




Nutrition




Nutrition




- The science that investigates the relationship between physiological function and the essential elements of foods eaten.



Hunger vs. Appetite



- Hunger is the feeling with the physiological need to eat.
- Appetite is the desire to eat, normally accompanies hunger but is more psychological than physiological.



Calories

- A unit of measure that indicates the amount of energy obtained from a particular food.
- Excessive calorie consumption is a major factor in the tendency to be overweight.

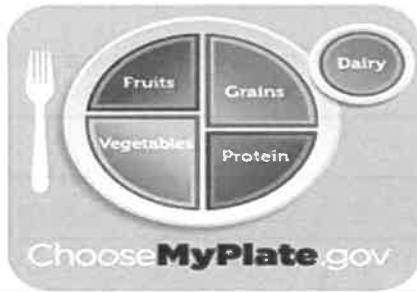
Nutrition Facts

Serving Size 1 pretzel (about 25g)	
Servings Per Container 20	
Amount Per Serving	
Calories 90	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 470mg	20%
Total Carbohydrate 19g	6%
Dietary Fiber less than 1g	4%



My Plate Food Guide

- This diagram illustrates the importance of the different food groups and recommended servings.



Water

- A person can only survive a few days without water
- Between 50-60% of total body weight is water
- Responsible for bathing cells, aids in fluid and electrolyte balance, maintains pH balance and transports molecules and cells throughout the body
- Major component of blood, which carries oxygen and nutrients to the body
- Min. 9 cups/day for teen girls
- Min. 13 cups/day for teen boys



Proteins



- They play a role in developing and repairing bone, muscle, skin and blood cells.
- Are a key element in antibodies that protect us from disease, of enzymes that control chemical activities in the body, and hormones that regulate body functions.
- Aid in the transport of iron, oxygen and nutrients to all body cells
- Can be found in animal products, legumes, grains and nuts



Carbohydrates



- The basic nutrient that supplies the body with the energy needed to sustain normal activity.
- Simple Sugars found in fruits
- Complex Carbohydrates are found in grains, cereals, and vegetables



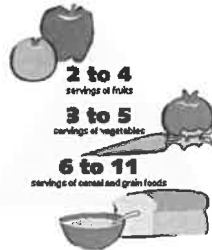
Carbohydrates



- Monosaccharides contain only one molecule of sugar
 - Glucose, Fructose, Galactose
- Disaccharides contain a combination of two Monosaccharides
 - Sucrose (table sugar), Lactose
- Polysaccharides are complex carbohydrates formed by the long chains of saccharides
 - Cellulose (starches and fiber)

Fiber

- Often called "bulk" or "roughage" is the indigestible portion of plant foods that help move foods through the digestive system and softens stools by absorbing water.
- 20-35 grams/day
- Fruits, vegetables, whole grains, seeds, legumes



Fats (lipids)

- Play a role in maintaining healthy skin and hair, insulating body organs against shock, maintaining body temperature, and promoting healthy cell functions
- They make food taste better
- Provide energy in the absence of carbohydrates
- Carry fat-soluble vitamins A, D, E, and K to the cells



Fats

- Unsaturated fats- lowers risk of heart disease
 - vegetable oils, nuts, seeds
- Saturated fats- increases risk of heart disease
 - meat and dairy products
- Trans fats- increase risk of heart disease
 - hydrogenated products/oils, margarine, junk foods

Vitamins

- Essential organic compounds that promote growth and reproduction and help maintain life and health.
- Broken into 2 groups; water-soluble and fat-soluble



Water-Soluble

- Dissolve in water and pass easily into the bloodstream during digestion.
- These are not stored by the body...the kidneys get rid of what is not used.

Vitamin C	Folic Acid	B Vitamins
Citrus fruits, berries, peppers, tomatoes, broccoli, spinach, potatoes	Dark green leafy vegetables, dry beans and peas, oranges, fortified cereals and other grain products	Enriched and whole-grain products, lean animal products, peanuts, bananas, carrots



Fat-Soluble

- Stored in body fat for later use
- If consumed in large amounts, they can build up in the body to the point where they become harmful

Vitamin A	Vitamin D	Vitamin E	Vitamin K
Carrots, sweet potatoes, tomatoes, leafy greens, fish, liver, egg yolk	Fortified cereals and dairy, fatty fish: salmon/tuna *your body naturally produces it when exposed to sunlight!	Fish, milk, egg yolk, vegetable oils, fruits, nuts, peas, beans, broccoli, spinach	Green leafy vegetables, oils, cheese, broccoli, tomatoes



Minerals



- Inorganic, indestructible elements that aid the body's processes
- Without minerals, vitamins cannot be absorbed
- Some are needed in larger amounts
 - Sodium, calcium, phosphorus, magnesium, potassium, sulfur and chloride
- Some are needed in smaller amounts
 - Iron, zinc, manganese, copper, iodine, and cobalt

Minerals



Mineral/Amount Needed Per Day	Role in Body	Food Sources
Calcium 1,300mg	Forms bones & teeth, aids blood clotting; assists muscle and nerve function; reduces risk of osteoporosis	Dairy products, corn tortillas, Chinese cabbage, broccoli, kale, fortified foods and juices
Phosphorus 1,250 mg	Produces energy; maintains healthy bones	Dairy, peas, meat, eggs, some cereals & breads
Magnesium 360 mg/teen girl 410 mg/teen boy	Normal muscle and nerve function, sustains regular heartbeat; aids in bone growth; energy production	Meat, milk, green leafy vegetables, whole grains, nuts
Iron 15 mg/teen girl 11 mg/teen boy	Part of a compound in the RBC needed for carrying oxygen, energy, immune system support	Meat, poultry, beans, fortified grain products

Food Allergies



- A condition in which the body's immune system reacts to substances in some foods.
 - In response, the body produces antibodies, triggering allergic symptoms.
- Most common allergies include
 - Milk, eggs, peanuts, soybeans, tree nuts, fish, shellfish, and wheat
- Reactions can range from minor rashes to severe swelling in the mouth, tongue, and throat to violent vomiting and diarrhea, and, anaphylaxis.



Food Intolerance

- Occurs with people who lack certain digestive chemicals and suffer adverse effects when they consume substances that their body has difficulty in breaking down.
- Common examples include lactose, food additives, sulfites, and MSG



*“Is what you eat
making **you** ill?”*

Organic Foods

- Foods that are grown without the use of pesticides or chemicals
- Cannot contain GMO's (genetically modified ingredients)



Influences on Food Choices

- Hunger and appetite
- Emotions...response to emotional needs like stress, frustration, loneliness, sadness,
- Mindlessness...boredom, tension, when absorbed in another activity; when body does not need food
- Environment and culture



Food and Your Environment



The people and things around you also affect what you choose to eat; environmental influences include...

- Family and culture
- Friends
- Time
- Financial situations
- Advertising



Food Insecurity

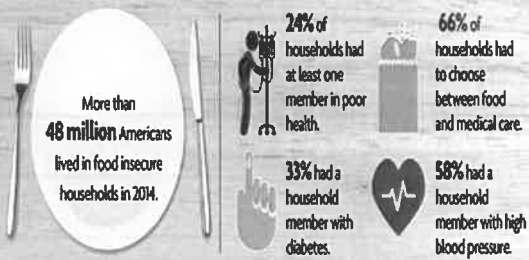


- Lacking reliable access to a sufficient quantity of affordable, nutritious food
- 1 in 6 children in the U.S. lives in a food-insecure household



Food Insecurity and the Impact on Health

According to the study *Hunger in America 2014*, which surveyed 60,000 Feeding America clients and 32,000 partner agencies:



Food Deserts

- An urban area in which it is difficult to buy affordable or good-quality fresh food
 - Fresh fruit, vegetables, and other healthful wholefoods
- signified by high levels of obesity, diabetes and cardiovascular diseases



Food Insecurity & Deserts

- Largely due to a lack of grocery stores, farmers' markets, and healthy food providers
- Heavy on local quickie marts that provide a wealth of processed, sugar, and fat laden foods that are known contributors to our nation's obesity epidemic



Issues affecting food insecurity and deserts

- Distance needed to travel to attain healthy foods
- Availability to fresh foods
- Income and food prices
- Work and family life
- Store safety
- Social and cultural barriers



5 Most Food Deserted Cities in U.S.



- | | | |
|------------------|----|---|
| 1. Indianapolis | 5% | <small>(people with food access within a 5 minute walk)</small> |
| 2. Oklahoma City | 5% | |
| 3. Charlotte | 6% | |
| 4. Tucson | 6% | |
| 5. Albuquerque | 7% | |



Are there any solutions????



FOOD DESERT SOLUTIONS

COMMUNITY

- WORK ON LOCAL INFRASTRUCTURE SOLUTIONS TO IMPROVE ACCESS AND INCREASE THE AFFORDABILITY OF HEALTHY FOOD**
1. **IMPROVE LOCAL INFRASTRUCTURE**
Build and maintain local food processing facilities to help the local food system.
 2. **IMPROVE LOCAL INFRASTRUCTURE**
Build and maintain local food processing facilities to help the local food system.

ACCESS

- ORGANIZE THE BARRIERS OF OBTAINING HEALTHY FOOD**
1. **IMPROVE LOCAL INFRASTRUCTURE**
Build and maintain local food processing facilities to help the local food system.
 2. **IMPROVE LOCAL INFRASTRUCTURE**
Build and maintain local food processing facilities to help the local food system.



SEVEN STEPS TOWARDS PUTTING HEALTHY FOOD IN GOOD HANDS

EMPOWERMENT

- EMPOWER COMMUNITIES AND INDIVIDUALS WITH THE TOOLS TO TAKE RESPONSIBILITY FOR THEIR OWN HEALTH**
1. **IMPROVE LOCAL INFRASTRUCTURE**
Build and maintain local food processing facilities to help the local food system.
 2. **IMPROVE LOCAL INFRASTRUCTURE**
Build and maintain local food processing facilities to help the local food system.
