

Nutrition: The science/study of nutrients that come from food, their action, interaction, & balance in relation to health & disease; & the process by which the organism (body) ingests, digests, absorbs, transports, utilizes & excretes food substances

What drives people to eat? Why people eat?
Eating behavior factors:

- Hunger
- Appetite
- Cultural & social meaning of food Habit or custom
- Emotional Comfort or discomfort
- Convenience & advertising Nutritional value
- Social interactions

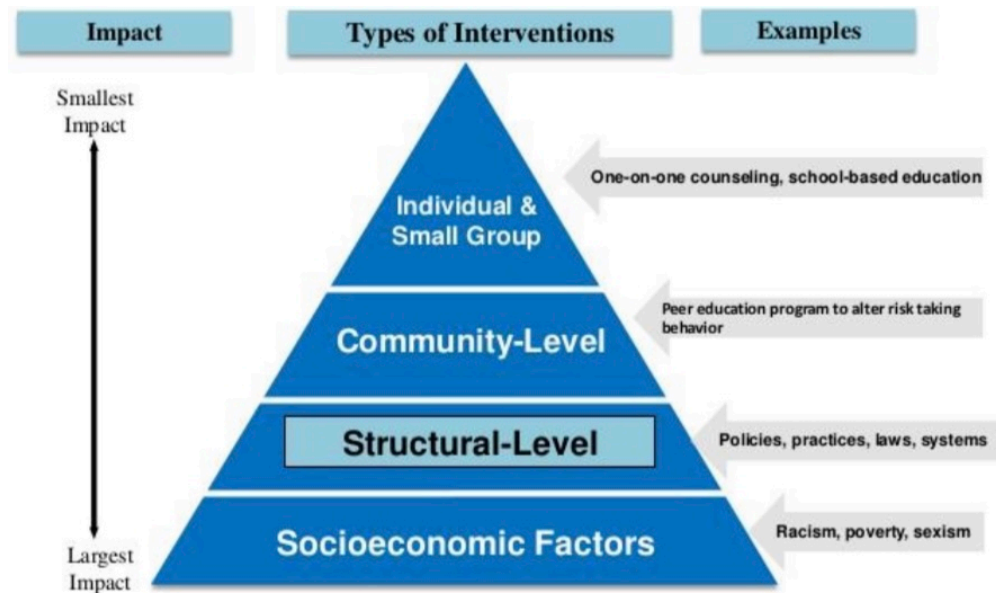
General factors affecting nutrition:

- Age & gender
- Lifestyle
- Food habits
- Ethnicity, Culture, & Religious practices
- Social Interaction
- Availability of food
- Peer pressures “social status of our society”
- Economy

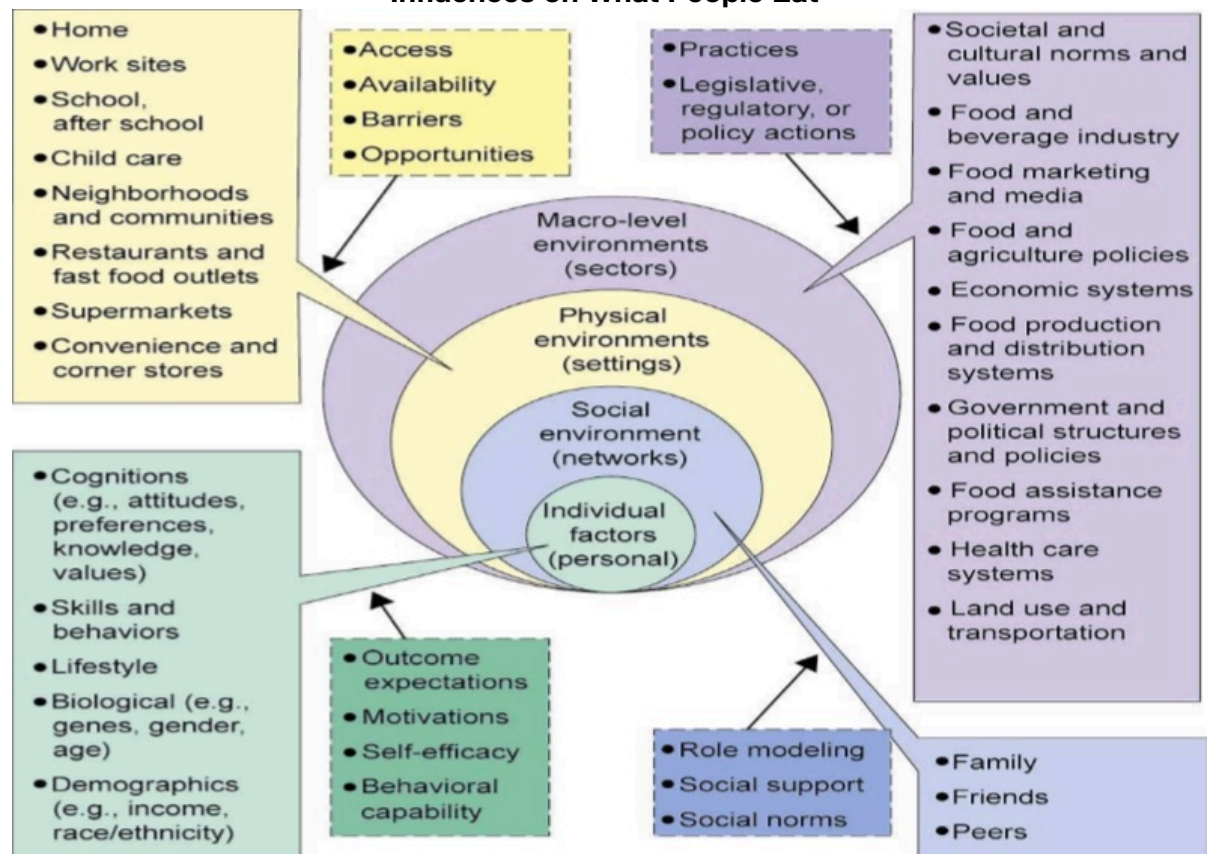
Social Determinants (factors) of Nutrition (Social factors thought to influence diet)

- Knowledge & attitudes
- Skills & training
- Social support
- Societal & cultural norms
- Food & agricultural policies
- Food assistance programs
- Economic price systems

Nutrition



Influences on What People Eat



<p>Nutrients: Chemical substances in food that nourish the body by providing energy, building materials, & factors to regulate needed chemical reactions within our bodies.</p>	<p><u>Functions</u> of nutrients in food:</p> <ul style="list-style-type: none"> •Provide energy sources •Build tissue •Regulate metabolic processes 	<p>Public Health: is the art & science of preventing disease, prolonging life & promoting health through the organized efforts of society The <u>main mission of public health</u> is "to assure conditions in which people can be healthy" Since nutrition is an essential aspect of the conditions in which people can be healthy, <u>public health nutrition is part of the public health system</u></p>															
<p><u>Types</u> of nutrients: 1.Essential nutrients: Must be provided by food because the body does not produce them in sufficient quantities or can not make them at all 2.Nonessential nutrients: Healthy, well-nourished bodies can make them in sufficient quantities to satisfy their needs. (extra nutrients)</p>	<p><u>Classifications</u> of nutrients: 1.Macronutrients: [carbohydrates (55-65%), fats (25-30%), & proteins (10-15%)]. -Provide calories for energy -Needed in <u>large</u> quantities 2.Micronutrients: [vitamins, minerals, & water]. -Needed in <u>smaller</u> amounts</p>	<p>Public health nutrition & Community nutrition programs <u>provide</u>:</p> <ul style="list-style-type: none"> •increased access to food resources •nutrition information & education •health-related care •efforts to change behavior & environments •initiate policy 															
<p>Nutrients are <u>essential</u> if they meet two <u>characteristics</u>: 1.omitting the nutrient from the diet leads to a nutritional deficiency & a decline in some aspect of health. 2.if the omitted nutrient is put back into the diet, the symptoms of nutritional deficiency will decline & the individual will return to normal, barring any permanent damage caused by its absence</p>	<p>Six <u>categories</u> of nutrients 1.Carbohydrates: contain carbon, hydrogen, & oxygen combined in small molecules called sugars & large molecules represented mainly by <u>starch</u> 2.Lipids (fats & oils): contain carbon, hydrogen, & oxygen as do carbohydrates, but the amount of oxygen is much less. <u>Triglyceride</u> is the main form of food fat. 3.Proteins: contain carbon, hydrogen, & oxygen, plus nitrogen & sometimes sulfur atoms arranged in small compounds called <u>amino acids</u>. Chains of amino acids make up dietary proteins. 4.Vitamins: are organic compounds that serve to catalyze or support a number of biochemical reactions in the body. (both types of vitamins fat-soluble & water- soluble) 5.Minerals: are inorganic elements or compounds that play roles in metabolic reactions & serve as structural components in body tissues such as bone. 6.Water: is vital to the body as a solvent & lubricant & as a medium for transporting nutrients & waste.</p>	<p>Public Health Nutrition strives to <u>improve or maintain optimum nutritional health</u> of the whole population & high risk or vulnerable subgroups within the population. Public Health uses multiple, coordinated strategies to reach & influence the community, & organizations & individuals that make up the community.... with leadership provided <u>by the government</u>.</p>															
<p>The <u>essential nutrients</u> are: -Some forms of carbohydrate (glucose) main source of energy -Certain constituents of fat [the essential fatty acids: linoleic acid (omega-6) & linolenic acid (omega-3)] important for different functions. -Certain constituents of protein (the essential amino acids such as lysine, histidine, etc) -15 vitamins -About 25 minerals -Water</p>		<table border="1"> <thead> <tr> <th></th><th>Public Health Practice</th><th>Clinical Nutrition Practice</th></tr> </thead> <tbody> <tr> <td>Focus</td><td>Prevention</td><td>Disease treatment</td></tr> <tr> <td>Target</td><td>Populations</td><td>Individuals</td></tr> <tr> <td>Setting</td><td>Country, district & Communities</td><td>Clinics & Hospitals</td></tr> <tr> <td>Strategies</td><td>Multiple, Reinforcing</td><td>Counseling and education</td></tr> </tbody> </table>		Public Health Practice	Clinical Nutrition Practice	Focus	Prevention	Disease treatment	Target	Populations	Individuals	Setting	Country, district & Communities	Clinics & Hospitals	Strategies	Multiple, Reinforcing	Counseling and education
	Public Health Practice	Clinical Nutrition Practice															
Focus	Prevention	Disease treatment															
Target	Populations	Individuals															
Setting	Country, district & Communities	Clinics & Hospitals															
Strategies	Multiple, Reinforcing	Counseling and education															

<p><u>Issues</u> related to health & nutrition:</p> <ul style="list-style-type: none"> •Iodine & vitamin A deficiencies. •Starvation & widespread chronic hunger. •Under-nutrition, especially among children, women & the elderly. •Other important micronutrient deficiencies including iron. •Diet-related communicable & non-communicable diseases. •Impediments to optimal breastfeeding. •Inadequate sanitation & poor hygiene, including unsafe drinking water. 	<p><u>Improving nutritional status</u> is a global health challenge that <u>requires effective action</u></p> <ol style="list-style-type: none"> 1.across a number of <u>areas</u> (food, health, social welfare, education, water, sanitation, and gender equity) & 2.across a number of <u>actors</u> (government, civil society, private sector, research, and international development partners). 	<p>Adolescence: is a period of tremendous physical & cognitive changes.</p> <ul style="list-style-type: none"> -Teens are nutritionally vulnerable because of increased need for all nutrients at a time -Educating adolescents about the optimal energy, fat intake & level of physical activity helps them to develop a healthy body & lifestyle & avoid diseases 	<p>Overweight/Obesity in <u>children & adolescence</u> (teenagers)</p> <ul style="list-style-type: none"> -Increasing prevalence -Multi-factorial health issues -Influence of access to food, eating tied to leisure activities, children making food decisions, portion sizes, & inactivity. -Short-term & long-term health outcomes/Consequences: discrimination, negative self-image, depression, decreased socialization. -Increases cardiovascular risk factors (<u>hyperlipidemia</u>, <u>hypertension</u>, & <u>hyperinsulinemia</u>) & type 2 diabetes. -Importance of early identification & intervention
<p><u>consequences</u> of poor nutrition include: mortality, infection, cognitive impairment, lower work productivity, early onset & higher risk of non-communicable diseases (NCDs), stigma, & depression</p>	<p>food & nutrition policy: is a policy with a preventative & clinical health perspectives based on human rights. The <u>basic idea</u> is that all members of the society <u>should be granted enough food to grow & develop without disorders due to malnutrition</u> (under or over nutrition).</p>	<p><u>Nutritional Problems in Adolescence</u> Growth & Development:</p> <ul style="list-style-type: none"> •Physiologic changes •Puberty, sexual maturity •Growth velocity •Independence & autonomy •Body image 	<p><u>Interventions for Childhood Obesity</u></p> <ul style="list-style-type: none"> •Family involvement •Dietary modifications •Nutrition information •Physical activity •Behavioral strategies •Prevention
<p>Dietary factors <u>are associated</u> with five of the ten leading causes of death: Coronary heart disease, some types of cancer, stroke, non-insulin dependent diabetes (type 2 diabetes), & atherosclerosis</p>	<p><u>Nutritional Problems in Childhood</u></p> <ul style="list-style-type: none"> •Overweight & obesity •Iron deficiency •Dental caries •Allergies •Lactose intolerance 	<p><u>Food Habits</u> of Adolescence</p> <ul style="list-style-type: none"> •Irregular meals •Excessive snacking •Eating away from home (especially fast foods) •Dieting & meal skipping <p><u>Factors Influencing Food Habits</u></p> <ul style="list-style-type: none"> •Decreasing influence of family •Increasing influence of peers •Increasing media exposure •Increasing prevalence of employment outside home •Increasing responsibilities (less time to eat with families) 	