

HSS 1101 @ uOttawa

Chapter 9: Recognizing Use, Misuse, Abuse, and Addiction to Drugs and Behaviours

Drug Use, Misuse and Abuse

- **Drug use:** taking drug, as intended
- **Drug misuse:** taking drug, not prescribed
- **Drug abuse:** excessive use of drug
- **Individual response:** setting and set
 - Response to drugs is influenced
 - **One internal environment (set)** - mindset of individual at time of consumption
 - **Total external environment (setting)** - influences from external stimuli

Defining Addiction

- **Addiction:** persistent dependence on behaviour, substance
- Aspect of addiction include
 - Excessive use of a substance, behaviour
 - Persistent desire to reduce, control use
 - Frequent incapacitation due to use
 - Substance, behaviour: to avoid withdrawal symptoms
- Physiology of addiction
 - Neurotransmitters influence receptor sites (nerve cells)
 - Tolerance: larger dose, to obtain desired effects
 - Withdrawal: drug causes an effect the body creates itself
 - **Delirium tremens:** body goes into withdrawal, gives craving for the substance
- The addictive process
 - Nurturing through avoidance; maladaptive emotionally
 - Behaviours or drug no longer pleasurable
 - Still preferable to unhappy realities
- The signs of addiction
 - Compulsion, obsession
 - Loss of control, inability to predict self
 - Negative consequences
 - denial
- Addictive behaviours
 - Gambling
 - **Video lottery terminals:** roles in gambling problems
 - More men than women; increasing among students
 - Unable to control urge to gamble
 - Shopping and borrowing
 - Excessive spending on purchases
 - Easy credit (companies target students)

- Gambling shopping can lead to compulsive borrowing
- Exercise addiction
 - Exercise, a powerful mood enhancer (addictive)
 - Needs: nurturance, intimacy, self-esteem and self-competency
- Technology addictions
 - Risk of overexposure has grown
 - Phones, videogames, and social media
 - 1/8 internet users will experience internet addiction
- Managing an addiction
 - Intervention: planned process of confrontation
 - By significant others; break denial compassionately
 - Individuals see destructive nature of addiction
 - Forms of therapy
 - Individual, group, family
 - 12-step, alternatives to 12-step

Drug Dynamics

- Drugs attach to receptor sites (body)
- **Receptor sites:** specialized proteins (all cells)
- Cells and tissues have different receptors
 - Different drugs, different sites
- Types of drugs
 - **Psychoactive drugs:** alter moods or behaviour
 - **Prescription drugs:** only prescription from physician
 - **Recreational drugs:** used to relax, socialize
 - **Over the counter (OTC) drugs:** purchased without prescription
 - **Herbal preparations:** substances of plant origins
 - Believed to have medicinal properties
 - **Illicit drugs:** illegal possession, cultivation, manufacture, and sale
 - **Commercial preparations:** chemical substances with drug action
- Routes of drug administration
 - Ways in which drug is taken into body
 - Oral ingestion
 - Inunction
 - Injection
 - Intravenous
 - intramuscular
 - Subcutaneous
 - Inhalation
 - Suppositories
- Drug interactions
 - Synergism: interaction of 2+ drugs magnifies effects
 - Antagonism: one drug blocks another
 - Inhibition: one drug eliminates effects of others
 - Intolerance: 2+ drugs, together produce uncomfortable reactions

- Cross-tolerance: tolerance carries to another drug
- Types of prescription drugs
 - Antibiotics
 - Sedatives
 - Tranquilizers
 - Antidepressants
 - Amphetamines
 - Analgesics
 - Oxytocin is the most abused
- Generic drugs
 - Sold under chemical name, not brand name
 - Contain same active ingredients
 - Controversy surrounding effectiveness
 - Branded drugs will spend years testing drug, while generic ones usually just copy this without testing
- Types of OTC drugs
 - Analgesics: prostaglandin inhibitors
 - Cold, cough allergy, and asthma relievers
 - Expectorants
 - Antitussives
 - Antihistamines
 - Decongestants
 - Anticholinergics
 - Stimulants
 - Sleeping aids

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Chapter 10: Using Alcohol and Caffeine Responsibility and Refraining from Tobacco Use

Alcohol: An Overview

- 78.4% of Canadians consume alcohol
- Beer is most popular
- Moderate consumption, associated with heart health
- 10% report hard due to drinking
 - 32.7% harmed by someone else drinking
- Cost of alcohol abuse: \$14.6 billion in 2002
- Heavy drinkers - 5 or more drinks at one occasion at least once per month
- Usually men are heavier drinkers than females
- 20-34 years is where there is the highest percentage of heavy drinkers
- Alcohol and post secondary students
 - Most used, misused, abused recreational drug
 - 90% of students consume alcohol
 - Binge drinking (single sitting)
 - 5 drinks for men, 4 for women
 - Other consumption: alcohol enemas, vodka tampons
 - Goes to show that alcohol can be absorbed in faster ways than digestion through mouth, by putting through sexual organs
- Rights vs Responsibilities
 - Many refuse to acknowledge a drug
 - Society condones consumption
 - Informs people about drinking responsibility
 - Often students' words, actions (incongruent)
 - Especially if excess
 - Drinking guidelines (per week)
 - Men: max 14 standard sized drinks
 - 30% report they exceed the guidelines
 - Women: mx 9 drinks exceed guideline
 - Max 2-3 drinks per day (women, men)

The production of Alcohol

- Ethyl alcohol or ethanol
- Fermentation
- Distillation
- Proof: measure of the percent alcohol

Physiological and Behavioural Effects of Alcohol

- Behavioural effects
 - Effects vary with setting and individual
 - Blood alcohol concentration (BAC)

- Ratio: alcohol to total blood volume
 - Some can develop learned behavioral tolerance
 - Modify behaviour, appear sober, with high BAC
- Absorption and metabolism
 - Factors that influence absorption
 - Amount of consumed alcohol in given time
 - Size, sex, body build and metabolism
 - Type and amount of food in stomach
 - Mood
 - Women and alcohol
 - Higher percentage body fat increases BAC
 - Less enzymes to break down alcohol
 - Breathalyzer (urinalysis and blood test) and other tests
- Alcohol is converted to alcoholdegenous by the liver which is toxic and can cause liver damage and harm body. Alcohol is 7 calories per gram.
- Immediate effects
 - Central nervous system depressant, diuretic
 - Water pulled from cerebrospinal fluid = dehydration
 - Irritant to gastrointestinal system
 - Hangover (caused by congeners)
 - The only cure is time for recovery, with attempts to prevent death by suffocation
- Drug interactions (prescriptions or other drugs)
- Long term effects
 - Effects on the nervous system
 - Brain shrinkage
 - Cardiovascular effects
 - High blood pressure
 - Holiday heart syndrome (irregular heartbeat due to excess drinking on holidays)
 - Liver disease
 - Cirrhosis (top 10 disease in Canada), hepatitis
 - Cancer and other effects
 - Inflammation of pancreas, decreased nutrient absorption
- Fetal Alcohol Spectrum Disorders (FASD)
 - Alcohol during pregnancy: developmental, cognitive disabilities
 - No level of alcohol is safe during pregnancy
 - Fetal alcohol syndrome (FAS)
 - Fetal alcohol effects (FAE)
 - FASD leading cause of developmental delay
 - 1-6 every thousand births
- Drinking and Driving
 - Impaired driving: major cause of death
 - About 1350 Canadians killed, annually
 - Injuries many more

Alcoholism

- Alcohol abuse (alcoholism)
 - Interferes with work, school, relationships, and violates law
 - 6.2% binge drinking, 1+ times a week
 - Men, ages 20-35 most likely to binge
 - Most common areas affected
 - Physical, financial, and social health
- How, why and whom?
 - addiction : tolerance, dependence, and withdrawal
 - Usually from chronic use, over time
- Causes of Alcoholism
 - Biological and family factors
 - Type 1 alcoholics - drinkers with one parent with drinking problem, growing up in environment of drinking
 - Type 2 alcoholics - male under age 25, biological son of parent with violent and alcohol abuse
 - Social and cultural factors
 - Peer pressure, emotional and social problems
 - Family attitude, social factors (urbanization)
 - Recognizing personal risks
 - Needed to cut down on drinking?
 - Annoyed by criticism of drinking?
 - Felt guilty about drinking?
 - Felt need to drink in the morning?
- Effects of alcoholism on family
 - Dysfunctional families
 - Children assume 1+ of following roles
 - Family hero
 - Scapegoat
 - Lost child
 - Mascot
 - Expresses how children can either grow up as alcoholics too, or become completely resistant to the temptations after seeing what becomes of others.
- Costs to society
 - Over \$20 billion in sales (2011)
 - Employs >14000 people
 - Average Canadian spends \$712.40 annually
- Women and alcoholism
 - More women are drinking
 - Almost s many as men
 - Alcoholism starts later in life, but progresses more quickly
 - Receive less support for treatment and recovery

- More likely prescribed mood-altering drugs
- The families role
 - Intervention: planned confrontation
 - Family and friends express their concerns

Recovery

- Treatments
 - Residential, outpatient, detox, and crisis centres
 - Various withdrawal symptoms
 - Convulsions, agitation, depression, seizures, and delirium tremens
 - Withdrawal, very difficult and medically risky.
 - Treatment programs
 - Family, individual and group therapy
 - Other treatments
 - Drug and aversion therapy; alcoholics anonymous (AA)
 - Brief interventions (<5 minutes)
 - Relapse
 - 60% rate of relapse in first 3 months

Smoking

- Facts
 - 2020, tobacco to kill the most people
 - Canadians smoking less since 1966
 - Number one preventable cause of death
 - Kills x5 more than
 - Car accidents, murder, suicide, and alcohol
 - 17% of all deaths
- Tobacco and its effects
 - Cigarettes, cigars, pipes, snuff and chewing tobacco
 - Smoking most common form of tobacco
 - Nicotine plus 5000 chemicals
 - Chemicals condense in lungs, can form tar
 - Carbon monoxide: 800x higher than safe levels
 - Physiological effects of nicotine
 - Stimulates central nervous system, adrenal glands
 - Increases heart rate, respiratory rate
 - Constricts blood vessels = increased blood pressure
 - Reduces appetite
 - Increased chance of blood clot
 - Makes you feel less hungry, because it slows contractions in stomach which signal hunger
- Smoking is a learned behaviour
 - Perception: smoking is a normal behaviour
 - Trying-to-smoke-everyday: 2-3 years
 - 85% start before age 16

- Tobacco promotion
 - Aimed at youth, especially young women
 - Perception: desirable, socially acceptable, healthy and sexy
- Environmental tobacco smoke
 - Two types: mainstream and secondhand smoke
 - Passive smokers: from someone else's smoking
 - Lung cancer and heart disease
 - Children: greater risk of disease
- Breaking the nicotine addiction
 - One of the toughest addictions
 - Irritability, restlessness, and intense cravings for tobacco
 - Anti Smoking therapy such as aversion therapy
- Benefits of quitting
 - Body repairs immediately, more energy, better sleep
 - After 1 year: risk for lung cancer and stroke reduced

Caffeine

- Most widely consumed drug in Canada
 - Average 210-238 mg/day
 - Caffeine levels vary with product
- Effects: insomnia, irregular heartbeat, dizziness, nausea, indigestion
- Caffeine addiction
 - To avoid let down, drink more
 - Develop dependency (caffeinism)
 - Health consequences
 - Linked to heart disease, cancer, and mental dysfunction
 - Birth defects and high LDL
 - Okay: moderation (<3 cups / day)
 - People with health conditions, be careful;
 - Irregular heartbeat
- Does not cause long term blood pressure, or stroke, nor evidence of caffeine and heart disease