SUBSTANCE USE DISORDERS

How Drugs Highjack the Brain

The brain is a communication network containing billions of neurons that pass messages back and forth, coordinating and regulating everything we feel, think, and do.

Drugs target the limbic system, interfere with the way neurons exchange information, and overstimulate it with dopamine; the neurotransmitter that regulates movement, emotions, and feelings of pleasure.

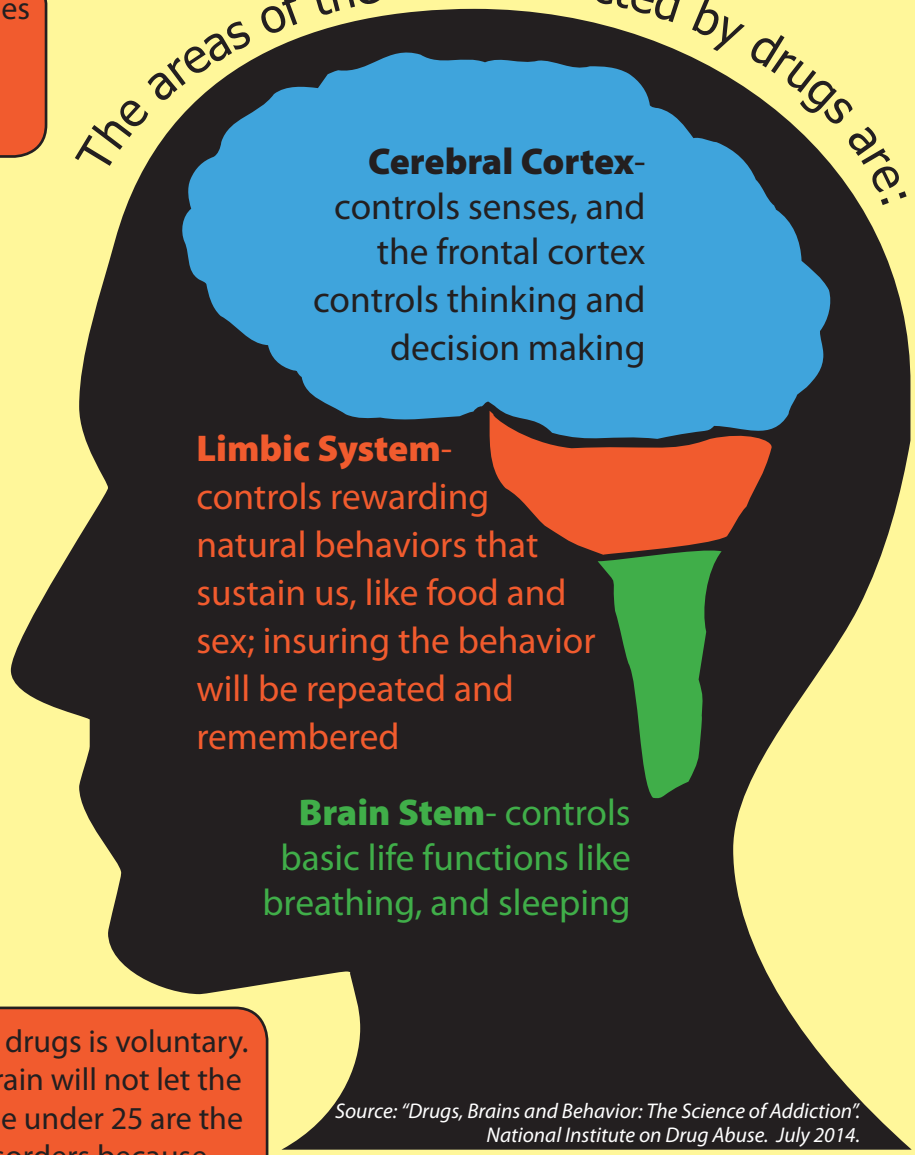
Drugs can release 2-10 times the amount of dopamine and can last much longer than natural rewards.

The brain adjusts to these surges by producing less dopamine and receptors. The reward circuit of a person that misuses drugs becomes abnormally low, reducing the person's ability to experience any pleasure, and reinforcing the continuation of drug use.

Now the person needs to keep taking drugs in increased amounts and frequency to bring dopamine functions up to normal; perpetuating the cycle and developing tolerance and dependence.

The initial decision to take drugs is voluntary. With continued use, the brain will not let the person "just say no". People under 25 are the most susceptible to substance use disorders because their frontal cortex, or brake system, isn't fully developed.

The areas of the brain affected by drugs are:



Source: "Drugs, Brains and Behavior: The Science of Addiction". National Institute on Drug Abuse. July 2014.

For more information, contact ACT Missouri at **573-635-6669** or **info@actmissouri.org**.