

HPRB 1710

Topics for the Third Exam

This study guide is an overview of the topics that you need to focus on for the exam. Everything from the textbook and the PowerPoint lectures and discussions from the class is a fair game for the exam. If it isn't listed on the study guide, I will not be testing you on it.

## **CHAPTER 10 (Drugs)**

Patterns of Illicit Drug Use

- Rates of illicit drug use vary by age, gender, race and ethnicity, education, employment status, and geographical region
- Among Americans aged 12 or older, more than **47 percent** report having used an illicit drug in their lifetime. The most commonly used drug is marijuana  
There is also substantial misuse of psychotherapeutics (prescription-type drugs)

What is a **drug**?

Substance other than food that affects structure or function of body through its chemical action

Types of drugs (illicit drugs-are unlawful to possess, manufacture, sell, or use)  
Drug misuse and abuse- use of prescription drugs for purposes other than what prescribed for in large amounts of it

Abuse – Use of substance in amounts, situations, or a manner such that it causes problems, or greatly increases the risk of problems, for the user or for others

### ***Effects of drug on body***

#### **Characteristics of the drug**

Chemical properties of the drug and its actions

#### **Characteristics of the person**

Age

Body weight and mass

Physical condition

Mood

Experience with the drug

Expectations

#### **Characteristics of the situation**

Environmental experience

### ***Routes of administration (know this well!)***

Oral (**\*\*\*SLOWEST\*\*\***)

**Injection:** Involves a hypodermic syringe to deliver drug through 3 methods:

**Intravenous injection-** into the bloodstream (**\*\*\*FASTEST\*\*\***)

**Intramuscular injection-** to deposit it into a muscle mass

**Subcutaneous injection-** to deposit it into the upper layer of the skin

**Inhalation**

**Application to mucous membranes-** results in rapid absorption since mucous membranes are moist and have a rich blood supply

**Application to skin**

### ***Drug dependence***

- **Tolerance-** is reduced sensitivity to the effects of the drug
- **Withdrawal-** symptoms are different for different drugs and lead to unpleasant feelings after not taking the drug

### ***Effect of drugs on the brain***

- **Pleasure and Reward circuit-**When a person starts taking a drug, the drug stimulates an unnaturally high levels of dopamine synthesis and release in the parts of brain involved in pleasure and reward circuit, which makes the person to experience euphoria.
- **Long-term effect on dopamine synthesis -** Over prolonged time, the brain reduces the dopamine synthesis as well as number of dopamine receptors. So, the same dose of the drug is not able to create the same level of pleasure that it used to. To get the same effect, the person starts increasing the drug dose (this is the concept of tolerance).

### ***DRUGS of abuse***

- **CNS stimulants (cocaine, amphetamines, MDMA, caffeine)**
  - Drugs that speed up activity in the brain and sympathetic nervous system
  - Effects similar to the 'fight or flight' reaction
  - May stimulate movement, fidgeting, talking, and produce intense feelings of euphoria and create a sense of well-being
- **CNS depressants (barbiturates and hypnotics(HAS NO ANTIDOTE- victim goes into seizure and dies), anti-anxiety drugs, Rohypnol and GHB)**
  - Slows down activity in the brain and sympathetic nervous system
  - Can be deadly if misused, especially when mixed with alcohol
  - CNS depressants carry a high risk of dependence
- **Opioids**
  - Natural and synthetic derivatives of opium
  - Long history of medical use for pain relief and treatment of diarrhea
  - Currently prescribed as pain relievers, anesthetics, antidiarrheal agents, and cough suppressants
    - Ex: Morphine, Heroin, Synthetic opioids (Brand names— OxyContin, Vicodin, Demerol, Percocet, and Percodan)
  - Produces feelings of pleasure and blocks sensation of pain

- **Hallucinogens (LSD, PCP)**
  - Also known as psychedelics
  - Alter perceptions and thinking in characteristic ways
  - Intensify and distort visual and auditory perceptions and produce hallucinations
- **Inhalants (paint thinner, gasoline, glue, spray can propellant)**
  - Breathable chemical vapors that alter consciousness, producing a state that resembles drunkenness
  - Active ingredients are all powerful toxins and carcinogens
  - The most significant negative effect for chronic users is widespread and long-lasting brain damage
- **Cannabinoids**
  - Marijuana:
    - Most widely used illicit drug in the U.S.
    - Derived from the hemp plant
    - Active ingredient is THC
    - Side effects include: mild euphoria, sedation, lethargy, short-term memory impairment, distorted sensory perceptions, distorted sense of time, impaired coordination, and an increase in heart rate

### ***Approaches to drug problem***

- **Supply Reduction strategies**
  - Interdiction: Interception of drugs before they get into the country
  - Pressure supplying countries to suppress production and exportation
  - Prevent domestic production and selling via law enforcement
- **Demand Reduction strategies**
  - Incarceration for drug-related crimes
  - Prevention strategies through education
    - Primary prevention
    - Secondary prevention
    - Tertiary prevention
  - Drug treatment programs
    - Narcotics Anonymous (NA)
- **Harm Reduction strategies**
  - Focuses on helping addicts reduce the harm associated with drug use, including:
    - Needle exchange programs
    - Drug substitute programs (ex: methadone instead of heroin)
    - Controlled availability
    - Medicalization
    - Decriminalization

### **SEXUAL HEALTH, REPRODUCTIVE CHOICES, STIs**