

SJSU – Justice Studies 122
Drugs and Society/Updates in Class
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Lesson Plan : Scope of Problem

Research-CASA 1998

- 1.7 million incarcerated (2000)
- 1.4 million-substance use disorder
- 1996-38 billion to build and maintain 4,700 prisons
- Last decade-CA-1 college, 15 prisons
- 21%-influence alcohol
- 3%-cocaine

Alcohol

- Over 100,00 related deaths-U.S.
- 12-17 age group
- 9 yrs. Old, 4th grade-Introduction
- Women and dependency
- Fetal Alcohol Syndrome

Tobacco

- 3 million worldwide die
- U.S.-over 400,000
- Increase 12-17 yr. Olds.

Beliefs and Attitudes

- Who abuses alcohol & other drugs?
- Why do people use alcohol & other drugs?
- Premise: “Drug taking is bad. I drink alcohol...therefore, alcohol is not a drug.”
- List of good/bad drugs
- Most harmful/least harmful

Lesson Plan : Historical Perspective

- **Early years**
 - Gallo Bros/Joy Plant
 - Cocaine Mummies
- **1800's**
 - Opium Wars-Laudanum
 - Civil War-Morphine
 - Bayer Co.-Heroin
 - Freud-”Coca Papers”
- **1900's**
 - Harrison Narcotic Act-1914
 - Reefer Madness

Lesson Plan : Drug Classification

- **Degree of medical effects on body**
- **Acute**

- Short-term/limited dose
- Heart attack, seizures
- **Chronic**
 - Long-term/prolonged effect
 - Heart/lung/liver
 - Post-Drug Impairment Syndrome
- **Uppers-Stimulants**
 - CNS-Central Nervous System
 - Euphoria
- **Downers-Depressants**
 - CNS-Central Nervous System
 - Relieves stress
 - Induces sleep
- **Sedative-Hypnotics**
 - Barbiturates
 - Mild sedation to coma dose
 - Benzodiazepines
 - Reduces anxiety
 - Fewer side-effects
 - Alcohol
 - Sedates-irritates

Lesson Plan: Classification, cont.

- **Opiates-Narcotics**
 - CNS-Central Nervous System
 - Relieves pain/induces sleep
 - Natural/synthetic
- **Hallucinogens/Psychedelics**
 - Alters sensory processing
 - Perceptual disturbances
 - PCP-any category*
- **Inhalants-Solvents**
 - Neuro-toxic

Lesson Plan - Definitions

- What is a **drug**?
 - Chemical substance
 - Physical, mental, emotional change
- What is a **psychoactive drug**?
 - Alters functioning-CNS
 - 4,000 plants, 8,000 patents
 - Licit, illicit
 - Prescription/OTC
- What is **drug misuse**?

- Inappropriate/unintentional use
- **What is drug abuse?**
 - Intentional/inappropriate use with physical, mental, emotional, financial, or social consequences
- **What is addiction?**
 - Chronic, progressive, relapsing, incurable, and potentially fatal condition
 - Consequence of genetic irregularities
- **Route of Administration**-How quickly drugs travel to CNS
 - Orally
 - Snorting
 - Injecting
 - Inhaling
- **Poly-abuse**
 - More than one drug-the norm
- **Dependence**
 - Cellular adaptation
 - Absence the drug-physical withdrawal
- **Tolerance**
 - More drug-less effect
 - Tissue resistance
- **Synergism**
 - Whole is greater than the sum of its parts
- **Metabolism**
 - Terminating effects of the drug in the body
- **Excretion**
 - Elimination through the kidneys
 - Implications for drug testing
- **Blood Brain Barrier**
 - Selective filter
- **Weight**
 - Drug laws-categorized by weight
 - Controlled Substance Act of 1970-
 - Health & Safety Code (California)

Lesson Plan: Brain Basics-Neuroanatomy

- **Psychopharmacology**
 - How psychoactive drugs affect CNS
 - Mimic or interfere
 - Overexcite or depress
- **Neuroanatomy**
 - Mechanism in which messages are transmitted by CNS
 - 100 billion neurons-brain cells
 - 100 trillion possible connections
- Behavior depends on this communication-neuron to neuron

- **Old Brain**-reptilian, clumsy
 - Medulla
 - Cerebellum
 - Nucleus Accumbens
 - Inferior Colliculus
 - Superior Colliculus
- **New Brain**
 - Cerebral Cortex
- **Neurotransmitters**-biochemical's that transmit message from one neuron to another
 - 60-100 NT's
- **Neurotransmission**-Relay of information between neurons
 - Within neuron-electrical
 - Between neurons-chemical
 - Synaptic gap-distance between neurons
 - Agonist
 - Antagonist
- Bill Moyers-*The Hijacked Brain*
 - Dopamine levels depleted
 - Paranoia/psychosis-drug induced
 - No control-compulsive
 - Anhedonia
 - Pleasure Circuit-brain remembers
 - Nucleus Accumbens

Lesson Plan : Theories of Addiction

“All theories are relevant to some degree. Rigid views limit the scope of recovery.”

- Moral Theory
- Psycho-Analytic Theory
- Personality Theory
- Behavioral Theory
- Social/Cultural Theory
- **Addictive/Disease Theory**
 - Chronic, progressive, relapsing, incurable, potentially fatal
 - High susceptibility/liability
 - Genetic Predisposition
 - Loss of Control
- **Bio, Psycho, Social Theory- Risk Factors**
 - **Bio**-genetic predisposition, heredity, physiology
 - **Psycho**-personality, psychiatric condition, self-esteem, life events
 - **Social**-cultural environment, peer pressure, learned behavior
- **Symptoms** of the disease of addiction-both physical and psychological
 - Craving

- Compulsion
- Continued use in spite of negative consequences
- Denial
- Tolerance
- Dependence
- **Pattern/Progression of use**
 - Experimentation
 - Social/Recreational
 - Habituation
 - Addiction/Disease

Lesson Plan : Depressants

- Anxiety disorders-the most common form of mental illness
- **Barbiturates**-powerful CNS depressant
 - Treat insomnia, anxiety, tension
 - Prevents or mitigates epileptic seizures
 - Tolerance builds quickly
 - Interrupts R.E.M. sleep
 - Impairment of memory, judgment
 - Cross-tolerant
 - Withdrawals can cause medical emergency
- **Benzodiazepines**-”magic bullet”
 - Produces sedation/induces sleep
 - Relieves anxiety, muscle spasms
 - Develops tolerance more slowly
 - Risk: extended time-high dose
 - Risk: mix with alcohol
- **Methaqualone**-”Ludes”
 - No legal medical use
 - Scored with “714”
 - Method of use-mix with alcohol
- **Rohypnol**-”roofies”
 - Benodiazepine family
 - 10x more potent
 - Hoffman-LaRoche-no medical use
 - Symptoms-withdrawals
 - Anterograde Amnesia
 - Scheduled Drug
- **GHB-Gamma Hydroxy Butyrate**
 - *Blue nitro, Georgia Home Boy, greivous bodily harm, liquid E, easy lay*
 - Scheduled Drug
- **Potential for abuse**
 - Clear, odorless, slightly salty taste
 - Date-rape drug

- **Symptoms**
- **Withdrawals**

Lesson Plan : Alcohol

- **Alcohol, Ethel Alcohol, Ethanol**
 - Statistics
- **Facts:**
 - CNS depressant
 - Irritates & Sedates
 - Lowers inhibitions
 - Alters mood, feeling, coordination, perception, & behavior
- **Impact on the Brain**
 - Frontal Lobe
 - Cerebellum
 - Medulla Oblongata
- **Blood Alcohol Concentration (BAC)**
- **Rate of Absorption**
 - Factors
- **Metabolism**
 - Time factor
 - DMV Legal Limit
- **Penalties**
 - DUI
- **Fetal Alcohol Syndrome (FAS)**
 - Facts
 - Risk factors
 - Features

Lesson Plan -Alcohol, Binge Drinking

- **Prevalence of drinking**
 - Per capita consumption
 - Heavy drinking
 - Age, ethnicity
- **Social**
 - Low B.A.C.
 - Reasonable intervals
 - Take it or leave it attitude
- **Problem**
 - Family, legal, employment, \$,physical
- **Alcoholic-10-12% pre-disposed**
 - Loss of control
 - Craving
 - Compulsion

- Tolerance
- dependence
- Signs of Alcoholism
- Signs of alcohol withdrawal
- Binge Drinking-48 Hrs.
 - 4-5 drinks at a sitting
 - 10 million underage drinkers
 - Risk of teenage drinking

Lesson Plan : Cocaine

- **Cocaine-Erythrozylon Coca**
 - Most powerful CNS stimulant
 - Schedule II Drug
- 2001-National Household Survey
 - Current cocaine users 2001 vs. 1985
- **National Household Survey/D.A.W.N. Drug Abuse Warning Network-E.R. Episodes**
 - **2000-2001**
 - **Gender**
 - **Ethnicity**
 - **Trends**
- **Freud & the Coca Papers-1884**
 - Cure for morphine addiction
 - Coca-Cola-”temperance drink”
 - 60 mg. Cocaine per 8 fl. Oz.
- **Cocaine Epidemics**
 - 1886-1891-Europe
 - 1894-1891-Europe & U.S.
 - Mid-1980’s-U.S. (crack cocaine)
- **Cocaine Processing**
 - 100-150 kilos (kilo+2.2 lbs.) of drug leaves produces 1 kilo pure pasta
 - Mixed w/ diesel fuel, lime, bicarbonate
 - “Stepped on”, cut with adulterants
 - 1998-454 metric tons (1,000 kilograms/ 2,204.6 lbs.) shipped into U.S.
 - 1 gram \$40-150
- **Neurotransmission**
 - Dopamine, Norepinephrine, Serotonin pathways
 - Dopamine-pleasure/reward center
 - Blocks Dopamine re-uptake
 - Energy supplies depleted
- **Route of Administration**
 - **Snorting** (intranasal) most common
 - 5% of cocaine absorbed
 - Septal Necrosis- destroys cartilage separating nostrils

- Lung infections common
- **Injecting** (Intravenous) least common
 - Cocaine hydrochloride (powder) mixed w. water & injected into vein
 - Quicker route to the brain-rush
 - Risk of HIV-AIDS, inflammation of heart lining (endocarditis), hepatitis
 - Speedball-injecting mixture of cocaine * heroin
- **Freebase-1970's**
 - Separating molecules using Ether-volatile
- **Inhaling Smokeable Cocaine-Crack**
 - Dirty-basing
 - Cocaine Hydrochloride cooked with sodium bicarbonate & adulterants-lower temperature
 - Quick route to the brain-powerful reinforcement for compulsive use
- **Rate of Absorption**
 - The faster the absorption, the more intense the high and shorter the duration
- **Short-term effects**
 - Euphoric
 - Constricted blood vessels
 - Dilated pupils
 - Increased BP, heart rate, temperature
- **Long-term effects**
 - Addiction/Dependence
 - Mood disturbances
 - Cardiomyopathy
 - Formication Syndrome- “coke bugs”
- 11350 H&SC; 11550 H&S

Lesson Plan -Crack Cocaine

- **Smokeable Cocaine-Crack**
 - mid-80's
 - Converting Cocaine Hydrochloride
 - Cook and broken into “rocks”- 0.89 grams each approx.
 - 75-90% pure
 - \$3-40-rock or vial of crack
- **Inhaling**-efficient route of administration
 - Fat soluble
 - Prone to binge use
 - 50 rocks/day-1/20th a gram-\$5-20 each
 - Per gram, crack costs twice the price
- **Side effects**
 - More intense
 - Respiratory problems
 - Tachycardia
 - Seizures/stroke
- **Crash**

- Sleep for days
- Anhedonia
- Anergia
- **Cocaethylene**
 - Mixing cocaine & alcohol
 - Intensifies euphoric effect
 - Risk of sudden death
- **Current research- “crack” babies- National Institute of Drug Abuse-1999**
 - Fetal cocaine exposure
 - What stage of development
 - Developmental issues

Lesson Plan : Amphetamines/Meth

- **Amphetamine/Methamphetamine**
 - CNS stimulants-Speed, Crank, Crystal, Ice
 - Schedule II Drug
- **History**
 - Analog of Ephedrine
 - 1927-medical use
 - WWII
 - 1960's-1970's-weight loss, truckers, bikers, students
 - 1967-Summer of Love
 - Operation Desert Storm-1991
- **Neuropathway**
 - Norepinephrine
 - Dopamine
 - Serotonin
- **Side-effects**
 - Dilated pupils/increased blood pressure
 - Rapid & irregular heart beat
 - Hyper-pyrexia-body temperature higher than 104 degrees
 - Weight loss- anorexia
 - Involuntary body movements
 - Tinnitus
 - Aggression
 - Paranoid delusions
 - Stimulant induced psychosis
 - Visual hallucinations

Lesson Plan – Methamphetamine

- Drug Abuse Warning Network (DAWN)
 - ER episodes for Methamphetamine distress-
 - Trends
- High Intensity Binge Use
 - Binge cycle

- Withdrawal
- Video: MTV: *Meth Madness/Tweaked*

Lesson Plan - Other Stimulants

- **Ritalin-Methylphenidate**
 - Schedule II Drug
 - Amphetamine analog
 - Powerful stimulant
 - 2-3% elementary students
 - More than 2 million prescriptions
 - 500% increase
- **Attention Deficit Hyperactivity (ADHD)**
 - 3 times more prevalent in boys
 - Symptoms-outside of school
 - Symptoms-at school
 - Ritalin works paradoxically
 - Not first treatment of choice
- **Khat, Cat, Cathinone(active ingredient)**
 - Milder stimulant
- **Methcathione**
 - Synthetic version
 - Main raw ingredient-Ephedrine
- **Ephedrine**
 - Ephedra bush
 - Controlled by Federal Gov't
 - Extracted as ingredient for Meth
- **Nicotine Statistics**
 - Over 400,000 related deaths
 - \$50 billion in health care costs
 - 1995- 62,000 deaths from lung cancer; 46,000 deaths from breast cancer
 - Deaths from secondhand smoke
- **Nicotine**
 - Powerful stimulant
 - 10mg. Nicotine per cigarette
 - 7-15mg. Tar
 - Dozen gases-carbon monoxide
- **Neuropathways**
 - Norepinephrine
 - Acetylcholine
 - Dopamine
 - Physical complications
- **Hooked in 4 hrs.**
- **Research animals**

- **Drug abusers and tobacco**
- **At risk populations**
- Bidi's
- Caffeine
 - Chemical compound found in over 60 species of plants
 - Prevalence of caffeine consumption
 - Tolerance and dependence
 - Acute effects of caffeine
- **Inhalant Classification/Features**
 - Depressive/Hallucinogenic
 - Lipid soluble
 - Neuro-toxic
 - Dopamine Neuropathway
 - Statistics-Monitoring the Future Survey
 - 6% of U.S. children used by 4th grade
 - More boys than girls-grades 4-6
 - Higher in Native American youths
 - Risk Factors
 - Graffiti-tagging
- **Volatile Solvents**
 - Vaporize at room temperature
 - List of chemicals
 - Toluene-active ingredient
 - 381(a) PC-Possession, misd.
- **Aerosols**
 - Contain propellants & solvents
- **Gases-Anesthetics**
 - Dissociative effect
 - Nitrous Oxide-"laughing gas"
 - 381(b) PC-Possession, misd.
- **Nitrites**
 - Dilate blood vessels
- **Methods of use**
 - Sniffing
 - Huffing
 - Bagging
- **Effects**
 - Intoxication
 - Euphoria
 - Impaired judgment
 - Violent behavior
 - Delusions
 - Damage to heart, lungs, liver, kidneys
- **Sudden Sniffing Death Syndrome**

- Asphyxiation
- Suffocation
- Choking
- Loss of consciousness
- **Recognizing inhalant abuse**
 - Chemical odor
 - Paint on hands, face, clothing
 - Drunk or disoriented appearance
 - Slurred speech
 - Nausea or loss of appetite
 - Inattentiveness, lack of coordination, irritability, depression

Lesson Plan : Steroids

- **Steroids**
 - Synthetic derivatives-testosterone
 - Androgenic
 - Anabolic
- **Statistics**
- **Medical Uses**
 - Anemia
 - Breast, testicular cancer
 - Nasal spray
 - Tissue re-growth
 - Inadequate testosterone production
- **Competitive Edge?**
 - Increase muscle mass
 - Ability to train longer
 - Research-improvement
 - Black market
- **Federal Laws**
- **Route of Administration**
 - Orally
 - Injecting
 - “Stacking”
 - “Cycling”
- **Risks**
 - Compulsive use
 - Loss of control
 - Liver tumors
 - “roid rage”
 - Men-side effects
 - Women-side effects
- Androstenedione
- Creatine

Lesson Plan: LSD, PCP & other Hallucinogens

- **Lysergic Acid Diethylamide-LSD-25**
 - Potential to produce hallucinations
 - Alters thoughts, perception & feelings
 - Albert Hoffman-1938
 - Fungus “ergot”
 - Timothy Leary-1960’s
 - “Tune in, Turn on, Drop out”
 - Operates on Serotonin NT
 - Tolerance builds quickly-no known dependence
- **Perceptual side-effects**
 - Turns off biological filter
 - “Turns the lights up”
 - “Turns down the background”
 - Magnifies whatever’s left
 - Experienced intensely
 - Bright spark of pleasure in a dark space
- **Bad trip**
 - Magnification of something negative pre-existing in the brain
 - Blows up what’s there
 - Beautiful-Ugly
- **Dose**
 - 50-150 micrograms
 - 3 hits of 50 micrograms blotter acid-\$10
- **Sensory Effects**
 - Vary with dose, setting & mood
 - *Synesthesia*
- **Psychic effects**
 - Thought disorders
- **Extreme side-effects**
 - Depersonalization, acute anxiety, depression
- **Peyote Cactus**
 - Active ingredient- Mescaline
 - Tolerance builds quickly
 - No physical dependence
 - Used in religious ceremonies
 - Cactus button-50 milligram of mescaline
 - Synthesized- liquid, capsule, tablet
 - Effects
- **Psilocybin-”Magic Mushrooms**
 - Chemically similar to LSD
 - Less potent than Peyote-Mescaline
 - shorter-acting, milder
 - Consumed orally as dried mushrooms, liquid, or tablets

- Used in religious ceremonies
- Effects
- **PCP-Phencyclidine-*Angel Dust, KJ, Dust***
 - Several classifications
 - Schedule II Drug
 - History
 - White crystalline powder
 - Fat-soluble
 - Method of use
- **Effects**
 - Dissociative- protects from feelings
 - Anesthetic-feel no pain
 - Increased heart beat, BP
 - Chronic use-loss of brain function
 - Other effects....
- **Biggest risk factor:** *Unpredictable*
- **Statutes:** Health & Safety Code
 - Lesson Plan: Club Drugs**
- **Club Drugs**-MDMA (Ecstasy), GHB-Gamma Hydroxybutyrate, Ketamine, Rohypnol
- **Raves-Why and What?**
 - Underground raves-1987 G.B., Chicago, Detroit, NY
 - Techno-electronic events-up to 140 BPM
- **Statistics: Surveys**
 - 2000 Monitoring the Future Study
 - 12th graders
 - 8th & 10th graders
 - Perceived availability
- **Statistics; Surveys, cont.**
 - **D.A.W.N.**-Drug Abuse Warning Network
 - 253 -1994; 4,511-2000
 - Blacks, Whites, Hispanics
- **MDMA-Ecstasy**
 - Synthetic psychoactive drug
 - Methylenedioxymethamphetamine
 - 90% imported illegally from Netherlands-pill form
 - DEA
 - Tablets 60-120mg. \$25-40 each
 - Schedule I Drug- 1985
- **MDMA-Ecstasy, cont.**
 - Stimulant
 - Hallucinogenic
 - Neuropathways: Serotonin, Dopamine, Norepinephrine

- Serotonin-levels depleted
 - Mood, sleep, pain, emotion, thought & memory
 - Brain Imaging Technologies
 - Linked with confusion, depression, severe anxiety, impulsive bx, sleep problems, impairment of memory & attention
 - Paranoia, psychotic episodes
- **Physical Effects**
 - Senses elevated
 - Dilated pupils
 - Body temperature-increase
 - “Malignant Hyperthermia”
 - Increase heart rate, BP
 - Dehydration, nausea
 - Excess energy
 - Muscle tension
 - Involuntary teeth clenching
 - Sleep disturbance
 - Drug craving
- **Raves-*P.L.U.R.***
 - Rolling
 - Candy-flippers
 - Paraphernalia
 - Sensual not sexual
 - Massage parlor
 - Cool down room
 - Dancesafe
- **Ketamine**
 - Anesthetic
 - 90% veterinary use
 - Snorted, injected
 - “Special K”, Vitamin “K”
 - Raves, date rape
 - High doses
 - D.A.W.N.- ER Episodes
 - 19-1994
 - 396-1999

Lesson Plan #17: Marijuana

- **Cannabis Sativa**
 - Main active ingredient- **Delta-9 Tetrahydrocannabinol- THC**
 - 360 chemicals in cannabis plant
 - 60 metabolites
 - 1960’s
 - 1990’s, 2000’s
 - B.C.Bud
 - Lipid (fat) soluble

- Chronic users-urine test
 - 1930- **Marijuana Tax Act**
 - **1970-Controlled Substance Act**
 - Schedule I Drug
 - **Facts of interest re: Marijuana**
 - Biggest cash crop in U.S.
 - #1 illicit drug used in U.S.
 - Estimated 1,476 metric tons of MJ consumed in U.S.
 - Globally, 200-300 million people
 - U.S.-70 million people
 - 70 more carcinogenic compounds than tobacco
 - **2000 Monitoring the Future Study**
 - MJ use remained stable since 2001
 - 8th graders
 - 10th graders
 - 12th graders
 - Height of use:1979-50.8%
 - **DAWN-Drug Abuse Warning System**
 - 1990-17,706
 - 1999-87,150
 - Increased potency
 - Neuropathy
 - Anandamide
 - Sedative & euphoric
 - Stimulatory Effects
 - Depressant Effects
 - Anesthetic Effects
 - Hallucinogenic Effects
 - **Other Effects**
 - Diminishes ability to perform complex tasks-Research Study
 - **Groups most at risk**
 - **New Research**
 - **Post Hallucinogenic Drug Perceptual Disorder**
 - **Amotivational Syndrome**
 - **Statutes**
 - **D.U.I.- includes marijuana**
- Lesson Plan: Medical Marijuana**
- **Medical Marijuana**
 - 1996- California Proposition 215
 - Pro-Con
 - State vs. Federal Law
 - 11362.5 H&SC
 - **Supreme Court ruling- 2001**

- No medical necessity
- No currently accepted medical use of MJ
- Federal Controlled Substance Act
- Need research
- **Medical Marijuana debate** –What are the facts?
 - Marijuana vs. Marinol (Dronabinol)
 - Handout
 - Medical efficacy
 - Pharmacodynamics of THC
 - Clinical trials
 - Safe dose
 - Limitations of Scheduling
 - Ethical dilemma
- **What do you think?**
 - Change Drug Schedule?
 - Alternative to Marinol?
 - Why conduct research?
 - Should state law rule?
 - What's the message for teenagers?
 - 1994 Study-
 - What if it was your family member or close friend?

Lesson Plan: Opiates

- **Pain Control**
 - Chronic pain
 - 1/3rd U.S. population
 - Most common reason
- **Narcotic Analgesics**
 - *Narcotics*-Greek for *stupor*
 - Analgesic-pain relief produced w/o loss of consciousness
 - Sedating, painkilling, sleep-inducing
- **Natural Opiates**-obtained directly from opium
 - Opium, Morphine, Codeine
- **Semi-synthetic Opiates**-chemically altered derivatives
 - Heroin
- **Synthetic Opiates**-synthesized in laboratories-not derived from natural opiates
 - Demerol, Vicodin, Darvon, Fentanyl, Dilaudid, Percodan, Oxycontin (time-released Percocet), Methadone
- **Neuropathway**
 - Endorphin/Enkephalins- NT's
 - Brain's natural pain suppressors
 - Opiates further block pain receptors
 - Mimic action of NT's
- **Opium**
 - Papaver Somniferum-plant that brings sleep
 - Wizard of Oz

- Grown in: Afghanistan, Iran, Pakistan, China, Burma, Laos, Thailand, Turkey, Columbia, Mexico
- **Morphine**-1803
 - Synthesized from Opium
 - 10 times stronger
 - Hypodermic needle- effective delivery system
 - Pain relief, cough suppressant, diarrhea
 - Thought to be a cure for Opium addiction
- **Heroin**-1874
 - Synthesized from Morphine
 - 3 to 10 times stronger
 - *Thought to be a cure for Morphine addiction*
- **Physical effects**-dose dependent
 - Dependence
 - Drowsiness
 - Nausea
 - Pinpoint pupils
 - Lower body temp./BP
 - Respiratory depression
 - Relaxed muscles
 - Flushed, warm face & neck
 - Dry, itchy skin
 - Constipation-
- **Route of administration**-Opiates easily cross BBB-fat soluble
- **Orally**
 - First pass
 - 20-30 minutes
 - Mild/moderate levels of pain
- **Intravenous**
 - High concentration-bloodstream
 - Greater control
 - 15-30 seconds
 - Skin-popping/intramuscularly-5-8 min
- **Prescription Drug Abuse**
 - Potential for dependency
 - Higher abuse among women
 - Forged prescriptions
 - Vicodin
- **Oxycontin**
 - High potential for abuse
 - Time-released

Lesson Plan: Heroin
- **Diacetylmorphine-Heroin**
 - 1998-Leading cause of accidental death in S.F.
- **National Survey on Drug Abuse & Health-2002**

- 166,000 heroin users-past month
- 80% under age 26
- 2.9 Million used at least once in their lifetime
- 663,000 used in last year
- **DAWN**-Emergency room episodes-2000
 - 72,217 visits (second to cocaine)
 - 70% increase
 - Snorting Heroin increased 470% from 1988 to 1996
 - 4, 178 deaths
 - 39% increase for whites
 - No significant increase for blacks
- **Heroin dose/purity/cost**
 - *Traditionally*: 1-10%/Recently 1-98%
 - \$25-1/4 gram; \$10 bag-1/8^t gram
 - Color varies due to impurities
 - **Short-term effects**
 - Tolerance builds/suppression of pain
 - Depressed respiration
 - Clouded mental functioning
 - Nausea, vomiting
 - **Long-term effects**
 - Addiction
 - Infectious diseases
 - Collapsed veins/abscesses
 - Endocarditis
 - Necrotizing fasciitis
- **Heroin withdrawal**
 - Vomiting/stomach cramps
 - diarrhea/
 - Restlessness/insomnia
 - Cold flashes-goose bumps “cold turkey”
 - Muscle/bone pain
 - Leg movements-”kicking”
- **Overdose-Profile**
 - Age/experience
 - Treatment-Narcan
 - 13%-released from jail 17%-novices
- **Black Tar Heroin**
 - Produced in Mexico
 - High purity, low cost, crude method of converting opium gum to Heroin
 - 20-30% purity
 - \$200 gram/\$4,000 oz.
 - Diluted and injected
- **Trends**
- **Lifestyle Danger**

- **Statutes:** 11550 H&SC, 11350 H&SC, 4149 B&)
- Lesson Plan: Dual Diagnosis**
- **Dual Diagnosis-Who?**
 - NIH study
 - How prevalent?
 - Substance abusers
 - Homeless
 - Criminal Justice System
 - Adolescents
 - Proper ID can lead to assessment & treatment
- **Dual Diagnosis-Definition**
 - Major mental disorders
 - Similarity in neurotransmitters
 - Specific drugs
- **Dual Diagnosis issues**
 - Asking the question the first step
 - Both disorders must be treated
 - Proper diagnosis & treatment important
 - Need observation-being an expert not important
 - Medication often effective
- **Remember:**
 - You may be the first on to ask the question.
 - Web site: www.dualdiagnosis.org

Lesson Plan: HIV/AIDS

- **Human Immuno-Deficiency Virus**
 - Breaks down body's immune system
 - T-cells
- **Acquired Immuno-Deficiency Syndrome**
 - Acquired-Something you can catch
 - Syndrome-Set of life threatening conditions
- **HIV-AIDS is not a moral issue. It's a health issue.**
 - It's not who you are, but what you do.
- **Statistics**
 - World AIDS Day-Cases worldwide
 - 2002-U.S.
 - 1.3 million children
 - 1,000 babies
 - 2002-3.1 million AIDS deaths worldwide
 - 80% of deaths in Africa
 - Fifth leading cause of death in U.S. ages 25-44 yrs.
 - Shift to IV drug use/heterosexual unprotected sex
- **Transmission Fluids**
 - Blood
 - Semen

- Vaginal/cervical fluid
- Breast milk

- **Transmission Modes**

- Unprotected sexual intercourse
- IV drug use
- Blood transfusions-prior to 1985

Risky Behavior.....HIV+
6 weeks-6 months

HIV+.....AIDS
Up to 19 years ++

AIDS.....Death
2 years ++++++++

- **Risk Factors**

- Alcohol/drugs=risky behavior
- Immune system compromised
- Judgment impaired
- Alcohol & other drugs-increased sexual behavior

- **Treatment**

- No vaccine or cure
- Combination therapies-protease inhibitors-"cocktails"
- Lifestyle change
 - Ex. Magic Johnson

- **Prevention**

- Use latex condoms-double up
- Don't shoot-Don't share
- Testing
- Web site: www.aidsinfo.nih.gov/

- **Hepatitis C-new epidemic**

- What is Hepatitis?
- SC Co. more than new HIV cases
- 230,000 cases annually in U.S.
- Similar transmission fluids-blood more effective method
- Limited treatment-no cure, may need liver transplant

Lesson Plan: Treatment

- **Goal of treatment**

- Quality of life-recovery
- Higher functioning
- Sobriety is not recovery
- One size does not fit all
- Tx is crucial to recovery

- **Research-Rand Study**

- Treatment is cost effective
- Every \$1.00 spent in Tx saves \$7.00 in CJS costs

- **Thirteen Principles of Effective Drug Addiction Treatment**

- Research-based guidelines
- **Assessment-Recovery Cornerstone**
 - Needs to be complete, accurate
 - Map provides direction
 - Can be modified as needed-flexible
- **Treatment Modalities**
 - Detox
 - Residential
 - Out-Patient
- **12-Step Programs: H.A.L.T.-striking a balance**
 - “Never get too...”
- **Narcotic Replacement Therapies**
 - Methadone-agonist
 - No magic bullet
 - Allows person to function
 - Slots into opiate receptor sites
 - Highs are less dramatic
 - Known protocols-proper dose
 - “Dose & Dash”
 - Diverted to black market
 - **Naltrexone- “Revia”-Antagonist**
 - Non-addicting drug
 - Defeats the effect of opiates by occupying opiate receptor sites
 - Lessens craving and high
 - Works best with motivated clients, in addition to treatment
 - **Buprenorphine-agonist & antagonist**
 - Chemically related to morphine
 - Possesses a ceiling effect
 - Greater safety profile
 - Less likely to cause respiratory depression
 - **Rapid Opiate Detoxification**
 - Procedure lasting 4-6 hours
 - Patient given Naltrexone under anesthesia
 - Not indicated for every addict
 - Too painless?

Who deserves treatment?

- Barriers to treatment
- Does coercion work?

Lesson Plan: Drug Courts- Proposition 36

- **Drug Courts**
 - *1989-Miami
 - *1995-Santa clara County
 - *3,000 felony/4,000 misd. Cases
 - *Non-adversarial approach-team

- *Use of coercion
- *High retention rate
- *2001-over 1,000 on Drug Court probation
- *Challenged the system-need buy-in

- **Proposition 36-California**

- *November, 2001-passed w/ 61%
- *Mandated treatment
- *Reduce prison population
- *\$120 million for treatment
- *No funding for drug testing
- *Realities of Prop 36
- *Are we better off?

Lesson Plan: War on Drugs

- **Have we lost the war?**

- Wrong terminology
- \$\$worth the cost
- What drugs?
- Scientific knowledge vs. Political reality
- Drug pusher vs. Drug companies
- All or nothing debate

- **Legalization**

- Making legal what is currently illegal
- Certain illegal drugs legal
 - For who?
 - Which drugs?
 - What potency?
 - Who regulates
 - Who enforces

- **Decriminalization**

- Removal of, or reduction in criminal sanctions for simple possession of drugs
 - CA-less than 1oz marijuana-misd., Fine \$
 - Prevents clogging up the system
 - Wrong message? Condone use?
 - “soft” vs. “hard” drugs

- **Harm Reduction**

- Alternative to supply reduction strategy
- Public health concept
 - Drug use a fact of life
 - Focus is on the harm
 - If not a cure, then care
 - Abstinence is desirable
 - Not always a realistic goal
 - Lowering addict transmission of infections diseases-needle exchanges
 - Minimize the harm, reduce crime
 - Most proponents of HR do not favor legalization

- **Zurich, Switzerland experiment**
 - Containment of hard core users
 - Needle Park
 - Daily overdoses
 - Doctor's stationed in the park
 - Closed in 1992
 - Addicts moved to the train station
 - 1997-Gov't supplies heroin to enrolled addict
 - Crime rate lowered
- **Dutch Drug Policy**
 - Drug use is a fact of life
 - Needs to be discouraged
 - User accountability
 - Minimize the risks
 - "soft" drugs vs. "hard" drugs
 - 1995-Possession or sale of 5 grams of Marijuana decriminalized
 - Does not apply to those under 18 yrs.
 - Lower rate of marijuana use than U.S.
- **Education/Prevention**
 - Supply is determined by the demand
 - Looking for new ways to deal with problem
 - where best to spend \$\$