

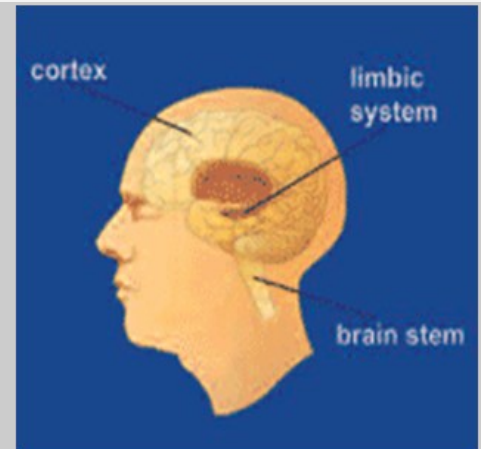


Drug Demand Reduction Quarterly Newsletter

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Brain and Addiction:

When drugs enter the brain, they can interrupt the work and actually change how the brain performs its jobs. These changes are what lead to compulsive drug use, the hallmark of addiction. Drugs of abuse affect three primary areas of the brain: Brain Stem is in charge of all of the functions our body needs to stay alive. The limbic system links together a bunch of brain structures that control our emotional responses. The cerebral cortex powers our ability to think, plan, solve problems, and make decisions.



What Do Drugs Do to the Brain?

Drugs are chemicals. They work in the brain by tapping into its communication system and interfering with the way nerve cells normally send, receive, and process information. Different drugs – because of their chemical structures – work differently. In fact, some drugs can change the brain in ways that last long after the person has stopped taking drugs, maybe even permanently. This is more likely when a drug is taken repeatedly.

Some drugs, such as marijuana and heroin, activate neurons because their chemical structure mimics that of a natural neurotransmitter. In fact, these drugs can “fool” receptors, can lock onto them, and can activate the nerve cells. The problem is, they don't work the same way as a natural neurotransmitter, so the neurons wind up sending abnormal messages through the brain. Other drugs, such as amphetamine, cause nerve cells to release excessive amounts of natural neurotransmitters or prevent the normal recycling of these brain chemicals (cocaine and amphetamine). This leads to an exaggerated message in the brain, ultimately wreaking havoc on the communication channels. The difference in effect is like the difference between someone whispering in your ear versus someone shouting in a microphone.

All drugs of abuse – nicotine, cocaine, marijuana, and others – affect the brain's “reward” circuit, which is part of the limbic system. Normally, the reward circuit responds to pleasurable experiences by releasing the neurotransmitter dopamine, which creates feelings of pleasure, and tells the brain that this is something important – pay attention and remember it. Drugs hijack this system, causing unusually large amounts of dopamine to flood the system. Sometimes, this lasts for a long time compared to what happens when a natural reward stimulates dopamine. This flood of dopamine is what causes the “high” or euphoria associated with drug abuse.



What is National Drug Facts Week?

National Drug Facts Week (NDFW) (25 -31 Jan 16) is a health observance week that aims to shatter the myths about drugs and drug abuse.

Signs and Symptoms of Drug Use Physical Signs

- Loss of appetite, increase in appetite, any changes in eating habits, unexplained weight loss or gain
- Slowed or staggering walk; poor physical coordination
- Inability to sleep, awake at unusual times, unusual laziness
- Red, watery eyes; pupils larger or smaller than usual; blank stare
- Cold, sweaty palms; shaking hands
- Puffy face, blushing or paleness
- Smell of substance on breath, body or clothes
- Extreme hyperactivity; excessive talkativeness
- Runny nose; hacking cough
- Needle marks on lower arm, leg or bottom of feet
- Nausea, vomiting or excessive sweating

Behavioral Signs

- Change in overall attitude/personality with no other identifiable cause
- Changes in friends; new hang-outs; sudden avoidance of old crowd
- Change in activities or hobbies
- Drop in grades at school or performance at work; skips school or is late for school
- Change in habits at home; loss of interest in family and family activities
- Difficulty in paying attention; forgetfulness
- General lack of motivation, energy
- Moodiness, irritability, or nervousness.
- Silliness or giddiness
- Paranoia
- Excessive need for privacy; unreachable.
- Secretive or suspicious behavior
- Car accidents
- Chronic dishonesty

Drug Specific Symptoms:

Marijuana: Glassy, red eyes; loud talking and inappropriate laughter followed by sleepiness; a sweet burnt scent; loss of interest, motivation; weight gain or loss. **Alcohol:** Clumsiness; difficulty walking; slurred speech; sleepiness; poor judgment; dilated pupils; possession of a false ID card. **Depressants:** (including barbiturates and tranquilizers) Seems drunk as if from alcohol but without the associated odor of alcohol; difficulty concentrating; clumsiness; poor judgment; slurred speech; sleepiness; contracted pupils. **Stimulants:** Hyperactivity; euphoria; irritability; anxiety; excessive talking followed by depression or excessive sleeping at odd times; may go long periods of time without eating or sleeping; dilated pupils; weight loss; dry mouth and nose. **Inhalants:** (Glues, aerosols, and vapors) Watery eyes; impaired vision, memory and thought; secretions from the nose or rashes around the nose and mouth; headaches and nausea; appearance of intoxication; drowsiness; poor muscle control; changes in appetite; anxiety; irritability; an unusual number of spray cans in the trash. **Hallucinogens:** Dilated pupils; bizarre and irrational behavior including paranoia, aggression, hallucinations; mood swings; detachment from people; absorption with self or other objects, slurred speech; confusion. **Heroin:** Needle marks; sleeping at unusual times; sweating; vomiting; coughing and sniffing; twitching; loss of appetite; contracted pupils; no response of pupils to light. **Tobacco/Nicotine:** Smell of tobacco; stained fingers or teeth.