I, Adam Barrett, DO NOT have a financial interest, arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.

Session Objectives

At the end of this session, the attendee should be able to:

- List and describe the most commonly used Central Nervous System Stimulants.
- Discuss and contrast the difference between Amphetamines and Methamphetamine.
- List the common signs and symptoms of Methamphetamine use.
- Discuss the signs and symptoms of withdrawal from Central Nervous System Stimulants in general and Methamphetamine specifically.
Central Nervous System Stimulants

• CNS stimulants are a class of drugs that, when ingested, stimulate the brain, speeding up both mental and physical processes.

• This increase in energy, improve attention and alertness, and elevate blood pressure, heart rate and respiratory rate. They increase the rate of speech, motor activity, improve confidence and concentration, and lessen inhibitions.

• The intensity of CNS stimulants increases the level of drive or focus to an uncommon degree. In the brain, such as dopamine, monophosphate or serotonin, may also have other effects, depending on the actual drug. For example, dopamine positively increases mood levels; lowering is evidence that we feel sad.

• When prescribed, the medical use, CNS stimulants can be used to treat depression, attention deficit hyperactivity disorder (ADHD), and narcolepsy.

• Prescription stimulants are medically taken in pill form. However, they can also be snorted, injected into veins by people who misuse them.

• CNS stimulants are often prescribed to improve mental performance. They do this by increasing activity in the brain region known to affect memory, attention, and motor skills.

Central Nervous System Stimulants

• CNS stimulants are classified into two categories:

  • Stimulating Target, Monoamine Stimulation

  • Norepinephrine, Hypothalamus, Dopaminergic Stimulation

• There are differences in the length of time they act in the body and how quickly they start to work. Some CNS stimulants have been modified to improve their effect. For example, a methylated group was added to the xenamfetamine, which took longer than amphetamine, produces the brain better, and in fewer steps to determine the effect the brain.

• Problems of a prescription stimulants:

  • Using prescription or dose other than prescribed

  • Taking prescription

  • Taking prescription drugs

• Other means of a prescription stimulants, which can be found the medicine in its name, is to see duodenal or perirectal. They are taken orally, by mouth, the same way as the pill. Some CNS stimulants can be taken by injection, as with amphetamine.

• CNS stimulants include the variety of CNS stimulants that are listed as one part of the category.

Introduction: Central Nervous System Stimulants

Statistical Trends in the United States

• The National Institute on Drug Abuse (NIDA) reports that survey approximately 15 people per 100,000 were receiving care for a medication addiction or abuse involving stimulants.

• As of 2019, the survey indicated that 8.7% of the American population aged 12 and older had had medication problems at least once.

• The United States' government reported that 135 million people used stimulants in 2018, and of these, 35 million used stimulants to treat ADHD.

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• Drug treatment admissions due to methamphetamine and amphetamines abuse tripled in the United States from 2% in 1992 to 6% in 2015.

• Some states have much higher percentages such as Hawaii, where 42% of the people seeking help for drug or alcohol abuse in 2007 were self-professed as drug users.
What is Methamphetamine?

- Methamphetamine is a highly addictive stimulant drug that affects the central nervous system. It is typically used in powder or pill form and can be ingested orally, smoked, snorted, bumped, or injected. Methamphetamine is known as meth, blue, ice, speed, and crystal, and tina, among other names.

- The term amphetamine has been used broadly to refer to a group of chemicals with similar stimulating properties, and methamphetamine is included in this group. According to the National Institute on Drug Abuse (NIDA), “Methamphetamine differs from amphetamine in that at comparable doses, much smaller amounts of the drug get into the brain, making it a more potent stimulant.”

Ingredients Found in Methamphetamine

- Anhydrous Ammonia: anhydrous ammonia is found in fertilizer and some cleaners. Mixing it with other chemicals creates a toxic gas.
- Hydrochloric Acid: a corrosive acid used to make plastic. It is so corrosive it can dissolve rubber.
- Sodium Hydroxide: an alkaline liquid used to make soaps. It is highly caustic and can cause burns to the skin, is highly found on matchboxes, in road flares and other explosives. It is highly flammable.
- Acetone: a highly flammable solvent used to remove ink, paint or toilet cleaner. It is corrosive and can also burn the skin.
- Lye: sodium hydroxide, or lye: lye: lye: lye: lye: lye: lye: lye:
- Pseudoephedrine: a decongestant typically used as a nasal decongestant or to treat seasonal allergies. According to the National Library of Medicine, side effects of this drug include tremors, sweating and increased heart rate and blood pressure.
- Amphetamine: a central nervous system stimulant that increases heart rate and blood pressure.
- Dopamine: a neurotransmitter involved in the reward system of the brain.
- Dopamine, DA: dopamine is found in the brain, and is involved in the reward system of the brain.
- Serotonin: 5-HT: serotonin is involved in mood and behavior, and is involved in the reward system of the brain.
Signs of Methamphetamine Use Disorder

- Hallucinations (auditory and visual)
- SI/HI
- Body Tremors
- Dry Mouth (lip smacking)
- Dry Skin
- Changes in behavior
- Loss of appetite
- Skin Sores/Breakdowns
- Loss of sleep
- Loss of appetite
- Increased heart rate
- Increased blood pressure
- High blood pressure
- Anxiety
- Depression
- Aggression
- Anxiety
- Panic
- Insomnia

Injecting: Often referred to as "pointing" or "slamming."

The Impact of Chronic Methamphetamine use on Physical Appearance & Dental Health

Before

After

Produced by: Adam C. Barrett, M.Ed., BSN, RN
Produced for: The American Society of Addictions Nursing
In Conclusion

In conclusion, consider the following points:

- Amphetamine, including Methamphetamine Use Disorder/Addiction is a serious problem for our society and it is a growing area.
- Amphetamine, including Methamphetamine Use Disorder/Addiction is a stress-related, neurochemical reaction allowing for the stimulation of pathways in the brain via the neurotransmitter dopamine.
- People with substance use, including Methamphetamine Use Disorder/Addiction are at risk for "JUST STOP!" however this condition can be treated.
- Understanding that some risk factors can provide great insight into personal risk when it comes to the environmental use of stimulants and other substances of abuse.
- Individuals being treated foramphetamine, including Methamphetamine Use Disorder/Addiction are at risk for "JUST STOP!" however this condition can be treated.

Nursing Considerations – Discussion

- Patient at risk for: 
- Patient at risk for:
Questions?

For any additional questions, comment, or suggestions, I can be reached at: noaddictions@gmail.com

Please put "Webinar on Stimulants" in subject line.

Thank you for your time and attention!

References


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Thank you for your time and attention!