States of Consciousness

Some Early Definitions

**Consciousness**: All the sensations, perceptions, memories, and feelings you are aware of at any instant

Waking consciousness: Normal, clear alert awareness

Altered state of consciousness (ASC): Changes that occur in quality and pattern of mental activity; different from waking consciousness (ex: sleep, meditation, hypnosis, drugs)

**Level of Consciousness**:

- Preconscious- all of your stored memories and knowledge (you aren’t thinking of it currently, but the info is there)
- Nonconscious- internal, automatic body functions; you do not have access to these (ex: hair growing)
- Unconscious/Subconscious- the hidden urges, motives, fears that Freud believes shape us into the person we are; see this in our dreams?

Sleep

**Circadian Rhythm**- the internal 24-hour sleep/wake cycle

When you travel through time zones, your circadian rhythm becomes disrupted- “jet lag”

**Sleep deprivation**: Sleep loss; being deprived of needed amounts of sleep- can cause loss of coordination, accidents, slowed reaction time, memory loss, “sick” feeling, confusion, hallucination

Measuring Sleep Changes

**Electroencephalograph (EEG)**: Brain-wave machine; amplifies and records electrical activity in the brain

Beta waves: Small, fast waves associated with alertness and wakefulness

Alpha waves: Large, slow waves associated with relaxation and falling asleep

**Stages of Sleep**- usually in 90 minute intervals, move through Stage 1-2-3-4-3-2-REM

Stage 1- Small, irregular waves produced in light sleep (people may or may not say they were asleep)

Stage 2- Deeper sleep; sleep spindles (short bursts of distinctive brain-wave activity) appear

Stage 3- Deeper sleep; delta waves appear; very large and slow

Stage 4- Deepest level of sleep; almost purely delta waves, sleep walking, sleep talking, night terrors occur

Rapid Eye Movement (REM) Sleep: Associated with dreaming; sleep is very light, return to Stage 1 sleep EEG patterns, Body is very still during REM sleep nut brain is active- called “paradoxical sleep”

Non-REM (NREM) Sleep: Occurs during stages 1, 2, 3, and 4; no rapid eye movement occurs, usually dream free- if you do dream they are flashes of images with no real story line

Sleep Disturbances

**Insomnia**: Difficulty in getting to sleep, frequent nighttime awakenings, or waking too early
**Sleepwalking**: (somnambulism): Occurs in NREM sleep during Stages 3 and 4; carry out routine behaviors in your sleep

**Sleep talking**: Speaking while asleep; occurs in NREM sleep

**Nightmares**: Bad dreams that occur during REM sleep, May occur once or twice a month; brief and easily (unfortunately) remembered

**Night Terrors**: Total panic occurs; hallucinations may occur during Stage 4 NREM sleep, Most common in childhood; may occur in adults, Not remembered

**Sleep Apnea**: Repeated interruption of breathing during sleep, Produces loud snoring with short silences and gasps for breath, Apnea can be treated by Surgery, Weight loss, CPAP Breathing mask

**Narcolepsy**: Sudden, irresistible sleep attacks, Fall directly into REM sleep

**Dreaming**

Dream Content (Freud): Dream symbols: Images in dreams that have a deeper symbolic meaning

- **Manifest**: Obvious, visible meaning of dream (usually just related to things we experienced that day)
- **Latent**: Hidden symbolic meaning of dream (related to our unconscious)

Psychodynamic Theory of Dreaming: Wish fulfillment: Freudian belief that many dreams are expressions of unconscious desires

**Hypnosis**: Altered state of consciousness characterized by intensely narrowed attention and increased openness to suggestion, Mesmer: first to use hypnosis, Must cooperate to become hypnotized

**Hypnotic Suggestibility/Susceptibility**: How easily a person can be hypnotized

Theories on Hypnosis

- **Role Theory**: it is not an altered state; people being hypnotized are unconsciously playing a role like an actor
- **State Theory**: it is an altered state of consciousness that produces altered brain wave patterns

Hypnosis Can...

- Help people relax
- Reduce pain
- Get people to make better progress in therapy

Hypnosis cannot...

- Produce acts of superhuman strength
- Produce age regression
- Force you to do things against your will

**Drugs and Altered States of Consciousness**

**Psychoactive drug**: Substance capable of altering attention, judgment, memory, time sense, self-control, emotion, or perception
**Categories of Drugs:**

- **Stimulant:** Substance that increases activity in body and nervous system
- **Depressant:** Substance that decreases activity in body and nervous system
- **Hallucinogen:** Substance that causes hallucinations or delusions; distorts your perceptions

**Physical Dependence:** Addiction based on drug tolerance and withdrawal symptoms

**Drug tolerance:** Reduction in body’s response to a drug - will need to take more to get the same result

**Psychological Dependence:** Drug dependence based primarily on psychological or emotional needs

Drug is necessary to maintain comfort and well-being; Crave drug and its rewarding qualities

**Stimulants:**

speed up breathing, heartbeat, give energy; used in diet pills and drugs to keep people awake, can cause “super man” feeling → always followed by a crash

Examples:

- **Amphetamines:** Synthetic stimulants that excite nervous system, “speed”; used in diet pills and energy pills
- **Cocaine:** Central nervous system stimulant derived from leaves of coca plant, Highly addictive drug, can cause increase in energy, euphoria, lack of appetite, followed by a crash and depression
- **Caffeine:** Most frequently used psychoactive drug in North America; present in colas, chocolate, coffee, tea, Causes tremors, sweating, talkativeness, tinnitus; suppresses fatigue or sleepiness, increases alertness
- **Nicotine:** Natural stimulant found mainly in tobacco, In large doses may cause stomach pain, vomiting, diarrhea, confusion, tremors, Addictive, Smoking is one cause of lung cancer

**Depressants:** drugs that slow down the body and nervous system; slows down breathing, heartbeat, reflex time, can cause a pleasurable body buzz, used to treat pain and put people to sleep

Examples:

- **Tranquilizers:** Lower anxiety and reduce tension, AKA Barbiturates, Valium, Xanax
- **Alcohol:** NOT a stimulant but does lower inhibitions, affects the frontal lobe (poor decision making), the cerebellum (loss of balance and coordination) and the hippocampus (memory loss); very dangerous drug on a macro level
- **Opiates:** drugs like heroin, morphine, vicodin, oxy; mimic the role of endorphins in the body → pleasurable body feeling, slows everything down, highly addictive with very intense withdrawal symptoms; used medically to manage pain

**Hallucinogens:** A substance that alters or distorts sensory impressions, causes hallucinations and delusions

- **Lysergic Acid Diethylamide (LSD):** Hallucinogen that can produce hallucinations and other psychotic-like symptoms; usually the hallucinations are geometric in nature; can cause psychological disorders
• **Marijuana (Pot)**- Cannabis sativa (marijuana; pot): Active Chemical: THC, Effects: Relaxation, time distortion, perceptual distortions