

5.4.4 Side Effects of Drugs on the Nervous and Endocrine Systems

Drugs are substances that change the normal functioning of the body. Some drugs are used in medicine to treat diseases, while others are abused and can damage the nervous and endocrine systems. Drug abuse is a major health problem that affects physical, mental, and social well-being.

Definition of Drug Abuse

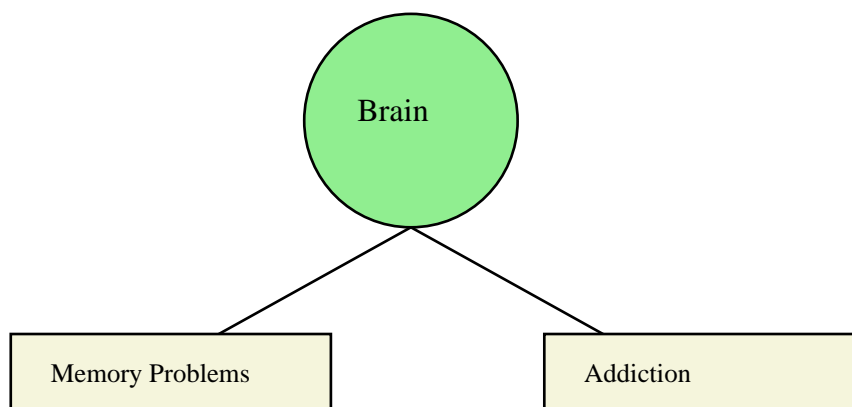
Drug abuse is the harmful or excessive use of drugs without medical supervision. Abused drugs interfere with normal body functions and may lead to addiction.

Effects of Drugs on the Nervous System

The nervous system controls body activities through nerve impulses. Drugs can interfere with communication between neurons and affect brain function.

Common effects of drugs on the nervous system include: Reduced concentration and memory. Poor coordination and reflexes. Changes in mood and behavior. Hallucinations and confusion. Addiction and dependence.

Diagram of Drug Effects on Brain Function



Effects of Drugs on the Endocrine System

Drugs may alter hormone production and affect endocrine glands. Hormonal imbalance can disturb growth, reproduction, metabolism, and emotional stability.

Reduced hormone secretion. Disturbance of reproductive hormones. Changes in growth and development.
Increased stress hormone production. Disruption of insulin regulation.

Commonly Abused Drugs

Several substances are commonly abused by young people and adults.

Drug	Main Effect
Alcohol	Depresses brain activity
Tobacco	Damages lungs and blood vessels
Cannabis	Affects memory and thinking
Cocaine	Stimulates nervous system
Khat	Causes excitement and dependence

Addiction and Dependence

Addiction is a condition in which a person cannot stop using a drug despite harmful effects. Repeated drug use changes the brain and body.

Signs of addiction include: Strong desire to use drugs. Difficulty controlling drug use. Withdrawal symptoms when not using drugs. Neglect of school, work, or family duties. Increased tolerance to drugs.

Social and Economic Effects of Drug Abuse

Drug abuse affects not only individuals but also families and communities.

Poor academic performance. Family conflict. Unemployment. Increased crime. Health care costs.

Prevention of Drug Abuse

Drug abuse can be prevented through education, awareness, and healthy lifestyles.

Avoid peer pressure. Participate in sports and social activities. Seek counseling when needed. Follow medical advice when using drugs. Educate young people about dangers of drugs.

Important Notes

- Drug abuse harms the nervous and endocrine systems.
- Drugs can interfere with brain function and hormones.
- Addiction causes dependence on drugs.
- Drug abuse affects both health and society.
- Prevention and education are important.

Summary

Drug abuse affects the normal functioning of the nervous and endocrine systems. It can lead to addiction, hormonal imbalance, poor coordination, and social problems. Commonly abused drugs include alcohol, tobacco, cannabis, cocaine, and khat. Education and healthy choices are important in preventing drug abuse.

Review Questions and Answers

1. What is drug abuse?

Drug abuse is the harmful use of drugs without medical supervision.

2. Mention one effect of drugs on the nervous system.

Poor memory or poor coordination.

3. How do drugs affect the endocrine system?

They may disturb hormone production.

4. What is addiction?

Addiction is dependence on drugs.

5. Mention one commonly abused drug.

Alcohol, cannabis, or khat.

6. Give one method of preventing drug abuse.

Avoid peer pressure and educate young people.

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