

# Harmful Effects of Medication, Alcohol, Drugs, and Addiction

---

## OBJECTIVES/RATIONALE

---

To promote health living through the lifespan an understanding of the relationship between unsafe behavior and personal health is important. The student will develop strategies for preventing the use of tobacco, alcohol and other addictive substances.

TEKS: 115.32(b)(3)(C),(7)(A-E),(16)(D)

TAKS ELA 1, 3, 4, 5, 6  
Social Studies 1, 3, 5  
Science 2, 3

Duration: Approximately 4 (1 ½ hour) class periods

---

## KEY POINTS

---

- I. Tobacco
  - A. Terminology
    1. nicotine – addictive drug found in cigarettes
    2. stimulant – drug that increases activity of the central nervous system and other organs
    3. tar – thick, sticky, dark fluid produced when tobacco burns
    4. carcinogen – cancer causing substances
    5. carbon monoxide – colorless, odorless, poisonous gas in cigarette smoke that passes through the lungs into the blood
    6. leukoplakia – thick, white, leather appearing spots in the inside of a smokeless tobacco user’s mouth, it is precancerous
    7. passive smoke – cigarette, cigar, or pipe smoke inhaled by non smokers
    8. mainstream smoke – smoke the smoker blows off
    9. sidestream smoke – smoke that comes from the burning tobacco
    10. cilia – hair like projections in the respiratory tract, keep airway clean
    11. chronic bronchitis – bronchi are irritated, cilia do not work, chronic coughing and excessive mucus
    12. emphysema – destruction of air sacs in the lungs through which oxygen is absorbed
    13. lung cancer – cancer of the lungs, one of the leading causes of death
    14. addictive – physiologically, psychological dependence
    15. physiological addiction – body has a chemical need for the drug
    16. psychological addiction – person thinks they need the drug to function
    17. withdrawal – symptoms when substance one is addicted to is withdrawn
  - B. Cigarettes
    1. more than 4,000 chemicals, at least 43 known carcinogens
    2. nicotine – an addictive stimulant that increases blood pressure and heart rate
    3. tar – carcinogen, coats and penetrates the airway and lungs, paralyzes and destroys the cilia
    4. Dangers of smoking

- a. C.O.P.D. – chronic obstructive pulmonary disease
  - i. chronic bronchitis
  - ii. emphysema
- b. Lung cancer
- c. Circulatory system
  - i. decreased circulation
  - ii. increased plaque build up in the vessels
  - iii. increased risk of myocardial infarction
  - iv. increased blood pressure
  - v. increased risk of stroke
  - vi. damages the heart muscle
- 5. Smoking and pregnancy
  - a. small fetal growth and low birth weight
  - b. increased chance of miscarriage and stillbirths
  - c. growth and development during childhood
  - d. nicotine – transfers during breast feeding
  - e. children of cigarette smokers have increased respiratory problems, poor lung functions and are twice as likely to develop lung cancer
- C. Pipe and cigar smokers are more likely to develop lip, mouth, and throat cancer
- D. Smokeless tobacco – mouth sores, leukoplakia, may turn into cancer of the mouth, also an increased chance of developing cancer of the lip, throat, damage the teeth, gums, and digestive system

#### Dangers of smokeless tobacco

- 1. addictive
- 2. leukoplakia
- 3. bad breath, discolored teeth
- 4. decreased smell and taste senses
- H. Quitting Tobacco Use
  - 1. withdrawal – nervous, moody, difficulty sleeping
  - 2. suggestions for quitting
    - a. change routine
    - b. avoiding people / situations that increase your chances of smoking
    - c. chew gum / snack on candy
    - d. drink plenty of water, avoid alcohol, coffee, tea, and cokes
    - e. set a date
    - f. plan rewards
    - g. positive reinforcement for non smoking friends
    - h. in relapse, quit again

## II. Alcohol

### A. Terminology

- 1. FAS – fetal alcohol syndrome – causes mental and physical abnormalities
- 2. DWI – driving while intoxicated
- 3. DUI – driving under the influence of drugs or alcohol
- 4. BAC – blood alcohol concentration
- 5. alcoholism – addiction to alcohol
- 6. cirrhosis – scarring of the liver

7. jaundice – yellow skin and eyes
- B. Effects of Alcohol
1. Brain – decreased activity of the nervous system, thought processes are disorganized, memory and concentration are dulled, leads to brain damage resulting in loss of intellectual abilities
  2. Liver – inhibits the liver's ability to breakdown fats, fats accumulate leading to a fatty liver, the increased amount of fat keeps the liver cells from working and new liver cells being formed; cirrhosis – no blood flow through scarred area of the liver, causes the increase in blood pressure, hemorrhage, abdominal swelling, infection, jaundice
  3. Blood vessels – increase heart rate and blood pressure
  4. Kidneys – increased urination, dehydration
  5. Stomach – increased flow of gastric acids, inflammation, ulceration
  6. Tolerance – need to drink more to get the same effect
  7. Dependence – physiologically addicted
  8. Withdrawal – sleeplessness, sweating, tremors, hallucinations
- C. Teenage Drinking
1. Reasons teens drink
    - a. to have fun
    - b. to relax
    - c. to feel more self confident
    - d. to fit in – peer pressure
    - e. to get away with something
  3. Negative social consequences – difficulties with family, friends, school, police
- D. Alcohol and pregnancy
1. FAS – fetal alcohol syndrome, a cause of mental retardation
  2. shorter, smaller babies, slow body growth
  3. facial abnormalities
  4. poor coordination
  5. heart defects
  6. poor attentions span, nervousness, hyperactivity
- E. Drinking and driving
1. #1 cause of death for teenagers in the US
  2. decreases the ability to judge distances, speeds, turns
  3. decreases abilities and limitations
  4. increases risk taking
  5. slows reflexes
  6. adds to forgetfulness
  7. decreases the ability to concentrate
- F. Alcoholism
1. cannot keep from drinking
  2. cannot manage time without drinking
  3. cannot stop drinking once they have started
  4. Stages of Alcoholism

- a. Stage 1 – physiological and psychological dependence, drinks regularly, may have blackouts
- b. Stage 2 – cannot stop drinking, defensive, denial, tolerance, performance at school or work declines
- c. Stage 3 – drinking is visible, uncontrollable

### III. Illegal drugs – dangerous and illegal substances

#### A. Dangers of drug use

- 1. physiological dependence
- 2. psychological dependence
- 3. tolerance
- 4. addiction
- 5. body systems damage, death
- 6. social consequences
  - a. poor school / work performance
  - b. problems with family and friends
  - c. police, court, jail

#### B. Drugs: Categories, classes, effects

- 1. Stimulants
  - a. increase the central nervous system
  - b. irregular heart beat, heart failure
  - c. increased blood pressure, stroke
  - d. anxiety, paranoia
  - e. physical collapse, death
- 2. Amphetamines
  - a. increase heart rate and breathing
  - b. anxiety, sleeplessness
  - c. tolerance, dependence
  - d. methamphetamine (crank, speed, ice) cause paranoia and may increase violent tendencies
- 3. Cocaine
  - a. rapid acting, powerful stimulant
  - b. increases heart rate, blood pressure, respiration
  - c. physiological dependence
  - d. paranoia, hallucinations, psychological dependence
  - e. can be snorted, injected
  - f. increases risk of heart attack, heart rhythm irregularities, cardiac arrest
  - g. increased risk of HIV with use of shared needles for injecting
  - h. crack
    - i. smokable form of cocaine
    - ii. danger or injury / death from explosion or fire
    - iii. dilates pupils, increase pulse, blood pressure, insomnia, hallucinations, paranoia, seizures
    - iv. lung damage
    - v. extremely addictive
- 4. Depressants

- a. slow down the central nervous system
- b. relax muscles, relieve tension
- c. physically and psychological dependence
- 5. Sedatives – Hypnotics
  - a. induce sleep, reduce anxiety
  - b. decreases heart rate and respiratory rate
  - c. physiological and psychological dependence
  - d. barbiturates – mood changes, coma death
- 6. Tranquilizers – addictive, decreases brain activity
- 7. Narcotics – medicines used to relieve pain
  - a. drowsiness
  - b. dependence
  - c. sleep – coma – death
- 8. Heroin
  - a. no medical use in U.S.
  - b. depresses the central nervous system
  - c. coma / death with large doses
  - d. tolerance
  - e. withdrawal from drug is difficult and painful
  - f. increased risk of HIV infection from contaminated needles
- 9. Hallucinations
  - a. psychedelics
  - b. alter mood, thought, and the senses
  - c. PCP
    - i. phencyclidine, angel dust
    - ii. distorts senses
    - iii. muscle coordination is impaired
    - iv. false sense of power and strength, results in violence and accidents
    - v. can cause permanent psychiatric disorders
    - vi. flashbacks – a recurrence of the effect of the drug, may occur at a later date
  - d. LSD – lysergic acid diethylamide
    - i. increases heart rate and blood pressure
    - ii. chills, fever, loss of appetite, nausea
    - iii. panic attacks, anxiety, accidental suicide
    - iv. flashbacks
  - e. Inhalants – sniffed, inhaled
    - i. glue, spray paints, aerosols, gasoline
    - ii. decreases the central nervous system
    - iii. effects
      - 1. nausea, sneezing, cough, nosebleeds, fatigue, lack of coordination, loss of appetite
      - 2. judgment is impaired
      - 3. kidney, bone marrow, brain, lung damage
      - 4. suffocation - death

10. Marijuana – hemp plant Cannabis, the leaves and flowers are smoked, eaten, drunk
- a. 400 different chemicals
  - b. THC – delta-9-tetrahydrocannabinol
    - i. chemical that causes the psychoactive effect
    - ii. stored in fatty tissue, especially in brain cells, liver, lungs, kidneys, and reproductive organs
    - iii. acts as a poison and prevents proper formation of DNA
  - c. hashish – dark brown resin from the tops of the cannabis plant
  - d. hallucinogen, depressant, stimulant effects
  - e. effects of use
    - i. sensory perception changes
    - ii. decreased body temperature, increased heart rate and blood pressure
    - iii. stimulates appetite
    - iv. decreases self control
    - v. mood changes can be influenced by mood and environment
    - vi. personality problems with increased use
      - 1. lack of will power and motivation
      - 2. lack of energy
      - 3. paranoia
      - 4. apathy and lethargic
    - vii. psychological dependence
    - viii. memory deficits
    - ix. concentration and coordination
    - x. decreased immune system function
    - xi. decreased testosterone, decreased sperm production
    - xii. use during pregnancy causes condition in baby similar to FAS

11. Club Drugs

- a. Ecstasy – MDMA
  - i. tablet, powder, capsule
  - ii. usually consumed orally
  - iii. effects can last from 3-24 hours
  - iv. causes euphoria and intoxication
  - v. depression, paranoia, and sometimes violent and irrational behavior
  - vi. physical reactions – loss of appetite, nausea, vomiting, blurred vision, increased heart rate, increased blood pressure, chills, sweating, tremors, insomnia, convulsions, heat exhaustion, and dehydration
- b. Rohypnol – sedative, ten times as strong as Valium
  - i. taken orally
  - ii. causes intoxication

- iii. can cause deep sedation, respiratory distress, blackouts can last up to 24 hours
    - iv. short term amnesia
    - v. can cause aggression
    - vi. called the “date rape drug”
  - c. GHB – central nervous system depressant abused for its intoxicating effects
    - i. capsule or white to sandy colored powder that is dissolved in water or alcoholic beverages
    - ii. most often sold as a slightly salty, clear liquid in small bottles
    - iii. effects will last for up to 3 hours
    - iv. can cause nausea, vomiting, delusions, depression, vertigo, visual disturbances, seizures, respiratory distress, loss of consciousness, amnesia, coma
  - d. Ketamine
    - i. white powder that is snorted or smoked with marijuana
    - ii. causes hallucinations, delirium, amnesia, impaired motor function, high blood pressure, depression, recurrent flashbacks, respiratory failure
- 12. Anabolic Steroids – synthetic derivative of male hormone testosterone
  - a. used illegally to increase athletic performance
  - b. increases aggressiveness and strength
  - c. side effects
    - i. increased blood pressure, acne, liver damage, heart disease, and stroke
    - ii. males – baldness, depression, aggressiveness, decreased sperm production, decreased testicular size, increase breast growth and body and facial hair
    - iii. females – breast shrinkage, growth of facial hair, baldness
    - iv. mood swings
    - v. increase risk of HIV infection with shared needles

#### IV. Addiction

- A. Tolerance
- B. physiological dependence
- C. psychological dependence
- D. withdrawal
- E. intervention – interrupting the addiction
- F. recovery – process that happens over time
  - 1. counseling
  - 2. Support groups – 12 step programs like AA – Alcoholics Anonymous
  - 3. Alcohol and Drug treatment centers
- G. Family disease
  - 1. codependency – being overly concerned with other people’s behaviors and problems, feeling responsible to fix and control those problems
  - 2. enabling – trying to protect the person having trouble facing the consequences of their use

3. recovery from codependency
  - a. get help from outside the family
  - b. counselors
  - c. support groups

---

## ACTIVITIES

---

### Tobacco

- I. Cut out smoking advertisements and bring them to class. Divide the students into small groups and have them discuss
  - a. What message does the advertisement imply?
  - b. What group is the advertisement targeting?
  - c. Does the advertisement really have anything to do with smoking?
  - d. What is the purpose of the advertisement?
- II. Make door hangers with antismoking messages to be distributed throughout the school during the Great American Smokeout.

***Teacher Note:***

*Contact the American Cancer Society for information in participating in the Great American Smokeout.*

### Alcohol and Drugs

- I. Brainstorm the reasons why teenagers drink and then brainstorm alternatives to alcohol use.
- II. Work in small groups; each group will be assigned a topic:
  - a. effects of alcohol and drugs on the body, both long term and short term
  - b. the reasons teenagers drink and use drugs and alternatives to, and prevention of use.
  - c. drinking and driving, drug impaired driving
  - d. negative social consequences of drug and alcohol use
  - e. alcohol, drugs, and pregnancy
  - f. increased risk taking behaviors that increase the risk of HIV/STD's and unplanned pregnancy

*(Compile all the information into one report, the students will edit and write an article. Submit the article to the school newspaper.)*

- III. Make anti drinking, anti drug door hangers to be hung around the school during red ribbon week, prom week, etc.

---

## MATERIALS NEEDED

---

Construction paper, markers, scissors, glue, poster board, materials from the American Cancer Society, Library research resource

---

---

## **ASSESSMENT**

---

Successful completion of:

- Advertisement activity
- Smoking door hanger activity
- Alcohol / Drug Article Project
- Alcohol / Drug door hanger activity

---

---

## **ACCOMMODATIONS**

---

For reinforcement, the student will make flash cards for terminology.

For enrichment, the student will participate in a ‘Shattered Dreams’ mock activity.

---

---

## **REFLECTIONS**

---