Module Title: MENU PLANNING AND COSTING

Department: Hospitality Management

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Lecture 3 : NUTRITION AND MENU PLANNING

- This chapter examines the role of nutrients in foods and their relationship to health.
- Methods to improve the nutrient quality of food items offered in the foodservice industry are introduced, as is the planning of nutritious diets.

Objectives:

At the end of this lecture, learners will be able:

- To provide information on the basics of nutrition
- To discuss the relationship of nutrition to health
- To illustrate how menus can be nutritious and still profitable to the foodservice operation.

Nutrition Basics

- Nutrition is the study of how food is used by the body.
- Food is composed of nutrients, which are chemical compounds needed for survival.
- Some of these are essential nutrients, which cannot be made in the body and must be supplied by food or supplements.

- Examples of essential nutrients are minerals (such as iron and calcium), vitamins, and certain amino acids that com bine to form protein.
- Without a source of these essential nutrients, good health cannot be maintained

- Other nutrients are equally important for survival, **but** these essential nutrients can be synthesized in the body if the raw materials are available.

- Examples of these types of nutrients include the **fatty** substance lecithin and the nonessential amino acids.

The six major nutrient groups are:

1. Proteins

2. Carbohydrates

3. Fats

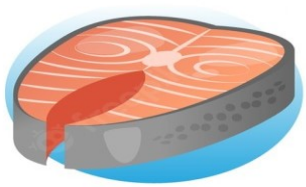
4. Vitamins

5. Minerals

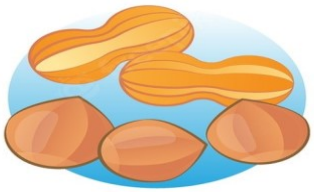
6. Water

- **Proteins** provide calories, synthesize new body tissue during growth, and replace worn-out cells.
- Proteins also form hormones, enzymes, and antibodies that are required to perform numerous bodily processes and to maintain immunity to diseases.

SOURCES OF PROTEIN

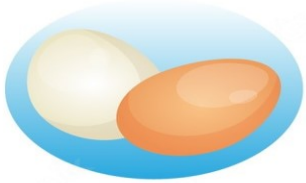


FISH



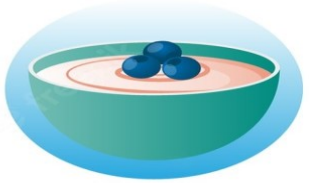
NUTS

MILK

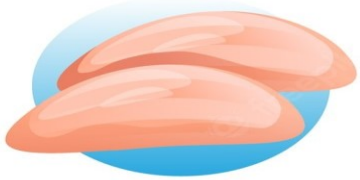


EGGS

ALMONDS



GREEK YOGURT



CHICKEN

LENTILS

BROCCOLI

SPROUTS

OATS

SEEDS

Nicola (2022), The Protein: What You Need to Know About Protein
https://nicoladaletraining.com/wp-content/uploads/2022/10/protein.jpg

- **Carbohydrates** include sugars, starches, and fiber.
- Carbohydrates are the most important energy source for the body, particularly the nervous system.
- Dietary fiber, which consists mostly of indigestible carbohydrates, helps to regulate the movement of food through the digestive tract.

TOP Food High in Carbohydrates

collegesearch

Adult DV (Female or Male)

White Sugar
200g / 1 cup (200g)
80%

Brown Sugar
216g / 1 cup (220g)
86%

Cornstarch
7.3g / 1 tbsp (8g)
3%

Honey
17g / 1 tbsp (21g)
7%

Raisins
129g / 1 cup (165g)
52%

Barley (raw)
155g / 1 cup (200g)
62%

Graham Crackers
65g / 1 cup (84g)
26%

Agave Syrup
16g / 1 tbsp (21g)
6%

Flour
95g / 1 cup (125g)
38%

Dates
18g / 1 date (24g)
7%

Pasta
68g / 1 cup (91g)
27%

Cornmeal
87g / 1 cup (120g)
35%

Nikita (2023), Sources of Carbohydrates
https://d13loartjoc1yn.cloudfront.net/article/1690179845_List%20of%20Food%20containing%20Carbohydrates.jpg

- **Fats** are a very concentrated energy source, which provide more than twice as many calories as an equal amount of protein or carbohydrate.
- Some fats are saturated, which means that their chemical structure contains the maximum number of hydrogen atoms (i.e., they are saturated with hydrogen).

- These fats are solid and tend to be found in animal products.

- Fats that contain fewer hydrogen atoms than required in their chemical structure and are liquid at room temperature are called **unsaturated fats.**

- Chemical structures known as double bonds replace the missing hydrogen atoms in these fats.
- If a fat has one double bond, it is a **monounsaturated fat**.
- If it has two or more double bonds, it **is a polyunsaturated fat**.

- Commonly used monounsaturated fats include olive oil and corn, soybean, and sunflower oils.

Foods High in Fat

Fatty meats and fish

Cheese

Butter

Avocado

Nuts and seeds

Chocolate

©Nutrientsreview.com

Nutrients review (2022), Fats, https://www.nutrientsreview.com/wp-content/uploads/2014/10/High-fat-foods.jpg

- **Vitamins** are chemical compounds that are involved in various metabolic reactions in the body
- They are divided into two groups:

1. **Fat-soluble vitamins**: Vitamins A, D, E, and K

2. **Water-soluble vitamins**: B vitamins and vitamin C

Pratiksha Shrestha (2022), Vitamins: Functions and their sources, https://foodtechnotes.com/wp-content/uploads/2020/07/Picture1-300x297.jpg.webp

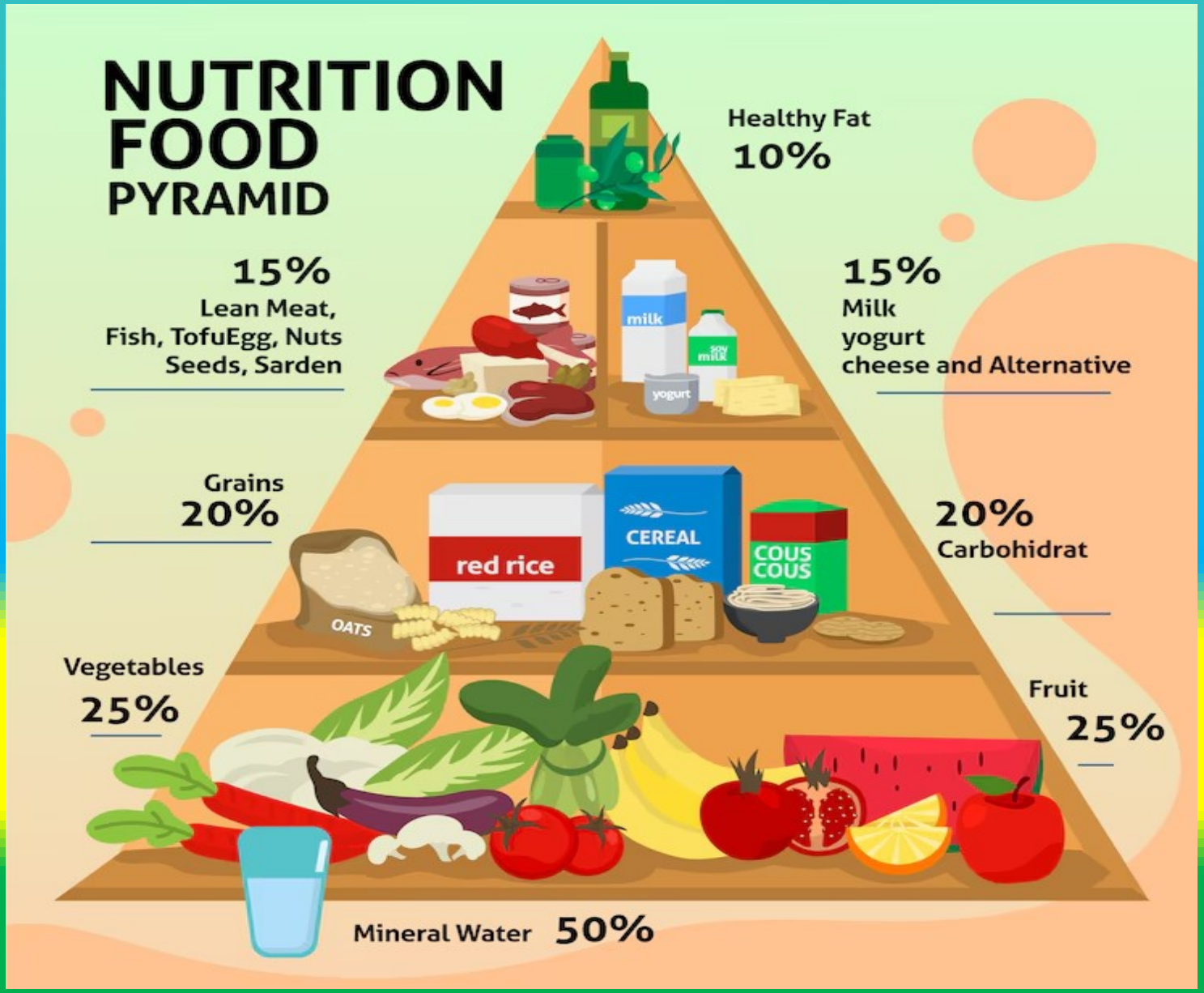
- **Minerals** are crystalline chemical elements that comprise about **4** percent of a person's weight.
- Calcium, phosphorous, sodium, potassium, magnesium, sulfur, and chlorine are considered macronutrients, because they are present in the body in relatively **large amounts**.

- The micronutrients include iron, zinc, selenium, manganese, copper, iodine, and fluorine, to name a few.

- **Water**, often taken for granted, is perhaps the **most vital** nutrient.
- While a person can survive for weeks or months without the other essential nutrients, a complete deprivation of water would cause death within a few days.

- Water dissolves and transports nutrients into, throughout, and from the body.
- It also regulates body temperature, lubricates joints, is involved in chemical reactions, and helps cells retain their shape.

Food pyramid



Designed by Freepik

https://img.freepik.com/free-vector/food-pyramid-template-concept_23-2148507114.jpg

Relationship of Nutrition to Health

- Customers are becoming increasingly aware that nutrition has a strong impact on health.
- Not only will adequate amounts of nutrients promote good health by preventing deficiencies, but good nutrition may also help in the prevention of chronic diseases and in increasing longevity

Good nutrition will help in:

- Reduce the risk of some diseases, including heart disease, diabetes, stroke, some cancers, and osteoporosis
- Reduce high blood pressure
- Lower high cholesterol

- Improve your well-being
- Improve your ability to fight off illness
- Improve your ability to recover from illness or injury
- Increase your energy level

- **Nutritional Implications for Menu Planning**

➢ When planning a menu for a foodservice operation, it is important to consider nutrient needs.

➢ Although some people still are unconcerned about nutrition, an ever-growing number of customers want the opportunity to select nutritious foods.

- Foodservice operations that offer nutritious foods help to heighten an awareness of nutrition.
- A nutrient breakdown of menu items, printed general nutrition information on the menu, and a health-oriented newsletter are just a few vehicles that can increase interest in healthful eating.

- Staff members who possess some knowledge about nutrition are also invaluable as they are able to answer guests' questions about the foods they are serving.
- Foodservice personnel can be educated about nutrition through seminars and by encouraging employees to take courses on this subject.

Ingredients and Preparation

- The ingredients and methods of preparation a foodservice operation uses have a vast effect on the food's nutrient content.
- It is desirable to maximize the amount of vitamins, minerals, and fiber and to minimize calories, fat, cholesterol, sodium, and sugar.

- Vitamins are very fragile substances that can be destroyed by exposure to acid, alkali, heat, light, and air.
- The enzymes naturally present in foods can also destroy vitamins.

- Tailoring a foodservice operation's cooking methods to minimize vitamin loss can be achieved by adhering to eight guidelines:

1. Avoid overcooking food.

2. Steam, stir-fry, or microwave foods instead of boiling.

If cooking in water cannot be avoided, use as little as possible and reuse that water in a soup or stock gravy.

3. Keep food wrapped to prevent oxidation.

4. If appropriate, keep foods cool to decrease the activity of enzymes.

5. Do not add baking soda to green vegetables to give them a bright green color.

6. Store foods in the dark or in opaque containers.

7. Cut foods into medium-size pieces for cooking. Large pieces usually cook too slowly, and very small pieces promote oxidation and loss of vitamins into the cooking water.

8. Avoid holding food at serving temperature for a prolonged period, as on a steam table. This procedure not only increases vitamin loss, but also affects texture and increases the risk of food poisoning.

References

[1] Paul J. McVety et al (2009), Fundamentals of Menu Planning, p37 – p60

ttps://lib.unika.ac.id/index.php?p=fstream-pdf&fid=3132&bid=48553356

[2] SKAGEN, RAVINTOLA (2019), Menu planning and costing

https://www.theseus.fi/bitstream/10024/267034/2/Venalainen_Kristiina.pdf

End of Lecture 3

Next lecture : Food Service Menus

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Thank you!