# STIMULANTS



A class of drugs that *speeds up* signals between the brain and body. Individuals who use stimulants feel more alert, awake, and energetic.

#### Common stimulants include:

- caffeine
- nicotine (found in commercial tobacco)
- amphetamines
- cocaine

**Too much** can cause anxiety, panic, headaches, stomach cramps, aggression, paranoia, and seizures.

Illicit behaviors involve snorting, swallowing, smoking or injecting harmful stimulants where long-term use results in adverse effects.

Alcohol and Drug Foundation, 2021.; Brands, B., Sproule, B., & Marshman, J. (Eds.). (1998). Drugs & Drug Abuse, 3rd Ed., Ontario: Addiction Research Foundation;



## **METHAMPHETAMINE**

- stimulant
- man-made
- smoking produces a long-lasting high
- 50% of the drug is removed from the body in 12 hours
- increases dopamine release and blocks dopamine re-uptake
- limited medical use for ADHD,



## COCAINE

- stimulant and local anesthetic
- plant-derived
- smoking produces a brief high
- 50% of drug is removed from the body within 1 hour
- blocks dopamine re-uptake
- limited medical use as a local anesthetic in some surgical

### **STIMULANTS ON THE ADDICTION PROCESS**

#### **Binge/Intoxication**

Stimulants will make the prefrontal cortex smaller and more sensitive to stress signals. An intense drive to use is felt along with a desire to escape the feelings of worthlessness. Individuals will make the decision to use stimulants. Individuals are sensitive to cues/triggers.

Stimulants will impact the basal ganglia in the brain to release dopamine rather than storing it away. Naturally occurring opioids in brain will indirectly be released where feelings of energy and strength are felt. The brain is trained to think this is rewarding.

Withdrawal/

**Bad Mood** 

#### Preoccupation/ Anticipation

Those who use amphetamines will struggle to get out of this stage--"the crash". Individuals are irritable and angry, lack motivation due to less dopamine stimulating the amygdala, and will have negative moods.



For More Information: Rocky Mountain Tribal Leaders Council Tribal Opioid Response Project 2929 3rd Avenue North, Suite 300 406.252.2550 www.rmtlc.org



eferences: Adapted from TOR: Stimulants on the Brain webinar from speaker Dr. Melinda Campopiano, ATTC Network, date: May 26, 2021 and U.S. Department of Health and Human Services (HHS), Office of the Surgeon General, Facing ddiction in America: The Surgeon General's Report on Alcohol, Drugs, and and Health. Washington, DC: HHS, November 2016.