**ALCOHOLISM AND SUBSTANCE RELATED DISORDERS**

Why do we need to study drug use?
1- We take aspirin to reduce headache.
2- We take an antibiotic to fight an infection.
3- We take a tranquilizer to calm ourselves after facing a trauma.
4- We drink coffee or tea in the morning to get going.
5- Smoke a cigarette to relax our nerves.

Examples
1- Sherlock Holmes, a famous detective, a fictional character who took drug stimulants to keep himself alert.
2- Sportsmen take drugs to enhance their performance but in the long run their body develops drug dependence.

The term drug applies to any substance other than food that changes our bodily and mental functioning. There are many substances that are capable of harming the body or adversely affecting the behavior and mood. The misuse of drugs has become one of the most disabling problems of the society. Drug misuse may lead to a temporary mental syndrome such as intoxication but chronic excessive use of drugs can lead to a substance use disorder.

Substance use disorder can take two forms
- Substance abuse
- Substance dependence

1- Substance abuse
A pattern in which people rely heavily on a drug and they structure their lives around a drug.

2- Substance dependence
In which people show all symptoms of substance abuse plus physical dependence on the drug.

It is believed that approximately 7% of all adults in United States currently display some form of substance use disorder.

Substance Dependence, the more severe in these two forms, refers to a pattern of repeated self-administration of increased amounts of the drug to achieve intoxication; withdrawal, unpleasant physical and psychological effects that the person experiences when he or she tries to stop taking the drug; and compulsive drug-taking behavior.

**The Concept of Substance Dependence**
Many psychological features or problems are associated with dependence on chemical substances. One such feature involves craving. Craving is a forceful urge to use drugs, but the relationship between craving and drug use is actually very complex. People who are dependent on drugs often say that they take the drug to control how they are feeling. Some clinicians refer to this condition as psychological dependence. As the problem progresses, it is not unusual for the person who abuses drugs to try to stop. Unfortunately, efforts at self-control are typically short-lived and usually failed. Tolerance and withdrawal are usually interpreted as evidence of physiological dependence.

The explanation for drug abuse can be done by using the following perspectives
1- Biological
2- Psychodynamic
3- Behavioral
4- Socio-cultural

- The biological view or perspective suggests that that people inherit a predisposition to drug addiction based on their research of twin and adoptee studies.
- The psycho dynamic perspective view that people who turn to drugs have an inordinate dependency needs and they turn to drugs.
- Behavioral perspective suggests that drug use is reinforced because it reduces tension and raises spirits.
- Socio-cultural perspective suggests that the people most likely to develop a pattern of drug abuse are those where societies create stress and their families tolerate drug abuse.

**Integrated Systems**

- We can conclude that alcoholism and other forms of addiction clearly result from an interaction among several types of systems.
- Various social, psychological, and biological factors influence the person’s behavior at each stage in the cycle, from initial use of the drug through the eventual onset of tolerance and withdrawal.

The drugs that we will focus in this chapter fall into three categories

1- **Depressants** are substances which slow the activity of central nervous system they include
   - Alcohol
   - Sedative-Hypnotic drugs
   - Opioids.

2- **Stimulants** are substances that increase the activity of the central nervous system, resulting in the increased blood pressure, heart rate, intensified activity, thought processes and alertness.
   The important stimulants are
   - Cocaine
   - Amphetamines
   - Nicotine
   - Caffeine

3- **Hallucinogens** are substances that cause changes primarily in sensory perception.
   They include
   - LSD
   - Cannabis drugs

1- **Depressants**
   a- **Alcohol**
   - Alcohol affects virtually every organ and system in the body.
   - After alcohol has been ingested, it is absorbed through membranes in the stomach, small intestine, and colon.
   - The rate at which it is absorbed is influenced by many variables, including the concentration of alcohol in the beverage, the volume and rate of consumption, and the presence of food in the digestive system.
   - After it is absorbed, alcohol is distributed to all the body’s organ systems.
   - Almost all the alcohol that a person consumes is eventually broken down or metabolized in the liver.
   - According to DSM-IV-TR, the symptoms of alcohol intoxication include slurred speech, lack of coordination, an unsteady gait, nystagmus (involuntary to-and-fro movement of the eyeballs induced when the person looks upward or to the side), impaired attention or memory, and stupor or coma.
The prolonged use and abuse of alcohol can have a devastating impact on many areas of a person’s life.

- The disruption of relationships with family and friends can be especially painful.
- Regular heavy use of alcohol is also likely to interfere with job performance.
- Many heavy drinkers encounter problems with legal authorities.
- On a biological level, prolonged exposure to high levels of alcohol can disrupt the functions of several important organ systems, especially the liver, pancreas, gastrointestinal system, cardiovascular system, and endocrine system.

In fact, over an extended period of time, alcohol dependence has more negative health consequences than abuse of any other drug, with the exception of nicotine.

The misuse of alcohol leads to an enormous number of severe injuries and premature deaths in every region of the world.

b- Sedative-hypnotic Drugs

This group of depressants includes Barbiturates and Benzodiazepines.

**Barbiturates**

- They relax the muscles
- Produce feeling of well being and
- They are used to induce sleep.

Example

Marilyn Monroe’s death is attributed to excessive use of alcohol and barbiturates.

**Benzodiazepines or Antianxiety drugs**

They reduce anxiety.

Example: valium.

c- Opioids

- These include Opium and drugs derived from it such as heroine and morphine.
- Opium is a substance derived from the sap of the opium poppy seed.
- It was widely used in the past because of its ability to reduce both physical and emotional pain.
- Morphine, its name is derived from Morpheus the Greek god of sleep.
- It is an effective pain reliever and helps to put person to sleep.
- In USA its use accelerated during civil war when wounded soldiers received its injections but it soon became clear that its repeated administrations lead to addiction.

**Heroin**

- Morphine was converted into a new pain reliever called heroine for years heroine was viewed as the wonder drug.
- Used as medicine but due to its addictive qualities it is illegal in USA under all circumstances.
- The various Opioid drugs are known collectively as narcotics.
- Narcotics can be smoked, inhaled and injected.
- Worries, tensions and pain subside but the person becomes unconcerned about the food and bodily needs.
- The person becomes lazy and lethargic.

2- Stimulants

Stimulants are substances that increase the activity of the central nervous system, resulting in the increased blood pressure, heart rate, intensified activity, thought processes and alertness.

Some important stimulants are

- **Cocaine**
- **Amphetamines**
- **Nicotine tobacco products** such as cigarettes.
- **Caffeine** such as in coffee, chocolate and many soft drinks.

**a- Cocaine**
Cocaine is the central active ingredient of the coca plant it is the most powerful natural stimulant. People use to chew coca leaves for energy and alertness.

- Processed cocaine is an odorless, fluffy white powder.
- It can be inhaled or injected
- Smoking coca base in pipe or cigarette.
- Serious side effects the users can become irritable, depressed, paranoid and unable to control their emotions.
- It can even create fatal heart problems heart beating rapidly and irregularly.
- It can even cause the breathing function and heart function to come to sudden halt.

b- Amphetamines
- Amphetamines are stimulant drugs. They were first used in treatment of asthma.
- These drugs soon became popular amongst people trying to loose weight.
- Athletes seeking an extra bust of energy.
- Soldiers, truck drivers and pilots trying to stay awake.
- Students studying for exams throughout night.
- Amphetamines are most often taken in pill or capsule or injection form.
- People using amphetamines reduce their appetite and weight.

c- Nicotine
- Nicotine is the active ingredient in tobacco, which is its only natural source.
- Nicotine is almost never taken in its pure form because it can be toxic.
- The effects of nicotine on the peripheral nervous system include increases in heart rate and blood pressure.

d- Caffeine
- It is called the gentle stimulant used by some 90% of the people.
- It is found in tea, coffee and cola drinks.
- It elevates mood
- Reduces fatigue
- When denied it causes headaches, drowsiness and unpleasant mood.
- In the central nervous system, nicotine has pervasive effects on a number of neurotransmitter systems.
- Nicotine has a complex influence on subjective mood states.
- Nicotine is one of the most harmful and deadly addicting drugs.

3- Hallucinogens
- Hallucinogens are substances that cause changes primarily in sensory perception.
- The sight, sound, smell, feelings and even taste are distorted sometimes in dramatic ways when under the effect of Hallucinogens.
- They include
  a- LSD
  b- Cannabis drugs

- Lysergic acid diethylamide or LSD
  Lysergic acid diethylamide or LSD it is a naturally occurring derivates of the grain fungus but it can be synthetically produced. It causes a profound perceptual changes and hallucinations.

b- Cannabis
- Cannabis is a hemp plant from where we get hashish and marijuana.
- Both impair motor and cognitive functions.
- It contributes to lung disease.
Treatment for substance abuse disorders

1- Biological therapy
   a- Detoxification
      • Alcoholism and related forms of drug abuse are chronic conditions and their treatment is typically
        accomplished in a sequence of stages, beginning with a brief period of detoxification—the
        removal of a drug on which a person has become dependent—for 3 to 6 weeks.
   b- Medications
      • Following the process of detoxification, treatment efforts are aimed at helping the person to
        maintain a state of remission.
      • Several forms of medication are used to help the person refrain from drinking.
      • If a person who is taking medicine consumes even a small amount of alcohol, he or she will
        become severely ill.

2- Insight therapy
   • Insight therapies try to help the clients become aware of and address the psychological factors that
     contribute to their pattern of drug use.

3- Behavioral Techniques
   a- Cognitive Behavior Therapy
      • Cognitive behavior therapy teaches people to identify and respond more appropriately to
        circumstances that regularly precipitate drug abuse.
      • One element of cognitive behavior therapy involves training in the use of social skills, which might
        be used to resist pressures to drink heavily.
      • Most people who have been addicted to a drug will say that quitting is the easy part of treatment.
      • The more difficult challenge is to maintain this change after it has been accomplished.
   b- Relapse Prevention Model
      • Alan Marlatt, a clinical psychologist at the University of Washington, and his colleagues have
        proposed a cognitive behavioral view of the relapse process.
      • The relapse prevention model addresses several important issues that confront the addict in trying
        to deal with the challenges of life without drugs.
      • Another important feature of the relapse prevention model is concerned with the guilt and
        perceived loss of control that the person feels whenever he or she slips and finds himself or herself
        having a drink (or a cigarette or whatever drug is involved) after an extended period of absence.
   c- Aversive Therapy
      Aversive conditioning in which an unpleasant stimulus is paired with the drug that the person is
      taking.

4- Self-Help Groups:
   Alcoholics Anonymous
• Alcoholics Anonymous (AA) is maintained by alcohol abusers for the sole purpose of helping other people who abuse alcohol become and remain sober.
• AA is not officially associated with any other form of treatment or professional organization.
• The viewpoint espoused by AA is fundamentally spiritual in nature.
• In this 12 step procedure in which the first step is the person must acknowledge that he or she is powerless over alcohol and unable to manage his or her drinking.
• The remaining steps involve spiritual and interpersonal matters such as accepting “a Power greater than ourselves” that can provide the person with direction; recognizing and accepting personal weaknesses; and making amends for previous errors, especially instances in which the person’s drinking caused hardships for other people.

5- Therapeutic communities
• Therapeutic communities or residential therapeutic communities where addicts live, work and socialize in a drug free environment.
• There is social and cultural disapproval and unacceptability for drinking, smoking and use of drugs because it has become one of the most disabling problems of the society.
• Just say no to drugs.
• It feels good.
• YOU can get help in saying no to drugs from your own self, family, friends and others.