ProStart 2 Chapter 2 Framed Outline for PowerPoint

**The Importance of Nutrition**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is the study of the nutrients in food and how they nourish the body.
* **Nutrients** are components of food that are needed for the body to function.
* Restaurant and foodservice professionals need to understand the nutritional needs of their customers.
* When restaurant and foodservice professionals understand how to combine nutrition science and culinary arts, they are able to provide food that is both delicious and healthful.

**Carbohydrates**

* **Carbohydrates** are the body’s main-energy source. They help the body use protein and fat efficiently.
* **Simple carbohydrates** contain one or two sugars. They are digested and absorbed quickly and provide a short burst of energy:
  + **Glucose** is a very important simple sugar. It is the primary source of energy. The body uses glucose to make energy for the body to use. Glucose is very important because it is the only source of energy for the brain and nervous system.
  + **Hormones** are special chemical messengers made by bodies that regulate different body functions.
* One of the most important hormones in relation to carbs is **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. Insulin allows glucose to be used by the body. The textbook says, “Insulin is produced in the pancreas. It allows glucose or blood sugar to travel throughout the body for energy use.”
* So without insulin, *you have no energy*.
* The quickest energy source for the body is from simple carbohydrates.
* **Simple \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are found in fruits, milk, processed sugar (including white and brown sugars), molasses and honey.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ carbohydrates** are found in foods that are starchy or fibrous (containing strings or fibers).
* Complex carbohydrates provide the body with longer term energy because they take longer to digest and enter the bloodstream more slowly. **Complex carbs** come from foods like dry beans, pasta, potatoes, corn, rice, grits, pasta, oatmeal, cornmeal, breads and cereals.
* An important part of the diet is **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Fiber** is the part of the plant that cannot be digested by people. (Think about the outside of the corn kernel or tomato skins.
* Fiber comes in two kinds – **soluble** (will dissolve in water) and insoluble (will not dissolve in water.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fiber** helps you feel full for a longer time. It also slows down the release of glucose into the bloodstream and reduces cholesterol levels in the blood.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fiber** is also called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. That is because it is made up of rough fibers that do not dissolve in water and so scrub out the digestive tract. It helps you eliminate waste. (Yes, that means it helps you move your bowels.)

**Lipids**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is another word for fat. Lipids are a group of molecules that include fats, oils, waxes, steroids, and other compounds:
  + **Fat** is an essential nutrient with many functions.
  + Fats are solid at room temperature and often come from animals. **Oils** are liquid at room temperature.
  + **Essential fatty acids** are required for good nutrition.
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is a chemical process that causes unsaturated fats to spoil.
  + **Cholesterol** is a white, waxy substance that helps the body carry out its many processes. Cholesterol is produced in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + **Trans fatty acids** are the result of taking a liquid fat and making it solid.

**Proteins**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are another class of nutrients that supply energy to the body. They are needed to build new cells and repair injured ones.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ acids** are chemical compounds that have special functions in the body: There are 20 amino acids found in food. Of those 9 are considered essential for good nutrition.
* When a food contains the 9 essential amino acids, it is considered a complete protein.
* But you can get proteins from sources that aren’t complete.
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ proteins** are called complete because they contain all the essential amino acids in the right amount.
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ proteins** lack one or more of the essential amino acids.
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are two or more incomplete protein sources that together provide adequate amounts of all the essential amino acids.
  + Macaroni and cheese is an example of a complementary protein.

**Vitamins and Minerals**

* Without the right amounts of vitamins and minerals, people may become deficient and develop deficiency-related diseases.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  are chemical compounds found in food. They’re needed for regulating metabolic processes, such as digestion, and the absorption of nutrients.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are classified as major or trace, according to how much is needed in the diet.
* Some examples of major minerals are calcium, phosphorus, potassium, sodium, and magnesium.

Even though some minerals are needed in very tiny amounts, getting the right amount is important to good health.

* Iron is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that helps the body replenish (resupply or make new) red blood cells. Iron is found in spinach, red meat and organs like liver.
* Calcium and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ help the body build and maintain strong teeth.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and potassium help the body maintain its water balance.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a condition where the bones lose their minerals and become weak.

**Water**

* Water is an essential nutrient. It is essential to all forms of life.
* About 55 to 65 percent of the human body is water by weight. Cells, tissues, and organs need water to function.
* Water has many important roles:
  + Helping with the digestion, absorption, and transportation of nutrients.
  + Helping with the elimination of wastes through the kidneys, colon, and lungs.
  + Distributing heat throughout the body and allowing heat to be released through the skin by evaporation (sweating).
  + Lubricating joints and cushioning body tissues.
* The human body can live a long time without many other nutrients, but only a few days without water.

**Digestion**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  is the process of breaking down food into its simplest parts so that it can be absorbed:
  + Digestion begins in the mouth.
  + The teeth grind food into smaller pieces and mix it with saliva.
  + After you swallow food, the stomach breaks it down with the aid of enzymes and acids, turning it into a fluid called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.
  + The chyme moves to the small intestine, where the majority of digestion and absorption of nutrients occurs.
  + As the digestive system sends the nutrients to parts of the body to be used, the wastes of digestion are sent to the large intestine.
  + The large \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ absorbs water and stores feces for elimination through the colon and anus.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ allows the body to use the nutrients in food to live and grow.
* The body converts much of the food you eat into glucose. Glucose gives the body energy – and supplies the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and nervous system with their ONLY \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of energy.

**Food Additives**

* Many \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ occur naturally or are extracted from food. Others are synthetic but chemically identical to natural substances.
* All food additives are carefully \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by the Food and Drug Administration.
* Additives help keep food wholesome and appealing during transport to markets.
* Without additives, many food items would be less attractive, less flavorful, less nutritious, more likely to spoil, and more costly.

**A healthy diet**

* **Dietary Reference Intakes (DRIs)** are recommended daily nutrient and energy intake amounts for healthy people of a particular age range and gender.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dietary \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are daily nutrient standards established by the U.S. government.
* **Adequate intakes** are similar to RDAs. They also identify daily intake levels for healthy people.
* A **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is a person who consumes no meat, fish, or poultry products:
  + Lacto-vegetarians consume vegetarian items plus dairy products
  + Lacto-ovo-vegetarians consume vegetarian items plus dairy products and eggs.
  + A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ follows the strictest diet of all and will consume no dairy, eggs, meat, poultry, fish, or anything containing an animal product or byproduct.

**The Numbers**

* According to the U.S. Centers for Disease Control, approximately \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ percent of children and teens from age 6 to 19 are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* There are also many children and teens who are considered \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Portion control and healthy choices are the keys to losing weight or maintaining a healthy weight.

**Summary**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the study of nutrients in food and how they nourish the body.
* The six basic nutrients found in food are carbohydrates, proteins, lipids, vitamins, minerals, and water.
* Food additives improve flavor, color, and texture; retain nutritional value; prevent spoilage; and extend shelf life.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ breaks down food into its simplest parts.
* A healthy diet emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products. It includes lean meats, poultry, fish, beans, eggs, and nuts. It is low in saturated fats, trans fats, cholesterol, salt, and added sugars.

Malnutrition is the condition that occurs when your body does not get enough nutrients.

**Food Preparation Techniques**

* Healthy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ require techniques that keep as many nutrients as possible. Keeping food safe throughout the flow of food helps to preserve nutrients.
* Purchasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ products is the first step toward providing nutritious meals.
* Long storage times and warm temperatures can be damaging to both safety and nutritional value.
* The best way to prevent deterioration is to maintain a low inventory of food products, and use a quick turnaround system.
* When preparing vegetables, wash them quickly and thoroughly.
* When cooking food, remember that the lower the temperature and the shorter the cooking period, the less the resulting nutrient loss.
* Be careful not to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ grains, which can affect vitamin content.
* Meat, fish, and poultry are at their best and most healthful when served \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the time they are cooked.
* When meat is cooked for long periods of time, it loses the nutrients \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and Vitamin B6
* Fruits and vegetables should be served \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ where appropriate.
* The key to cooking nutritious food is to manage time and temperature so that food is cooked only as much as necessary and served as soon as possible.

**Making Menus More Healthful**

* **Portion \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** means controlling the quantity of particular foods by using appropriately sized servings.
* Healthy cooking can also be about adding \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ingredients.
* After understanding the purpose of the ingredients, begin to modify recipes to be lower in fat, sugar, and salt.
* Much culinary creativity and experimentation comes in the soup, sauce, and gravy categories.
* When making modifications, remember to keep flavor in mind at all times.
* Be creative and use modifications as an opportunity to make food memorable.
* Saturated fats (butter, lard, tropical oils) and trans fats (margarine, shortening) can be reduced by using less and replacing them with alternative products.
* Using high-quality lean meat is a good strategy for replacing the large amounts of fat found in prime cuts.
* For food items that can’t be changed, limit the frequency with which they are eaten or decrease the portion size that is served.
* When making substitutions, remember the purpose for the substitution and the role that fat plays in the food item. Not \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fats can be reduced, removed, or replaced.

**Types of Produce  
(From a Grower’s Point of View)**

* Some customers may want to know how the food was produced before it got to the restaurant or foodservice operation. They want food produced without certain products, and they will pay more money to get it.
* To meet customer needs, many restaurant and foodservice operations choose to serve \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ food products.
* Employees must be able to identify the differences among the various types of products available.
* **Genetically \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ organisms (GMOs)** are plants or animals whose genetic makeup has been altered. From a nutritional standpoint, genetically modified food products do not differ much from unmodified food products.

**Organic Foods**

* Some people are worried about chemicals in their foods. Some chemicals that people worry most about are pesticides – chemicals that kill insects and other plant pests.
* Some farmers now grow food organically – that is without added hormones, chemicals, fertilizers or pesticides.