



Substance and Behavioral Addictions

Addicted America



Drugs An estimated **3.6 million** people are dependent on drugs. Each day some 8,000 people try them for the first time; 700,000 more are being treated for addiction. Cocaine, marijuana and prescription pain relievers are the most abused.



Tobacco There are about **71.5 million** users of tobacco products in the U.S. Some **23.4%** of men and **18.5%** of women are cigarette smokers, with cigarette use lowest in Western states and highest in the Midwest; 44.3% of young adults ages 18 to 25 use tobacco, the highest rate for any age group.



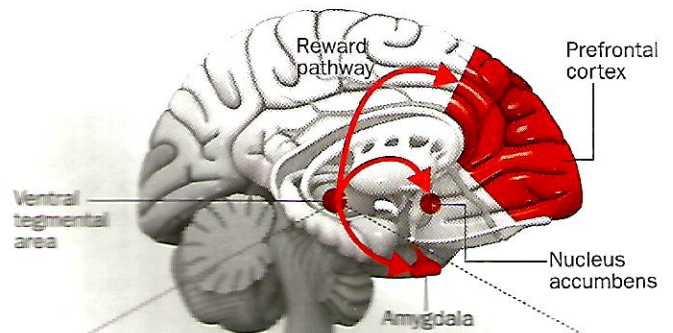
Caffeine It's the most widely used mood-altering drug in the world and is routinely ingested by about **80% to 90%** of Americans, primarily through soda and coffee. A daily brewed cup of joe, with 100 mg of caffeine, can lead to physical dependence. Withdrawal symptoms are experienced by **40% to 70%** of those trying to stop.



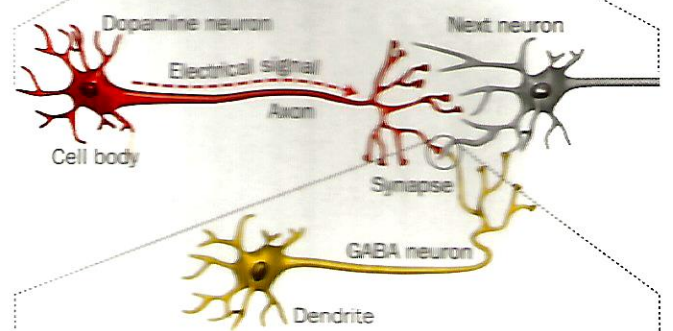
Food An addiction to food affects as many as **4 million** U.S. adults and is strongly linked to depression. About 15% of mildly obese people are compulsive eaters. Binge eating, thought to be the most common eating disorder in America, is considered bulimia when a person purges to lose weight.

What happens in the brain

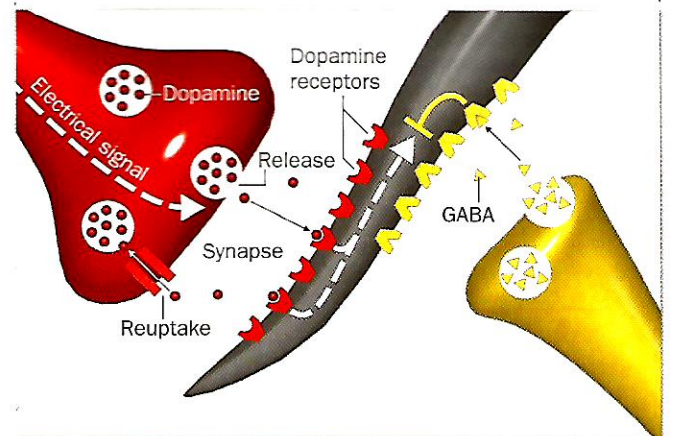
1. We feel good when neurons in the reward pathway release a neurotransmitter called dopamine into the nucleus accumbens and other brain areas.



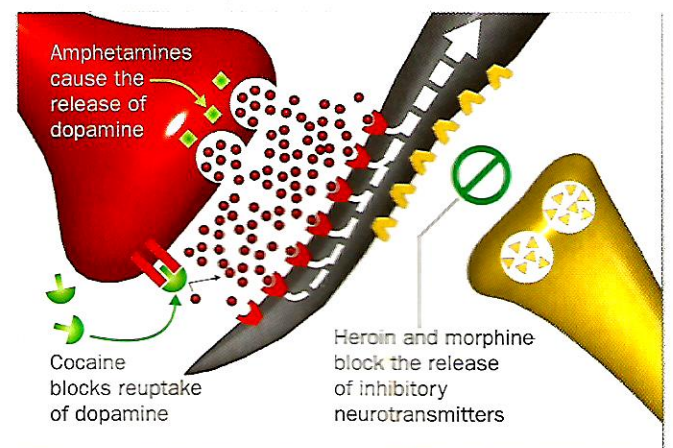
2. Neurons in the reward pathway communicate by sending electrical signals down their axons. The signal is passed to the next neuron across a small gap called the synapse.



3. Dopamine is released into the synapse, crosses to the next neuron and binds to receptors, providing a jolt of pleasure. Excess dopamine is taken back up by the sending cell. Other nerve cells release GABA, an inhibitory neurotransmitter that works to prevent the receptor nerve from being overstimulated.



4. Addictive substances increase the amount of dopamine in the synapse, heightening the feeling of pleasure. Addiction occurs when repeated drug use disrupts the normal balance of brain circuits that control rewards, memory and cognition, ultimately leading to compulsive drug taking.



Source: National Institute on Drug Abuse (NIH)
TIME Diagram by Kristina Dell, Meg Massey and Joe Lertola

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