Chapter Five; Addiction and Drug Abuse

1. Addiction is a persistent, compulsive dependence on a behavior or substance, despite ongoing negative consequences.
   a. Compulsion
   b. Loss of control
   c. Negative consequences
   d. Denial
   e. Inability to abstain

2. Physiology of Addiction
   a. Neurotransmitters: Biochemical messengers that exert their influence at specific receptor sites on nerve cells.
   b. Tolerance: Progressively larger doses or more intense involvement are needed to obtain the desired effect.
   c. Withdrawal: Symptoms of chemical dependencies are generally the opposite of the effects of the drugs, including psychological discomfort and preoccupation with or craving for the behavior.

3. Addictive Behaviors; Process Addictions
   a. Gambling disorder
      i. Characteristic behaviors include preoccupation with gambling, unsuccessful efforts to quit, and lying to conceal the extent of one's involvement.
      ii. Affects more than two million Americans.
   b. Compulsive buying disorder
      i. Preoccupation with shopping and spending, with little control over impulses to buy.
   c. Technology addictions
      i. Signs of Internet addiction include general disregard for health, sleep deprivation, depression, neglecting family and friends, lack of physical activity, euphoria when online, uncomfortable feelings when not online, and poor grades or job performance.
   d. Work addiction
      i. Compulsive use of work and the work persona to fulfill needs of intimacy, power, and success.
   e. Exercise addiction
      i. Use of exercise compulsively to try to meet needs—for nurturance, intimacy, self-esteem, and self-competency—that an object or activity cannot truly meet
   f. Sexual addiction
      i. Compulsive involvement in sexual activity
   g. Multiple addictions
      i. Characterized by having more than one addiction

4. How Drugs Affect The Brain
   a. All drugs that are addicting can activate the brain's pleasure circuit.
   b. Almost all psychoactive drugs (those that change the way the brain works) do so by affecting chemical neurotransmission—enhancing, suppressing, or interfering with it

5. Categories of Drugs
   a. Prescription Drugs
   b. Over-the-counter drugs (OTCs)
   c. Recreational drugs
   d. Herbal preparations
   e. Recreational Drugs
   f. Illicit (Illegal) Drugs
g. Commercial Preparations

6. Methods Of Drug Administration
   a. Snorting
      i. Drug is absorbed through mucous membranes into the bloodstream.
   b. Oral Ingestion
      i. Drug is absorbed in the bloodstream in the stomach and small intestine, then passes through the liver before being circulated through the body.
   c. Inhalation
      i. Drug enters the bloodstream through capillaries in the lungs.
   d. Transdermal
      i. Drug is absorbed into bloodstream through the skin.
   e. Injection
      i. Intravenously injected drug enters bloodstream directly at veins; intramuscularly and subcutaneously injected drugs enter the bloodstream through capillaries in muscles and the skin.

7. Misuse and Abuse
   a. Drug misuse involves using a drug for a purpose for which it was not intended.
   b. Drug abuse is excessive use of any drug.

8. Over-The-Counter Drugs
   a. Sleep aids, cold medicines, and diet pills.

9. Prescription Drugs
   a. Painkillers

10. Stimulants
    a. Cocaine, amphetamines, methamphetamine, and caffeine.

11. Marijuana
    a. Tetrahydrocannabinol (THC) is the psychoactive substance in marijuana.
    b. Diverse family of herbal blends
       i. K2, spice, fake marijuana, Yucatan Fire, Skunk, Moon Rocks
       ii. K2 is used by nearly 1 in 10 college students
       iii. K2 users may experience hallucinations, severe agitation, extremely elevated heart rate, coma, suicide attempts, and drug dependence

12. Depressants
    a. Alcohol is the most common depressants
    b. Benzodiazepines and barbiturates
       i. A sedative drug promotes mental calmness and reduces anxiety.
       ii. A hypnotic drug promotes sleep or drowsiness.
          1. Benzodiazepines (tranquilizers)
          2. Barbiturates
       iii. Rohypnol, a benzodiazepine, has gained notoriety as a problem on college campuses as a "rape drug."
    c. GHB is a central nervous system depressant originally sold to help bodybuilders reduce body fat and build muscle
       i. Banned in 1992
       ii. Slipped into drinks, it can result in loss of memory, unconsciousness, amnesia, and death.
    d. Opioids (narcotics) cause drowsiness, relieve pain, and produce euphoria.
       i. Synthetic opioids
          1. Vicodin, Percodan, Oxycontin, Demerol, Dilaudid
    e. Heroin is a depressant with no medical use.

13. Hallucinogens
    a. Hallucinogens, or psychedelics, are substances capable of creating auditory or visual hallucinations and unusual changes in mood, thoughts, and feelings.
    b. LSD (acid)
i. Psychological effects vary, euphoria is common, as well as distortions of perception, and auditory and visual hallucinations.
ii. Physical effects include increased heart rate, elevated blood pressure, muscle twitches, perspiration, chills, headaches, and mild nausea.

c. Mescaline
   i. A powerful hallucinogen and a central nervous system stimulant
   ii. Typically is swallowed, and those able to keep the drug down feel its effects within 30 to 90 minutes.

d. Ecstasy
   i. Ecstasy is the most common name for the drug methylenedioxymethamphetamine (MDMA).
   ii. One of the most well-known "club drugs" or "designer drugs" found in nightclubs and raves
   iii. Creates feelings of extreme euphoria, increased willingness to communicate, feelings of warmth and empathy, and heightened appreciation for music.

14. Inhalants
   a. Inhalants are chemicals whose vapors, when inhaled, can cause hallucinations and create intoxicating and euphoric effects. Misused products include rubber cement, model glue, paint thinner, aerosol sprays, lighter fluid, varnish, wax, spot removers, and gasoline.
   b. Amyl nitrite (poppers or rush)
      i. Prescribed to relieve chest pain in heart patients
      ii. Packaged in small, cloth-covered glass capsules that can be crushed to release the active chemical for the user to inhale
   c. Nitrous oxide
      i. Used as an adjunct to dental anesthesia
      ii. State of euphoria, floating sensations, and illusions
      iii. Pain relief and a silly feeling demonstrated by laughing and giggling (hence its nickname "laughing gas")

15. Steroids
   a. Anabolic steroids are artificial forms of the male hormone testosterone, and promote muscle growth and strength. Steroids are available in two forms: injectable solutions and pills.

16. Treatment and Recovery
   a. Recovery from addiction is a lifelong process, starting with treatment—and before that, recognition—of the addiction.
   b. Intervention is the planned process of confrontation by people who are important to the addict.
   c. Abstinence and detoxification
   d. Finding a treatment program
   e. Treatment approaches may include outpatient behavioral treatment, residential treatment, and continuing support programs like Alcoholics Anonymous.
      i. Medicinal treatments
      ii. Vaccines against addictive drugs
   f. Relapse is an isolated occurrence of or full return to addictive behavior.

Chapter Six; Alcohol

1. Chemistry and Potency of Alcohol
   a. The intoxicating substance found in beer, wine, liquor, and liqueurs is ethyl alcohol, or ethanol.
   b. Fermentation: The process by which yeast breaks down sugars, yielding ethanol and carbon dioxide
   c. Distillation: Processing of hard liquor
   d. Proof: The measure of the percentage of alcohol, and therefore strength
e. Alcohol percentage by volume is half of the given proof: 80 proof whiskey is 40 percent alcohol by volume.

f. Standard drink: Contains about 14 grams of pure alcohol

2. Absorption, Metabolism, and Consumption
   a. Approximately 20 percent of ingested alcohol diffuses through the stomach lining into the bloodstream and nearly 80 percent diffuses through the lining of the upper third of the small intestine.
   b. Several factors influence how quickly your body will absorb alcohol: the amount consumed, alcohol concentration of drink, amount of food in your stomach, your metabolism, weight, body mass index, and your mood.
   c. Blood alcohol concentration (BAC), the ratio of alcohol to total blood volume, is the primary method used to measure physiological and behavioral effects of alcohol.
   d. Hangover is often experienced the morning after drinking. Common symptoms include headache, muscle aches, upset stomach, anxiety, dehydration, depression, diarrhea, and thirst.
   e. Alcohol poisoning
      i. Drinking large amounts of alcohol in a short period can cause one's BAC to quickly reach a lethal range.
      ii. Death may be caused by CNS and respiratory depression, or inhalation of vomit or fluid into the lungs.
      iii. BAC can rise after a drinker becomes unconscious.
   f. Alcohol and weight gain
      i. Drinking an extra 150 calories a day is the equivalent of 1 pound a month and up to 12 pounds a year.
   g. Fetal alcohol syndrome (FAS) is the third most common birth defect and the second leading cause of mental retardation in the United States.
      i. Symptoms include mental retardation, small head, tremors, abnormalities of the face, limbs, heart, and brain; poor memory, reduced attention span, and impulsive behavior
   h. Alcoholism, or alcohol dependency, results when personal and health problems related to alcohol use are severe, and stopping alcohol use causes withdrawal symptoms.
      i. Private treatment facilities
         1. Most treatment facilities keep patients from 3 to 6 weeks and charge several thousand dollars. Some insurance programs or employers assume most of the expense.
      ii. Therapy
         1. Several types of therapy are commonly used in alcoholism recovery (family, individual, and group), and some colleges have their own treatment programs.
      iii. Pharmacological treatment
         1. Medications currently being used include disulfiram, naltrexone, and acamprosate.
         2. All pharmacological treatments for alcoholism should be used in conjunction with psychotherapy or support groups.
      iv. Support group treatments
         1. Alcoholics Anonymous (AA) is a nonprofit self-help organization with more than 1 million members; it offers group support to help people stop drinking.
         2. Other groups include Al-Anon and Alateen, Women for Sobriety, and Secular Organizations for Sobriety.
      v. Over half relapse within the first 3 months of treatment.
      vi. Effective recovery programs offer alcoholics ways to increase self-esteem and resume personal growth.
Chapter Six; Tobacco

1. Nicotine
   a. Highly addictive chemical stimulant in all tobacco products
   b. A powerful central nervous system stimulant that produces a variety of physiological effects

2. Tar and carbon monoxide
   a. Particulate matter condenses in the lungs to form a sludge called tar, which contains carcinogenic agents, such as benzopyrene, and chemical irritants, such as phenol.
   b. Cigarette smoke also contains poisonous gases, the most dangerous of which is carbon monoxide.

3. Tobacco Products
   a. Cigarettes
      i. Filtered cigarettes are the most common form of tobacco available today.
      ii. Different types of cigarettes are available including filtered, non filtered, clove, and menthol.
   b. Cigars
      i. Cigar smoke contains 23 poisons and 43 carcinogens.
      ii. Most cigars contain as much nicotine as several cigarettes.
   c. Pipes and hookahs
      i. According to cumulative research by the National Cancer Institute and the American Cancer Society, pipe smoking carries similar risks to cigar smoking.
      ii. Hookah smoking originated in the Middle East and involves burning flavored tobacco in a water pipe and inhaling the smoke through a long hose. Pipes cool the smoke, but do not filter out harmful substances.
   d. Bidis
      i. Bidis are small, hand-rolled cigarettes in a variety of flavors, such as vanilla, chocolate, and cherry.
   e. Smokeless tobacco
      i. Includes chewing tobacco, dip, and snuff. It is just as addictive as cigarettes and actually contains more nicotine.
   f. Electronic cigarettes
      i. A recent report from the CDC showed that in 2012, 10 percent of U.S. middle and high school students experimented with e-cigarettes.
      ii. FDA found variable amounts of nicotine and traces of toxic chemicals in two popular brands.

4. Health Hazards
   a. Cancer
      i. Lung cancer is the leading cause of cancer deaths in the United States.
      ii. Tobacco is also linked to pancreatic cancer and cancers of the lip, tongue, salivary glands, and esophagus.
      iii. Long-term smokeless tobacco use increases risk of larynx, esophagus, nasal cavity, pancreas, kidney, and bladder cancers.
   b. Cardiovascular Disease
      i. Smoking and exposure to environmental tobacco smoke (ETS) accelerates buildup of fatty deposits (plaque) in the heart and major blood vessels (atherosclerosis).
      ii. Smoking contributes to platelet adhesiveness, the sticking together of red blood cells associated with blood clots.
   c. Respiratory Disorders
      i. Chronic bronchitis (inflamed lungs) along with susceptibility to ailments such as influenza, pneumonia, and colds
      ii. Approximately 8 percent of all emphysema cases are related to cigarette smoking.
   d. Sexual Dysfunction and Fertility Problems
i. Male smokers are much more likely to experience erectile dysfunction than non-smokers.
ii. Women who smoke increase their risk for infertility, ectopic pregnancy, spontaneous abortion, stillbirth, and risk of sudden infant death syndrome.

e. Other Health Effects
   i. Macular degeneration
   ii. Premature skin wrinkling, teeth staining, yellowing of fingernails, and bad breath
   iii. Significantly increased risk of Alzheimer's disease

5. Environmental Tobacco Smoke; Secondhand Smoke
   a. Mainstream smoke (smoke exhaled by a smoker)
   b. Sidestream smoke (smoke from the burning end of a cigarette)

6. Quitting
   a. Approximately 70 percent of adult smokers in the United States want to quit smoking, and up to 44 percent make a serious attempt to quit each year. However, only 4 to 7 percent succeed.
   b. Benefits of quitting
      i. Within 8 hours, carbon monoxide and oxygen levels return to normal, and "smoker's breath" disappears.
      ii. Within weeks, the mucus that clogs airways is eliminated, and circulation and sense of taste and smell improve. Many ex-smokers have more energy, sleep better, and feel more alert.
      iii. After 1 year, risk for lung cancer and stroke decreases.
   c. "Cold turkey"—deciding not to smoke again
   d. Pharmacological treatments can help with nicotine withdrawal
   e. Nicotine replacement products
      i. Include gums, sprays, and inhalers
   f. Smoking-cessation medications
      i. Aimed at reducing withdrawal symptoms and decreasing cravings
   g. Anti Smoking therapy

Chapter Two; Psychological Health

1. Maslow’s Hierarchy of Needs

   ![Maslow's Hierarchy of Needs Diagram]

   a.

2. Types of Health
   a. Mental health is used to describe the "rational" or "thinking" dimension of our health.
   b. Emotional health refers to the feeling or subjective side of psychological health.
   c. Social health includes a person's interactions with others on an individual and group basis.
   d. Spiritual health refers to the sense of belonging to something greater than the purely physical or personal dimensions of existence.
i. Spirituality as defined by Dr. Harold G. Koenig is the personal quest for understanding answers to the ultimate questions about life, meaning, and relationship with the transcendent or sacred.

3. Factors Impacting Psychological Health
   a. The family, support system, community, self efficacy, self esteem, personality, life span, maturity, the mind-body connection,

4. Strategies To Enhance Psychological Health
   a. Develop a support system, complete required tasks to the best of your ability, form realistic expectations, make time for yourself, maintain your physical health, examine problems and seek help when necessary, and get adequate sleep.

5. Benefits of Good Spiritual Health
   a. Physical benefits
   b. Decreases anxiety, depression, anger, discomfort, and feelings of isolation.
   c. Decreases alcohol and drug abuse.
   d. Decreases blood pressure and the risk of heart disease.
   e. Increases the ability to cope with the effects of illness and medical treatments.
   f. Increases feelings of hope and optimism, freedom from regret, satisfaction with life, and inner peace.

6. Anxiety Disorders
   a. Anxiety disorders are the number one mental health problem in the United States, affecting more than 21 percent of all adults aged 18 to 64.
   b. Generalized anxiety disorder
   c. Panic disorder
   d. Phobic disorder
   e. Social anxiety disorder
   f. Obsessive-compulsive disorder
   g. Post-traumatic stress disorder (PTSD)
   h. Causes
      i. Biology, environment, social, and cultural roles

7. Mood Disorders
   a. Chronic mood disorders are disorders affecting how you feel. In any given year, approximately 10 percent of Americans aged 18 or older suffer from a mood disorder.
   b. Major depression is the most common mood disorder, affecting about 8 percent of the American population.
   c. Dysthymic disorder is chronic, mild depression.
   d. Bipolar disorder is associated with severe mood swings.
   e. Seasonal affective disorder (SAD) is associated with reduced exposure to sunlight.
   f. Mood disorders are caused by an interaction of factors including: biological differences, hormones, inherited traits, life events, and trauma.

8. Other Psychological Disorders
   a. Personality disorders are enduring patterns of inner experience and behavior that deviates markedly from expectations of the individual's culture and is pervasive and inflexible.
   b. Narcissistic personality disorders-sense of self importance or self absorption; sufferers are overly needy and demanding “entitled” to nothing but the best.
   c. Antisocial personality disorders-long term pattern of manipulation and taking advantage of others.
   d. Borderline personality disorder-risky behaviors such as gambling sprees, unsafe sex, and use of illicit drugs; daredevil driving.
   e. Paranoid personality disorder-pervasive, unfounded mistrust of others, secretiveness, irrational jealousy.
   f. Schizophrenia is characterized by alterations of the senses, the inability to sort out incoming stimuli and make appropriate responses, an altered sense of self, and radical changes in emotions, movements, and behaviors.

9. Learning Disabilities
a. Attention-deficit/hyperactivity disorder.
b. Dyslexia.
c. Autism spectrum disorder.

10. Alzheimer’s and Dementias
   a. The term dementia is used to describe either reversible symptoms or progressive forms of brain malfunctioning.
   b. Dementia: memory failure, judgement, or erratic behavior.
   c. Alzheimer’s: most common dementia, personality changes, and loss of independence.

11. Treatment
   a. Deciding to seek treatment
   b. First evaluation should include a physical checkup, psychiatric history, and mental status examination.
   c. Type of mental health professionals
   d. What to expect in therapy
   e. Pharmacological treatment

Chapter Three; Stress

1. What is Stress?
   a. Stress is the mental and physical response and adaptation by our bodies to the real or perceived changes and challenges in our lives.
   b. Stressors are any real or perceived physical, social, or psychological events or stimuli that strain our abilities to cope.
   c. Distress is negative stress, more likely to occur when you are tired, under the influence of alcohol or other drugs, or coping with illness, financial trouble, or relationship problems.
   d. Eustress is positive stress that presents the opportunity for personal growth and satisfaction and can actually improve health.
   e. Acute stress is intense stress that flares quickly and disappears quickly.
   f. Episodic acute stress is the state of regularly reacting with wild acute stress to various situations.
   g. Chronic stress lingers indefinitely and can harm your body's systems.
   h. Traumatic stress is often a result of witnessing or experiencing events like major accidents, war, shootings, assault, or natural disasters.

2. Your Body’s General Response to Stress
   a. Our physiological responses evolved to protect us from harm. Today when we face real or perceived threats, these same physiological responses kick into gear, but our instinctual reactions to fight, scream, or flee the enemy must be held in check.
   b. Alarm phase
      i. The cerebral cortex perceives stressor and triggers an autonomic nervous system response preparing for action.
   c. Resistance phase
      i. The body tries to return to homeostasis by resisting the alarm responses. However, because some perceived stressor still exists, the body does not achieve complete calm or rest.
   d. Exhaustion phase
      i. The hormones, chemicals, and systems that trigger and maintain the stress response are depleted and the body returns to allostasis, or balance.
   e. Fight-or-flight response
      i. Also known as the alarm stage of the GAS
      ii. Physical response of the body in reaction to stress
   f. Autonomic nervous system
      i. Portion of the central nervous system that regulates body functions that we do not normally consciously control (e.g., heart rate, glandular functions, breathing)
      ii. Consists of two divisions:
         1. Sympathetic nervous system
a. Activated during arousal of stress response
   b. Release of stress hormones (cortisol, ACTH, adrenaline)

g. Parasympathetic nervous system
   i. Counteracts the sympathetic nervous system.

3. Effects of Stress on your Health
   a. Physical effects of stress: Cardiovascular disease, weight gain, alcohol dependence, hair loss, diabetes, digestive problems, impaired immunity.
   b. Intellectual and psychological effects of stress
      i. Stress, memory, and concentration
         1. Prolonged exposure to cortisol has been linked to shrinkage of the hippocampus, the brain's major memory center.
   c. Stress and mental disorders
      i. Rates of mental disorders, particularly depression and anxiety, are associated with various environmental stressors from childhood through adulthood.
   d. Internal Factors of Stress
      i. Although stress can come from the environment and other external sources, it can result from internal factors as well.
         1. Appraisal and stress
            a. Appraisal helps us recognize stressors and evaluate them on the basis of past experience and emotions, and decide whether or not we have the ability to cope with them.
         2. Self-esteem and self-efficacy
            a. Self-esteem refers to how you "feel" about yourself.
            b. Self-efficacy is confidence in one's skills and abilities to cope with life's challenges.
      ii. Types of Personalities
         1. Type A personalities are defined as hard-driving, competitive, time-driven perfectionists.
         2. Type B personalities are described as being relaxed, noncompetitive, and more tolerant of others.
         3. Type C personalities are characterized as stoic, with a tendency to stuff feelings down and conform to the wishes of others.
         4. Type D personalities are characterized by a tendency toward excessive negative worry, irritability, gloom, and social inhibition.

4. Stress Managements
   a. Stress management requires examining your emotional responses to interactions with others—and remembering that you are responsible for the emotion and the resulting behaviors.

Chapter Four: Reproductive Choices

1. Barrier Methods
   a. Male condom
      i. Advantages: ninety-eight percent effective when used correctly, no prescription, inexpensive, no negative health effects
      ii. Disadvantages: considerable potential for user error
   b. Female condom
      i. Advantages: ninety-five percent effective when used correctly, inexpensive, no negative health effects
      ii. Disadvantages: potential for user error
   c. Spermicide
      i. a sperm-killing agent, especially a commercial birth-control preparation, usually a cream or jelly.
   d. Contraceptive Sponge
1. The contraceptive sponge is a type of birth control that prevents sperm from entering the uterus. The contraceptive sponge is a soft, disk-shaped device made of polyurethane foam that is inserted into the vagina to cover the cervix.

e. The Diaphragm
   i. A thin contraceptive cap fitting over the cervix.

f. The Cervical Cap
   i. The cervical cap is a birth control device that prevents sperm from entering the uterus. The cervical cap is a reusable, deep silicone cup that is inserted into the vagina and fits tightly over the cervix.

2. Hormonal Methods
   a. The term hormonal contraception refers to birth control containing synthetic estrogen, progestin, or both.
   b. Oral contraceptives
      i. Advantages: combination pills highly effective at preventing pregnancy (more than 99% with perfect use and 91% with typical use), less room for user error, convenient, discreet
      ii. Disadvantages: increased risk for high blood pressure, clots, stroke, varying minor side effects, must be taken every day
   c. Progestin-only pills
      i. Advantages: used safely for women over 35, breast-feeding mothers, over 99 percent effective with perfect use
      ii. Disadvantages: irregular menstrual bleeding or spotting
   d. Ortho Evra: Transdermal patch worn for 1 week and replaced every 3 weeks
   e. Nuvaring: Inserted via the vagina and leaves it in place for 3 weeks
   f. Depo-Provera and Depo-SubQ Provera: Injected into the skin lasts for 3 months
   g. Nexplanon: Small soft plastic capsule that is inserted just beneath the skin on the inner of a woman’s upper underarm by a health care provider
   h. IUD: a small contraceptive device, often ‘T’-shaped, often containing either copper or levonorgestrel, which is inserted into the uterus. They are one form of long-acting reversible contraception which are the most effective types of reversible birth control.
      i. ParaGard- T-shaped does not contain any hormones can be left for 10 years
      ii. Mirena-left for 5 years
      iii. Skyla-usually designed for those that have not had a baby and lasts for 3 years.
   i. Emergency contraceptive pills (ECPs) prevent pregnancy by delaying or inhibiting ovulation, inhibiting fertilization, or blocking implantation of a fertilized egg.

3. Behavioral Methods and Fertility Awareness Methods
   a. Sexual Abstinence: Voluntarily refraining from intimate sexual behavior which could lead to unintended pregnancy or disease

4. Surgical Methods
   a. Female Sterilization
      i. Tubal ligation is a surgical procedure for sterilization in which a woman's fallopian tubes are clamped and blocked, or severed and sealed, either method of which prevents eggs from reaching the uterus for implantation.
      ii. A hysterectomy is a surgery to remove a woman's uterus (also known as the womb). The uterus is where a baby grows when a woman is pregnant. During the surgery the whole uterus is usually removed. Your doctor may also remove your fallopian tubes and ovaries.
   b. Male Sterilization
      i. A vasectomy is an operation that makes a man permanently unable to get a woman pregnant. It involves cutting the 2 tubes called vas deferens so that sperm can no longer get into the semen.

5. Pregnancy
a. Prenatal Care: Nutrition and exercise, drugs and alcohol, smoking, other teratogens, prenatal testing and screening (ultrasonography, chorionic villus sampling, triple marker screen, amniocentesis).

b. Costs
i. Middle-income parents can expect to spend close to $300,000 over the next 17 years.
ii. Lower-income parents will spend approximately with $212,370 over the next 17 years.

c. Childbirth and Postpartum Period
i. Childbirth
   1. Cesarean section
ii. Complications of pregnancy and childbirth
   1. Preeclampsia and eclampsia
   2. Ectopic pregnancy
   3. Miscarriage
   4. Stillbirth
iii. Postpartum Depression
   1. Depression suffered by a mother following childbirth, typically arising from the combination of hormonal changes, psychological adjustment to motherhood, and fatigue.
iv. Sudden Infant Death Syndrome (SIDS)
   1. The unexplained death, usually during sleep, of a seemingly healthy baby less than a year old. SIDS is sometimes known as crib death because the infants often die in their cribs.

Chapter 11: Infectious Conditions
1. Sexually Transmitted Infections
a. Transmission
   i. STI pathogens prefer dark, warm, moist places, mostly mucous membranes
   ii. Vaginal intercourse
   iii. Oral-genital contact
   iv. Hand-genital contact
   v. Mouth-to-mouth contact
   vi. Contact with fluids from body sores
b. Risk Behaviors
   i. Unprotected sex of any kind is high-risk behavior.
   ii. Abstinence is a low-risk behavior.
c. HIV/AIDS
   i. HIV typically enters one person’s body via another person’s infected fluids (sperm, vaginal secretions, and blood). Intercourse vaginal and anal. Sharing needles during drug activity.
   ii. HIV cannot reproduce outside its living host and does not survive well in open air. Cannot be transmitted via casual contact.
   iii. Symptoms of HIV/AIDS
      1. Vary greatly from person to person.
      2. For adults without medical treatment, it takes an average of 8 to 10 years to cause changes in the immune system characteristic of AIDS.
iv. Testing for HIV antibodies
   1. It takes 3 to 6 months after infection for antibodies to develop to show a positive test.
   2. Retest within 6 months.
v. Treatments and prevention
   1. Antiretroviral therapy
   2. AZT, ddl, ddC, d4T 3TC
3. No current vaccine
   vi. Reduce risk through choices in sexual behavior and drug use
      1. Abstinence
d. Chlamydia
   i. Signs and symptoms
      1. Some present no symptoms (80% will have no symptoms, silent)
      2. Painful and difficult urination, frequent urination, discharge from penis in men
      3. Yellowish discharge, spotting between periods and after intercourse in women
   ii. Diagnosis and treatment
   iii. Urine sample or fluid from the vagina or penis
   iv. Treatable with antibiotics.
e. Gonorrhea
   i. Signs and symptoms
      1. In men, white milky discharge from penis with painful burning urination 2 to 9 days after contact
      2. Most women do not experience symptoms.
   ii. Diagnosis and treatment
      1. Sample of urine or fluid from vagina or penis
      2. Treatable with antibiotics if detected early.
f. PID and Epididymitis
   i. Pelvic inflammatory disease (PID) is a catch-all term for a number of infections of the uterus, fallopian tubes, and ovaries that are complications resulting from untreated STIs. Organs are inflamed and organs stop working. Reduced fertility
   ii. Epididymitis is a swelling of the man’s testicles most common among men aged 19 to 35, most commonly caused by untreated STIs. You will become sterile and can no longer have kids.
g. Syphilis
   i. Primary syphilis-Stage I
      1. Often characterized by development of a chancre at infection site, appearing 3–4 weeks after initial infection. Usually not painful, not treated will go to Stage II
   ii. Secondary syphilis-Stage II
      1. Includes skin rash, with patches on the skin or mucous membranes, enlarged lymph nodes, fever/headache, appearing 1 month to 1 year after the chancre disappears.
   iii. Latent syphilis-Stage III
      1. Causes lesions in body organs if left untreated, rarely transmitted to others, but only during pregnancy. Bacteria is now irreversible
   iv. Tertiary/late syphilis
      1. Symptoms include heart and central nervous system damage, blindness, deafness, premature senility, and dementia.
h. Herpes and Genital Herpes
   i. The herpes family of diseases is not transmitted exclusively by sexual contact; kissing or sharing eating utensils can also transmit the infection.
      1. Two types of Herpes Simplex Virus-HSV-1 and HSV-2-can affect anywhere on the body
      2. Herpes Simplex Virus remains in nerve cells for life
      3. HSV-1 or oral herpes causes sores around the mouth and lips (fever blisters or cold sores)
      4. HSV-2-infected around the genitals or rectum
   ii. Signs and symptoms-flu like symptoms
1. Precursor phase includes a burning sensation and redness at the site of infection.
2. Second phase includes fluid-filled blister.

iii. Complications
1. Pregnant women can infect a baby as it passes through the vagina during birth.
2. Women with herpes have a greater risk of cervical cancer.

iv. Diagnosis and treatment
1. Blood test or sample from sore
2. There is no cure for herpes but medications can help keep the disease from spreading.

i. Human Papillomavirus
   i. The most common Virus is HPV
   ii. Genital warts are caused by a group of viruses known as human papillomavirus (HPV). There are over 100 different types of HPV.
      1. 2 common ones cause cervical cancer
      2. 2 cause genital warts-testicular cancer- “crown of thorns”

iii. Signs and symptoms
1. Incubation period is 6–8 weeks.
2. Genital warts or bumps or growths on the genitals

iv. Complications
1. Some high-risk HPV infections may lead to cervical cancer.
2. Threat to fetus during birth

v. Diagnosis through visual examination
1. HPV vaccines

j. Trichomoniasis
   i. Trichomoniasis is characterized by a yellowish, unpleasant-smelling discharge, with burning and itching. Only about one-third who contract it have symptoms. Treatment includes oral metronidazole.

k. Pubic Lice
   i. Pubic lice symptoms include itchiness and blueish-gray skin color. Diagnosis involves examination by a health care provider. Treatment includes washing of clothing, furniture, and linens that may harbor the eggs.

2. Bacteria Vs. Viral STDs
   a. These are not treatable.
   b. HIV-Human Immunodeficiency Virus (Aids is the latent stage of HIV)
   c. HPV (Human Papillomavirus)-the most common virus
   d. Hepatitis- B and C
   e. Herpes Simplex Virus-HSV-1 and HSV-2

Chapter 11: Environmental Health
1. Ecosystem
   a. Air Pollution
      i. The term air pollution refers to the presence of substances (suspended particles and vapors) not found in perfectly clean air.
      ii. Air pollutants are either naturally occurring or anthropogenic (human caused)
      iii. Components of air pollution
         1. Sulfur dioxide, particulates, carbon monoxide, nitrogen dioxide, ground-level ozone, and lead
   b. Photochemical smog
      i. Brownish haze produced by the photochemical reaction of sunlight with hydrocarbons, nitrogen compounds and other gases in vehicle exhaust
      ii. A temperature inversion occurs when a cool layer of air is trapped under a warmer layer of air.
   c. Air Quality Index (AQI)
The AQI is a measure of how clean or polluted the air is on a given day and if there are any health concerns related to air quality.

Acid Deposition

Acid deposition (replacing the term acid rain) refers to the deposition of wet (rain, snow, sleet, fog, cloud water and dew) and dry (acidifying particles and gases) acidic components that fall to earth in dust or smoke.

Burning of fossil fuels is a major contributor.

Indoor Pollution

A growing body of evidence indicates that the air inside buildings can be much more hazardous than outdoor air even in the most industrialized cities.

Prevention of indoor air pollution should focus on three main areas: source control, ventilation improvements, and air cleaners.

ETS
Source Control
Asbestos
Formaldehyde
Radon
Lead
Home Heating
Mold
Sick Building Syndrome (SBS)

Asthma

Extrinsic or allergic asthma is associated with triggers and tends to run in families and develop in childhood.

Intrinsic or nonallergic asthma may be triggered by anything except an allergy.

Asthma rates have increased 30 percent in the last 20 years.

Global Warming and Climate Change

Climate change refers to a shift in typical weather patterns across the world.

Global warming is a type of climate change where average temperatures increase.

Pollution In The Water

Point Source Pollutants

on the most basic level, is water pollution that comes from a single, discrete place, typically a pipe.

Nonpoint Source Pollutants

caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters and ground waters.

Pollution On Land

Municipal Solid Waste

More commonly known as trash or garbage—consists of everyday items we use and then throw away, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, paint, and batteries.

Hazardous Waste

waste that is dangerous or potentially harmful to our health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges. They can be discarded commercial products, like cleaning fluids or pesticides, or the by-products of manufacturing processes.

Radiation

Nonionizing Radiation

Refers to any type of electromagnetic radiation that does not carry enough energy per quantum (photon energy) to ionize atoms or
molecules—that is, to completely remove an electron from an atom or molecule.

ii. Ionizing Radiation
   1. Radiation consisting of particles, X-rays, or gamma rays with sufficient energy to cause ionization in the medium through which it passes.

Chapter 10: CVC, Cancer, and Diabetes

1. Understanding The Cardiovascular System
   a. Arteries—carries blood away
   b. Arterioles—small vessels
   c. Capillaries—even smaller
   d. Veins—carbon dioxide transported to lungs and kidneys
   e. Venules (small veins)

2. Hypertension
   a. Blood pressure is measured in two parts and expressed as a fraction.
      i. Systolic pressure—the top number, is the pressure applied to the walls of the arteries when the heart contracts.
      ii. Diastolic pressure, the bottom number, is the pressure applied to the walls of the arteries during the heart's relaxation phase.
   b. High blood pressure is usually diagnosed when the systolic pressure is 140 or above.

3. Atherosclerosis
   a. Plaque: Fatty substances, cholesterol, cellular waste products, calcium, and fibrin (a clotting material in the blood) build up in the inner lining of an artery.
      i. Atherosclerosis is often called coronary artery disease (CAD).
      ii. This is due to the damage to the body's main coronary arteries on the outer surface of the heart.
      iii. Atherosclerosis and other circulatory impairments also often reduce blood flow and limit the heart's blood and oxygen supply, a condition known as ischemia.
      iv. When atherosclerosis occurs in the lower extremities, such as in the feet, calves, or legs, it is called peripheral artery disease (PAD).

4. Coronary Heart Disease
   a. A myocardial infarction (MI), or heart attack, involves an area of the heart that suffers permanent damage because its normal blood supply has been blocked.
   b. A coronary thrombosis is a clot that can cause an MI.
   c. An embolus is a thrombus (clot) that has become dislodged and moves through the circulatory system.
   d. Collateral circulation is an adaptation of the heart that occurs with a minor blockage where new vessels enlarge or grow to reroute needed blood through other areas.

5. Stroke
   a. A stroke (or cerebrovascular accident) occurs when blood supply to the brain is interrupted, killing brain cells, which have little capacity to heal or regenerate.
      i. Symptoms of stroke may include dizziness, weakness, numbness, impaired speech, memory, or motor control.
      ii. Ischemic strokes are caused by plaque or a clot that reduces blood flow.
      iii. Hemorrhagic strokes are due to bulging or rupture of a weakened blood vessel.
      iv. An aneurysm is the most life-threatening hemorrhagic stroke.
   b. Transient ischemic attacks (TIAs) are brief interruptions of the brain's blood supply that cause temporary impairment.

6. Other Cardiovascular Diseases
   a. Angina pectoris is a condition caused by reduced oxygen flow to the heart; often feels like pressure or squeezing in the chest or pain in the shoulders, arms, neck, jaw, or back.
   b. Arrhythmias are irregularities in heart rhythm that may result in dizziness, fainting, or heart fluttering, palpitations, or racing.
i. Tachycardia: Abnormally fast heartbeat
ii. Bradycardia: Abnormally slow heartbeat
c. Congestive heart failure occurs when the heart muscle is damaged or overworked and lacks the strength to keep blood circulating normally through the body.
d. Congenital and rheumatic heart disease
e. Congenital cardiovascular defect means the problem is present at birth.

7. CVD Modifiable Risks and Nonmodifiable Risks
   a. Modifiable: Avoid tobacco smoke, cut back on saturated fat and cholesterol, modify other dietary habits, modify other dietary habits, maintain a healthy weight, exercise regularly, control diabetes and blood pressure, and manage stress levels.
   b. Nonmodifiable: Heredity, age, gender, and race and ethnicity.

8. Treating and Diagnosing CVD
   a. CVD diagnostic techniques
      i. Electrocardiogram (ECG)
      ii. Angiography (cardiac catheterization)
      iii. Positron emission tomography (PET) scan
   b. Surgical options
      i. Coronary bypass surgery
      ii. Angioplasty
      iii. Stent
   c. Drug therapies (aspirin, clot busting therapy)
   d. Cardiac rehabilitation and recovery

9. What is Cancer
   a. When something interrupts normal cell programming, uncontrolled growth and abnormal cellular development result in a neoplasm, a new growth of tissue serving no physiological function.
   b. This neoplasmic mass often forms a clump of cells known as a tumor.
      i. Tumors may be malignant (cancerous) or benign (noncancerous).
      ii. Benign tumors are generally harmless unless they grow to obstruct or crowd out normal tissues.
      iii. The only way to determine whether a tumor is malignant is through biopsy, or microscopic examination of cell development.
   c. Metastasis is the spread of cancer cells to other organs.

10. Cancers
    a. Types
       i. Carcinomas: Epithelial tissues (tissues covering body surfaces and lining most body cavities) are the most common sites for cancers.
       ii. Sarcomas: Sarcomas occur in the mesodermal, or middle, layers of tissue—for example, in bones, muscles, and general connective tissue.
       iii. Lymphomas: Lymphomas develop in the lymphatic system—the infection-fighting region of the body—and metastasize through the lymphatic system.
       iv. Leukemia: Cancer of the blood-forming parts of the body, particularly the bone marrow and spleen
    b. Risk Factors
       i. Lifestyle risks for cancer
          1. Includes tobacco use, alcohol use, poor nutrition, physical inactivity and obesity, and stress and psychosocial issues
       ii. Genetic and physiological
          1. Includes activation of oncogenes and reproductive and hormonal factors
       iii. Inflammation risks
       iv. Occupational and environmental
1. Workplace or environmental exposure to carcinogens; includes radiation and chemicals in foods

v. Infectious diseases
   1. Chronic hepatitis B and C and liver cancer, HPV and cervical cancer, and helicobacter pylori and stomach cancer

c. Detecting Cancer
   i. Magnetic resonance imaging (MRI)
   ii. Computerized axial tomography (CAT) scan

d. Cancer treatments
   i. Stereotactic radiosurgery (gamma knife surgery) uses a targeted dose of gamma radiation to zap tumors.
   ii. Radiotherapy is the use of radiation to kill cancerous cells.
   iii. Chemotherapy is the use of drugs to kill cancerous cells.

11. What Is Diabetes
   a. Diabetes mellitus is a group of diseases, each with its own mechanism, but all characterized by a persistently high level of glucose.
      i. Type 1 diabetes (insulin dependent) is an autoimmune disease in which the immune system attacks and destroys insulin-making cells in the pancreas, reducing or stopping insulin production.
      ii. Type 2 diabetes (non-insulin dependent) is diabetes in which the pancreas does not make sufficient insulin or the body cells become resistant to its effects.
      iii. Pre-diabetes is a condition in which blood glucose levels are higher than normal, but not high enough to be classified as diabetes.
      iv. Gestational diabetes is a state of high blood glucose during pregnancy, thought to be associated with metabolic stresses that occur in response to changing hormonal levels.

   b. Risk Factors
      i. Nonmodifiable Risk Factors: Increased age, certain ethnicities, genetic factors, and biological factors.
      ii. Modifiable Risk Factors: Body weight, dietary choices, level of physical activity, sleep patterns, and stress level.

   c. Symptoms
      i. Symptoms of diabetes
         1. Thirst and excessive urination
         2. Weight loss
         3. Fatigue
         4. Nerve damage
         5. Blurred vision
         6. Poor wound healing and increased infections
      ii. Diabetes complications
         1. Diabetic coma
         2. Cardiovascular disease
         3. Kidney disease
         4. Amputations
         5. Eye disease and blindness
         6. Infectious diseases
         7. Other complications

Note: That’s it for the study guide, everyone! I hope it helps, and I hope you do wonderfully on your final exam! I wish you guys the best of luck, and feel free to ask me any questions about the study guide. Good luck!