools: video, pamphlets, speakers, advertising, brochures	met not met

Comments:

Name:_____ Date:_____

Evaluator's Signature:_____ Date:_____