**Nutrition**

**Macro Nutrients:** Substance required in large amounts. Carbohydrates:Polysaccharides, glycogen, fiber, starch. Protein, Fats, Water.

**Micro Nutrients:** Chemical substance required in trace amounts for normal growth of living organisms

* Vitamins: Organic (Carbon & Hydrogen). Minerals: Inorganic

Types of *Monosaccharide:*Any of class of sugars that cannot be hydrolyzed to give a simpler sugar

* **Galactose**: Sugar of hexose class that is a constituent of lactose and many polysaccharides
* **Glucose**: Simple sugar, energy source in living organisms, composed of many carbohydrates
* **Fructose**: Hexose sugar found especially in honey and fruit

*Disaccharides*: Any of a class of sugars whose molecules contain 2 monosaccharide residues

* **Sucrose**: compound that is the chief component of cane or beet sugar (Fructose + Glucose)
* **Maltose**: Sugar produced by the breakdown of starch. (glucose + Glucose)
* **Lactose**: Sugar present in milk. (Glucose + Galactose)

*Polysaccharides*: Carbohydrate whose molecules consist of a # of sugar molecules bonded together

**Glycogen**: Composed of glucose manufactured in body and stored in liver and muscles. Used for energy. Liver stores 1/3 & 2/3 in muscle. You can store 12 hrs worth of glycogen, rest is stored as fat

* Stored in cells then fat then bloodstream = diabetes.
* Anaerobic exercise uses glucose then glycogen for energy. Aerobic uses fat

**Starch**: Odorless tasteless white substance. Polysaccharide, an important constituent of the human diet

**Calorie Intake Percentages: 55%-60% Carbohydrates: 20%-25% Proteins: 20% Fats**

**Glycogen,** polysaccharide composed of glucose manufactured in the body and stored in the liver and muscles. The liver stores 1/3, muscles stores 2/3 because it will need it for energy.

* You can store about 12 hrs. worth of glycogen, the rest of the glucose will get stored as fat.
* Anaerobic exercise utilizes glucose then glycogen for energy. You will replace the glycogen storage before you make any fat.

**Glycogenesis** (formation of Glycogen) & **Lipogenesis** (formation of fat) when glycogen stores are full.

Q: **What is the Glycemic Effect:** When you eat sugar, it will raise blood sugar causing an over secretion of Insulin to lower sugar levels and take it below normal.

Q: **What's wrong with having a high Glycemic Index:** Low blood sugar makes you hungry

* High insulin increases inflammation, Raises serotonin levels (makes you hungry)

**Glycemic Index Foods :** White bread, potatoes (shoots blood sugar)

* High fiber grains (Gradually increases B.S.L)
* High sugar diets with high GI has 2x fat around liver and 2x fat in blood stream.
* Monosaccharides shoots B.S.L while Polysaccharides reduce it.

**Ghrelin and Leptin:** They are enzymes, Ghrelin increases appetite and leptin decreases appetite.

**Simple Carbohydrates**: Sugar & anything bleached. Bad carbohydrates have no fiber.

**Fats**: *Saturated*: Lots of Hydrogen

*Monounsaturated*: One less hydrogen

*Polyunsaturated*: Two less hydrogen

\*\*\* 98% of our fats are triglycerides.

**Water**: Helps mucus membranes, nutrient absorption. Maintains electrolyte balance.

**Importance of Fiber:** Creates a feeling of fullness and you excrete all of it out

* Attracts water to digestive tract and soften fecal matter and prevents bacteria infection of the appendix and prevents diseases like hemorrhoids, Diverticulosis
* Fat + Bile + Natural Bacteria in the colon = secondary Bile Acids- Is a carcinogen. The more fats you eat the more secondary bile acids you create
* Improves body’s handling of glucose-(fruit slows absorption and digestion of sugar)

**How does cooking effect fiber:** Steaming vegetables leads to less fiber loss than boiling. Keep cooking times as short as possible to preserve fiber and nutrients

**Types of fiber**

**Insoluble**: Fruits, vegetables, bran, whole grain, nuts, seeds, brown rice, popcorn,wheat, whole wheat. Can not be dissolved in water. Great at stool softening, pushing the bad stuff out:

**Soluble**: Fruits, vegetables, seeds, **Legumes, oats**, barley and rye. Can be dissolved in water: Good as it pulls bad cholesterol out of your blood. High fiber food have high antioxidants

**How much fiber do we need?** 25-30g of fiber a day.From fruits, veggies, legumes, and grains

**How are fats useful:** Insulation & cushioning organs, Compact form of energy, Produces Hormones Makes vitamin D, Protective Sheath (mylein) around PNS

**High Fat Foods:** Bacon, chocolate, dressings, fast foods, popcorn, cheese, red meat, cream cheese

**Essential fatty acids: Linoleic Acid:** Omega-6 (vegetable oil). Inflammatory in large amounts. Without it, skin becomes red, increased infection, liver abnormalities, and stunts your growth.

**Linolenic Acid:** Omega-3, anti-inflammatory and prevents hypertension, lowers LDL cholesterol.

**Cholesterol**: Wax-like sterile found in animal products made by liver (1000 mg per day).

**Saturated Fat:** Comes from animals, less legs animal has the better

**Polyunsaturated Fat:** Found in most vegetable oils. Increases HDL cholesterol and reduces heart disease but too much leads to inflammation and may cause cancer.

**Monounsaturated Fat**: Olive and Canola oils. Decreases LDL cholesterol and inflammation which prevents CVD, cancer and many other inflammatory diseases. Liquid at room temperature.

**How much saturated fat should I have in my diet?** No more than 7% of your total calories

**Calculating The Calories I Need**

1. Multiply your weight by 10(Females) or 11(Male)
2. Multiply that by 1.2-1.5 depending on the amount of physical activity
3. Multiply that by 1.1 to get the total amount of calories needed

**Calculating Daily Value**

1. Take the amount of calories you need
2. Divide that by the Daily Value (4g protein, 4g Carbs, 9g fats)
3. If you exercise, multiply by 20% before diving by the daily value

**Basic components of protein: Nitrogen, Carbon, Hydrogen, Oxygen (NCHO)**

**Incomplete proteins:** Protein that doesn't have all 9 essential amino acids. Grains and vegetables Soybeans are complete proteins, there are essential proteins that make the 11 complete proteins.

**NPU – Net Protein Utilization:** Measure of protein retained after ingesting.

**Role Of Vitamins**

**Q: Fat soluble means:** Stored,dissolves and transported in fat. A,D,E, and K. (ADEK)

**Vitamin A: Beta-carotene Antioxidant**  Too much is toxic, causes orangish skin color.

Increase resistance to infection, helps prevent cancers of lining of organs(lung, stomach), found in bones and transparent covering lens of the eye ,strengthens tooth enamel. Prevents night blindness. Helps calcium and phosphorous absorption in bones.

**VITAMIN D:** Absorption of phosphorus & calcium, prevents certain cancers (colon). Too much can lead to headaches, diarrhea, kidney stones.

**VITAMIN E**: Generally helps the immune system, inhibits blood clots, as well as prevents the chances of getting cancer. Also prevents early red blood cell destruction.

**ANTIOXIDANT** – saves polyunsaturated fat and other fats from being oxidized.

**VITAMIN K:** Helps maintain bone mass preventing osteoporosis, aids in blood clotting. There must be a balance of both Vitamin E and K as 1 clots blood and 1 prevents the clotting of blood.

**Water Soluble : B & C:** Must ingest water every day *Vitamin B:*

* **B1**: Thiamin is essential for proper carbohydrate metabolism. Also works to promote healthy nerves, improve mood, strengthen the heart, and improve heartburn.
* **B2**: Riboflavin, necessary for red blood cell formation, assisting with fat, protein and carbohydrate metabolism. Improve skin blemishes, migraines
* **B3** - Niacin is an effective aid for lowering cholesterol, as well as to promote healthy skin. Can also be used to treat depression, insomnia and arthritis.
* **B6**: Pyridoxine, needed for almost every function in the body, working as a coenzyme for numerous enzymes. Plays major role in forming red blood cells, proteins and neurotransmitters. Can be used to relieve asthma attacks
* **B12** - Cyanocobalamin, essential to prevent pernicious anemia,caused by B12 deficiency stabilizes homocysteine levels. Lowers homocysteine levels
* **Biotin** is important to improve nail & hair health.
* **Folic acid/ Folacin** - Essential during pregnancy to protect against birth defects; stabilizes homocysteine levels.

**Vitamin C:** Helps absorption of iron. Reduces chance of cataracts,prevent alzheimer disease & scurvy

**Role of Minerals in a Healthy Diet**

**Macrominerals:** Calcium (Ca), Phosphorus (P). Magnesium (Mg), Potassium (K), Sulfur (S)

**Calcium**: Most abundant mineral in body, Helps contract muscles, An electrolyte.

**Potassium**:Cuts sodium levels to cut down water retention, Takes sodium out, lowers blood pressure,

**Microminerals:** Copper , Iron , Iodine . Manganese (Mn), Selenium (Se), Zinc , Cobalt (Co)

**Iodine**: Allows for healthy thyroid gland, Found in salt and seafood

**Iron**: Important for women, Used to make hemoglobin which leads to oxygen, Makes blood red. **Zinc**: A mineral that helps formation of sperm cells.

**Selenium**: Antioxidant, Prevents prostate & gastric cancer, Found in seafood, grains, eggs, garlic.

**Sodium:** An electrolyte, Found in anything that is processed, canned, boxed, and ice cream.

**Fortified Means**: Adding something that a product never had

**Enriched:** taken out during processing and put back in but not as much

**ORAC**: Oxygen Radical Absorption Capacity; Neutralizes free radicals

**Set Point Theory:** Your metabolism naturally wants to stay the same weight by means of its own internal controls you were and will adjust to keep it. So if you overeat your metabolism speeds up.

**Fat Cell Theory:** People gain in number of fat cells 3 times, infancy, puberty, and pregnancy. Other than those 3 times fat cells only gain in size. The more cell the more they want to be filled up, and the more they will be hungry to be filled up.

**Lipogenesis** is the process of storing fat. Fat molecules combine so it doesn’t leave the cell.

**Lipolysis** is the process of breaking down fat molecules in cells with exercise (oxygen).

**Fasting:** Run out of glycogen, blocks lipolysis, lowers BMR , increases Lipogenesis when you do eat.

**High Protein Diets:** Low calorie diet means little sugar so energy comes from burning muscle

**How to plan an effective Diet: H.A.L.T.** Hunger, Anger, Loneliness/Boredom, Tired/Thirsty.

*Vocab*

**Potential dangers of bleaching (white flour)**:Whats lost: Half of beneficial unsaturated fatty acids, almost all vitamin E, 50% calcium, 70% phosphorus, 80% iron, 98% magnesium, 50-80 %B vitamins.

**Alloxan,** byproduct of bleaching process, product of decomposition of uric acid. A poison used to produce diabetes in healthy experimental animals.

**Leptin:** Starvation hormone. Tells your brain that you have enough energy stored in your fat cells

**Ghrelin:** Originates in the stomach, declines soon after meals. Ghrelin levels in the blood are high before we eat our food. If you give ghrelin to someone, they will eat more.

**Inflammation & free radicals :** Some types of arthritis result of misdirected inflammation. Arthritis is a general term that describes inflammation in the joints. **Free radicals** are good in that they enable the body to fight inflammation, kill bacteria and control the tone of smooth muscles.

**Anti-inflammatory foods:** Reduces inflammation, can make weight loss easier, slow down aging process and prevent diseases

**Heterocyclic Amines:** Biological functions vary,created by high temperature cooking of meat

**Glycotoxins/ Advanced Glycation End Products:** Can cause health problems. Associated with premature aging, diabetes, reduced muscle function and cardiovascular disease

**Acrylamides:** Used in many industrial processes such as paper, dyes and plastics and in the treatment of drinking water and wastewater,including sewage.

**Nitrosamines:** Used in the manufacture of some cosmetics, pesticides and in most rubber products, occurs in many foods and other consumables. Not expected to be of toxicological significance

**Cytokines**: Cytokines are proteins produced by cells. Cytokines interact with cells of the immune system in order to regulate body's response to infection.

**Homocysteine:**Naturally occurring amino acid found in blood plasma.High levels of homocysteine are believed to increase chance of heart disease, stroke, Alzheimer disease and osteoporosis.

**C Reactive Protein**: Blood test, measures amount of CRP in blood, measures general levels of inflammation. High levels of CRP caused by infections and many long term diseases, but CRP test cannot show where the inflammation is located or the cause of it

**Pro-inflammatory foods**: Contribute to unhealthy inflammation

**Excitotoxins**: Chemical that causes a brain cell to become overexcited, leading to cell death

**Interesterified Fat:** Bad as trans fat. might increase heart disease risk by lowering HDL cholesterol and raising LDL cholesterol, as trans fats do. Might increase risk of type 2 diabetes

**High fructose corn syrup**: Significant risk of weight gain and obesity, increased risk of developing type 2 diabetes, hypertension and elevated bad LDL cholesterol levels, liver damage

**ORAC Scale:** Oxygen Radical Absorbance Capacity, method of measuring the antioxidant capacity of different foods and supplements.

**Phytonutrients/Phytochemicals:** Natural chemicals from plants, may help prevent disease and keep your body working properly

**Mental Health**

**Maslow Hierarchy of Needs:** Ranked list of need essential to human growth and development,

Level 1 Physical: Need to satisfy basic needs of hunger,thirst,sleep and shelter

Level 2 Safety: Need to be secure from danger

Level 3 Belonging: Need to love and be loved, need to belong

Level 4 Feeling Recognized: Need to achieve, need to be recognized

Level 5 Reaching Potential: Need for self actualization

Defense Mechanisms

**Suppression**: Conscious, intentional pushing of unpleasantness from one’s mind.

**Repression:** Involuntary pushing of unpleasant feelings out of conscious thought.

EX: A man has a phobia of spiders but cannot remember the first time he was afraid of them.

**Rationalization:** Making an excuse for a mistake or failure rather than taking responsibility for it.

**Regression:** Reverting to behaviors more characteristics of an earlier stage of development rather than dealing with the conflict in a mature manner.

**Compensation:** Making up for mistakes through gift giving, hard work or extreme efforts.

**Identification:** Identifying with someone you admire.

**Idolization:** Extreme identification; idol or hero worship, seeing someone else as perfect as and more worthy than everyone else. You can’t see or **deny** the person’s faults.

**Idealization:** Blinded by a particular concept or ideology and cannot look at it objectively. People will follow “blindly” without question.

**Daydreaming/escapism:** make believe to escape frustration to avoid dealing with a problem

**Reaction formation:** Expression of emotions that is the opposite of what you truly feel.

**Denial:** Unconscious lack of acknowledgement of something that is obvious to others.

**Displacement:** shifting the expression of feelings about one person onto another person (on the rebound from a dating standpoint **/** kicking the dog).

**Negativism:** *failing to try* because failing to try is better than trying and failing to one’s self-esteem.

**Sublimation:** Replacement of an undesirable outlet for energy by a desirable one.

EX: Person experiencing anger might take up kickboxing as a means of venting frustration.

**Conversion:** converting an unpleasant or emotional reaction to a physical one.

**Projection:** Attributing your own feelings or faults

EX: If you have a strong dislike for someone, instead you might believe that he does not like you

*Mental Disorders*

**Anxiety Disorder**: Condition in which real or imagined fears are difficult to control

**Manic Depression**: Extreme mood change, energy levels and behavior

**Antisocial Personality Disorder**: Tend to be irritable,aggressive,impulsive and violent

**Borderline Personality Disorde**r: Experience a series of troubled relationships

**Passive-aggressive Personality Disorder:** Uncooperative. Resent being told what to do, yet they rely on others direction. Angry over issues of control, they show their anger indirectly

**Obsessive-Compulsive Disorder**: Person trapped in pattern of repeated thoughts/behaviors.

**Obsessive:** Persistent and unwanted thoughts that prevent people from doing normal activities.

**Compulsive** : Repeated, irresistible behaviors

**Panic Disorder**: Person has sudden, unexplained feelings of terror.Accompanied by symptoms such as trembling. Pounding heart, shortness of breath, dizziness.

**Post-Traumatic Stress Disorder**: Condition that develop after exposure to a terrifying event that threatened or caused physical harm. *Symptoms* include flashbacks, nightmares, emotional numbness, sleeplessness, guilt, and problems with concentration.

**Mood Disorders**: Illness, often organic cause, involves mood extremes, interferes everyday living.

**Clinical Depression**: Depression that lasts for more than a few weeks. Results from a chemical imbalance that a person cannot overcome without professional help.

**Bipolar Disorder**: Manic-depressive disorder is marked by extreme mood changes, energy levels and behavior.Adults may behave normal between episodes but teens tend to alternate rapidly

**Manic symptoms**: Excessive happy, silly, irritable, angry, agitated,

**Conduct Disorders:** Pattern of behavior in which social rules are violated.EX: Lying, theft.

**Personality Disorders**: Behave in ways that make it difficult for them to get along with others;

**Antisocial Personality Disorder:** Often feel society’s rules don’t apply to them. They tend to be irritable, aggressive, impulsive, and **violent.** Often become criminals.

**Borderline Personality Disorder**: Frequently experience a series of troubled relationships. Tend to engage in high-risk activities, poor self-esteem. Fear abandonment, frequently lash out violently

**Passive-Aggressive Personality Disorder**: Often uncooperative. Resent being told what to do, yet rely on others’ direction. Angry over issues of control, show anger **ONLY** indirectly. Person is always late

**Paranoid Personality Disorder**: Unfounded suspicion and mistrust of others.

**Compulsive Personality Disorder**: Constantly concerned with rules and standards. Often lack a sense of humor. Often insist that others do things their way.

**Schizophrenia**: Severe mental disorder in which a person loses touch with reality.

Symptoms: Delusions, hallucinations, and thought orders.

**Dissociative Disorder:** People may forget who they are or think they are someone else.

**Somatoform Disorders**: Condition in which there are physical symptoms, but no physical illness.

**Hypochondria:** Is a strong belief that one is ill when illness is neither present nor likely.

They often complain about multiple pains that come and go.

**General Anxiety Disorder**: The person feels anxious, fearful and upset most of the time, but for no specific reason. This may eventually lead to a Panic Attack.

**Alienation:** Feeling isolated and separated from everyone else

*Mental disorders treatments*

**Psychoanalysis:** Analysis of unresolved conflicts a person’s early life. Unresolved conflicts will eventually manifest themselves in ways that are unhealthy.

**Psychotherapy:** Discussions which bring out real problem, understanding of it & possible solution.

**Biomedical (drug) therapy:** Use of drugs to treat or reduce the symptoms of a mental disorder

**Electroconvulsive therapy:** Electric shock

**Group therapy:** meeting with people with similar problems/run by a trained counselor.

**Behavioral therapy:** gets patients to change unwanted habits or behaviors through rewards and punishment. Relaxation techniques can also be used.

**Cognitive Therapy:** treatment method designed to identify and correct distorted thinking patterns that can lead to feelings and behaviors that may be troublesome, self-defeating or self-destructive.

**Play therapy:** with children

**Psychodrama and role reversal:** with couples

*Mental Health Professions*

**Neurologist:** Physician who specializes in organic disorders of the CNS; i.e.; brain tumors

**Psychiatrist:** Specializes in diagnosing and treating mental disorders and can prescribe medicine.

**Clinical Psychologist:** Diagnoses andtreats emotional and behavioral disorders by means of counseling but cannot prescribe medicine.

**Social workers:** provides guidance and treatment for clients with emotional problems, usually in a mental hospital, mental health clinic, school or service agency.

**Occupational therapist:** Evaluates person’s abilities in the light of his emotional or physical handicap

**Alcohol**

**Different ways that we perpetuate or enable the problem to continue**

**1. Avoiding and Shielding**: Enabler prevents abuser from experiencing the full consequences

**2. Attempting to Control:** Intent of taking personal control over the abuser's drug use

* Threatening physical violence to get the abuser to quit

**3. Taking Over Responsibilities of the drug user by the enabler**

**4. Rationalising and Accepting:** Conveys a rationalization of the abuser's drug use

Most alcoholics go from controlled social drinking to complete addiction in 7 **progressive phases**

1. Controlled social drinking
2. Purposeful occasional drinking to escape from tensions
3. Frequent escape drinking in which tolerance to alcohol steadily increases
4. Early alcoholic phase with first blackout
5. Progressive preoccupation with alcohol
6. Complete alcohol dependence, danger of withdrawal symptoms
7. social, medical and spiritual help needed or death occurs

Steps an alcoholic takes during the recovery process

*Step 1*: **Admission**: The person admits to having a drinking problem and asks for help

*Step 2*: **Detoxification**: Process in which the body adjust to functioning without alcohol

*Step 3*: **Counseling**: The person receives counseling to help him learn to live without alcohol

*Step 4*: **Recovery**: The person takes responsibility for his own life

**Heart rate:** Heart Rate increases a little with low amounts as people keep running around

Blood Pressure increases

* At higher amounts to cell respiratory arrest- stop breathing, your heart will stop soon after
* When you're really drunk, it is difficult to maintain body temperature
* Exhale 5% through water vapor

**Blood Alcohol Concentration:** Physical size determines what's going to come up in that breathalyzer

* Gender and size makes a difference
* If you eat before drinking you are going to have a lower concentration for a while
* How much food is in the stomach, slows down the concentration
* How much time between drinks : The number of drinks you consumed
* Condition of your liver, the longer you've been drinking, the faster it breaks down

Vocab

**Alcohol**: Powerful and addictive drug

**Depressant**: Drug that slows the central nervous system

**Intoxication**: State in which body is poisoned by alcohol

**Detoxification** is a process in which the body adjusts to functioning without alcohol

**Binge Drinking**: Drinking 5 or more alcoholic drinks at one sitting

**Alcohol Poisoning:** Severe and potentially fatal physical reaction to an alcohol overdose

**Metabolism**: The process by which the body breaks down substances

**Withdrawal:** Occur when a person stops using a medicine on which he has a chemical dependence. Symptoms include nervousness, insomnia, headaches, gradually ease over time.

*Short term effect of alcohol use*

**Body Size and gender**: Small person feels effect of same amount of alcohol faster than a large person.

**Food**: Food in the stomach slows down the passage of alcohol into the bloodstream

**Amount and rate of intake**: Amount of alcohol consumed increases, level of alcohol in bloodstream also rises. When a person drinks alcohol faster than the liver can break down, intoxication results. When blood alcohol levels become too high, alcohol poisoning can occur.

**Signs of alcohol poisoning:** Alcohol acts as depressant and shuts down involuntary actions: breathing.

*Long Term Effects of Alcohol*

**Changes to the Brain:** Addiction, loss of brain functions, brain damage

**Cardiovascular Changes:** Damage to heart muscle, Enlarged heart from increased workload caused by alcohol, high blood pressure damages the heart and can cause heart attack and stroke

**Liver Problems:** Fatty Liver- fats build up in the liver and cannot be broken down; excess fat blocks the flow of blood to liver cell, inflammation or infection of the liver

**Digestive Symptoms Problems:** Irritation : Lining of pancreas swells to block passage from the pancreas to the small intestine.

**Pancreas Problem:** Chemicals the small intestine needs for digestion and pass through the blocked area. The chemicals begin to destroy the pancreas itself, causing pain and vomiting.

**Characteristic- Traits- Feeling and Behaviors of Children of Alcoholics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name of game | Outside **Behavior** | What you don’t see. **Feelings** | R**epresents** to family | Adult **without help** | Adult **with help** |
| Family Hero | **Always does what’s right**, over achiever, | Hurt, confusion, guilt, fear, low self esteem. | S**omeone to be proud of** | Workaholic, never wrong, marry a dependent person, need to control, can’t say no, | Accept failure, **be responsible only for self,** okay to say no |
| Problem Kid | **Trouble maker** | Hurt, abandoned, anger , no/low self worth | **Takes the focus/heat** | Alcoholic unplanned pregnancy, cops and prison- Trouble | Good under pressure. Can see reality. Can help others. No trouble |
| Lost Child | Loner, day dreamer, not missed for days, quite and ignored | **Unimportant**, not allowed to have feelings, **Fear** | Relief, 1 kid not to worry for | Indecisive, no fun, stays the same, alone, dies early, can't say no | Independent, talented and creative, imaginative, assertive and resourceful |
| Family  Clown | Super cute and anything for a laugh ,short attention span, learning disabilities, | **Low self esteem,** terror, lonely, inadequate and unimportant | **Comic relief**, fun and humor | Compulsive, clown, Can't handle stress. Marry a “hero” | Charming host and person, good company, quiet with good sense of humor, independent, helpful |

**Different Type of Drinkers**

1. **Problem Drinker:** Purely psychological dependence to relieve emotional pain. Drinking excessive, damages relationships.Shows no evidence of addiction nor loss of ability to control
2. **Hard Drinker**:Nutritional deficiency.No loss of control, no withdrawal. Damage primarily physiological, reduced earning capacity and family stability and life expectancy.
3. **Periodic Drinker:** Usually abstinent between binges, suffers from manic-depressive mood swings. Suffers from loss of control and temporary addictive behavior
4. **Steady Alcoholic:** Vast majority of American alcoholics, true physiological addictions, withdrawal symptoms, loss of control of intake and a craving for alcohol. Increased body tolerance for alcohol, suffers from all areas of the person;s functioning, including health
5. **Plateau Alcoholic:** Identified by need to maintain certain minimum level of inebriation much of the time. Prevalent in France and among women May be able to hide problem for years. Social life disintegrates gradually. Declining health, from addiction

**Smoking**

Tobacco

**Addictive Drug:** A substance that causes physiological or psychological dependence

**Nicotine**: The addictive drug found in tobacco leaves

**Stimulant**: Drug, increases action of central nervous system, heart and other organs. EX: Nicotine

**Carcinogen**: A cancer- causing substance

**Tar**: Thick, sticky, dark fluid produced when tobacco burns/ Destroys cilia and alveoli.

**Carbon Monoxide:** Colorless, odorless, poisonous gas that replaces oxygen in the blood. Increases blood pressure which damages blood vessels and causes hardening of the arteries and CVD.

**Smokeless tobacco**: Tobacco that is sniffed through the nose, held in the mouth or chewed

**Leukoplakia**:Thick, white, leathery- looking spots inside of mouth, can develop into oral cancer

**What is in that cigarette?:** Nicotine, Tar, Carbon Monoxide

**Nicotine**: Drug classification stimulant (mild), extremely addictive. Psychological and physiological dependence. Decreases circulation to extremities (fingertips and penis) by constricting blood vessels.

*Short Term Effects of Tobacco Use*

**Changes in Brain Chemistry**: Addictive properties of nicotine cause the body to crave more. User may experience withdrawal symptoms such as headaches, nervousness and trembling soon

**Increased respiration and heart rate:** Breathing during physical activity becomes more difficult;

**Dulled taste buds and reduced appetite:Bad breath and smelly hair, clothes and skin**

*Long Term Effects of Tobacco Use*

**Chronic Bronchitis:** Repeated use can damage cilia in bronchi until cilia no longer functions. Leads to buildup of tar in lungs, chronic coughing and excessive mucus secretion

**Emphysema:** Disease that destroys the tiny air sacs in lungs. Air sacs less elastic, making it more difficult for lungs to absorb oxygen.

**Lung Cancer:** When the cilia in the bronchi are destroyed, extra mucus cannot be expelled. Cancerous cells can grow in these conditions, block the bronchi, and move to the lungs.

**Coronary heart disease and stroke:** Nicotine constricts blood vessels, cuts down on circulation, or blood flow. Nicotine contributes to plaque buildup in blood vessels, which can lead to hardened arteries, arteriosclerosis. Arteries may become clogged, increasing risk of heart attack and stroke.

**Nicotine Withdrawal:** Process that occurs in the body when nicotine is no longer used. The cravings and discomfort caused by these symptoms are temporary.

**Nicotine Substitute:** Symptoms of nicotine withdrawal, irritability, difficult concentrating, anxiety, sleep disturbance and cravings for tobacco. To relieve symptoms people use a nicotine substitute Replace tobacco use with healthier alternatives: Sugarless gum, carrots

Health Risks of Tobacco: **Nervous System:** Addiction and increased risk of stroke

**Excretory System:** Increased risk of cancer of the bladder and kidneys

**Respiratory System**:Coughing/Smoker’s hack

* Increased risk of emphysema, lung cancer and chronic bronchitis

**Cardiovascular System:** Increased heart rate and blood pressure

* Hardened arteries and decreased blood flow
* Increased risk of heart attack

*Long-term effects*

**Immune system**: Weakens immune system, more vulnerable to diseases

**Chronic Bronchitis** : Makes it harder to breathe

**Bronchiectasis** : Condition in which damage to the airways causes them to widen and become flabby.your airways slowly lose their ability to clear out mucus. The mucus builds up, and bacteria begin to grow. This leads to repeated, serious lung infections.

**Emphysema**:Form of chronic (long-term) lung disease. People with emphysema have difficulty breathing from a limitation in blowing air out.

Atherosclerosis (soft plaque) which eventually will turn into hard plaque Arteriosclerosis.

Hypertension

**Impotence & Erectile Dysfunction**: Inability to get and maintain an erection

**Infertility**: You cannot make a baby (conceive)

**Osteoporosis**: Disease in which bones become fragile and more likely to fracture.

**Alzheimer Disease**: Type of dementia that causes problems with memory, thinking and behavior.

**Stomach & Duodenal Ulcers**

**Wrinkles**

**Chronic Sinusitis:** Cavities around nasal passages inflamed and swollen. Mucus to build up. May be difficult to breathe through nose. Area around eyes and face may feel swollen, may have headache.

**Cavities**

**Hearing Loss**

**Vitamin C loss:**

**Environmental tobacco smoke (ETS):** secondhand smoke

**Mainstream Smoke**: The smoke exhaled from the lungs of a smoker

**Sidestream Smoke:** Smoke from the burning end of a cigarette. Is more dangerous than mainstream as it has higher concentrations of carcinogens, nicotine and tar