Chapter 10:
Substance-Related Disorders

Rick Grieve, Ph.D.
PSY 440: Abnormal Psychology
Western Kentucky University

Why Study Substance Abuse

- Problem on Campus
- Problem in the Community
- Problem in Therapy
- Health Problems
- Performance Enhancing Drugs

Classification of Substance-Related Disorders

- Substance Use Disorders
  - Involve maladaptive use of psychoactive substances
- Substance-Induced Disorders
  - Disorders that can be brought about by using psychoactive substances
- Substance Dependence
  - Identified by dependence that impairs social or occupational functioning

Classification of Substance-Related Disorders

ACCORDING TO THE STANDARD psychiatric definition, any drug user who passes three of the nine tests below is hooked. Several researchers were asked to apply the tests not only to drugs but also to other substances and activities—chocolate, sex, shopping. Their responses show it's possible to become addicted to all sorts of things. For example, serious runners could pass three of the tests by spending more time running than originally intended, covering increasing distances, and experiencing withdrawal symptoms (a devoted runner forced to stop because of an injury, say, might become anxious and irritable). Of course, that sort of dependency isn't necessarily destructive. Conversely, a drug that fails the addictiveness test—LSD, for instance—may be harmful just the same. That so many things are potentially addictive suggests the addiction's cause is not confined to the substance or activity—our culture may play a large role too.

	Nicotine	Alcohol	Caffeine	Cocaine	Crack	Heroin	Ice*	LSD	Marijuana	PCP	Valium, Xanax, etc.†	Steroids	Chocolate	Running	Gambling	Shopping	Sex	Work	Driving	Television	Mountain climbing
TAKES substance or does activity more than originally intended	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
WANTS to cut back or has tried to cut back but failed	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
SPENDS lots of time trying to get substance or set up activity, taking substance or doing activity, or recovering	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓
IS OFTEN intoxicated or suffers withdrawal symptoms when expected to fulfill obligations at work, school, or home		✓		✓	✓	✓	✓		✓	✓	✓										

Classification of Substance-Related Disorders

	Nicotine	Alcohol	Caffeine	Cocaine	Crack	Heroin	Ice*	LSD	Marijuana	PCP	Valium, Xanax, etc.†	Steroids	Chocolate	Running	Gambling	Shopping	Sex	Work	Driving	Television	Mountain climbing
CURTAILS or gives up important social, occupational, or recreational activities because of substance or activity		✓		✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓		✓	✓
USES substance or does activity despite persistent social, psychological, or physical problems caused by substance or activity	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
NEEDS more and more of substance or activity to achieve the same effect (tolerance)	✓	✓	✓	✓	✓	✓	✓				✓										
SUFFERS characteristic withdrawal symptoms when activity or substance is discontinued (cravings, anxiety, depression, jitters)	✓	✓	✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓	✓		✓	✓
TAKES substance or does activity to relieve or avoid withdrawal symptoms	✓	✓	✓	✓	✓	✓	✓				✓										

* Methamphetamine
† Benzodiazepines

Research by Valerie Fahey

Substance-Related Disorders

- Comorbid Disorders

Addiction, Physiological Dependence and Psychological Dependence

- Addiction
  - Habitual or compulsive use of a drug accompanied by evidence of physiological dependence
- Physiological Dependence
  - Condition in which the drug user's body comes to depend on a steady supply of the substance

Addiction, Physiological Dependence and Psychological Dependence

- Psychological dependence
  - Compulsive use of a substance to meet a psychological need
- Substance Abuse
  - Behavioral Characteristics

Racial/Ethnic Differences

- Despite the stereotype, drug dependence is not more prevalent in minorities

Pathways to Drug Dependence

- Experimentation
- Routine Use
- Addiction/Dependence

Substance Abuse

- Residual category
- Four characteristics:
  - Recurrent substance abuse resulting in a failure to fulfill major role obligations
  - Recurrent substance abuse in situations in which it is physically hazardous
  - Recurrent substance use-related legal problems
  - Continued use despite problems

Drugs of Abuse

- Depressants
  - A drug that lowers the level of activity in the CNS
  - Barbiturates
  - Opioids

Drugs of Abuse

- Stimulants
  - Drugs that stimulate the CNS
  - Amphetamines
  - Ecstasy
  - Cocaine
  - Nicotine
  - ADHD Medications

Drugs of Abuse

- Hallucinogens
  - Drugs that promote sensory distortions or hallucinations
    - Major alterations in color perception and hearing
    - May have physiological and affective components, too
  - LSD
  - PCP
  - Marijuana
  - Synthetic Cannabinoids

Substances with Both Abuse and Dependence

- Alcohol
- Amphetamines
- Cannabis
- Cocaine
- Hallucinogens
- Inhalants
- Opioids
- PCP
- Sedatives

Theoretical Perspectives

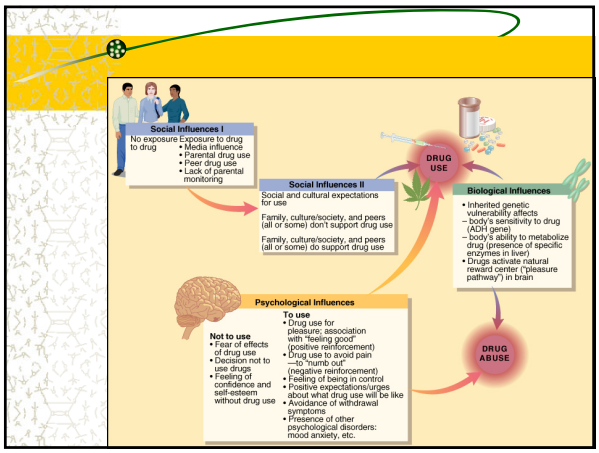
- Biological
  - Neurotransmitters
    - Dopamine system
    - Brain changes with long-term use
  - Genetic factors
    - Family studies
    - Twin studies
    - Animal studies
    - Other evidence

Theoretical Perspectives

- Learning
  - Behaviors are learned and can be unlearned
  - Operant Conditioning
    - Drug use is pleasurable; therefore it is reinforcing
    - Alcohol and tension reduction
    - Other negative reinforcement
  - Classical Conditioning
  - Observational Learning

Theoretical Perspectives

- Cognitive
  - Outcome expectancies
  - Restraint bias
  - Underestimation
- Psychodynamic
  - Oral Dependent Personality
- Sociocultural Factors
- Overall Picture

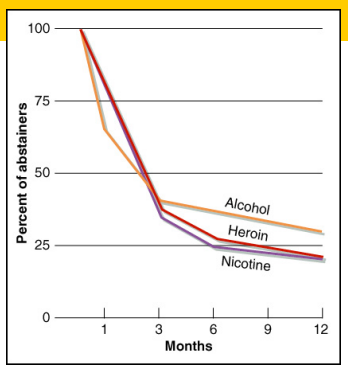


Treatment

- Biological Approach
  - Detoxification
  - Therapeutic Drugs
    - Disulfram
    - Antidepressants
    - Nicotine Replacement Therapy
    - Methadone Maintenance Programs
    - Naloxone & Naltrexone
  - New Vaccine

Treatment

- Nonprofessional Support Groups
  - Alcoholics Anonymous
    - Good Points
    - Bad Points



Treatment

- Residential Treatments
  - 28 days
- Behavioral Approaches
  - Self-Control Strategies
    - Antecedents
    - Behaviors
    - Consequences
  - Aversive Conditioning

Treatment

  - Social Skills Training
- Relapse Prevention
  - Marlatt
  - Abstinence Violation Effect

Outline

- Substance-Related and Addictive Disorders
  - Depressants
  - Stimulants
  - Opioids
  - Cannabis, other hallucinogens and other drugs
- Causes of substance-related disorders
- Treatment of substance-related disorders
- Gambling disorder
- Other Impulse-control disorders

Focus Questions

- *What are the features of substance-related and addictive disorders?*
- *What are the effects of depressants, stimulants, and opioids?*
- *What causes contribute to the development of substance-related disorders?*
- *How are substance-related disorders treated?*
- *What processes lead to gambling disorder?*
- *What is considered an impulse control disorder?*

Perspectives on Substance Use Disorders

- The nature of substance use disorders
  - Abuse of psychoactive substances
  - Wide-ranging physiological, psychological, and behavioral effects
  - Associated with impairment and significant costs

Perspectives on Substance-Related Disorders, Part 1

- Some important terms and distinctions
  - Substance use
    - Taking moderate amounts of a substance in a way that doesn't interfere with functioning
  - Substance intoxication
    - Physical reaction to a substance (e.g., being drunk)
  - Substance abuse
    - Use in a way that is dangerous or causes substantial impairment (e.g., affecting job or relationships)

Perspectives on Substance-Related Disorders, Part 2

- Substance dependence
  - May be defined by tolerance and withdrawal
  - Sometimes defined by drug-seeking behavior (e.g., spending too much money on substance)
- Tolerance
  - Needing more of a substance to get the same effect/reduced effects from the same amount
- Withdrawal
  - Physical symptom reaction when substance is discontinued after regular use

Five Main Categories of Substances, Part 1

- Depressants
  - Behavioral sedation (e.g., alcohol, sedative, anxiolytic drugs)
- Stimulants
  - Increase alertness and elevate mood (e.g., cocaine, nicotine)

Five Main Categories of Substances, Part 2

- Opiates
  - Produce analgesia and euphoria (e.g., heroin, morphine, codeine)
- Hallucinogens
  - Alter sensory perception (e.g., marijuana, LSD)
- Other drugs of abuse
  - Include inhalants, anabolic steroids, medications

Substance Use Disorders in *DSM-5*, Part 1

- Pattern of substance use leading to significant impairment and distress
- Symptoms (need 2+ within a year)
  - Taking more of the substance than intended
  - Desire to cut down use
  - Excessive time spent using/acquiring/recovering
  - Craving for the substance
  - Role disruption (e.g., can't perform at work)
  - Interpersonal problems

Substance Use Disorders in *DSM-5*, Part 2

- Pattern of substance use leading to significant impairment and distress
- Symptoms (need 2+ within a year)
  - Reduction of important activities
  - Use in physically hazardous situations (e.g., driving)
  - Keep using despite causing physical or psychological problems
  - Tolerance
  - Withdrawal

Substance Use Disorders in *DSM-5*, Part 3

- *DSM-5* now spells out criteria for:
  - Substance intoxication for different types of substances (e.g., alcohol, stimulants)
  - Substance use disorders for different types of substances
  - Withdrawal from different types of substances

The Depressants: Alcohol-Related Disorders, Part 1

- Psychological and physiological effects of alcohol
  - Central nervous system depressant
  - Influences several neurotransmitter systems
  - Specific target is GABA
    - Increases inhibitory effects—makes neural cells worse at firing

The Depressants: Alcohol-Related Disorders, Part 2

- Effects of chronic alcohol use
  - Alcohol intoxication and withdrawal
  - Associated brain conditions—dementia and Wernicke's disease
  - Fetal alcohol syndrome
    - Developmental problems due to mother's consumption of alcohol when child is in the womb

DSM-5 Criteria: Alcohol Use Disorder, Part 1

- A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following occurring within a 12-month period:

(1) Alcohol is often taken in larger amounts or over a longer period than was intended.

(2) There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.

(3) A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or

DSM-5 Criteria: Alcohol Use Disorder, Part 2

(4) Craving, or a strong desire or urge to use alcohol.

(5) Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home.

(6) Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol.

(7) Important social, occupational, or recreational activities are given up or reduced because of

DSM-5 Criteria: Alcohol Use Disorder, Part 3

(9) Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol

(10) Tolerance, as defined by: either/both a need for markedly increased amounts of alcohol to achieve intoxication or desired effect or a markedly diminished effect with continued use of the same amount of alcohol (11) Withdrawal, as manifested by

- (a) the characteristic withdrawal syndrome for

DSM-5 Criteria: Alcohol Use Disorder, Part 4

Specify current severity:

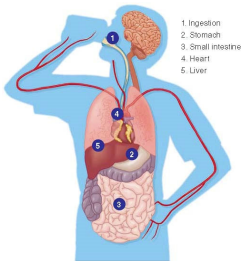
Mild: Presence of 2–3 symptoms

Moderate: Presence of 4–5 symptoms

Severe: Presence of 6 or more symptoms

From American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

Figure 10.1: The path traveled by alcohol throughout the body



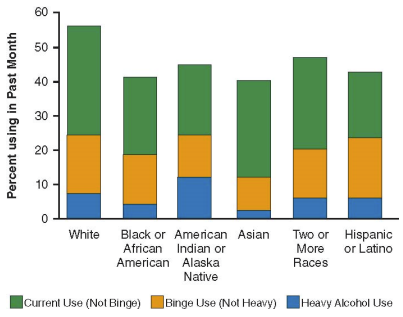
Alcohol: Some Facts and Statistics, Part 1

- In the United States
  - most adults consider themselves light drinkers.
  - alcohol use is highest among Caucasian Americans (56.8%).
  - males use and abuse alcohol more than females.
  - 23% of Americans report binge drinking
  - violence is associated with alcohol.
    - Alcohol alone does not cause aggression

Alcohol: Some Facts and Statistics, Part 2

- Statistics on abuse and dependence
  - Three million Americans are alcohol dependent
  - 20% with alcohol problems experience spontaneous recovery
- Diversity and alcohol use
  - Large variety in alcohol use statistics throughout the world
    - Peru: 1 in 3 adults is dependent on alcohol
    - Shanghai: <1% rate of alcohol dependence

Racial Differences in Alcohol Use



Sedative, Hypnotic, or Anxiolytic-Related Disorders: An Overview, Part 1

- The nature of drugs in this class
  - Sedatives—calming (e.g., barbiturates)
  - Hypnotic—sleep inducing
  - Anxiolytic—anxiety reducing (e.g., benzodiazepines)

Sedative, Hypnotic, or Anxiolytic-Related Disorders: An Overview, Part 2

- Effects are similar to large doses of alcohol
  - Combining such drugs with alcohol is synergistic
- All exert their influence via the GABA neurotransmitter system
- *DSM-5* criteria for this class of disorders
  - Same as for other classes of drugs (i.e., significant interference or distress accompanied by problems such as reduced activities or tolerance)

DSM-5 Criteria: Sedative, Hypnotic, or Anxiolytic-Related Disorders, Part 1

- A problematic pattern of sedative, hypnotic, or anxiolytic use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

(1) Sedatives, hypnotics, or anxiolytics are often taken in larger amounts or over a longer period than was intended.

(2) There is a persistent desire or unsuccessful efforts to cut down or control sedative, hypnotic, or anxiolytic use.

(3) A great deal of time is spent in activities necessary to obtain the sedative; use the sedative, hypnotic, or anxiolytic; or recover from its effects.

DSM-5 Criteria: Sedative, Hypnotic, or Anxiolytic-Related Disorders, Part 2

(4) Craving, or a strong desire to use the sedative, hypnotic, or anxiolytic.

(5) Recurrent sedative, hypnotic, or anxiolytic use resulting in a failure to fulfill major role obligations at work, school, or home.

(6) Continued sedative, hypnotic, or anxiolytic use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of sedatives, hypnotics, or anxiolytics.

DSM-5 Criteria: Sedative, Hypnotic, or Anxiolytic-Related Disorders, Part 3

(7) important social, occupational, or recreational activities are given up or reduced because of sedative, hypnotic, or anxiolytic use

(8) recurrent sedative, hypnotic, or anxiolytic use in situations in which it is physically hazardous

(9) sedative, hypnotic, or anxiolytic use is continued despite knowledge of having a persistent physical or psychological problem that is likely to have been caused or exacerbated by the sedative, hypnotic, or anxiolytic

DSM-5 Criteria: Sedative, Hypnotic, or Anxiolytic-Related Disorders, Part 4

(10) tolerance, as defined by either (a) a need for markedly increased amounts of sedative, hypnotic, or anxiolytic to achieve intoxication or desired effect or (b) a markedly diminished effect with continued use of the same amount of sedative, hypnotic or anxiolytic

(11) withdrawal, as manifested by either (a) the characteristic withdrawal syndrome for sedatives, hypnotics, or anxiolytics or (b) sedatives, hypnotics, or anxiolytics are taken to relieve or avoid withdrawal symptoms

DSM-5 Criteria: Sedative, Hypnotic, or Anxiolytic-Related Disorders, Part 5

Specify current severity

Mild: Presence of 2–3 symptoms

Moderate: Presence of 4–5 symptoms

Severe: Presence of 6 or more symptoms

From American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

Stimulants: An Overview

- Nature of stimulants
  - Most widely consumed drug in the United States
  - Such drugs increase alertness and increase energy
  - Examples include amphetamines, cocaine, nicotine, and caffeine
- *DSM-5* criteria for stimulant intoxication
  - Recent stimulant use leading to significant impairment or psychological changes
    - Accompanied by physical changes (e.g., change in

Stimulants: Amphetamine Use Disorders, Part 1

- Effects of amphetamines
  - Produce elation, vigor, reduce fatigue
  - Such effects are usually followed by extreme fatigue and depression
- Amphetamines stimulate CNS by
  - Enhancing release of norepinephrine and dopamine
  - Reuptake is subsequently blocked

Stimulants: Amphetamine Use Disorders, Part 2

- Some ADHD drugs are mild stimulants
  - E.g., Adderall, Ritalin
- Ecstasy and crystal meth
  - Amphetamine effects, but without the crash
  - Both drugs have a high risk of dependence

DSM-5 Criteria: Stimulant Use Disorder, Part 1

- A pattern of amphetamine-type substance, cocaine, or other stimulant use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
  - (1) The stimulant is often taken in larger amounts or over a longer period than was intended
  - (2) There is a persistent desire or unsuccessful efforts to cut down or control stimulant use
  - (3) A great deal of time is spent in activities necessary to obtain the stimulant, use the stimulant, or recover from its effects
  - (4) Craving, or a strong desire or urge to use the stimulant

DSM-5 Criteria: Stimulant Use Disorder, Part 2

- (5) Recurrent stimulant use resulting in a failure to fulfill major role obligations at work, school, or home
- (6) Continued stimulant use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the stimulant
- (7) Important social, occupational, or recreational activities are given up or reduced because of stimulant use
- (8) Recurrent stimulant use in situations in which it is physically hazardous
- (9) Stimulant use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the stimulant

DSM-5 Criteria: Stimulant Use Disorder, Part 3

- (10) Tolerance, as defined by either (a) a need for markedly increased amounts of the stimulant to achieve intoxication or desired effect or (b) a markedly diminished effect with continued use of the same amount of the stimulant
- (11) Withdrawal, as manifested by either (a) the characteristic withdrawal syndrome for the stimulant or (b) the stimulant is taken to relieve or avoid withdrawal symptoms

DSM-5 Criteria: Stimulant Use Disorder, Part 4

Specify current severity

Mild: Presence of 2–3 symptoms

Moderate: Presence of 4–5 symptoms

Severe: Presence of 6 or more symptoms

From American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, D.C.

Stimulants: Cocaine-Related Disorders

- Effects of cocaine
  - Short-lived sensations of elation, vigor, reduce fatigue
  - Effects result from blocking the reuptake of dopamine
  - Highly addictive, but addiction develops slowly
  - 1.9 million report use in the United States each year
- Most cycle through patterns of tolerance and withdrawal
  - Withdrawal characterized by apathy and boredom > leads to desire to use again

Stimulants: Nicotine-Related Disorders, Part 1

- Effects of nicotine
  - Stimulates nicotinic acetylcholine receptors in CNS
  - Results in sensations of relaxation, wellness, pleasure
  - Highly addictive
  - Relapse rates equal to those seen with alcohol and heroin

Stimulants: Nicotine-Related Disorders, Part 2

- Nicotine users dose themselves to maintain a steady state of nicotine
- Smoking has complex relationship to negative affect
  - Appears to help improve mood in short term
  - Depression occurs more in those with nicotine dependence

DSM-5 Criteria: Tobacco Use Disorder, Part 1 (1 of 2)

- A problematic pattern of tobacco use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
  - (1) Tobacco is often taken in larger amounts or over a longer period than was intended
  - (2) There is a persistent desire or unsuccessful efforts to cut down or control tobacco use
  - (3) A great deal of time is spent in activities necessary to obtain or use tobacco
  - (4) Craving, or a strong desire or urge to use tobacco

DSM-5 Criteria: Tobacco Use Disorder, Part 1 (2 of 2)

- (5) Recurrent tobacco use resulting in a failure to fulfill major role obligations at work, school, or home
- (6) Continued tobacco use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of tobacco
- (7) Important social, occupational, or recreational activities are given up or reduced because of tobacco use
- (8) Recurrent tobacco use in situations in which it is physically hazardous (e.g., smoking in bed)

DSM-5 Criteria: Tobacco Use Disorder, Part 2

(9) Tobacco use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by tobacco

(10) Tolerance, as defined by either (a) a need for markedly increased amounts of tobacco to achieve the desired effect or (b) a markedly diminished effect with continued use of the same amount of tobacco

(11) Withdrawal, as manifested by either (a) the characteristic withdrawal syndrome for tobacco or (b) tobacco (or a closely related substance such as nicotine) is taken to relieve or avoid withdrawal symptoms

DSM-5 Criteria: Tobacco Use Disorder, Part 3

Specify current severity

Mild: Presence of 2–3 symptoms

Moderate: Presence of 4–5 symptoms

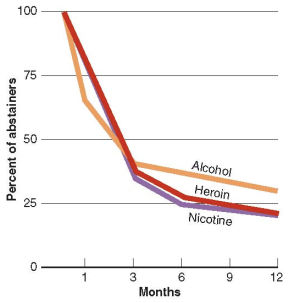
Severe: Presence of 6 or more symptoms

From American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

DSM-5 Criteria for Tobacco Withdrawal

- After several weeks of daily use, unpleasant symptoms upon stopping or reducing:
  - Insomnia, increased appetite, restlessness, trouble concentrating, anxiety and depression, irritability
- Symptoms lead to clinically significant distress or impairment

Figure 10.4: Relapse rates for different substances



Stimulants: Caffeine-Related Disorders, Part 1

- Effects of caffeine—the "gentle" stimulant
  - Used by over 90% of Americans
  - Found in tea, coffee, cola drinks, and cocoa products
  - Small doses elevate mood and reduce fatigue
  - Regular use can result in tolerance and dependence
  - Caffeine blocks the reuptake of the neurotransmitter adenosine

Stimulants: Caffeine-Related Disorders, Part 2

- *DSM-5* Criteria for Caffeine Intoxication
  - Recent caffeine consumption, possibly in excess
  - Associated with physical symptoms including restlessness, anxiety, insomnia, flushed face, diuresis, GI disturbance, muscle twitching, rambling thoughts or speech, elevated or irregular heartbeat, excitement, inexhaustibility, motor agitation
  - Symptoms cause clinically significant distress or impairment

DSM-5 Criteria: Caffeine Intoxication, Part 1

A. Recent consumption of caffeine (typically a high dose well in excess of 250 mg)

B. Five (or more) of the following signs or symptoms developing during, or shortly after, caffeine use:

- (1) restlessness, (2) nervousness, (3) excitement, (4) insomnia, (5) flushed face, (6) diuresis, (7) gastrointestinal disturbance, (8) muscle twitching, (9) rambling flow of thought and speech, (10) tachycardia or cardiac arrhythmia,

DSM-5 Criteria: Caffeine Intoxication, Part 2

C. The signs or symptoms in Criterion B cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The signs or symptoms are not attributable to another medical condition and are not better explained by another mental disorder, including intoxication with another substance.

From American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

Opioids: An Overview, Part 1

- The nature of opiates and opioids
  - Opiate—natural chemical in the opium poppy with narcotic effects
  - Opioids—natural and synthetic substances with narcotic effects
  - Often referred to as analgesics
    - Analgesic = painkiller

Opioids: An Overview, Part 2

- Effects of opioids
  - Activate body's enkephalins and endorphins
  - Low doses induce euphoria, drowsiness, and slowed breathing
  - High doses can result in death
  - Withdrawal symptoms can be lasting and severe
- Mortality rates are high for opioid addicts
  - High risk for HIV infection due to shared needles

DSM-5 Criteria: Opioid Use Disorder, Part 1

- A problematic pattern of opioid use leading to clinically significant impairment or distress, with at least two of the following, within a 12-month period:

(1) Opioids are often taken in larger amounts or over a longer period than was intended

(2) There is a persistent desire or unsuccessful efforts to cut down or control opioid use

(3) A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or

DSM-5 Criteria: Opioid Use Disorder, Part 2

(5) Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home

(6) Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids

(7) Important social, occupational, or recreational activities are given up or reduced because of opioid use

(8) Recurrent opioid use in situations in which it is physically hazardous

DSM-5 Criteria: Opioid Use Disorder, Part 3

(10) Tolerance, as defined by either (a) a need for markedly increased amounts of opioids to achieve intoxication or desired effect or (b) a markedly diminished effect with continued use of the same amount of an opioid

(11) Withdrawal, as manifested by either (a) the characteristic opioid withdrawal syndrome or (b) opioids are taken to relieve or avoid withdrawal symptoms

Specify current severity: Mild: Presence of 2 to 3 symptoms Moderate: Presence of 4 to 5 symptoms Severe: Presence of 6 or more symptoms

From American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

Hallucinogens: An Overview

- Nature of hallucinogens
  - Change the way the user perceives the world
  - May produce
    - Delusions, paranoia, hallucinations, altered sensory perception
- Examples include marijuana, LSD
  - 5–15% of people in Western countries smoke marijuana regularly

Hallucinogens: Marijuana and LSD, Part 1

- Marijuana
  - Active chemical is tetrahydrocannabinol (THC)
  - Symptoms - mood swings, paranoia, hallucinations
  - Impairment in motivation is not uncommon
  - Withdrawal and dependence are rare

Hallucinogens: Marijuana and LSD, Part 2

- LSD and other hallucinogens
  - LSD is most common form of hallucinogenic drug
  - Hallucinogenic effects are much more intense than marijuana
  - Tolerance is rapid and withdrawal symptoms are uncommon
  - Can produce psychotic delusions and hallucinations

DSM-5 Criteria: Cannabis Use Disorder, Part 1

- A problematic pattern of cannabis use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
  - (1) Cannabis is often taken in larger amounts or over a longer period than intended
  - (2) There is a persistent desire or unsuccessful efforts to cut down or control cannabis use
  - (3) A great deal of time is spent in activities necessary to obtain cannabis, use cannabis, or recover from its effects
  - (4) Craving, or a strong desire or urge to use cannabis
  - (5) Recurrent cannabis use resulting in a failure to fulfill major role obligations at work, school, or home

DSM-5 Criteria: Cannabis Use Disorder, Part 2

- (6) Continued cannabis use despite having persistent social or interpersonal problems caused by the effects of cannabis
- (7) Important social, occupational, or recreational activities are given up or reduced because of cannabis use
- (8) Recurrent cannabis use in situations in which it is physically hazardous
- (9) Cannabis use is continued despite knowledge of having a persistent physical or psychological problem that is likely to have been caused by cannabis
- (10) Tolerance, as defined by either (a) a need for markedly increased amounts of cannabis to achieve intoxication or desired effect or (b) a markedly diminished effect with continued use of the same amount of cannabis

DSM-5 Criteria: Cannabis Use Disorder, Part 3

(11) Withdrawal, as manifested by either (a) the characteristic withdrawal syndrome for cannabis or (b) cannabis (or a closely related substance) is taken to relieve or avoid withdrawal symptoms.

Specify current severity

Mild: Presence of 2–3 symptoms

Moderate: Presence of 4–5 symptoms

Severe: Presence of 6 or more symptoms

From American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Washington, DC.

DSM-5 Criteria: Other Hallucinogen Use Disorder, Part 1

- A problematic pattern of hallucinogen (other than phencyclidine) use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
  - (1) The hallucinogen is often taken in larger amounts or over a longer period than intended
  - (2) There is a persistent desire or unsuccessful efforts to cut down or control hallucinogen use
  - (3) A great deal of time is spent in activities necessary to obtain the hallucinogen, use the hallucinogen, or recover from its effects
  - (4) Craving, or a strong desire or urge to use the hallucinogen

DSM-5 Criteria: Other Hallucinogen Use Disorder, Part 2 (1 of 2)

- (5) Recurrent hallucinogen use resulting in a failure to fulfill major role obligations at work, school, or home
- (6) Continued hallucinogen use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the hallucinogen
- (7) Important social, occupational, or recreational activities are given up or reduced because of hallucinogen use
- (8) Recurrent hallucinogen use in situations in which it is physically hazardous
- (9) Hallucinogen use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the hallucinogen

DSM-5 Criteria: Other Hallucinogen Use Disorder, Part 2 (2 of 2)

(10) Tolerance, as defined by either (a) a need for markedly increased amounts of the hallucinogen to achieve intoxication or desired effect or (b) a markedly diminished effect with continued use of the same amount of the hallucinogen

DSM-5 Criteria: Other Hallucinogen Use Disorder, Part 3

Specify current severity

Mild: Presence of 2–3 symptoms

Moderate: Presence of 4–5 symptoms

Severe: Presence of 6 or more symptoms

From American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

Other Drugs of Abuse: Inhalants, Part 1

- Nature of inhalants
  - Substances found in volatile solvents
  - Breathed directly into lungs
- Examples
  - Spray paint, hair spray, paint thinner, gasoline, nitrous oxide

Other Drugs of Abuse: Inhalants, Part 2

- Properties and consequences
  - Rapidly absorbed
  - Effects similar to alcohol intoxication
  - Tolerance and prolonged symptoms of withdrawal are common

DSM-5 Criteria: Inhalant Use Disorder, Part 1

- A problematic pattern of use of a hydrocarbon-based inhalant substance leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
  - (1) The inhalant substance is often taken in larger amounts or over a longer period than was intended
  - (2) There is a persistent desire or unsuccessful efforts to cut down or control use of the inhalant substance
  - (3) A great deal of time is spent in activities necessary to obtain the inhalant, use it, or recover from its effects
  - (4) Craving, or a strong desire or urge to use the inhalant substance

DSM-5 Criteria: Inhalant Use Disorder, Part 2 (1 of 2)

- (5) Recurrent use of the inhalant substance resulting in a failure to fulfill major role obligations at work, school, or home
- (6) Continued use of the inhalant substance despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of its use
- (7) Important social, occupational, or recreational activities are given up or reduced because of use of the inhalant substance
- (8) Recurrent use of the inhalant substance in situations in which it is physically hazardous
- (9) Use of the inhalant substance is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance

DSM-5 Criteria: Inhalant Use Disorder, Part 2 (2 of 2)

(10) Tolerance, as defined by either (a) a need for markedly increased amounts of inhalant substance to achieve intoxication or desired effect or (b) a markedly diminished effect with continued use of the same amount of the inhalant substance

DSM-5 Criteria: Inhalant Use Disorder, Part 3

Specify current severity

Mild: Presence of 2–3 symptoms

Moderate: Presence of 4–5 symptoms

Severe: Presence of 6 or more symptoms

From American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Washington, DC.

Other Drugs of Abuse: Anabolic Steroids

- Nature of anabolic-androgenic steroids
  - Steroids are derived or synthesized from testosterone
  - Used medicinally or to increase body mass
  - Users may engage in cycling or stacking
  - Do not produce a high
  - Can result in long-term mood disturbances and physical problems

Other Drugs of Abuse: Designer Drugs, Part 1

- Designer drugs
  - Drugs were originally produced by pharmaceutical companies to target diseases; then others began producing for recreational use
  - Cause drowsiness, pain relief and dissociative sensations
    - Ecstasy
    - BDMPEA ("nexus")
    - Ketamine ("Special K")

Other Drugs of Abuse: Designer Drugs, Part 2

- Often heighten auditory and visual perception, sense of taste/touch
- Becoming popular in large social recreational gatherings (e.g., nightclubs, raves)
- Produce tolerance and dependence

Causes of Substance-Related Disorders: Family and Genetic Influences

- Results of family, twin, and adoption studies
  - Substance abuse has a genetic component
    - Example: certain genes confer risk for heroin abuse in Latino and Black populations
  - Much of the focus has been on alcoholism
    - Genetic differences in alcohol metabolism > impact which drugs are most effective for treating alcohol use disorders
  - Multiple genes are involved in substance abuse

Causes of Substance-Related Disorders: Neurobiological Influences

- Results of neurobiological research
  - Drugs affect the "pleasure pathway" of the brain (i.e., the area that is active when receiving a reward such as food)
    - Believed to include dopaminergic system in areas of the midbrain and frontal cortex
  - GABA turns off reward-pleasure system
  - Drugs inhibit neurotransmitters that produce anxiety/negative affect

Causes of Substance-Related Disorders: Psychological Dimensions, Part 1

- Role of positive and negative reinforcement
  - Early on, drug use may be seeking a euphoric high (positive reinforcement)
  - Later, drug use will be seeking escape from withdrawal/crash (negative reinforcement)
  - Substance abuse as a means to cope with negative affect
    - Self-medication, tension reduction
    - Drugs offer escape from life stressors

Causes of Substance-Related Disorders: Psychological Dimensions, Part 2

- Opponent-process theory
  - Why the crash after drug use fails to keep people from using: Drugs themselves are easiest way to alleviate feelings of withdrawal
- Cognitive factors
  - Role of expectancy effects: People use drugs when they anticipate positive effects
- Cravings
  - Triggered by cues (mood, environment, availability of drug)

Causes of Substance-Related Disorders: Social and Cultural Dimensions, Part 1

- Exposure to drugs is a prerequisite for use of drugs
  - Media, family, peers
  - Parents and the family appear critical
- Societal views about drug abuse
  - Sign of moral weakness—failure of self-control
  - Sign of a disease—caused by some underlying process

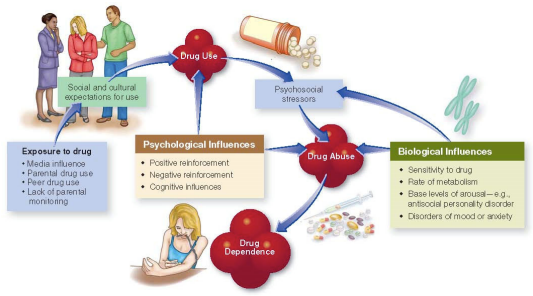
Causes of Substance-Related Disorders: Social and Cultural Dimensions, Part 2

- The role of cultural factors
  - Influence the manifestation of substance abuse
  - Some cultures expect heavy drinking at certain social occasions (e.g., Korea)
  - Cultural expectancies of substances may influence drug-related behavior
    - If drinking is thought to increase aggressiveness, people may act in more aggressive ways after drinking

An Integrative Model of Substance-Related Disorders

- Exposure or access to a drug is necessary, but not sufficient
- Drug use depends on:
  - Social and cultural expectations
  - Positive and negative reinforcement
  - Genetic predisposition and biological factors
  - Psychosocial stressors

Figure 10.5: An integrative model of substance-related disorders



Biological Treatment of Substance-Related Disorders, Part 1

- Agonist substitution
  - Safe drug with a similar chemical composition as the abused drug
  - Examples include methadone and nicotine gum or patch
- Antagonistic treatment
  - Drugs that block or counteract the positive effects of substances
  - Examples include naltrexone for opiate and alcohol problems

Biological Treatment of Substance-Related Disorders, Part 2

- Aversive treatment
  - Drugs that make use of substances extremely unpleasant
  - Examples include antabuse and silver nitrate
- Efficacy of biological treatment
  - Generally ineffective when used alone
  - Used to help with withdrawal symptoms

Psychosocial Treatment of Substance-Related Disorders, Part 1

- Inpatient vs. outpatient care
  - Little difference in effectiveness
- Community support programs
  - Alcoholics Anonymous (AA) and related groups (e.g., NA) may be helpful
- Balancing treatment goals
  - Controlled use vs. complete abstinence
- Component treatment
  - Incorporate several elements such as psychotherapy and contingency management

Psychosocial Treatment of Substance-Related Disorders, Part 2

- Comprehensive treatment and prevention programs
  - Individual and group therapy
  - Aversion therapy and convert sensitization
  - Contingency management
  - Community reinforcement
  - Relapse prevention
- Preventative efforts
  - Recent shift away from education approaches
  - Greater enforcement of anti-drug laws

Summary of Substance-Related Disorders, Part 1

- *DSM-5* substance related disorders
  - Cover four classes
    - Depressants, stimulants, opiates, and hallucinogens
  - Diagnoses include intoxication, withdrawal and substance use disorders

Summary of Substance-Related Disorders, Part 2

- Most substances activate the dopaminergic pleasure pathway
  - Psychosocial factors interact with biological influences
- Treatment of substance abuse disorders
  - Often unsuccessful
  - Highly motivated persons do best
  - Important to use comprehensive approach

Gambling Disorder, Part 1

- New disorder in *DSM-5*
- Classified under "Addictive Disorders"
- Recurrent gambling leading to clinically significant distress or impairment

Gambling Disorder, Part 2

- Associated with 4+ symptoms within a year:
  - Difficulty stopping/reducing gambling
  - Restlessness/irritability when trying to cut back
  - Need to gamble with increasing amounts of money,
  - Frequent preoccupation
  - Gambling when distressed
  - Attempting to "win it back" after a loss
  - Lying about gambling
  - Relying on others for financial support
  - Jeopardizing a significant relationship/job/opportunity

DSM-5 Criteria: Gambling Disorder, Part 1

- Persistent and recurrent problematic gambling behavior leading to clinically significant impairment of distress, as indicated by four (or more) of the following in a 12-month period:
  - (1) Needs to gamble with increasing amounts of money in order to achieve the desired excitement
  - (2) Is restless or irritable when attempting to cut down or stop gambling
  - (3) Has made repeated unsuccessful efforts to

DSM-5 Criteria: Gambling Disorder, Part 2

- (5) Often gambles when feeling distressed
- (6) After losing money gambling, often returns another day to get even
- (7) Lies to conceal the extent of involvement with gambling
- (8) Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling
- (9) Relies on others to provide money to relieve desperate financial situations caused by gambling

DSM-5 Criteria: Gambling Disorder, Part 3

Specify current severity

Mild: 4–5 criteria met

Moderate: 6–7 criteria met

Severe: 8–9 criteria met

From American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

Gambling Disorder: Treatment

- Psychosocial treatment similar to substance abuse
- Treatment is often ineffective
- Motivation to get better is critical; dropout is high
- Research is limited, but multipart CBT interventions are under investigation
  - Scheduling alternative activities, setting financial limits, relapse prevention

Impulse-Control Disorders, Part 1

- Each is characterized by:
  - Impairment of social and occupational functioning
  - Increased tension/anxiety prior to the act
  - A sense of relief following the act
- Include:
  - Intermittent explosive disorder
  - Kleptomania
  - Pyromania

Impulse-Control Disorders, Part 2

- Intermittent explosive disorder
  - Rare condition
  - Characterized by frequent aggressive outbursts
  - Leads to injury and/or destruction of property
  - Few controlled treatment studies

Impulse-Control Disorders, Part 3

- Kleptomania
  - Failure to resist urge to steal unnecessary items
  - Seems rare, but it is not well studied
  - Highly comorbid with mood disorders
  - Also co-occurs with substance-related problems

Impulse-Control Disorders, Part 4

- Pyromania
  - Involves having an irresistible urge to set fires
  - Diagnosed in just 3% of arsonists
  - Little etiological and treatment research
  - Treatment usually focuses on identifying urges and practicing incompatible behaviors

Summary of Non-Substance Disorders Related to Addiction

- Involve impulsive, self-destructive behaviors
- Include gambling disorder, intermittent explosive disorder, kleptomania, pyromania
- Research remains scarce

References

- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (Fourth Ed.). Washington, D. C.: Author.
- Dingfelder, S. (2004). Pavlovian psychopharmacology: New research suggests that, in response to internal cues, the body learns to anticipate and counteract some physiological effects of drugs. *APA Monitor on Psychology, 35*(4), 18-19.
- Kassler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. R., Hughes, M., Eshleman, S., Wittchen, H. U., & Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Survey. *Archives of General Psychiatry, 51*, 8-19.
- Munsey, C. (2012). 'Spice and 'K2': New drugs of abuse now on the market. *APA Monitor on Psychology, 42* (9), 23.
- Nairne, J. S. (1999). *Psychology: The adaptive mind* (2nd Ed.). Albany, NY: Brooks/Cole Publishing Company.
- Nevid, J. S., Rathus, S. A., & Greene, B. (2003). *Abnormal psychology in a changing world* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- Packard, E. (2006). Self-consciousness affects drinking in sororities and fraternities. *APA Monitor on Psychology, 37* (4), 11.
- Sobell, M. B., & Sobell, L. C. (2007). Substance use, health, and mental health. *Clinical Psychology: Research and Practice, 14, 1-5.*
- Stambor, Z. (2005). Study reveals alcohol-abuse contributors. *APA Monitor on Psychology, 36* (2), 19.