

Drugs- Use And Abuse

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What Are Drugs?

- Is a single chemical substance that constitutes the active ingredient in a medicine.
- If two more drugs are used together , the combined effect is more effective than each substance alone and this is called *synergism*.

Medications Usage

- **Curative:** To cure a patient from a specific disease
example :antibiotics to destroy bacterial infections.
- **Suppressive:** to suppress an unwanted symptom.
Example pain killers and anti inflammatory drugs.
- **Preventive:** to prevent an infection to occur like
vaccines or to prevent pregnancy as oral
contraceptives or to prevent heart attacks and stroke
like aspirin.
- **Recreational and feeling high:** Cocaine, LSD, heroin ,
nicotine and caffeine.

Overmedications

- People consume too many medications prescribed or over the counter (OTC) for avoidable reasons.
- Patients expect to receive a prescription for every visit to their doctor.
- Lifestyle, health and behavior can be effected by drugs we consume.

Routes of Drugs Administration

- **By mouth (drops, tablets, syrup, capsules or liquid mixture)**
- **Injection:**
 - Intravenous**
 - Intramuscular (in the muscle)**
 - Subcutaneous(under the skin)**
 - In spinal fluid(spinal anesthesia)**
 - In tendons and joints**
- **Inhalation**
- **Nasal spray**
- **Sublingual (under the tongue)**
- **Topical(ointments, eye drops, and patches)**
- **Suppositories**

Drugs Interactions

- Factors affecting drug potency and absorption
 1. Time intervals of taking the medication: timing is important in achieving a good tissue and blood level of the drug.
 2. Relation to food intake: some medications should be taken on an empty stomach to facilitate good absorption and others should be taken on a full stomach .
 3. Interaction with food and other medications: Many drugs should not be taken with other medications or special kind of food because of synergetic effect or negative interaction.

Effects Of Drugs Action

- Drug resistance
- Drug dependence
- Drug tolerance

Drug Resistance

- It is the germ that becomes resistant to the drug, not the patient.
- Resistance can only develop in the target of the medication.
- An antibiotic works its effects on bacterial germs, not on the person taking the antibiotic.
- Bacteria are able to teach each other how to be resistant to antibiotics.
- Germs can transmit resistance through the same species and even from species to species.

Drug Tolerance

- A condition that occurs when the body gets used to a medicine so that either more medicine is needed or different medicine is needed.
- Drug tolerance is basically the body's ability to adapt to the presence of a drug.

Drug Dependence

- Continuous need of the body on the drug. The person would not be able to perform unless he received the drug.
- Addiction and physical dependence often occur together.
- The World Health Organization (**WHO**) stress that drug dependence always includes "a **compulsion** to take the drug on a continuous or periodic basis".

Drug Dependence

- **Substance (drug) dependence** as consisting of *three* of the following criteria within a twelve month period:
- tolerance
- withdrawal symptoms
- increasing doses
- unsuccessful efforts to cut down intake of the substance
- a considerable amount of time spent obtaining or using the substance
- interference with important social, occupational or recreational activities
- continued use despite recognition of physical or psychological problems

Drug Dependence

- There are two types of drug dependence.
- **Physical dependence**
- Physical dependence is a condition in which the body has adjusted to the presence of a drug, resulting in clear symptoms of withdrawal when its use stops.
- An individual physically dependent on a drug requires that drug in order to function normally.

Drug Dependence

- **Psychological dependence**
- This kind of dependence is characterized by emotional and mental preoccupation with the drug's effects and by a persistent craving for it.
- The symptoms displayed are not physical symptoms. Craving seems to be the most common withdrawal symptom.

Signs and symptoms of drug ABUSE

- Continuing to use drugs even though you have health problems that are affected or caused by your drug use
- Irritability, anger, hostility, fatigue, agitation, anxiety, depression, psychosis (seeing or hearing things that are not there), lack of coordination, difficulty concentrating
- Scheduling your day around using drugs
- Focusing recreational activities around obtaining drugs, using drugs, or recovering from drug use
- Using drugs when alone

Commonly Abused Drugs

- Club Drugs (commonly used in bars, night clubs and parties):

Ectasy, metamphetamine and LCD.

- Stimulants :Cocaine
- Opioids :Heroin
- Pain Killers:Vicodin and Oxycontin , tramadol(tramal)
- Depressants (Benzodiazepine) :Valium and Xanax (tranquilizers)
- Cannabinoids :Marijuana and Hashish
- Drugs for increasing muscle mass: Anabolic steroids

Ecstasy

- **Street Names:**
XTC, X, Adam, hug, beans, love drug.
- A drug that has stimulant and psychodelic properties. It is taken orally as a capsule or tablet.
- Short-term effects include feelings of mental stimulation, emotional warmth, enhanced sensory perception, and increased physical energy. Adverse health effects can include nausea, chills, sweating, teeth clenching, muscle cramping, and blurred vision.
- In 2009, 2.8 million Americans age 12 and older had abused MDMA at least once in the year prior to being surveyed.

LSD (Acid)

- One of the strongest mood-changing drugs. It is sold as tablets, capsules, liquid, or on absorbent paper.
- Effects: Unpredictable psychological effects. With large enough doses, users experience delusions and visual hallucinations. Physical effects include increased body temperature, heart rate, and blood pressure; sleeplessness; and loss of appetite.
- In 2009, 779,000 Americans age 12 and older had abused LSD at least once in the year prior to being surveyed.

Signs and symptoms of Cannabis use (Marijuana and Hashish)

- Heightened visual and auditory perceptions and increased sensitivity in taste
- Increased appetite
- Problems with memory, difficulty concentrating, paranoid thinking
- Decreased coordination, slowed reaction time
- Bloodshot eyes, elevated blood pressure, increased heart rate .
- In 2009, 28.5 million Americans age 12 and older had abused marijuana at least once in the year prior to being surveyed.

Short and Long Term Effects of Heroin Abuse

- **Short-Term Effects:**
- “Rush”
- Depressed respiration
- Clouded mental functioning
- Nausea and vomiting
- Suppression of pain
- Spontaneous abortion

Short and Long Term Effects of Heroin Abuse

- **Long-Term Effects:**
- Infectious diseases (HIV/AIDS and Hepatitis)
- Collapsed veins
- Bacterial infections
- Abscesses
- Infection of heart lining and valves
- Arthritis and other rheumatologic problems
- In 2009, 605,000 Americans age 12 and older had abused heroin at least once in the year prior to being surveyed.

Steroids (Anabolic)

- Mostly synthetic substances similar to the male sex hormone testosterone. Some people, especially athletes, abuse anabolic steroids to enhance performance and appearance. Abuse of anabolic steroids can lead to serious health problems, some of which are irreversible like *impotence*.
- In males, adverse effects may include shrinking of the testicles and breast development.
- In females, adverse effects may include growth of facial hair, menstrual changes, and deepened voice.
- In some rare cases liver and kidney tumors or even cancer may develop.