

# Nutrition & Diet Therapy

## *Overview of Nutrition*



# Basic Concepts of Nutrition

- **Nutrition** the result of those processes whereby the body takes in and uses food for growth, development, and the maintenance of health
- **Nutrient** a chemical substance obtained from food and needed by the body for growth, maintenance, or repair of tissues
- **Food** any substance taken into the body that will help to meet the body's needs for energy, maintenance, and growth

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- ***Diet*** refers to whatever you eat and drink each day. Thus it includes the normal diet you consume and the diet people consume in groups
  - ***Optimum nutrition*** the state of receiving and utilizing essential nutrients to maintain health and well-being at the highest possible level
  - ***Malnutrition*** means an undesirable kind of nutrition leading to ill-health. It results from a lack, excess or imbalance of nutrients in the diet
  - ***Overnutrition*** an excessive intake of one or more nutrients, frequently referring to nutrients providing energy

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- ***Undernutrition*** is a state of an insufficient supply of essential nutrients or a deficiency of one or more nutrients, including nutrients providing energy
  - ***Health*** the state of complete physical, mental, and social well-being; not merely the absence of disease and infirmity
  - ***Wellness*** that integrates body, mind, and spirit should be the main goal in life
  - ***Nutritional status*** One's physical condition as determined by the diet or condition of the body as it relates to the consumption and utilization of food

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- **Good nutritional status** the intake of a balanced diet containing all the essential nutrients to meet the body's requirements for energy, maintenance, and growth
  - **Poor nutritional status** an inadequate intake (or utilization) of nutrients to meet the body's requirements for energy, maintenance, and growth
  - **Kilocalorie** (kcalorie, kcal) technically correct term for unit of energy in nutrition, equal to the amount of heat required to raise the temperature of 1 kg of water 1°C



**Figure 1-1** Good nutrition shows in the happy faces of these children

**Figure 1-2** The poor-quality hair, mottled complexion, dull expression, spindly arms and legs, and bloated abdomen of this baby girl exemplify many signs of malnutrition.



<b>Good nutritional status</b>	<b>Poor nutritional status</b>
<b>Alert expresion</b>	<b>Apathy</b>
<b>Shiny hair</b>	<b>Dull, lifeless hair</b>
<b>Clear complexion with good color</b>	<b>Greasy, blemished complexion with poor color</b>
<b>Bright, clear eyes</b>	<b>Dull, red-rimmed eyes</b>
<b>Pink, firm gums and well-developed teeth</b>	<b>Red, puffy, receding gums and missing or cavity-prone teeth</b>
<b>Firm abdomen</b>	<b>Swollen abdomen</b>
<b>Firm well-developed muscles</b>	<b>Underdeveloped, flabby muscles</b>
<b>Well-developed bone structure</b>	<b>Bowed legs, “ pigeon” breast</b>
<b>Normal weight for height</b>	<b>Overweight or underweight</b>
<b>Erect posture</b>	<b>Slumped posture</b>
<b>Emotional stability</b>	<b>Easily irritated, depressed, poor attention span</b>
<b>Good stamina, seldom ill</b>	<b>Easily fatigued, frequently ill</b>
<b>Healthy appetite</b>	<b>Excessive or poor appetite</b>
<b>Healthy, normal sleep habits</b>	<b>Insomnia at night, fatigued during day</b>
<b>Normal elimination</b>	<b>Constipation or diarrhea</b>



# ***Assessment of Nutritional Status***

**i. Physical Findings**

**ii. Anthropometric Measurements**

**iii. Laboratory Data**

**iv. Diet History and Methods of Evaluating Data**



A



B



C



D

**Figure 1-3** (A) Height is one anthropometric measurement used in the nutrition assessment. (B) Weight is an anthropometric measurement used in the nutrition assessment. (C) Head circumference is an anthropometric measurement used to assess Brain development during the first year of life. (D) Skinfold is an anthropometric measurement used to assess lean muscle mass versus fat

# *Nutrients & their Functions*

- **Carbohydrates (CHO)** – provide energy (4 kcal)
- **Fats (lipids)** – provide energy (9 kcal)
- **Proteins** – build and repair body tissues; provide energy (4 kcal)
- **Vitamins** – regulate body processes
- **Minerals** – regulate body processes
- **Water** – regulate body processes

**Key:**

- Fat (naturally occurring and added)
- ▼ Sugars (added)

*These symbols show fats, oils and added sugars in foods.*

