Food is for Life and Nourishment!

Nutrition Education Module 1

Learning objectives:
1. Describe the role of food as nourishment and essential element in sustaining life;
2. Understand the basic food groups and its relation to daily diet; and
3. Learn how to use Pinggang Pinoy for proper nutrition.

Everybody needs to eat certain amount of food to sustain life. Enjoying variety of colors, texture, flavor, and aroma engages us to eat food to nourish our body to survive, function, and live a quality life.

Good food can come from home-grown crops and can be easily prepared or cooked. Local and sustainable sources of plant-based foods are highly essential to have good nutrition.

Good nutrition is the bedrock of child survival, health, and development. Well-nourished children are better able to grow and learn, to participate in and contribute to their communities, and to be resilient in the face of disease, disasters, and other global crises (UNICEF).

Our body obtains fuel or energy from the food we eat. It is essential to eat a nourishing and well-balanced diet because our bodies depend on it.
**Food** can be anything edible or potable as defined by every culture that can provide nourishment and has a nutritive component or components such as carbohydrates, proteins, fats, essential vitamins and minerals. When ingested and utilized by the body, it sustains life, promotes growth, generates energy, and provide overall health to the body.

**Nutrition** is the science that relates food and its nutrients to health and disease. It includes the processes by which the human as an organism utilizes food substances to be able to live and function well.

**Nutrients** are substances in food that provide energy and structure to the body and regulate body processes.

**Eating Habits Magnify Your Health Outlook**

Any food you eat contains nutrients that the body uses to perform daily tasks and functions. However, to make your diet healthy, it is important to choose nutrient-rich foods. Remember, every food you take contributes and reflects to your overall health. It is crucial that the foods you choose are dense in essential nutrients and low in nutrients that can be harmful when taken in excess such as sodium or salt.

**Vitamins and Minerals**

Micronutrients are needed by the body in small quantities. These include vitamins and minerals from fruits, vegetables, grains, root crops, dairy, and oils. Micronutrients are primarily for growth and repair of tissues, but specific micronutrients are also involved in brain health, energy production, and other tasks.

"The source and availability of food can also dictate our food choices, which in turn affect our health and nutritional status. We must create an environment that can influence us to be healthier and provide us with better food choices.” - Ian Curt R. Sarmiento

**Carbohydrates, Proteins and Fats**

Macronutrients are needed by the body in larger quantities. These include carbohydrates, proteins, and fats which provide the daily requirement for energy of an individual.

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*Food is for balanced diet and proper nutrition.*
Every year, around 3 million children die due to undernutrition. For millions more, chronic malnutrition will result in stunting, an irreversible condition that literally stunts the physical and cognitive growth of children (UNICEF).

Why Do We Need to Understand and Learn Nutrition?

Nutrition is a lifestyle factor that is key to developing and maintaining an optimal state of health. A poor diet and a sedentary lifestyle are known to be risk factors for life-threatening diseases.

We must learn and understand nutrition and its relation to food and health because it will help us develop good eating habits. Availability of nutrient-rich food in the locality, paired with healthy eating habits, can help attain optimal state of health and prevent malnutrition and its effects.

What is Malnutrition?

Malnutrition is any condition caused by excess or deficiency in food energy or nutrient intake or by an imbalance of nutrients. Nutrient or energy deficiency results to undernutrition while excess in energy intake results to being overweight.

Undernutrition
Underweight – Low weight for age (acute)
Stunting - Low height for age (chronic)
Wasting – Underweight for height

Overweight
Overweight – weighing too much for height
Obese – being severely overweight

Quick Facts: Undernutrition in the Philippines

The Food and Nutrition Research Institute - Department of Science and Technology (FNRI-DOST) conducts the National Nutrition Survey every five years and the study discovered how many Filipinos suffer different forms of undernutrition:

Survey Results:
2008: About 4 million children were undernourished; anemia prevalence among schoolchildren 6–12 years old was at 20%

2013: Among Filipino children 5-10-year-old:
- 29% are underweight,
- 29.9% are stunted; and
- 8.6% are wasted

Possible short and long term consequences:
- Mortality
- Morbidity
- Disability
- Adult size
- Low intellectual ability
- Low economic productivity
- Low reproductive performance
- No development of metabolic and cardiovascular performance
If nothing will be done to address these short and long term consequences of undernutrition, the offspring of the undernourished individuals may also suffer from poor health and development as shown in the figure below. Hence, it is very important to cut this vicious cycle. Otherwise, the next generation of Filipinos will not be able to achieve their full potential and productivity.

“Healthy children learn better. People with adequate nutrition are more productive and can create opportunities to gradually break the cycles of poverty and hunger”.

According to the World Health Organization:

✓ To achieve and maintain a good nutritional status, proper nutrition is necessary.
✓ Nutritional Status is the physiological state of an individual determined by the quantity and quality of food consumed and by the ability of the body to use them.

Balanced Diet
The body requires a full range of nutrients to maintain good health. At a glance, they are:
✓ Carbohydrates for energy;
✓ Proteins for growth and repair;
✓ Fats for warmth, energy, and healthy body functioning;
✓ Vitamins, minerals, and phytonutrients for general health and well-being;
✓ Fiber for a healthy digestive tract; and
✓ Water, a very essential element.

References:
http://www.who.int/features/factfiles/nutrition/en/
http://www.who.int/nutrition/challenges/en/
http://www.unicef.org/nutrition/
Pinggang Pinoy, Food and Nutrition Research Institute, Department of Science and Technology, 2016
http://dl.ishtm.ac.uk/DLTesting/ANH101/sessions/S1/S1/Printable.html
Pinggang Pinoy is one of the tools that can be used as guide for proper nutrition, it shows the recommended food group proportion in every meal. It is divided into four portions: half of the plate is comprised of fruits and vegetables; the other half is composed of rice and fish or lean meat. The glass is filled with water to show the importance of water for hydration.

Source: Food and Nutrition Research Institute - Department of Science and Technology (FNRI-DOST)

Appendix 1: Food is for Life and Nourishment!
Pinggang Pinoy

A food guide using a food plate model to show the recommended proportion by food group in every meal.

Go
Energy Giving

Go for rice, root crops, pasta, bread, and other carbohydrate-rich foods, which provide energy to support bodily functions and physical activity.

Choose whole grains like brown rice, corn, whole wheat bread, and oatmeal, which contain more fiber and nutrients than refined grains and are linked to lower risk of heart disease, diabetes, and other health problems.

Grow
Body Building

Eat fish, shellfish, lean meat, poultry, eggs, and dried beans and nuts needed for the growth and repair of body tissues.

Include fatty fish in the diet like tuna, sardines, and mackerel 2-3 times a week to provide essential fatty acids that help protect against heart diseases.

Consume milk, milk products, and other calcium-rich foods like dilis and small shrimps for strong bones and teeth.

Glow
Body Regulating

Enjoy a wide variety of fruits and vegetables, which are packed with vitamins, minerals, and fiber needed for the regulation of body processes.

Water

Drink lots of water everyday for adequate hydration.

Limit intake of sugar-sweetened beverages to reduce the risk of obesity and tooth decay.

Health Tips!

☑ Eat less salty, fried, fatty, and sugar-rich foods to prevent chronic diseases.
☑ Prepare a good breakfast to have enough fuel to get through the day.
☑ Get creative when cooking meals for kids.
☑ Serve healthy snacks.
☑ Understand nutrition information on product labels to make smart food choices.

Encourage kids to be active!

Reference: Pinggang Pinoy, FNRI-DOST, 2016, used with permission

Appendix 2: Food is for Life and Nourishment!
# How to Fill Up Your Kid’s Plate

<table>
<thead>
<tr>
<th>Age Group</th>
<th>GO: Rice and alternatives</th>
<th>GROW: Fish and alternatives</th>
<th>GLOW: Vegetables</th>
<th>GLOW: Fruits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-5 years</td>
<td>Any of the following:</td>
<td>Any of the following:</td>
<td>Any of the following:</td>
<td>Any of the following:</td>
</tr>
<tr>
<td></td>
<td>1/2 cup cooked rice</td>
<td>1/2 piece small size fish</td>
<td>1/2 cup cooked vegetables (ie. malunggay, saluyot, gabi leaves, talinum, ampalaya, kalabasa, carrots, sitaw)</td>
<td>1/2-1 medium size fruit (ie. saging, dalonghita, mangga)</td>
</tr>
<tr>
<td></td>
<td>2 pieces small pandesal</td>
<td>(ie. galunggong)</td>
<td>3/4 cup cooked vegetables (ie. malunggay, saluyot, gabi leaves, talinum, ampalaya, kalabasa, carrots, sitaw)</td>
<td>1/2-1 slice big fruit (ie. papaya, pinya, pakwan)</td>
</tr>
<tr>
<td></td>
<td>2 slices small loaf bread</td>
<td>1/2 slice large variety of fish (ie. bangus)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/2 cup cooked noodles</td>
<td>1/2 serving lean meat, 15g (ie. chicken, pork, beef)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ie. pansit)</td>
<td>1/2 piece tokwa</td>
<td>3/4-1 cup of cooked vegetables (ie. malunggay, saluyot, gabi leaves, talinum, ampalaya, kalabasa, carrots, sitaw)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/2 medium piece root crop (ie. kamote)</td>
<td>1/2 piece small chicken egg</td>
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<td></td>
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<tr>
<td>6-9 years</td>
<td>Any of the following:</td>
<td>Any of the following:</td>
<td>Any of the following:</td>
<td>Any of the following:</td>
</tr>
<tr>
<td></td>
<td>3/4 cup cooked rice</td>
<td>1/2 piece small size fish</td>
<td>1/2 cup cooked vegetables (ie. malunggay, saluyot, gabi leaves, talinum, ampalaya, kalabasa, carrots, sitaw)</td>
<td>1 medium size fruit (ie. saging, dalonghita, mangga)</td>
</tr>
<tr>
<td></td>
<td>3 pieces small pandesal</td>
<td>(ie. galunggong)</td>
<td>3/4 cup cooked vegetables (ie. malunggay, saluyot, gabi leaves, talinum, ampalaya, kalabasa, carrots, sitaw)</td>
<td>1 slice of big fruit (ie. papaya, pinya, pakwan)</td>
</tr>
<tr>
<td></td>
<td>3 slices small loaf bread</td>
<td>1/2 slice large variety of fish (ie. bangus)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3/4 cup cooked noodles</td>
<td>1/2 serving lean meat, 15 g (ie. chicken, pork, beef)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ie. pansit)</td>
<td>1/2 piece tokwa</td>
<td>1/2 piece small chicken egg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3/4 medium piece root crop (ie. kamote)</td>
<td>1/2 piece small chicken egg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-12 years</td>
<td>Any of the following:</td>
<td>Any of the following:</td>
<td>Any of the following:</td>
<td>Any of the following:</td>
</tr>
<tr>
<td></td>
<td>1 cup cooked rice</td>
<td>1 piece small size fish</td>
<td>3/4 cup cooked vegetables (ie. malunggay, saluyot, gabi leaves, talinum, ampalaya, kalabasa, carrots, sitaw)</td>
<td>1 medium size fruit (ie. saging, dalonghita, mangga)</td>
</tr>
<tr>
<td></td>
<td>4 pieces of small pandesal</td>
<td>(ie. galunggong)</td>
<td>3/4-1 cup of cooked vegetables (ie. malunggay, saluyot, gabi leaves, talinum, ampalaya, kalabasa, carrots, sitaw)</td>
<td>1 slice of big fruit (ie. papaya, pinya, pakwan)</td>
</tr>
<tr>
<td></td>
<td>4 slices of small loaf bread</td>
<td>1 slice large variety of fish (ie. bangus)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 cup of cooked noodles</td>
<td>1 serving lean meat, 30 g (ie. chicken, pork, beef)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ie. pansit)</td>
<td>1/2 piece tokwa, 6x6x2cm</td>
<td>1/2 piece small chicken egg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 medium piece root crop</td>
<td>1/2 piece small chicken egg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ie. kamote)</td>
<td></td>
<td></td>
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</tbody>
</table>

*Pinggang Pinoy, FNRI-DOST, 2016, used with permission*
1. Eat a variety of foods everyday to get the nutrients needed by the body.

2. Breastfeed infants exclusively from birth up to 6 months then give appropriate complementary foods while continuing breastfeeding for 2 years and beyond for optimum growth and development.

3. Eat more vegetables and fruits everyday to get the essential vitamins, minerals and fiber for regulation of body processes.

4. Consume fish, lean meat, poultry, egg, dried beans or nuts daily for growth and repair of body tissues.

5. Consume milk, milk products and other calcium-rich foods, such as small fish and shellfish, everyday for healthy bones and teeth.

6. Consume safe foods and water to prevent diarrhea and other food-and water-borne diseases.

7. Use iodized salt to prevent Iodine Deficiency Disorders.

8. Limit intake of salty, fried, fatty and sugar-rich foods to prevent cardiovascular diseases.

9. Attain normal body weight through proper diet and moderate physical activity to maintain good health and help prevent obesity.

10. Be physically active, make healthy food choices, manage stress, avoid alcoholic beverages and do not smoke to help prevent lifestyle-related non-communicable diseases.

*Developed by the Technical Working Group led by the Food and Nutrition Research Institute of the Department of Science and Technology (FNRI-DOST).