

Warmup: Read the excerpt on pg. 148 (at the beginning of Ch. 5) about Pablo Escobar.

1.

2.

3.

4.2: Drug Dependency

SFS 2: Use various scientific techniques to analyze physical and trace evidence

a. Classify toxins and their effects on the body

3/21/17

<http://www.youtube.com/watch?v=UgvErY2Yq8I>

Part I: Intro to Drugs

- a **drug** can be defined as a natural or synthetic substance that is used to produce physiological or psychological effects in humans or other higher order animals.
- in their modern context, drugs mean something different to each person:
 - a necessity for sustaining and prolonging life
 - provide an escape from the pressures of life
 - a means of ending life
- during the 1960s, many drugs found their way out of laboratories, pharmacies, and medicine chests and into the streets, including hallucinogens, amphetamines, and barbiturates
 - during this decade, marijuana became the most widely used illicit drug in the US
 - alcohol consumption continued to rise—today 90 million Americans drink alcohol regularly, and 10 million of these are hopelessly addicted or have severe problems in coping with their drinking habits

- during this decade, marijuana became the most widely used illicit drug in the US
- alcohol consumption continued to rise—today 90 million Americans drink alcohol regularly, and 10 million of these are hopelessly addicted or have severe problems in coping with their drinking habits
- in the 1970s, heroin addiction emerged as a national problem, and today the US is in the midst of an epidemic of methamphetamine abuse
- drug abuse has grown from a problem generally associated with members of the lower end of the socioeconomic ladder to one that cuts across all social and ethnic classes of society
 - approximately 23 million people in the US use illicit drugs today, including about a half million heroin addicts and nearly 6 million users of cocaine
- in the US, more than 75% of the evidence evaluated in crime labs is drug related

- approximately 23 million people in the US use illicit drugs today, including about a half million heroin addicts and nearly 6 million users of cocaine
- in the US, more than 75% of the evidence evaluated in crime labs is drug related
 - this deluge of drug specimens has expanded existing crime labs and helped create new ones
 - the crime lab's preoccupation with drug evidence is a serious distraction from time that could be devoted to evaluating evidence related to homicides and other types of serious crimes
 - the overall analytical capabilities of crime laboratories has increased due to this expansion



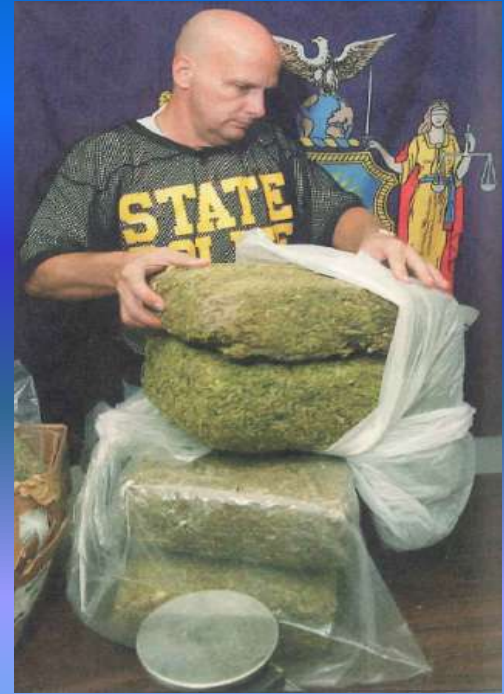
**SELF-CHECK
QUESTION!**

*What drug became the
most widely used illicit
drug in the US in the
1960s?*

marijuana

*Approx (25%, 50%, 75%)
of all evidence
evaluated in crime
laboratories is drug
related.*

- approximately 23 million people in the US use illicit drugs today, including about a half million heroin addicts and nearly 6 million users of cocaine
- in the US, more than 75% of the evidence evaluated in crime labs is drug related
 - this deluge of drug specimens has expanded existing crime labs and helped create new ones
 - the crime lab's preoccupation with drug evidence is a serious distraction from time that could be devoted to evaluating evidence related to homicides and other types of serious crimes
 - the overall analytical capabilities of crime laboratories has increased due to this expansion



Part II: Drug Dependence

- in assessing the potential danger of drugs, society has become particularly conscious of their effects on human behavior

Part II: Drug Dependence

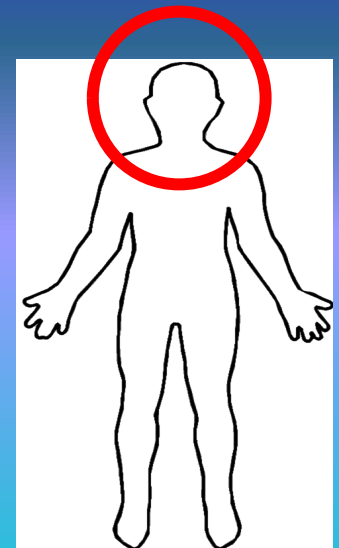
- in assessing the potential danger of drugs, society has become particularly conscious of their effects on human behavior
 - the first drugs to be regulated by law in the early years of the twentieth century were those deemed to have “habit-forming” properties (early laws were aimed primarily at controlling opium and its derivatives, cocaine, and later marijuana)
 - today, it is known that the ability of a drug to induce dependence after repeated use is submerged in a complex array of physiological and social factors
- **dependence** on drugs exists in numerous patterns and in all degrees of intensity, depending on:
 - the nature of the drug,
 - the route of administration,
 - the size of the dose,
 - the frequency of administration, and
 - the individual’s rate of metabolism
- **nondrug factors** play an equally crucial role in determining the behavioral patterns associated with drug use:

- **dependence** on drugs exists in numerous patterns and in all degrees of intensity, depending on:
 - the nature of the drug,
 - the route of administration,
 - the size of the dose,
 - the frequency of administration, and
 - the individual's rate of metabolism
- **nondrug factors** play an equally crucial role in determining the behavioral patterns associated with drug use:
 - the personal characteristics of the user,
 - his or her expectations about the drug experience,
 - society's attitudes and possible responses, and
 - the setting in which the drug is used
- the question of how to define and measure a drug's influence on the individual and its danger to society is difficult to assess
 - the nature and significance of drug dependence must be considered from two overlapping points of view:
 - the interaction of the drug with the individual, and

- the nature and significance of drug dependence must be considered from two overlapping points of view:
 - the interaction of the drug with the individual, and
 - the drug's impact on society
- it's useful when discussing the nature of the drug experience to approach the problem from two distinctly different aspects of human behavior—**psychological dependence** and **physical dependence**

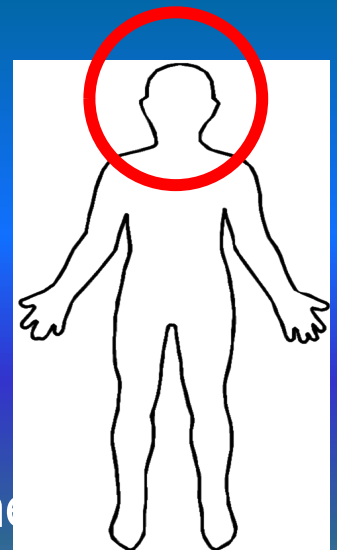
Psychological Dependence

- the common denominator that characterizes all types of repeated drug use is the creation of a psychological dependence for continued use of the drug
 - not all drug users are hopeless “addicts” who are social dropouts
 - most users present quite a normal appearance and remain both socially and economically integrated in the life of the community

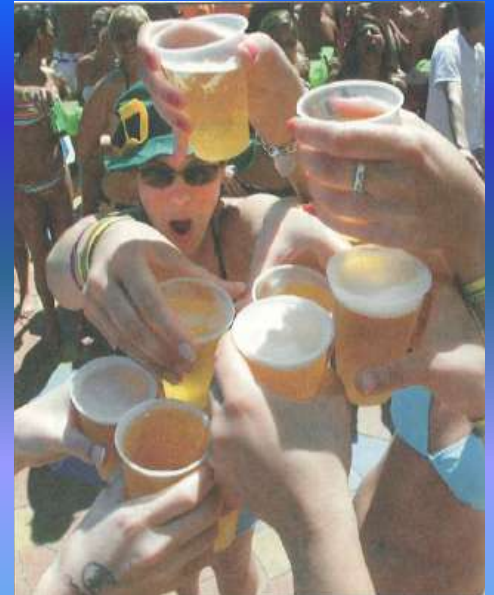


Psychological Dependence

- the common denominator that characterizes all types of repeated drug use is the creation of a psychological dependence for continued use of the drug
 - not all drug users are hopeless “addicts” who are social dropouts
 - most users present quite a normal appearance and remain both socially and economically integrated in the community
- why some people abstain from drugs while others become moderately or heavily involved are difficult if not impossible to determine
 - **psychological dependence** arises from numerous personal and social factors that stem from the individual’s desire to create a sense of well-being and to escape from reality:
 - they might be seeking relief from personal problems or stressful situations, or



- **psychological dependence** arises from numerous personal and social factors that stem from the individual's desire to create a sense of well-being and to escape from reality:
 - they might be seeking relief from personal problems or stressful situations, or
 - trying to sustain a physical or emotional state that permits an improved level of performance
 - whatever the reasons, the underlying psychological needs and the desire to fulfill them create a conditioned pattern of drug abuse
- intensity of psychological dependence associated with a drug's use is difficult to define and depends on the nature of the drug used
 - for alcohol, heroin, amphetamines, barbiturates, and cocaine, there is a significant likelihood that continued use will result in a high degree of involvement



- intensity of psychological dependence associated with a drug's use is difficult to define and depends on the nature of the drug used
 - for alcohol, heroin, amphetamines, barbiturates, and cocaine, there is a significant likelihood that continued use will result in a high degree of involvement
 - drugs like marijuana and codeine appear to have a considerably lower potential for the development of psychological dependence
 - this does not imply that repeated abuse of drugs deemed to have a low potential for psychological dependency is safe or will always produce low psychological dependence
- since there is no precise way of measuring or predicting the impact of drug abuse on the individual, the unpredictability of the human personality would still have to be considered (the personal inadequacies of the drug user represent the underlying motivation for drug use)
 - for instance, not all alcohol drinkers are psychologically addicted to the drug—most are “social” drinkers who drink in reasonable amounts and on an irregular basis

- for instance, not all alcohol drinkers are psychologically addicted to the drug—most are “social” drinkers who drink in reasonable amounts and on an irregular basis
 - but many people have progressed beyond this stage and consider alcohol a necessary crutch for dealing with life’s stresses and anxieties
 - a wide range of behavioral patterns exists among alcohol abusers, and to a large extent the degree of psychological dependency must be determined on an individual basis
- likewise, it would be wrong to generalize that all users of marijuana can only develop a low degree of dependency on the drug
 - a wide range of factors also influence marijuana’s effect, and
 - heavy users of the drug expose themselves to the danger of developing a high degree of psychological dependency

**SELF-CHECK
QUESTION!**

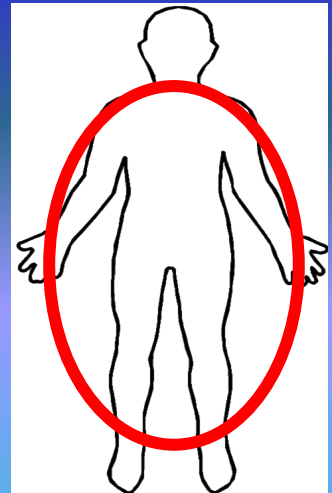
*Intensity of psychological
dependence depends on
these 2 things:*

the nature of the drug
used, and the
personality of the user

- likewise, it would be wrong to generalize that all users of marijuana can only develop a low degree of dependency on the drug
 - a wide range of factors also influence marijuana's effect, and
 - heavy users of the drug expose themselves to the danger of developing a high degree of psychological dependence

Physical (Physiological) Dependence

- emotional well-being is usually the primary motive leading repeated and intensive use of a drug
- but certain drugs, when taken in sufficient dose and frequency, are capable of producing physiological changes that encourage their continued use, and once the user abstains from such a drug, severe physical illness follows
 - the desire to avoid **withdrawal symptoms** ultimately causes physical dependence, or addiction
 - for example, a heroin addict would rather continue to abuse the drug than face body chills, vomiting, stomach cramps, convulsions, insomnia, pain, and hallucinations



- the desire to avoid **withdrawal symptoms** ultimately causes physical dependence, or addiction
 - for example, a heroin addict would rather continue to abuse the drug than face body chills, vomiting, stomach cramps, convulsions, insomnia, pain, and hallucinations
 - use of alcohol, heroin, and barbiturates can result in development of physical dependency
- oddly enough, some of the more widely abused drugs have little or no potential for creating physical dependence
 - marijuana, LSD, and cocaine create strong anxieties when their repeated use is discontinued, but no medical evidence attributes these discomforts to physiological reactions that accompany withdrawal
- **physical dependency** develops only when the drug user adheres to a regular schedule of drug intake (the interval between doses must be short enough so that the effects of the drug never wear off completely) —for example:

- **physical dependency** develops only when the drug user adheres to a regular schedule of drug intake (the interval between doses must be short enough so that the effects of the drug never wear off completely) —for example:
 - for heroin addicts, this time frame does not exceed 6 to 8 hours
 - many users of heroin avoid taking the drug on a regular basis for fear of becoming physically addicted to its use
 - the risk of developing physical dependence on alcohol becomes greatest when the consumption is characterized by a continuing pattern of daily use in large quantities
- **table 5–1** categorizes some of the more commonly abused drugs according to their effect on the body and summarizes their tendency to produce psychological dependency and to induce physical dependency with repeated use

- **table 5–1** categorizes some of the more commonly abused drugs according to their effect on the body and summarizes their tendency to produce psychological dependency and to induce physical dependency with repeated use

Drug	Psychological Dependence	Physical Dependence
Narcotics		
Morphine	High	Yes
Heroin	High	Yes
Methadone	High	Yes
Codeine	Low	Yes
Depressants		
Barbiturates (short-acting)	High	Yes
Barbiturates (long-acting)	Low	Yes
Alcohol	High	Yes
Methaqualone (Quaalude)	High	Yes
Meprobamate (Miltown, Equanil)	Moderate	Yes
Diazepam (Valium)	Moderate	Yes
Chlordiazepoxide (Librium)	Moderate	Yes
Stimulants		
Amphetamines	High	Unknown
Cocaine	High	No
Caffeine	Low	No
Nicotine	High	Yes
Hallucinogens		
Marijuana	Low	No
LSD	Low	No
Phencyclidine (PCP)	High	No

**SELF-CHECK
QUESTION!**

*Describe the symptoms of
withdrawl:*

body chills, vomiting,
stomach cramps,
convulsions, insomnia,
pain, and hallucinations

*Name 2 drugs that do
not induce physical
dependency:*

cocaine, caffeine,
nicotine, marijuana,
LSD, PCP

*Name 2 drugs that have a
high degree of
psychological dependence:*

morphine, heroin, methadone,
short-acting barbiturates,
alcohol, quaaludes,
amphetamines, cocaine, PCP

- **table 5–1** categorizes some of the more commonly abused drugs according to their effect on the body and summarizes their tendency to produce psychological dependency and to induce physical dependency with repeated use

Part III: Societal Aspects of Drug Use

- the social impact of drug dependence is directly related to the extent to which the user has become preoccupied with the drug (meaning the extent to which drug use has become interwoven in the fabric of the user's life)
 - the more frequently the drug satisfies the person's need, the greater the likelihood that he or she will become preoccupied with its use, with a consequent neglect of individual and social responsibilities
 - personal health, economic relationships, and family obligations may all suffer as the drug-seeking behavior increases in frequency and intensity and dominates the individual's life
 - extreme drug dependence may lead to behavior that has serious implications for the public's safety, health, and welfare

- extreme drug dependence may lead to behavior that has serious implications for the public's safety, health, and welfare
- drug dependence in its broadest sense involves much of the world's population
 - a complex array of individual, social, cultural, legal, and medical factors ultimately influence society's decision to prohibit or to impose strict controls on a drug's distribution and use
 - society must weigh the beneficial aspects of the drug against the ultimate harm its abuse will do to the individual and to society as a whole
 - many forms of drug dependence do not carry sufficient adverse social consequences to warrant their prohibition (think of such drug-containing substances as tobacco and coffee)
 - heavy and prolonged use of these drugs may eventually damage body organs and injure an individual's health, but there is no evidence that they result in antisocial behavior, even with prolonged or excessive use



- heavy and prolonged use of these drugs may eventually damage body organs and injure an individual's health, but there is no evidence that result in antisocial behavior, even with prolonged or excessive use
- society is therefore willing to accept widespread use of these substances
- the disastrous failure in the United States to prohibit the use of alcohol during the 1920s and the current debate on whether marijuana should be legalized emphasizes the delicate balance between individual desires and needs and society's concern with the consequences of drug abuse
 - this balance is continuously subject to change and re-evaluation by law enforcement and society as a whole



**SELF-CHECK
QUESTION!**

*Name a drug that does
not carry sufficient
adverse social
consequences:*

nicotine, caffeine

*What was the banning
of alcohol in the US in
the 1920s called?*

Prohibition