



## **SWK 3805: Module 8- Alcohol**



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## Module 8: Preface

Welcome to the online coursebook for Module 8 of our Theories and Biological Basis of Addiction course. The material is designed to be read interactively or after downloading; while the embedded interactive exercises require internet connectivity, each can also be downloaded for offline work. These exercises are presented to help you test and apply what you are reading, challenge yourself, prepare for quizzes, and have a little fun along the way. The list of key terms at the end explains text ***highlighted in bold italics*** throughout the book—in the interactive mode you can click on a highlighted word to jump to its explanation in the key terms section. Use the back arrow to return to where you were reading.

# Module 8: Introduction

The readings for Module 8 introduce concepts essential for understanding the nature of alcohol, alcohol use, alcohol misuse, and alcohol use disorders. In this Module we are turning the corner from an overview of theories to looking at specific types of substances. We begin with alcohol and cover several other categories before the end of our course. This online coursebook includes several readings from published literature that are introduced and placed in context by the coursebook author.

## Module 8 Reading Objectives

After engaging with these reading materials and learning resources, you should be able to:

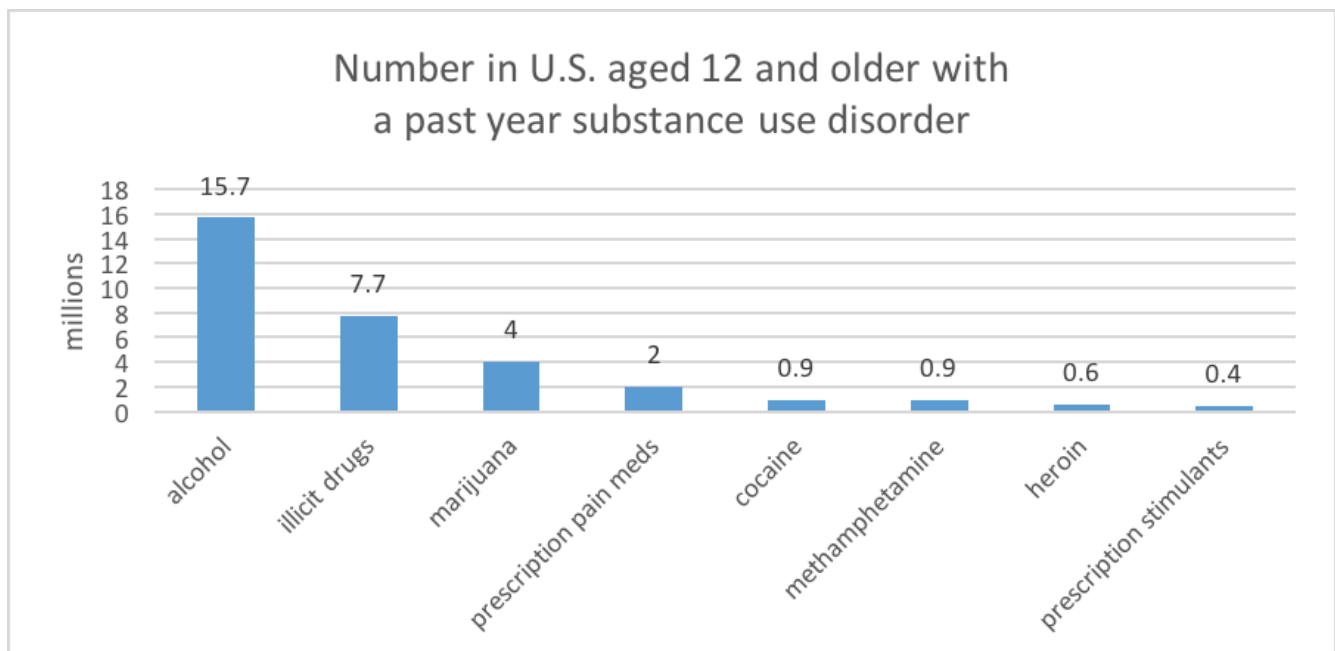
- Recall information concerning alcohol as the most common substance involved in substance use disorders
- Explain the basic pharmacology of alcohol
- Identify short- and long-term effects of acute and chronic use and misuse of alcohol
- Identify factors and issues related to adolescent use and misuse of alcohol, including the emerging role of social media (Twitter)
- Explain the role of drinking contexts on consequences and behaviors such as the perpetration of sexual aggression
- Define several key terms related to alcohol and alcohol use disorders.



## Ch. 1: Setting the Stage

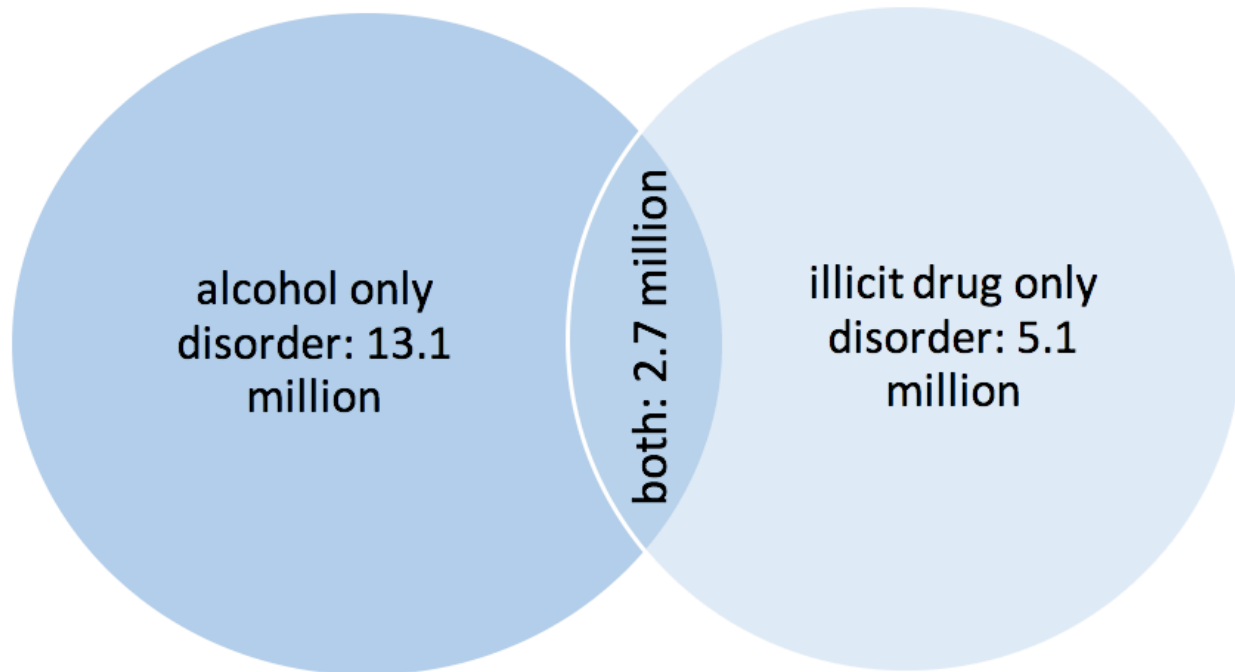
The first reading for Module 8 sets the stage for the topic of alcohol use, alcohol misuse, and alcohol use disorders (often abbreviated as AUDs). You may recall from earlier modules that, of all the substances we are studying, alcohol is the one most commonly used by individuals over the age of 12. You also may recall that individuals who have a diagnosable substance use disorder most commonly have a problem with alcohol: alcohol use disorders (AUDs) are far more common than substance use disorders (SUDs) involving illicit drugs, and individuals experiencing a substance use disorder involving illicit drugs often experience a problem with alcohol, too. You may remember seeing the information presented in Figure 1 below back when you read about the NSDUH (SAMHSA, 2016) study results in our coursebook for Module 2 (see Figure 1).

Figure 1. Number with a past year substance use disorder, by substance type



You may also recall Figure 2 from our Module 2 reading, based on information from the NSDUH study (SAMHSA, 2016). It shows the frequency with which individuals experience substance use disorders involving alcohol only, illicit substances only, or alcohol and illicit substances in combination (see Figure 2).

Figure 2. Number of persons with alcohol, illicit drug, or alcohol plus illicit drug use disorders



For these reasons, alcohol was chosen as the first of the specific substances that we are exploring in our course. The rest of the reading for this first chapter comes from a traditional textbook about chemical dependency. You will be reading two units about alcohol from Doweiko, H.E. (2009). *Concepts of chemical dependency, seventh edition*, (pp. 60-88). Belmont, CA: Brooks/Cole, Cengage Learning. Despite being an older piece, the concepts remain relevant; statistics about alcohol use, alcohol misuse, and alcohol use disorders discussed in the Doweiko (2009) pieces are updated in your lecture series for Module 8. And, to foreshadow what is coming in Module 10 when we talk about stimulants (and caffeine), there is some information to consider about combining energy drinks with alcohol.

In this chapter you will read about:

- background material concerning alcohol
- the pharmacology of alcohol (some of which was introduced in Module 3 & 4)
- short- and long-term effects of alcohol at different blood alcohol levels, for the average drinker, with acute alcohol misuse, and with chronic, heavy use
- key terms related to alcohol use, alcohol misuse, and alcohol use disorders.



[Click here for a link to our Carmen course](#) where you can locate the assigned pdf file(s) for this chapter. You will need to be logged into our Carmen course, select Module 8, and proceed to the Coursework area. Under the Readings heading you will find a box with links to the readings for relevant coursebook chapters. Don't forget to return here in your coursebook to complete the remaining chapters and interactive activities.

## Ch. 2: Alcohol Initiation Before and During Adolescence

The second reading for Module 8 discusses evidence related to the factors associated with adolescent alcohol use and binge drinking. You should recall the evidence from early in our course indicating that the probability of developing an alcohol use disorder is highest when drinking begins early in life. The probability of experiencing alcohol dependence during a person's lifetime is four times greater if drinking began before age 15 years, compared to individuals whose drinking is delayed to age 21 years; the probability is reduced by 14 percent with each increasing year of age at first use (Windle & Zucker, date unknown). Evidence also indicates that alcohol exposure during the developmental period of brain remodeling (associated with puberty) leaves individuals more vulnerable to long-term behavioral health problems that include, but are not limited to, substance use disorders—especially if drinking begins before age 11 (Guttmanova et al., 2011).

The National Survey on Drug Use and Health (NSDUH) survey results from 2015 show past-year *alcohol use initiation* occurred among an estimated 9.5% of 12-17 year olds, almost one in ten adolescents (SAMHSA, 2017). Another piece of evidence making this an important topic is a recent article by Jackson, Barnett, Colby, & Rogers (2017) indicating that children who have even been sipping alcohol (often with parental consent) by the 6<sup>th</sup> grade have a significantly greater odds of drinking full drinks, getting drunk, and drinking heavily by the time they are in 9<sup>th</sup> grade. In other words, according to the study's authors, early sipping is not the protective factor that many parents believe it to be; "offering even just a sip of alcohol may undermine messages about the unacceptability of alcohol consumption for youth" (p. 212).

The piece assigned for you to read in this chapter also has relevance to our Module 7 discussions about what makes sense in planning for the prevention of alcohol use disorders. The assigned piece is Patrick, M.E., & Schulenberg, J.E. (2013). Prevalence and predictors of adolescent alcohol use and binge drinking in the United States. *Alcohol Research: Current Reviews*, 35(2), 193-200.

In this chapter you will read brief entries about:

- recent results and trends from the *Monitoring the Future* study
- the influence of parents, peers, school, work, religiosity and community attachment and the difference between exercise versus sports participation on adolescents' use of alcohol
- risk-taking and sensation seeking
- drinking attitudes and reasons for using alcohol
- long-term consequences of alcohol use

- implications for prevention and intervention, and
- key terms related to alcohol use, alcohol misuse, and alcohol use disorders.



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## Ch. 3: The Role of Social Media (Twitter)

In Module 6 we looked at theory about the impact of social context on substance use behavior. This current chapter draws from Module 6: it looks at the potential of Twitter chatter to have an impact on peer drinking, operating through social norms and social learning theory. The important parts of this piece for our purposes are the abstract, introduction, results, and discussion. The piece is Cavazos-Rehg, P.A., Krauss, M.J., Sowles, S.J., & Bierut, L.J. (2015). “Hey everyone, I’m drunk: An evaluation of drinking-related Twitter chatter. *Journal of Studies on Alcohol and Drugs*, 76(4), 635-643.

In this chapter you will read about:

- the place of online social networks in our understanding of the role social contexts play in substance use behavior
- the “pro alcohol” bias in Tweets
- alcohol marketing in the Twittersphere
- implications for addressing/preventing alcohol misuse
- key terms related to alcohol use, alcohol misuse, and alcohol use disorders.



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1. What does it mean that “on-line social networks can influence the spread of drinking behaviors up to three degrees of separation (i.e., friends, and friends of friends) from page 635 of the article?
2. How does the following statement relate to the theories studied in Module 6: “exposure to drinking-related content on social media is common and contributes to the normalization of drinking among young people” from page 635 of the article?
3. What are the implications of the statement “the number of pro-drinking Tweets was more than 10 times the number of anti-drinking Tweets” from pages 640-641 of the article?

## Ch. 4: The Role of Drinking Context

The next reading is on a quite different topic from what we have been reading so far in Module 8. This piece is included here only in part because **sexual aggression** perpetration is a very important social issue. The other major reason why it is included here is because it makes a strong case for drinking contexts having a great deal to do with drinking outcomes, perhaps even more than drinking dose (how much and how fast someone consumes alcohol). We have focused a lot of attention on alcohol as a drug so far, but this chapter addresses cultural and social aspects of alcohol use—reminding us that we cannot really understand the consequences of drinking behavior without understanding the contexts in which it occurs. The most important parts of this piece to attend to are the abstract, introduction, results, and discussion. The piece assigned for this chapter is Testa, M., & Cleveland, M.J. (2017). Does alcohol contribute to college men's sexual assault perpetration? Between- and within-person effects over five semesters. *Journal of Studies on Alcohol and Drugs*, 78(1), 5-13.

In this chapter, you will read about:

- evidence concerning **heavy episodic drinking (HED)** and **sexual aggression**
- the role of drinking context (parties and bars) in sexual aggression
- the role of personality characteristics in sexual aggression and drinking behavior
- key terms related to alcohol misuse and sexual aggression



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1. What is the “alcohol myopia model”?
2. Which is more important in predicting sexual assault perpetration: whether a man has been drinking heavily or the place/context where the drinking occurs? Which contexts are the “riskiest” in terms of predicting sexual assault perpetration—in other words, are there “hot spots” for sexual victimization?
3. How do alcohol expectancy effects possibly play a role in sexual assault perpetration?

## Ch. 5: Summary

In this Module 8 coursebook, you learned some basic principles about alcohol, alcohol use, alcohol misuse, and alcohol use disorders. After reviewing information about relative frequency of alcohol and/or other substance use disorders, we explored basic principles concerning the pharmacology of alcohol. This led to an exploration of the effects of alcohol on the human body and behavior. The effects we learned about included the short- and long-term effects of acute and chronic use of alcohol. Next, we turned our attention to what matters regarding early initiation of alcohol use (during puberty and adolescence) and how early exposure can result in lifelong consequences. One factor that tends to promote alcohol misuse during adolescence and emerging adulthood was next in our list of topics: how social media (Twitter in particular) may play a role by influencing both social norms and social learning. Finally, we examined one source of evidence concerning the significance of drinking contexts in determining drinking consequences—we looked at this issue in light of data about drinking and the perpetration of sexual aggression.

You are now ready to review some of the key terms related to substance use disorders introduced in this book.

## Module 8: Key Terms

**alcohol use initiation:** used alcohol for the first time, started using.

**heavy episodic drinking (HED):** binge drinking; defined in many studies as drinking 5 or more drinks in a single occasion.

**sexual aggression:** unwanted contact, attempted intercourse, or intercourse using verbal, physical force, and/or incapacitation tactics.

## Module 8: References

- Cavazos-Rehg, P.A., Krauss, M.J., Sowles, S.J., & Bierut, L.J. (2015). "Hey everyone, I'm drunk." An evaluation of drinking-related twitter chatter. *Journal of Studies on Alcohol and Drugs*, 76(4), 635-643.
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