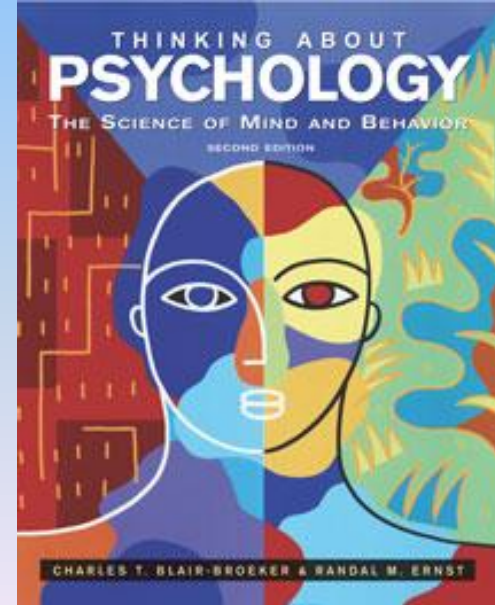


# Thinking About Psychology: The Science of Mind and Behavior 2e

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# Cognitive Domain



# Consciousness Chapter



# Module 26

# Drugs

# Module 26: Drugs

# Introduction

# Psychoactive Drugs

- Chemical substances that *alter perceptions, mood, or behavior*
- 3 most common psychoactive drugs:
  - Caffeine
  - Alcohol
  - Nicotine
- Induce an *altered state of consciousness*

# Dependence

- State of physiological, psychological, or both types of need to take more of a drug after continued use.
- True addictions seriously disrupt a person's ability to function in everyday life
- Gambling and internet (phone/device) use can sometimes fit this description, but the term addiction is generally overused
- Withdrawal follows if the drug is discontinued



# Withdrawal

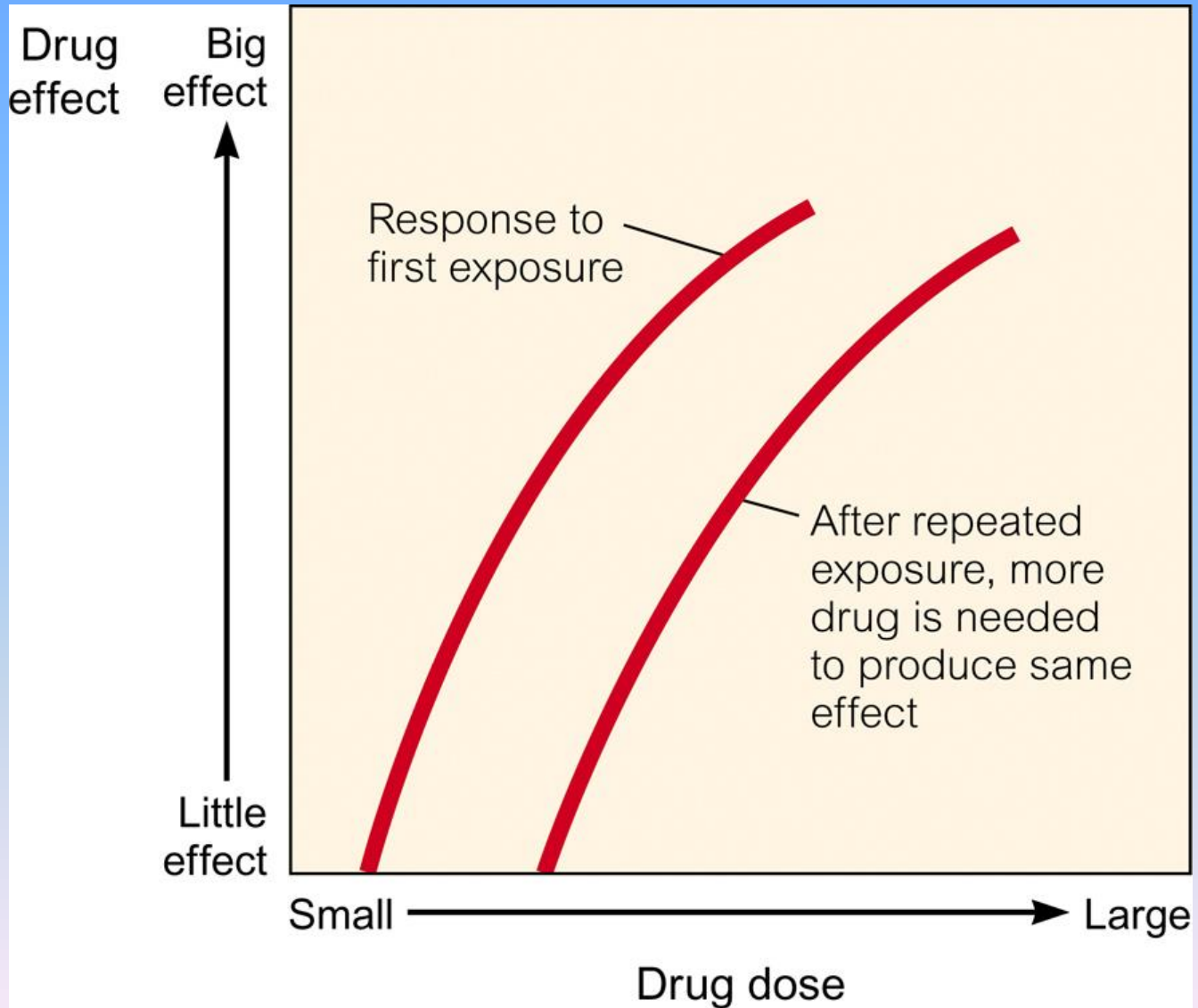
- *Discomfort and distress* that follow when a person who is dependent on a drug discontinues the use of that drug
- Withdrawal symptoms are *usually the reverse of the drug's effects*.
- Can range from grogginess or headache if you have a caffeine dependence, to the “shakes”, seizures, and even death in the case of heroin or alcohol withdrawal



# Tolerance

- *Reduced responsiveness* to a drug, prompting the user to *larger dosages* to *achieve the same pleasurable effects* previously obtained by lower doses
- New drinker may get a “buzz” from one beer, but after drinking regularly the person may now require 2 or 3 to get the same feeling

# Tolerance



## Module 26: Drugs

# Alcohol: A Depressant

# Depressants

- Drugs that *reduce* neural activity and *slow* body functioning
- Includes *alcohol, sedatives/tranquilizers* and *opiates* (like morphine and heroin)
- Tranquilizers/Barbiturates and Benzodiazepines (such as Xanax, Klonopin, Valium)

# Alcohol (ethyl alcohol)

- Found in beer, wine, and liquor
- The second most used psychoactive drug (caffeine first)
- Slows thinking, and impairs physical activity



# How much alcohol in each?

- Alcoholic beverages vary widely in the amount of alcohol they contain
- Beer – 3.5 - 5%
- Wine 9 – 12%
- Hard stuff (like whiskey or vodka) 40% or more



# How much does each contain?

- 1 *12 ounce* can of beer
- *4 ounces* of wine
- *1 ounce* of hard liquor
  
- All contain about the same amount of alcohol



# Blood Alcohol Content (BAC)

- A measure of how much alcohol is in a person's bloodstream
- BAC of .08 considered legal intoxication in most states (.02 if under 21)
- Even lower for those under 21 and in certain professions (.02)



# How long does it take to sober up?

- It takes a 150 pound man about an hour to metabolize the alcohol from one drink (takes women longer)
- Having more than one alcoholic drink/hour leads to an increase in blood alcohol content (BAC)

# Short Term Effects of Alcohol

- Alcohol impairs the parts of the brain responsible for controlling inhibitions and making judgments
- May explain many fights, accidents, and unwanted sexual advances that involve drinking
- Dramatically increases the probability that we will act out the inappropriate or dangerous urges we keep in check while sober

# Long Term Effects

- Long-term effects of alcohol abuse include organ damage/failure and early death
- Alcohol accounts for more injuries and death than all other illegal drugs combined



# Alcohol, Memory, and Sleep

- Studies have shown that alcohol impairs memory by suppressing the processing of recent events into long term memory (blackout).
- Alcohol impairs REM sleep, further disrupting memory storage.

# Alcoholism

## Table 26.1

### Do You Have an Alcohol Problem?

**If you can answer “yes” to even one of these questions, consider seeking advice about your use of alcohol.**

1. Has someone close to you sometimes expressed concern about your drinking?
2. When faced with a problem, do you often turn to alcohol for relief?
3. Are you sometimes unable to meet home or work responsibilities because of drinking?
4. Have you ever required medical attention as a result of drinking?
5. Have you ever experienced a blackout—a total loss of memory while still awake—when drinking?
6. Have you ever come into conflict with the law in connection with your drinking?
7. Have you often failed to keep the promises you have made to yourself about controlling or cutting out your drinking?

# Opiates and Opioids

- Numb the senses and relieve pain
- Include morphine, heroin, opium, and codeine
- Also include prescription pain killers like oxycodone (brand name Oxycontin)
- Extremely addictive and withdrawal is excruciatingly painful



## Module 26: Drugs

# Stimulants

# Stimulants

- While depressants like alcohol reduce neural activity and slow body functions, stimulants have the opposite effect.
- They *excite* neural activity and speed up body functions
- Include: caffeine, nicotine, amphetamines, and cocaine

# Caffeine

- Stimulant found in coffee, chocolate, tea, and some soft drinks
- Provides user with a sense of increased energy, mental alertness, and forced wakefulness
- Blocks neurological receptor sites that, if activated, sedate the central nervous system



# Aaah...coffee

- A 5 ounce cup of coffee contains about 100 milligrams of caffeine
- If you drink 200 or more milligrams of caffeine a day (2 small cups of coffee) you will probably experience withdrawal symptoms on a day you go without.



# Nicotine



- Stimulant found in tobacco
- In the top 3 with alcohol and caffeine
- Effects similar to those of caffeine
- Very addictive and does not stay in the body very long (why you need to keep smoking)
- 6,000 light up for the first time everyday – ½ will develop a smoking habit
- 450,000 die in US every year

# Cocaine in Coke?

- *Stimulant derived from leaves of the coca plant*
- Used for centuries in South America for medicinal and religious purposes
- Used as surgical anesthetic in US in 1880's
- Freud originally prescribed it to treat depression and used it regularly himself (but later condemned its use)
- Coca-Cola even included 60 mil. of it in its soda for a brief period (1896-1904)
- Recreational use died out in 1930's when replaced by cheaper amphetamines, but made comeback in late 1970's

# Cocaine

- *Dependency is quick and severe*
- Produces a strong euphoric effect, but an even stronger crash
- Places extreme strain on cardiovascular system which can lead to instant death in some cases
- *Crack* – inexpensive cocaine crystals





# Amphetamines

- Drugs that stimulate neural activity, speeding up body functions
- Include increased energy and mood changes
- Includes: speed, uppers, and more potent methamphetamines (also called crystal, crank, and *meth*)
- *Ice* is to meth as crack is to cocaine (cheaper)
- *Ice* stays in system much longer than *crack*
- Mimic adrenaline
- Can cause irreversible changes in mood

## Module 26: Drugs

# Hallucinogens

# Hallucinogens

- *Psychedelic drugs* (meaning mind-manifesting) that distort perceptions and evoke sensory images in the absence of sensory input
- Most made in a laboratory and illegal
- Include: LSD and ecstasy
- *Mescaline* (from peyote cactus) and *psilocybin* (from certain mushrooms) both produce perceptual disruption of time and space and are found in nature. Some states allow use for religious ceremonies, but not recreational use.

# Lysergic Acid Diethylamide (LSD)

- *Powerful hallucinogenic drug*
- Also known as “*acid*”
- First LSD experience was by Swiss chemist, *Albert Hoffman*, who first synthesized it in 1938
- After accidentally ingesting it in 1943 he described being “seized by a peculiar sensation of vertigo and restlessness. Objects, as well as the shape of my associates in the laboratory, appeared to undergo optical changes”

# Acid Trip



- The effects vary from person to person, but can include visual distortions, detachment from reality, and panic.
- Some experience a mildly pleasant or mildly unpleasant reaction; others have nightmarish or deadly experiences.
- Users can be dangerous to themselves and others.

# Ecstasy

- Hallucinogenic drug that *produces lower inhibitions, pleasant feelings, and greater acceptance of others (the “love drug”)*
- Also called *MDMA*
- Even moderate users may experience permanent brain damage.
- Closely associated with raves where users can dance at frenzied pace for hours, risking dehydration and sometimes leading to death

## Module 26: Drugs

# Marijuana



# Cannabis Sativa

- The hemp plant goes by many names – *pot, dope, weed, ganja, sinsemilla, etc.*
- Has been used for thousands of years for medical and religious purposes in China and India
- Doesn't fit neatly into any of the categories
- Sometimes categorized as a hallucinogen for its mild hallucinogenic effects

# Marijuana



- Low doses produce similar effects to alcohol, but high doses don't suppress breathing and are not lethal like alcohol
- Compared with LSD produces only mild hallucinogenic experiences
- Can stay in body for months, producing a reverse-tolerance effect

# Marijuana

- Leaves, stems, resin, and flowers form the hemp plant that, when smoked, lower inhibitions and produce feelings of relaxation and mild euphoria
- THC (delta-9-tetrahydrocannabinol) is the active ingredient that causes the “high”
- Disrupts memory; lung damage from smoke worse than cigarettes, brain cell loss with large doses

# Schedule 1 Drug

- Marijuana is listed as a schedule 1 drug along with heroin, LSD and ecstasy
- Schedule 1 drugs are classified as such based on 1. high potential for abuse and 2. having no currently accepted medical treatment in the US
- Despite this, 28 states have passed laws allowing for the use of medicinal marijuana and 7 states (and D.C.) have approved its use for recreational purposes

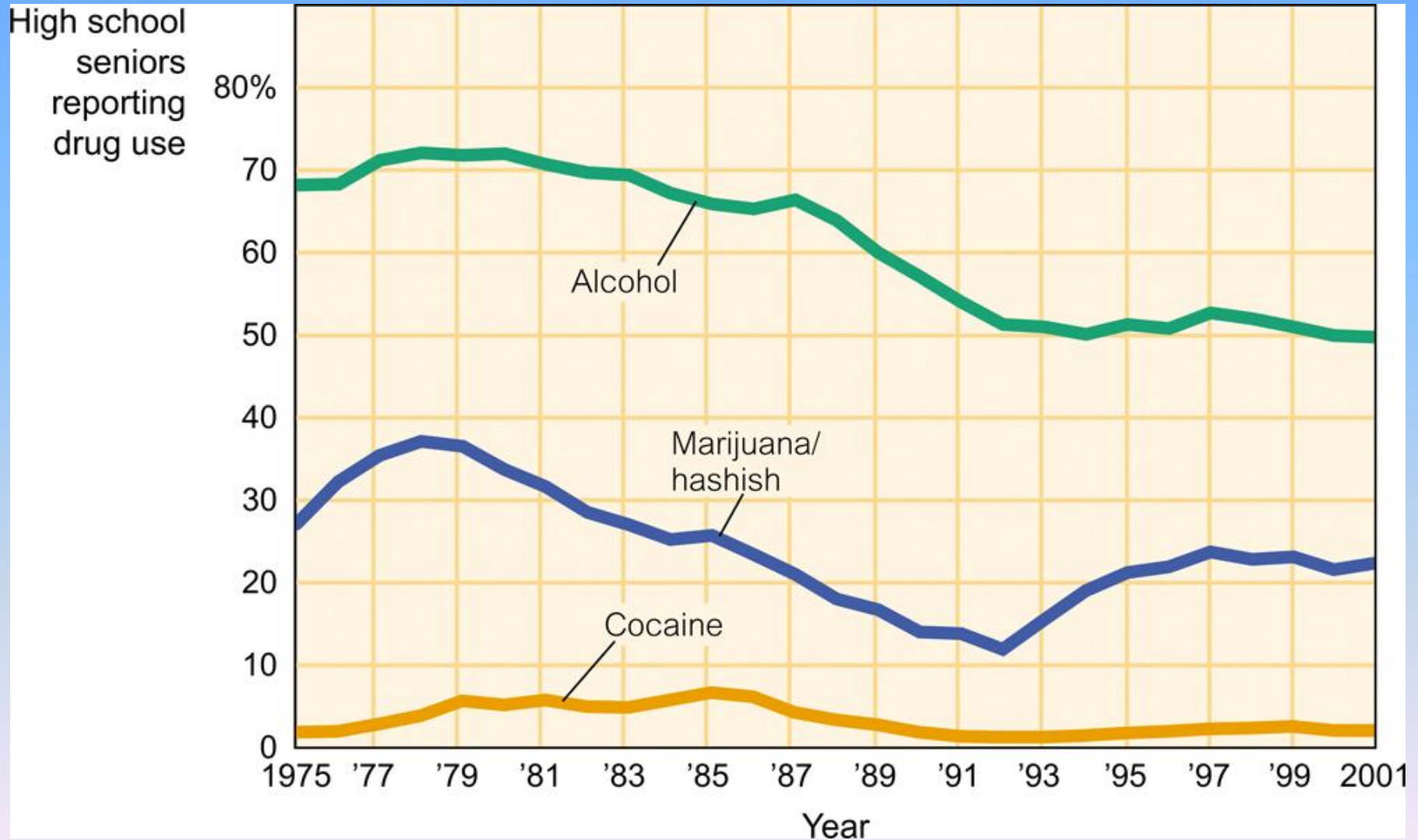
# Medical Marijuana

- Is used medicinally to treat nausea associated with chemotherapy and other diseases
- Other medical conditions it is used to treat include, MS, cancer, glaucoma, and HIV/AIDS
- There is still much debate over the benefits of medical marijuana and state laws conflict with federal law on this issue

# High School Drug Use

- While smoking and the use of many other drugs is on the decline among high school students, the use of marijuana among high school is on the rise

# High School Drug Use



## Module 26: Drugs

# Prevention



# Factors Affecting Drug Use

- *Education* – 4% of HS dropouts smoke cigarettes
- *Hopelessness* – those who believe their lives are meaningless are more likely to use
- *Mental Illness* – those struggling with mental health issues are more likely to self-medicate
- *Genetics* – those with alcoholism in their family are 4X more likely to abuse it
- *Peers* – if your friends don't use then you are less likely to and vice versa

# A Guide to Selected Psychoactive Drugs

**Table 26.2**

## A Guide to Selected Psychoactive Drugs

<b>Drug</b>	<b>Type</b>	<b>Pleasurable Effects</b>	<b>Adverse Effects</b>
Alcohol	Depressant	Initial high followed by relaxation and disinhibition	Depression, memory loss, organ damage, impaired reactions
Heroin	Depressant	Rush of euphoria, relief from pain	Depressed physiology, agonizing withdrawal
Caffeine	Stimulant	Increased alertness and wakefulness	Anxiety, restlessness, and insomnia in high doses; uncomfortable withdrawal
Methamphetamine ("speed," "crank," "ice")	Stimulant	Euphoria, alertness, energy	Irritability, insomnia, hypertension, seizures
Cocaine	Stimulant	Rush of euphoria, confidence, energy	Cardiovascular stress, suspiciousness, depressive crash
Nicotine	Stimulant	Arousal and relaxation, sense of well-being	Heart disease, cancer (from tars)
Marijuana	Mild hallucinogen	Enhanced sensation, relief of pain, distortion of time, relaxation	Disrupted memory, lung damage from smoke
Ecstasy (MDMA)	Hallucinogen	Euphoria, disinhibition	Brain damage, depression, fatigue

The End