



Hallucinogens Psychedelics Entheogens

Psychology 470

Introduction to Chemical Addictions

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Background

- Traditional hallucinogens have significantly been decreasing in use for the past 10 years
- Generally cause distortions in brain functioning but do not cause loss of consciousness
- Have been experiencing a comeback when used at low levels in psychiatry
 - To help clients gain enlightenment.

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Background

- Are naturally found in plants
- Can be artificially developed
- Can cause
 - Changes in self-awareness
 - Increased sensitivity to stimuli
 - Spiritual awakening

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Four Different Groups

- Are generally categorized by the type of neurotransmitter it influences.
 - Anticholinergic
 - Catecholamine like
 - Serotonin
- Other Group
 - Psychedelic Anesthetics

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Anticholinergic

- Found in Belladonna, Jimsonweed, and other plants
- Attaches to Ach. Receptors and blocks the site
- Influences memory and learning
- High doses causes paralysis of the respiratory system

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Catecholamine Like

- Also called Phenethylamine Psychedelics
- Are similar to dopamine and norepinephrine
- Also similar to the structure of amphetamines
- Cause stimulatory effects
- Lots of different types
 - Myristin Found in Nutmeg
 - Elemicin Found in Mace
 - Mescaline Found in Peyote
 - Synthetic Human made

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Effects

- Increase levels of serotonin and dopamine in the synaptic cleft and on receptors
- Also blocks the reuptake (removal) of these neurotransmitters
- Can influence other NT such as Norepinephrine
- Result –
 - Stimulation
 - Sensory changes
 - Sleep changes
 - Emotional swings

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Lots of Synthetic Compounds

- DOM
 - Amphetamine-like (low doses) and hallucination effects (high-doses)
 - Can cause convulsions and death
 - Not as popular anymore
- MDA
 - “The Love Drug”
 - Heightens touch sensations
 - Causes the release of NE, Dopamine, and Ser
 - Causes physical exhaustion
 - High doses can cause death.

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MDMA (Ecstasy)

- Also called Adam, X, E, and others
- More hallucinogenic effects than MDA
- Increases levels of Serotonin, Dopamine, and NE.
- Has more hallucinogenic effects than MDA
- Lasts about 2-6 hours

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Lots of Effects

- Time and reality distortion
- Euphoric effects
- Hyperactivity allows you to go a long time.
- Hyperthermia
- Increased blood pressure and hear rate
- Muscle tension
- Serotonin receptor degradation
- THIS IS BAD STUFF

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Combined with Lots of Other Drugs

- Viagra Sextasy
 - Increased risk for BBPs
- Ketamine Kitty Flipping
- LSD Candy Flipping
- Heroin H-Bomb
- Others

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PMA

- Similar to MDMA
- Very toxic
- Often taken by people who believe it is MDMA
- THIS IS VERY BAD STUFF

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Serotonin-Like Compounds

- Also called Indoleamine Psychedelics
- Are serotonin agonists (look like serotonin).
- Lots of different types
 - LSD
 - Psilocybin
 - DMT
 - Ololiuqui
 - Others

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LSD

- Most potent Hallucinogen
- Has been used to treat schizophrenia, alcoholism and other disorders
 - AT LOW DOSES AND UNDER CONTROLLED CONDITIONS
 - Psychodynamic (Freudian) model
 - Want the client to understand why they have the issues
 - Not very effective treatment results

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Pharmacokinetics and Pharmacodynamics

- Can be smoked, taken orally, or injected
- Do not need a lot to get an effect
- Lasts about 6-12 hours
- Metabolized by the liver
- Binds on serotonin receptors
 - Causes surges of sensory information
 - Alters signals
 - Causes changes in mood (can occur rapidly)
 - Can have enlightening or bad trips
 - Can have reoccurring effects (flashbacks)

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Psilocybin and Psilocin

- Found in mushrooms
 - Magic mushrooms
 - Shrooms
- Lasts 2-4 hours

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DMT

- Is like LSD but has a short duration
- Causes the same effects
 - 30 minutes
 - Businessman's lunch break
- Metabolized by enzymes in the synaptic cleft (MAO)

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Ololiuqui

- Found in morning glory seeds
- Need a lot of seeds to get an effect >100
- Problem
 - Causes nausea and vomiting
 - Headache

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Psychedelic Anesthetics

- Several types
- PCP
 - Angel Dust, Crystal T., Peter Pan
- Ketamine
 - Special K, Vitamin K, Jet

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PCP

- First developed as an anesthetic
- Was problematic in humans
 - Stopped use
- Worked well for large animals
 - Still used

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Pharmacokinetics and Pharmacodynamics

- Can be taken orally, inhalation, injection
- Distributed by the circulatory system
- Stimulates several systems
 - Brain reward systems
 - Sympathetic Nervous system
 - Increased BP and HR
 - Endocrine effects
 - Shuts down pain systems
 - Causes lots of effects
 - Hallucinations
 - Feelings of invulnerability

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Ketamine

- Developed to replace PCP as an anesthetic
- Is odorless and tasteless
 - Used as a date rape drug
- Similar effects as PCP

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Kinikinin

- Called
 - Bearberry, Rockberry, Beargrape
 - Found in shrubs and red willow
 - Found throughout Idaho
- Is usually smoked
- Creates hallucinations
- Can cause
 - Cramping and vomiting

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Overall

- MOST hallucinogens are relatively safe from a lethality standpoint
- Can be
 - Dangerous due to unpredictability
 - Don't know what the effect will be.
- Are experiencing a research comeback in Psychiatry at low doses (MDMA)
 - Are still being used and tested in other countries.

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