# Study Questions: Chapter 7

## 7.1 Xanthines & Methylxanthines-The METHYL Group

Resources:

* 7.1 Xanthines & Methylxanthines—The METHYL Group section of Drugs of Use and Abuse, Hopla, J. and Hunter, C., 2024.
* Article: How To Quit Caffeine Without a Headache, The Cleveland Clinic—Health Essentials, 2023.

Study Questions:

* What is the importance of understanding chemistry when studying substance use and addiction?
* What are the different examples of methylxanthines and how do they differ and compare to each other?
* Caffeine effects which neurotransmitter related to sleep?
* What are common sources of caffeine, theobromine, and theophylline?
* What is caffeinism?
* Caffeinism occurs when daily caffeine intake is what?
* What are the main symptoms of caffeinism?
* What is the difference between caffeine dependence and caffeine withdrawal?
* What are the regulatory distinctions between soft drinks and energy drinks?

## Lecture Material-Stimulants II: Methylxanthines

Resources:

* Lecture Material—Stimulants II—Methylxanthines

Study Questions:

* What are the main naturally occurring methylxanthines and where are they found?
* How do tea leaves differ?
* What are guarana and mate?
* Is caffeine the most frequently consumed stimulant in the world?
* What are the physiological effects that caffeine has on the Central Nervous System (CNS)?
* What common ingredients are found in energy drinks?
* What is the history and information found on Red Bull?
* What is taurine and Krating Daeng?
* What are the dangers of energy drinks containing alcohol?

## 7.2 Cathinones - Synthetic & Natural

Resources:

* 7.2 Cathinones—Synthetic and Natural section of Drugs of Use and Abuse, Hopla, J. and Hunter, C., 2024.
* Video: Djibouti's Khat, An Expensive Habit (17:14 min), France 24, 2018.
* Fact Sheet: Bath Salts, DEA, 2020.
* Article: Flakka Addiction and Abuse, Addiction Center, 2023.

Study Questions:

* What are cathinones and where is it found naturally?
* What are the different examples of synthetic cathinones compared to naturally occurring cathinones?
* What is khat?
* What are the main psychoactive compounds found in khat?
* What are the effects of khat?
* How does khat consumption impact Ali Hamed's family budget? (Video: Djibouti's Khat, An Expensive Habit)
* What challenge does the report highlight about addressing khat use? (Video: Djibouti's Khat, An Expensive Habit)
* What are bath salts?
* How are bath salts marketed and labeled? Why are they labeled this way in relation to which Act?
* How are they abused and how do they affect the mind?
* Cathinones are found in what forms?
* What are examples of bath salts?
* What is flakka?
* What schedule is flakka and what medical use does it have?
* How is flakka used and what are its effects?

## Lecture Material - Stimulants: Cathinones

Resources:

* Lecture Material—Stimulants II (Cathinones)
* Embedded video links-
  + Khat: Madventures Yemen—Chewing Khat, Legal Speed (Madventures, 2010)
  + Betel Nut—Papua New Guinea (Drew Binsky, 2018).

Study Questions:

* What is the scientific name for khat?
* What are the two main scheduled substances found in khat and how do they differ
* What are the associated risks with khat abuse?
* What is the betel nut classified as?
* What are examples of the effects and risks of using betel nut.
* Regular heavy use of betel nut can lead to what conditions?
* Mephedrone was permanently banned in the U.S. by the passage of which Act?
* What products contain mephedrone?
* What are the common ways cathinones are consumed?

## 7.3 Sugar

Resources:

* 7.3 Sugar section of Drugs of Use & Abuse, Hopla, J. and Hunter, C, 2024.
* Video: How Sugar Affects the Brain (4:49) TED-Ed lesson by Nicole Avena (2014)
* Video: Sugar, Hiding in Plain Sight (3:48 min) TED-Ed Lesson by Robert Lustig, 2014.
* Video: The Secrets of Sugar (42:00 min), The Firth Estate, CBC News, 2014.
* Video: The Truth About Sugar (57:26) BBC Documentary (2015)

Study Questions:

* What is the most widely used type of sugar?
* Sucrose is composed of two smaller sugars linked together.
* What are the negative effects that can result from consuming too much sugar?
* The World Health Organization (WHO) recommends limiting the intake of free sugars to less than what percent of total energy intake?
* What percentage of added sugar is found in packaged foods and drinks?
* What are the different recommended strategies to reduce and/or limit your sugar intake?

How Sugar Affects the Brain

* Cravings for sugar are fueled by what parts of the brain?
* What are the different forms of sugar?
* How does sugar affect portions of the brain?

Sugar, Hiding in Plain Sight

* What is the difference between glucose and fructose?
* Excess fructose is metabolized into what in the body?
* What are the different foods that do not contain added sugar?

The Secrets of Sugar

* How many grams of sugar are there in one teaspoon?
* According to Dr. Howard Moskowitz, what is the bliss point?
* What does too much fructose do to the brain?

The Truth About Sugar

* What is the connection and science behind sugar and energy?
* Sugar is one of the cheapest forms of what?
* The Truth About Sugar documentary focuses on four individuals who are challenged to cut back their daily sugar intake to what amount?
* How are humans hardwired to enjoy sugar?
* How does a teaspoon of honey compare to that of brown sugar or normal sugar?

Read this online at <https://books.byui.edu/drugs_use_and_abuse/study_questions_chapter_7>