

# Unit III: States of Consciousness, Sensation and Perception

Chapter 7-8

# Consciousness

An individual's state of awareness, including a person's feelings, sensations, ideas, and perceptions



# Hypnosis

A state of consciousness resulting from a narrowed focus of attention and characterized by heightened suggestibility



# Psychoactive Drugs

Chemicals that affect the nervous system and result in altered consciousness or awareness, influence sensations and perceptions, and modify moods and cognitive processes

Depressants

Tranquilizers

Opiates

Stimulants

Hallucinogens

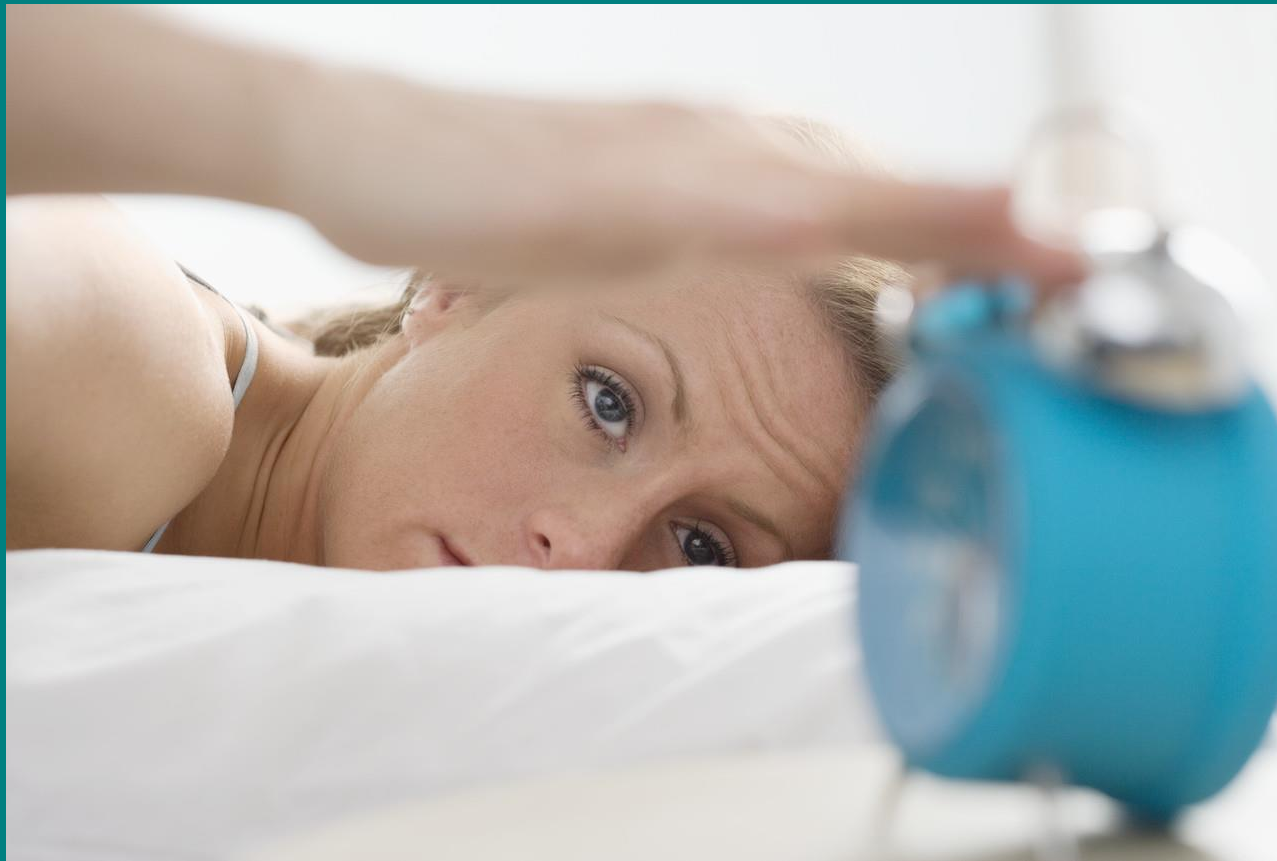
# Meditation

A systematic narrowing of attention on an image, thought, bodily process, or external object with the goal of clearing one's mind and producing relaxation



# Sleep

Sleep is a natural state of bodily rest observed in humans and other



# Circadian Rhythms

A regular sequence of biological processes such as temperature that occurs about every 24 hours (daily cycles)



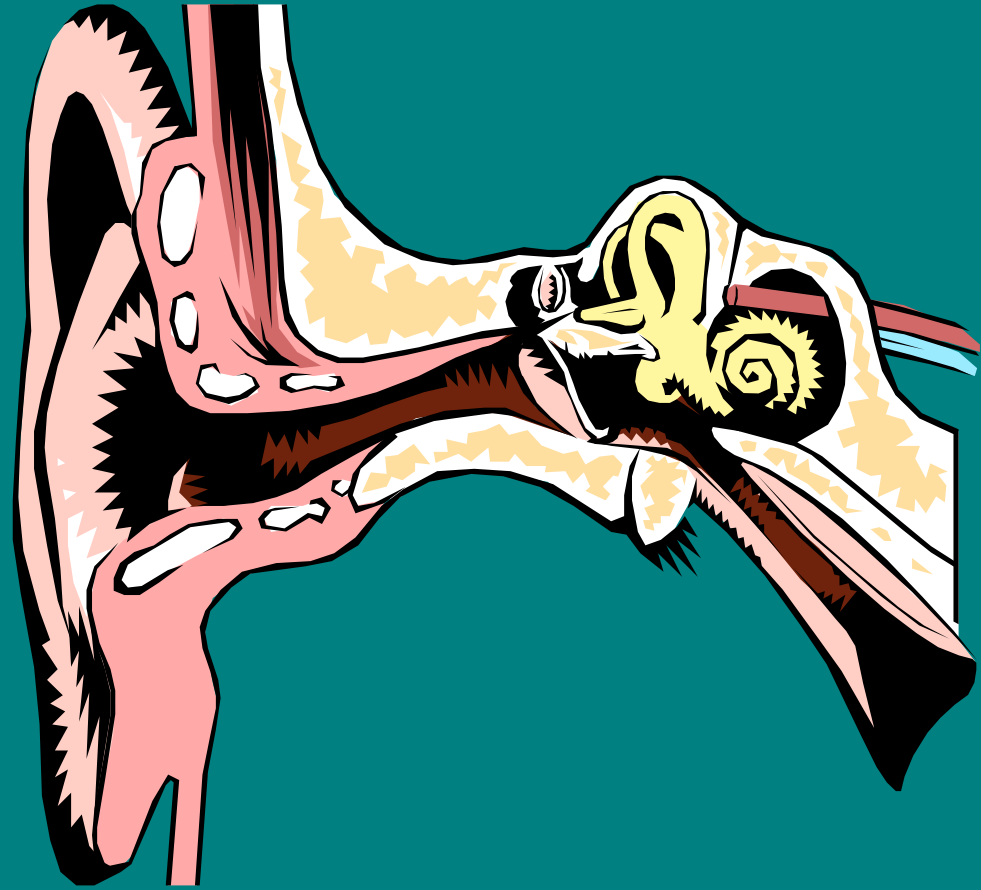
# Sleep Disorders

A sleep disorder (somnipathy) is a medical disorder of the sleep patterns of a person or animal. Some sleep disorders are serious enough to interfere with normal physical, mental and emotional functioning.



# Sensation

The stimulation  
of sensory  
receptors and  
the transmission  
of sensory  
information to  
the brain



# Perception

The organization and interpretation of sensory information into meaningful experiences



# Illusions

Perceptions  
that  
misrepresent  
physical  
stimuli

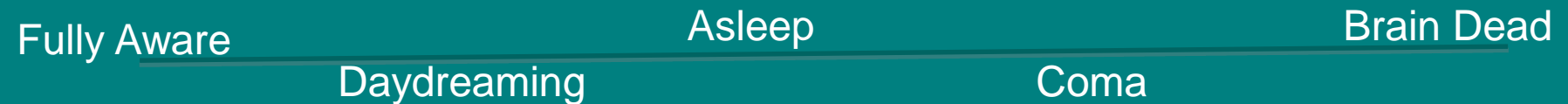


# What is consciousness?

- Consciousness: Personal Awareness
- Awareness of Internal and External Stimuli
  - Levels of awareness
    - James – stream of consciousness
    - Freud – unconscious

# Altered States of consciousness

- When you sleep, you are NOT unconscious, you are in an altered state.
- Really CONSCIOUSNESS is like a Spectrum:

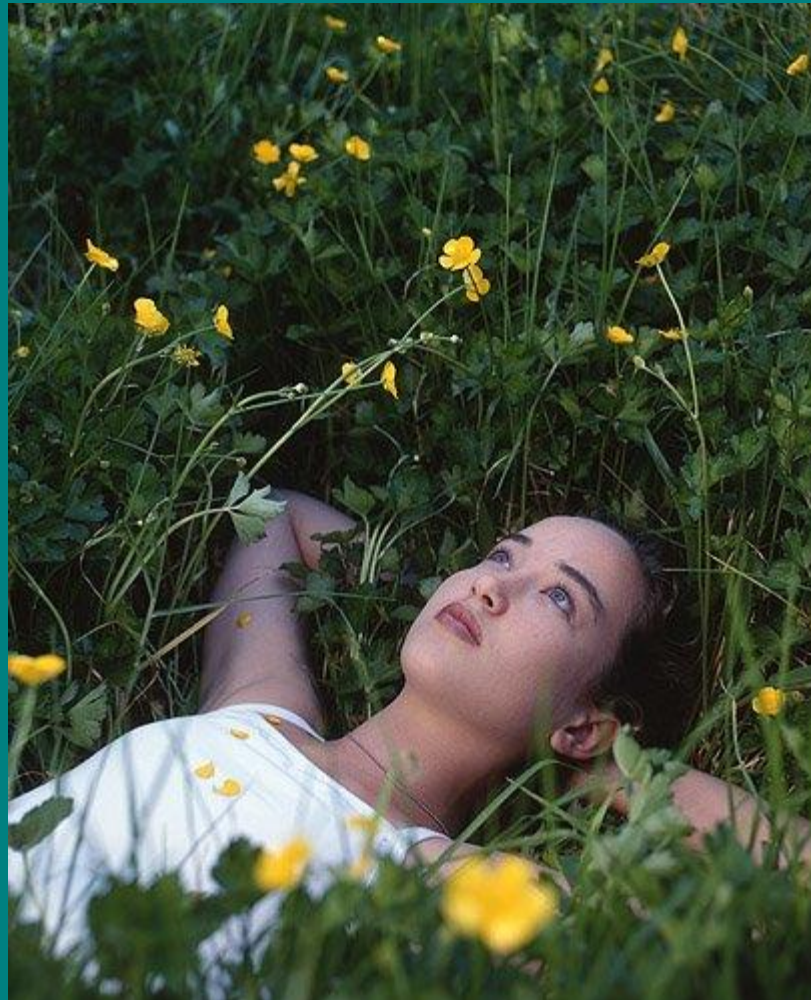


- Other altered states of consciousness include...

# Meditation



# Daydreaming



HE LIVES IN A LITTLE  
WORLD OF HIS OWN!



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# Hypnosis



# Under influence of a substance



*"You'll like this, sir. It'll make  
you very drunk"*

# Freud's Levels of Consciousness

- **Conscious Level:** Direct inner awareness of thoughts, images, emotions, and memories
- **Preconscious Level [SUBCONSCIOUS]:** material that is not currently in awareness, but is readily available
- **Unconscious Level:** mental events that are unavailable to awareness

# The Electroencephalograph: A Physiological Index of Consciousness

- **EEG** – monitoring of brain electrical activity
- Brain-waves
  - **Amplitude** (height)
  - **Frequency** (cycles per second)
    - **Beta (13-24 cps)**
    - **Alpha (8-12 cps)**
    - **Theta (4-7 cps)**
    - **Delta (<4 cps)**

# Alt. State of Consciousness: SLEEP

- *Why is sleep an altered state?*
- **Circadian Rhythms**
  - 24 hr biological cycles
    - Regulation of sleep/other body functions
- **WHY DO WE SLEEP?**
  - Restorative
  - Energy Conservation
  - Adaptive
  - Clear our Minds
  - “Sleep to Dream”

# Sleep Stages Posters

- \*Small group Activity:
- Each group will make a chart of an assigned stage of sleep,
  - Posters will include: body changes, brain changes, and why that stage is important
  - **Tell us EVERYTHING we need to know about your sleep stage!**

# Stage I—The Twilight Stage: Drifting to Sleep

- Lightest level of sleep
- Pulse slows down
- Muscles relax → HYPNIC JERKS
- Breathing uneven
- Can last up to 10 minutes
- *Alpha waves*

# Stage II—Light, Slow Wave Sleep

- Brain waves shift **ALPHA → THETA**
- Eyes roll slowly from side to side
- Wake easily to the slightest noise
- Can last 30 minutes
- SLEEP SPINDLES—bursts of brain wave activity in rhythmic patterns



# Stage III—Transitional Stage to Deep Sleep

- Large amplitude DELTA WAVES sweep the brain every few seconds
- Slow brain waves

# Stage IV—The Deepest Sleep

- Strong DELTA WAVES
- State of oblivion
  - Bedwetting can occur
  - Sleepwalking can occur
- Both Regular and Irregular Breathing Patterns
- Very important for Psychological Wellbeing

# Bedwetting



# Sleepwalking



"I probably shouldn't wake him. He needs the exercise."

# Stage V—Rapid Eye Movement (REM)

- Eyes move rapidly
- Irregular pulse and breathing
- Extremely high adrenaline level
- Muscles become paralyzed due to adrenaline
- **Most dreaming takes place**
- Lasts about 10 minutes and increases as the night progresses.
- Brain waves similar to one who is awake--BETA.

# Some facts...

- Entire cycle lasts about 90 minutes and then you repeat it.
- Stages 1-4 are known as QUIET SLEEP or Non-REM (NREM)
- REM is known as ACTIVE SLEEP
- 75% spent in stages 1-4
- 25% in REM
- Nightmares are simply unpleasant dreams that occur during REM
- Incubus attack (night terror) – unpleasant dream during stage 4.

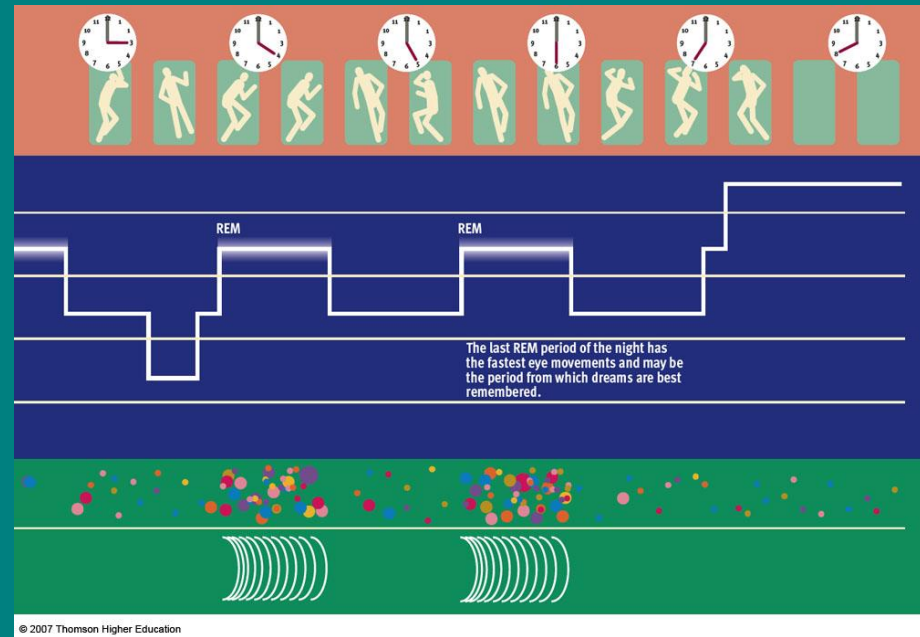
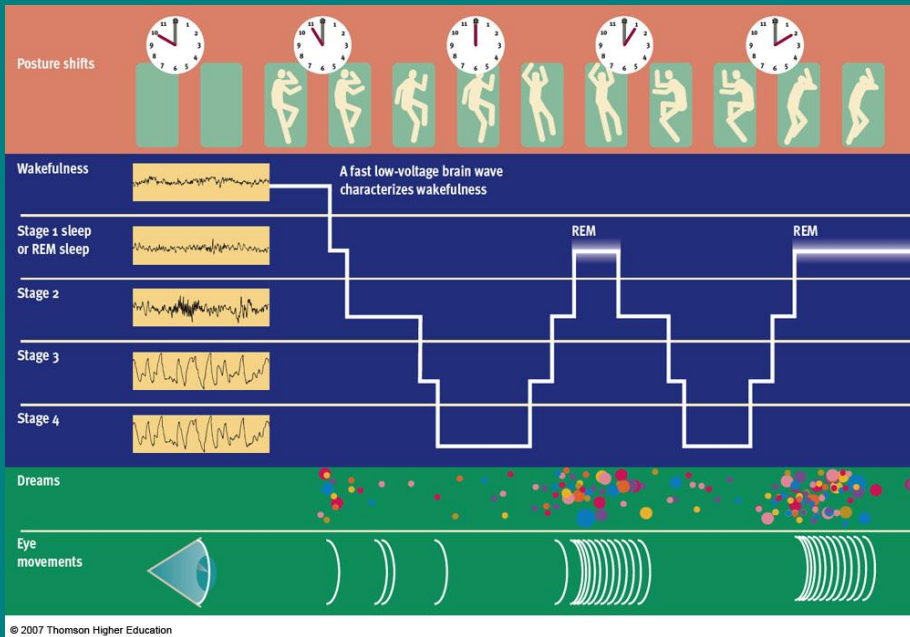


Figure 5.5 An overview of the cycle of sleep

# How much sleep?

- Infants – 16 hours a day
- Elderly – 5 hours
- Average 16 year old – 10-11 hours
- College graduate – 8 hours



# Tips for a better night's sleep

- Get cool – good room temperature is 65-72.
  - Drop in body temperature induces sleep.
  - Take a hot bath then get into cool bed
- Reduce anxiety
  - Hide illuminated clocks to avoid clock watching.
  - Avoid eating 3 hours before bed
  - Alcohol, tobacco, or caffeine exacerbates anxiety.

# Sleep Disorders

- In small groups, go to various stations to find out about the 6 different sleep disorders
  - Complete the Chart in your Notes
- \*Sleep Disorders debate: which is the worst?

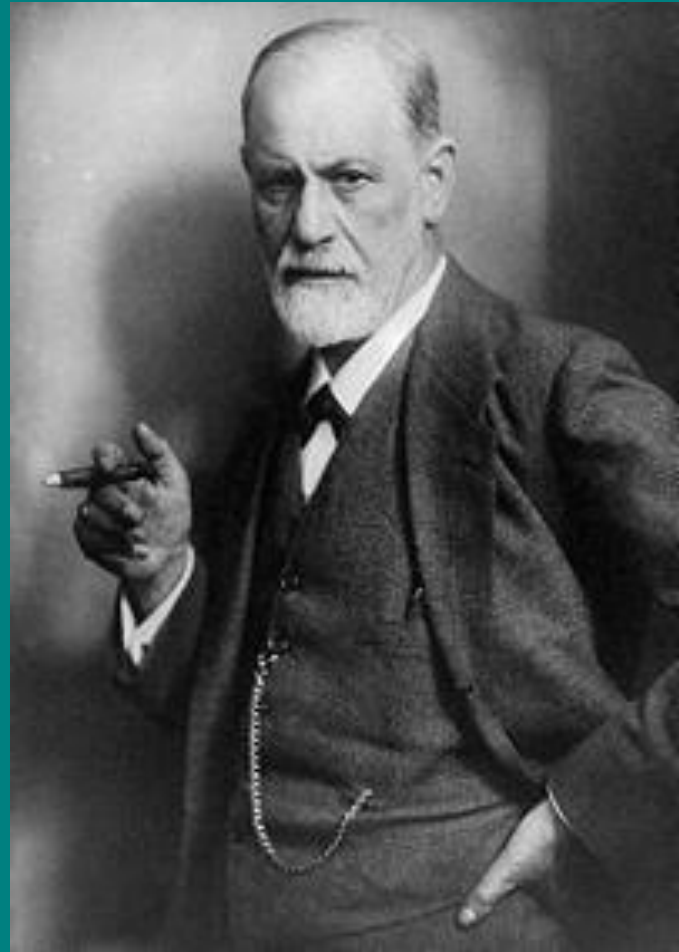
# DREAMS

*So what are dreams and why do we have them?*

-Dreams: Mental Experiences during sleep

# Freud's theory of dreams

- Freud was the first theorist to emphasize dreams and their meaning.
- He believed that dreams represent disguised fulfillment of repressed wishes.
- Dreams can be clues to desires the dreamer is afraid to acknowledge.



# DREAM CONTENT according to Freud

## Manifest Content

- Comes from events during the day
- Sensations during sleep
- Early memories
- Storyline of a dream

## Latent Content

- Comes from a person's unconscious feelings, wishes, desires.
- The meaning of a dream
  - “latent” means “hidden”

# Dream Theories

- **Wish Fulfillment: [FREUD]** Our Dreams allow us to role play; fulfill our inner desires; a hidden message from the unconscious; symbolic
- **Problem Solving: [Cartwright]** We can test out potential solutions in a safe environment
- **Mental Housecleaning:** Dreams simply allow us to purge unneeded information; Day Residue

# The Cultural Significance of Dreams

Western Culture v. Non-Western Culture

*\*Dream Interpretation: TRUTH or HOAX?!\**

# Meditation

- Through rituals, exercises, and passive observation, the normal person-environment relationship is altered
  - Clearing the mind in an attempt to reach a state of peace and relaxation
- The meditative state is entered consciously through deliberate relaxation
- Yoga, zen, transcendental meditation



# Hypnosis

- Form of altered consciousness where people do not use critical thinking skills
- Subject is NOT asleep
- Cooperation is the key
- Posthypnotic suggestion- remembering something when the trance is over, as suggested by the hypnotist

# Hypnosis

The 5 Qualities of the Hypnotic State:

- Heightened Suggestibility
- Dissociation
- Vivid Imagery
- Enhanced Memory
- Posthypnotic Suggestion

# Biofeedback

- The Self-monitoring of one's physiological states to control certain bodily functions such as heart rate or blood pressure
- People can learn to reduce pain and tension by altering brain waves rather than by taking medication

# Drugs

- Psychoactive Drugs: drugs that influence a person's emotions, perceptions, and behavior
- Addictive drugs: produce a biological or psychological dependence in the user

# Drugs

- Depressants: reduce the function of the sympathetic nervous system; induces muscle relaxation and sleepiness—but limits REM sleep
- Alcohol, sleeping pills, Quaaludes

# Drugs

- **Stimulants**: increase heart rate and respiration, pupils dilate, appetite depressant, trouble sleeping
- Amphetamines, meth, cocaine, ecstasy, caffeine, nicotine

# Drugs

- Hallucinogens: drugs that can change a person's perception, thinking, emotions, and self-awareness
- LSD, PCP, Pot

# Drugs

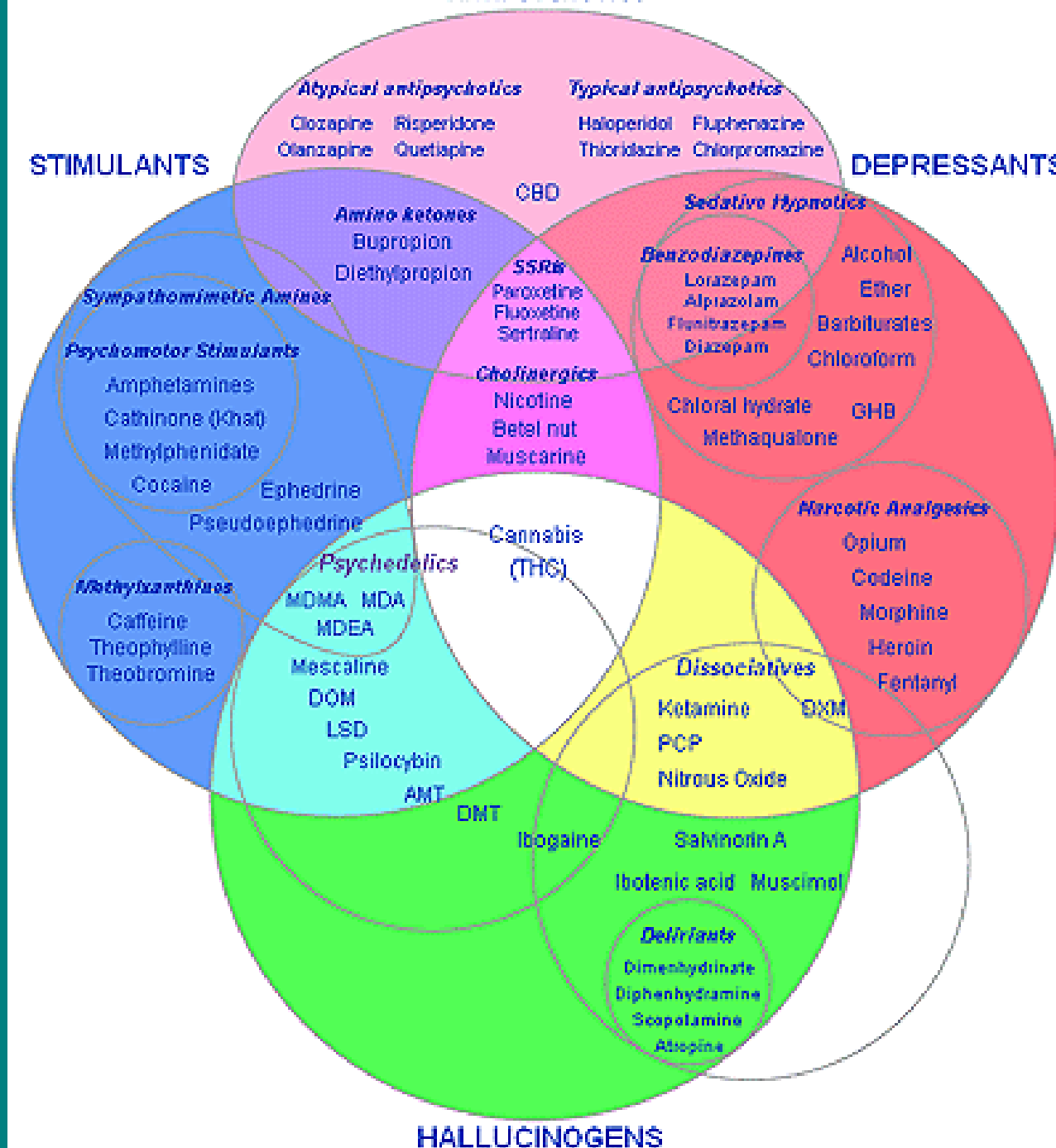
- Narcotics/Opiates: depress the entire neural system
- Morphine, codeine, heroin, opium



# ANTIPSYCHOTICS

## STIMULANTS

## DEPRESSANTS



# Controlled Substances

# Uses and Effects

U.S. Department of Justice  
Drug Enforcement Administration

Chart 5

Drugs	CSA Schedules	Trade or Other Names	Medical Uses	Physical Dependence	Psychological Dependence	Tolerance	Duration (Hours)	Usual Method	Possible Effects	Effects of Overdose	Withdrawal Syndrome
<b>Narcotics</b>											
Heroin	I	Diacetylmorphine, Horse, Smack	None in U.S., Analgesic, Antitussive	High	High	Yes	3-6	Injected, sniffed, smoked	<ul style="list-style-type: none"> <li>● Euphoria</li> <li>● Drowsiness</li> </ul>	<ul style="list-style-type: none"> <li>● Slow and shallow breathing</li> </ul>	<ul style="list-style-type: none"> <li>● Watery eyes</li> </ul>
Morphine	II	Duramorph, MS-Contin, Roxanol, Oramorph SR	Analgesic	High	High	Yes	3-6	Oral, smoked, injected	<ul style="list-style-type: none"> <li>● Respiratory depression</li> </ul>	<ul style="list-style-type: none"> <li>● Clammy skin</li> </ul>	<ul style="list-style-type: none"> <li>● Runny nose</li> </ul>
Codeine	II, III, V	Tylenol w/Codeine, Empirin w/Codeine, Robitussin A-C, Fiorinal w/Codeine, APAP w/Codeine	Analgesic, Antitussive	Moderate	Moderate	Yes	3-6	Oral, injected	<ul style="list-style-type: none"> <li>● Constricted pupils</li> </ul>	<ul style="list-style-type: none"> <li>● Convulsions</li> </ul>	<ul style="list-style-type: none"> <li>● Yawning</li> </ul>
Hydrocodone	II, III	Tussionex, Vicodin, Hycodan, Lorcet	Analgesic, Antitussive	High	High	Yes	3-6	Oral	<ul style="list-style-type: none"> <li>● Nausea</li> </ul>	<ul style="list-style-type: none"> <li>● Coma</li> <li>● Possible death</li> </ul>	<ul style="list-style-type: none"> <li>● Loss of appetite</li> </ul>
Hydromorphone	II	Dilaudid	Analgesic	High	High	Yes	3-6	Oral, injected			<ul style="list-style-type: none"> <li>● Irritability</li> </ul>
Oxycodone	II	Percodan, Percocet, Tylox, Roxicet, Roxicodone	Analgesic	High	High	Yes	4-5	Oral			<ul style="list-style-type: none"> <li>● Tremors</li> </ul>
Methadone and LAAM	I, II	Dolophine, Methadose, Levo-alpha-acetylmethadol, Levomethadyl acetate	Analgesic, Treatment of Dependence	High	High	Yes	12-72	Oral, injected			<ul style="list-style-type: none"> <li>● Panic</li> </ul>
Fentanyl and Analogs	I, II	Innovar, Sublimaze, Alfenta, Sufenta, Duragesic	Analgesic, Adjunct to Anesthesia, Anesthetic	High	High	Yes	10-72	Injected, Transdermal patch			<ul style="list-style-type: none"> <li>● Cramps</li> </ul>
Other Narcotics	II, III, IV, V	Percodan, Percocet, Tylox, Opium, Darvon, Talwin <sup>1</sup> , Buprenorphine, Meperidine (Pethidine), Demerol	Analgesic, Antidiarrheal	High-Low	High-Low	Yes	Variable	Oral, injected			<ul style="list-style-type: none"> <li>● Nausea</li> <li>● Chills and sweating</li> </ul>
<b>Depressants</b>											
Chloral Hydrate	IV	Noctec, Somnos, Felsules	Hypnotic	Moderate	Moderate	Yes	5-8	Oral	<ul style="list-style-type: none"> <li>● Slurred speech</li> </ul>	<ul style="list-style-type: none"> <li>● Shallow respiration</li> </ul>	<ul style="list-style-type: none"> <li>● Anxiety</li> </ul>
Barbiturates	II, III, IV	Amytal, Fiorinal, Nembutal, Seconal, Tuinal, Phenobarbital, Pentobarbital	Anesthetic, anticonvulsant, sedative hypnotic, veterinary euthanasia agent	High-Mod.	High-Mod.	Yes	1-16	Oral, injected	<ul style="list-style-type: none"> <li>● Disorientation</li> </ul>	<ul style="list-style-type: none"> <li>● Clammy skin</li> </ul>	<ul style="list-style-type: none"> <li>● Insomnia</li> </ul>
Benzodiazepines	IV	Ahvan, Dalmane, Diazepam, Librium, Xanax, Serax, Valium, Tranxene, Verstran, Versed, Halcion, Paxipam, Restoril	Antianxiety, sedative, anticonvulsant, hypnotic	Low	Low	Yes	4-8	Oral, injected	<ul style="list-style-type: none"> <li>● Drunken behavior without odor of alcohol</li> </ul>	<ul style="list-style-type: none"> <li>● Dilated pupils</li> <li>● Weak and rapid pulse</li> </ul>	<ul style="list-style-type: none"> <li>● Delirium</li> </ul>
Glutethimide	II	Doriden	Sedative, hypnotic	High	Moderate	Yes	4-8	Oral		<ul style="list-style-type: none"> <li>● Coma</li> </ul>	<ul style="list-style-type: none"> <li>● Convulsions</li> </ul>
Other Depressants	I, II, III, IV	Equanil, Miltown, Noludar, Placidyl, Valmid, Methaqualone	Antianxiety, Sedative, Hypnotic	Moderate	Moderate	Yes	4-8	Oral		<ul style="list-style-type: none"> <li>● Possible death</li> </ul>	<ul style="list-style-type: none"> <li>● Possible death</li> </ul>
<b>Stimulants</b>											
Cocaine <sup>1</sup>	II	Coke, Flake, Snow, Crack	Local anesthetic	Possible	High	Yes	1-2	Sniffed, smoked, injected	<ul style="list-style-type: none"> <li>● Increased alertness</li> <li>● Excitation</li> <li>● Euphoria</li> <li>● Increased pulse rate &amp; blood pressure</li> <li>● Insomnia</li> <li>● Loss of appetite</li> </ul>	<ul style="list-style-type: none"> <li>● Agitation</li> <li>● Increased body temperature</li> </ul>	<ul style="list-style-type: none"> <li>● Apathy</li> </ul>
Amphetamine/Methamphetamine	II	Biphentamine, Desoxyn, Dexedrine, Obetrol, Ice	Attention deficit disorder, narcolepsy, weight control	Possible	High	Yes	2-4	Oral, injected, smoked	<ul style="list-style-type: none"> <li>● Increased pulse rate &amp; blood pressure</li> <li>● Insomnia</li> <li>● Loss of appetite</li> </ul>	<ul style="list-style-type: none"> <li>● Hallucinations</li> <li>● Convulsions</li> <li>● Possible death</li> </ul>	<ul style="list-style-type: none"> <li>● Irritability</li> <li>● Depression</li> </ul>
Methylphenidate	II	Ritalin	Attention deficit disorder, narcolepsy	Possible	High	Yes	2-4	Oral, injected			<ul style="list-style-type: none"> <li>● Depression</li> </ul>
Other Stimulants	I, II, III, IV	Adipex, Didrex, Iomamin, Melfiat, Plegine, Captagon, Sanorex, Tenuate, Tepanil, Prelu-2, Preludin	Weight control	Possible	High	Yes	2-4	Oral, injected			<ul style="list-style-type: none"> <li>● Disorientation</li> </ul>
<b>Cannabis</b>											
Marijuana	I	Pot, Acapulco Gold, Grass, Reeler, Sinsemilla, Thai Sticks	None	Unknown	Moderate	Yes	2-4	Smoked, oral	<ul style="list-style-type: none"> <li>● Euphoria</li> <li>● Related inhibitions</li> <li>● Increased appetite</li> <li>● Disorientation</li> </ul>	<ul style="list-style-type: none"> <li>● Fatigue</li> <li>● Paranoia</li> <li>● Possible psychosis</li> </ul>	<ul style="list-style-type: none"> <li>● Occasional reports of insomnia</li> </ul>
Tetrahydrocannabinol	I, II	THC, Marinol	Antinauseant	Unknown	Moderate	Yes	2-4	Smoked, oral			<ul style="list-style-type: none"> <li>● Hyperactivity</li> </ul>
Hashish and Hashish Oil	I	Hash, Hash oil	None	Unknown	Moderate	Yes	2-4	Smoked, oral			<ul style="list-style-type: none"> <li>● Decreased appetite</li> </ul>
<b>Hallucinogens</b>											
LSD	I	Acid, Microdot	None	None	Unknown	Yes	8-12	Oral	<ul style="list-style-type: none"> <li>● Illusions and hallucinations,</li> <li>● Altered perception of time and distance</li> </ul>	<ul style="list-style-type: none"> <li>● Longer</li> </ul>	<ul style="list-style-type: none"> <li>● Unknown</li> </ul>
Mescaline and Peyote	I	Mescal, Buttons, Cactus	None	None	Unknown	Yes	8-12	Oral		<ul style="list-style-type: none"> <li>● More intense "trip" episodes</li> </ul>	
Amphetamine Variants	I	2, 5-DMA, STP, MDA, MDMA, Ecstasy, DOM, DOB	None	Unknown	Unknown	Yes	Variable	Oral, injected		<ul style="list-style-type: none"> <li>● Psychosis</li> </ul>	
Phencyclidine and Analogs	I, II	PCE, PCPy, TCP, PCP, Hog, Loveboat, Angel Dust	None	Unknown	High	Yes	Days	Oral, smoked		<ul style="list-style-type: none"> <li>● Possible death</li> </ul>	
Other Hallucinogens	I	Bufotenine, Ibogaine, DMT, DET, Psilocybin, Psilocyn	None	None	Unknown	Possible	Variable	Smoked, oral, injected, sniffed			
<b>Anabolic Steroids</b>											
Testosterone (Cypionate, Enanthate)	III	Depo-Testosterone, Delatestryl	Hypogonadism	Unknown	Unknown	Unknown	14-28 days	Injected	<ul style="list-style-type: none"> <li>● Virilization</li> <li>● Acne</li> <li>● Testicular atrophy</li> <li>● Gynecomastia</li> <li>● Aggressive behavior</li> <li>● Edema</li> </ul>	<ul style="list-style-type: none"> <li>● Unknown</li> </ul>	<ul style="list-style-type: none"> <li>● Possible depression</li> </ul>
Nandrolone (Decanoate, Phenpropionate)	III	Nortestosterone, Durabolin, Deca-Durabolin, Deca	Anemia, breast cancer	Unknown	Unknown	Unknown	14-21 days	Injected			
Oxymetholone	III	Anadrol-50	Anemia	Unknown	Unknown	Unknown	24	Oral			

<sup>1</sup> Designated a narcotic under the CSA <sup>2</sup> Not designated a narcotic under the CSA

# DRUG PSA

- <http://www.youtube.com/watch?v=LTWDIUonqlw>