Chapter 5: Consciousness

Drugs and consciousness abuse

- Psychoactive drugs (psychotropic drugs): Chemical that influences consciousness or behaviour by altering the brain's chemical message system
- Drug tolerance: Tendency for larger doses of a drug to be requires over time to achieve the same effect => larger and larger doses to get the same feeling
- Drug withdrawal symptoms: Include physical dependence (pain, convulsions, hallucinations,caffeine headache) and psychological dependence (desire to return to the drug) > if you don't take the drug you get psychological pain or physical pain
- 75% of people with substance use disorder overcome their addictions
- Drug addiction has different definitions
  - Drug abuse: Drinking harmful for the people around you
  - Drug dependence: Symptoms of withdrawal and tolerance
- Medical manual of mental disorders published by American Psychiatric Association (MD's)
  - Helps you make the diagnostic
  - Diagnostic and statistical manual of mental disorders (DSM-5)
  - 2013 => 5th edition
  - Medical model
  - Description of disorders, prevalence, age of onset (age mostly likely to have it), percentage of male to female
  - Symptoms checklist (must have…)
  - Similar to the diagnostic in Europe so we can share the research
  - Some disorders have been removed (homosexuality used to be considered a mental disorder)
  - Some disorders have been added (gambling addiction, internet addiction is now included)
  - Pros
    - Justified reason to be off work > assurance have proof to give you money
    - Makes the decease more believable
    - People can get some kind of assistance
  - Cons
    - Don't want to be labeled (don't label the person, but the disease)
    - Misdiagnostic
  - DSM-5 combines abuse and dependance (abuse is before dependence) and instead asks the clinician to rate the severity of the symptoms
- Categories of psychoactive drugs
  - Depressants: Reduces activity in central nervous system (more tired or relaxed > fall asleep > antidepressants > slower > sedatives > induced coma) {alcohol} less edgy, inhibitions are reduced
    - Sedative/calming effect
    - Reduces inhibition
    - Alcohol
      - Initial effects: Euphoria, reduced anxiety
      - Great quantities: slowed reaction,slurred speech, poor judgement,reduction in effectiveness of thought or action

- Increases activity neurotransmitter GABA (inhibits transmission of neural impulses)
- Alcohol 1/3 of traffic related deaths
- Why people might be sad or angry,agressive, loud
  - Expectancy Theory: The idea that alcohol effects can be produced by people's expectations of hoe alcohol will influence them in particular situations
    - Suggests that alcohol effects can be produced by people's expectations of how alcohol will influence them in particular situation
    - Act the same ways as others do > you are influenced by others behaviours
  - Alcohol myopia: A condition that results when alcohol hampers attention, leading people to respond in simple ways to complex situations
    - Life is filled with complicated situations and judgement is impaired when you drink a lot so reaction can be crying or doing something you normally wouldn't
    - Proposes that alcohol hampers attention and leads people to respond in simple ways to complex situation
- Barbiturates: Sleep aids + anesthetic before surgery
- Benzodiazepine:Treat anxiety and sleeping problems
- Toxic inhalants: Present in vapor of household objects (glue, hair spray, nail polish remover) > sniffing can be lethal and cause permanent neurological damage
- Dangerous to take two at the same time > a synergistic effect can put someone in a coma or lead to death
- Physical, Psychological dependence and overdoses

- Stimulants: Activate the central nervous system, heightening arousal and activity level
  - Makes your irritable > makes you awake > revs you up
  - Lose your appetite > diet pills
  - More neuronal communication
    - Norepinephrine, dopamine is increase
  - Caffeine
  - Cocaine:derives from coca plant
    - Blocks re-uptake of norepinephrine and dopamine > more of these neurotransmitters will excessively swimming around > activate more and more neurons
    - Affect the axon knobs
      - Will eventually crash when the neurons are exhausted
    - Euphoric and exhilaration
    - Seriously addicting
    - Withdrawal: unpleasant crash (insomnia, depression, agression, paranoia,physical problem (stroke,hyperthermia)
  - Ecstasy : Amphetamine derivative
    - Feel empathetic and close to those around them
    - Negative:interfere with regulation of body temperature, higher chances of heart stroke and exhaustion
    - Impurities are quite dangerous
    - Toxic effect to serotonin neurons is under debate >potentially associated with mood, memory and impulse control problems
  - Amphetamine (speed):originally for medical and diet use, but are abused
    - Causes insomnia,agression,paranoia
    - Activates part of the brain that helps you learn
  - Increases level of dopamine, norepinephrine >induces alertness and energy and euphoric state of confidence and agitated motivation to get things done
  - Physical and psychological dependence > overdoses

- Withdrawal symptoms: depressive effect, fatigue, negative emotions
- Elicits euphoria and confidence/motivation

- Narcotics: Highly addictive drugs derived from opium that relieves pain
  - Opiates: naturally synthesis from the opium poppy
  - Shaped like endorphins > go on the receptor sites of endorphin neurons
    - Affect the dendrites
  - Withdrawal painful so encourages them to take more of the drug
  - Opium, Heroin, Morphine, Methadone, Codeine
  - Feelings of well-being, relaxation and stupor and lethargy
  - Long-term produces tolerance and dependence
  - Administered with hypodermic seringues > can cause HIV
  - Artificially floods endorphins receptors, reducing receptor effectiveness and depressing production of endorphins
  - Remedies: Naloxone: There are drugs that can block the effect of opiates. They push the opiates off the receptor sites and takes their place blocking other neurotransmitters or drugs particles from locking into receptor sites
  - Vomit while taking opiates > choke on vomit and block the air
- Hallucinogens:Drugs that alter sensation and perception and that often causes visual and auditory hallucinations
  - Change in perception, sensation will seem weirdly intense, objects will seem to move, colours or patterns may appear which can be accompanied by exaggerated emotion (terror or bliss)
  - Effect dramatic and unpredictable
  - See things out of reality
  - Affect Seratonin > more seratonin in brain and spinal fluid
  - Unlikely to be addictive, no tolerance or dependance, overdoses are rare
    - Psychological withdrawal are possible, but not physical withdrawal
    - No overdose
    - Harmful to others
  - LSD (lysergic acid diethylamide or acid)
    - See things that don't exist and do actions that could be dangerous
    - Flashback experience
  - Mescaline
  - Psilocybin (shrooms)
  - PCP (phencyclidine)
  - ketamine (animal anesthetic)
  - Some are derives from plants (shrooms= mushrooms, mescaline=peyote cactus)
  - Used since ancient times >Native American
- Marijuana: Plant whose leaves and buds of the hemp plant contain a psychoactive drug called tetrahydrocannabinol (produces an intoxication that is mildly hallucinogen)
  - Mild hallucinogenic
  - Euphoric, heightened senses of sight and sound and the perception of rushed ideas
  - Affects judgement , short term memory, impairs motor skill and coordination
  - Affect receptors normally affected by anandamide (regulation of mood, appetite and pain perception)
  - Reduces vomiting
  - Has relaxant proprieties
  - No strong addiction potential
  - No tolerance or physical withdrawal symptoms

- Psychological dependence is possible
- Medecine for pain or nausea (controversial
- Abuse and dependance linked to increase of a risk of depression, anxiety and other forms of psychopathology
- Gateway drug: A drug whose use increases the risk of subsequent use of more harmful drugs
- Early-onset drug use increase the risk of later drug problems

- Nicotine:Positive effect comes from relief of withdrawal symptoms
  - Highly depended with extreme withdrawal > psychological and physical
  - Both stimulant (Don’t need to eat [diet]) and both depressant (relaxes and calms you down[helps with anxiety]) proprieties