

Relevance of Nutrition and Dietetics in Health Management

Agugo UA*

Department of Nutrition and Dietetics, Imo state Polytechnic, Umuagwo-Ohaji, Nigeria

*Corresponding author: Agugo UA, Department of Nutrition and Dietetics, Imo state Polytechnic, Umuagwo-Ohaji, Nigeria, Tel: 07035370651; E-mail: udodiriagugo@yahoo.com

Received date: Oct 18, 2017; Accepted date: Oct 23, 2017; Published date: Oct 27, 2017

Copyright: © 2017 Agugo UA. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Summary

The health of an individual cannot be properly maintained or managed without nutrients in food. Food nutrients are essential components for living organisms to stay alive. Varieties of food are combined in meal preparation to produce different diets either therapeutic (to manage a particular health disorder) or normal (to maintain good health). To understand the chemistry of food nutrients, how best to combine food nutrients in meal preparation to obtain adequate diet needed to meet the body nutrient requirements, nutrition becomes relevant.

Introduction

Health is the general physical condition of the body or mind especially in terms of presence or absence of diseases. The human body is made up of a number of systems that work inter-dependently to maintain life and health of an individual [1]. The activities of the body systems are understood in the context of anatomy, physiology and pathology.

Anatomy

This is the study of the structures of the body and the physical relationships between body systems which includes; circulatory, lymphatic, nervous, skeletal, muscular, endocrine, digestive, excretory, reproductive etc. Each of the body system consists of several organs, tissues and cells that perform specific functions to sustain life. These organs, tissues and cells require food nutrients for proper functioning.

Physiology

This deals with how the body systems work, and ways in which the integrated activities of the body systems maintain life and health of individuals. Some disorders of the body system (arteriosclerosis, hypertension, ischemic heart disease, hyperglycemia etc.) are often regarded as diet-related. This implies inadequate consumption of food nutrients or improper utilization of required food nutrients by the body.

Pathology

This deals with abnormalities that affect proper body functioning, often causing illness which include inflammation, tumors, abnormal immune mechanisms, thrombosis, arteriosclerosis, degeneration, metabolic abnormalities, genetic abnormalities etc. when the normal body processes is interrupted with illness it results in poor state of health. In fact, at any stage of disease condition diet plays vital role in the proper management to promote good health.

What is food?

Food is generally known as an essential need for every living organism. In health management is better to regard food as a human right for a productive life. Food contains chemical substance (nutrients) needed by the body systems to function optimally. Food nutrients are classified into to:

Macronutrients: These are required in large amounts by the body. They include carbohydrates, Proteins, and fats.

Micronutrients: These substances are the “magic wands” that enable the body to produce enzymes, hormones and other substances essential for proper growth and development. The micronutrients (vitamins and minerals) apart from acting as obligatory co-enzymes for proper metabolism of macro nutrients, provides other numerous functions.

Water: Water is the major constituent of the body. Water represents on average 60% of the body weight in adult men, and 50-55% in women [2,3]. This is because women typically have less skeletal muscle and more fat than males.

What is diet?

Diet is a food usually consumed by a person or animal to maintain health and sustain life. In meal preparation foods are combined to obtain various diets. The right combination of different food nutrients to meet the body requirement is referred to “adequate diet”. An adequate diet can be achieved by eating variety of foods. Healthy eating habit therefore, implies regular consumption of adequate diets. Diet can be normal or therapeutic.

Normal/Regular diet: should comprise of right proportions of food nutrients and capable of maintaining a state of good health. It is intended to any healthy person that does not need therapeutic diet.

Therapeutic diet: This is a modification of the normal diet to manage a particular disease condition. Therapeutic diet comprises of food from specified food group specially designed for a particular disease condition. Food groups to include and the indication will be dependent on the peculiarity of the health condition that requires dietary management and the individual.

What is nutrition?

According to National Institutes of Health [4], Nutrition is the science that interprets the interaction of nutrients and other substances in food in relation to maintenance, growth, reproduction, health and disease of an organism. It includes food intake, absorption, assimilation, biosynthesis, catabolism and excretion. A person is considered nutrition secure when he/she has a nutritionally adequate diet and the food consumed is biologically utilized such that adequate

performance is maintained in growth, resisting or recovering from disease, pregnancy, lactation and physical work [5].

The gastro-intestinal tract (GI): The gastro intestinal tract performs very important function in the body, it is through this tract that food nutrients are ingested in the body, digested, absorbed, and transported to the various organs, tissues and cells of the body therefore needs to be properly maintained.

However, the state of health of a person depends to a great extent on the type, quantity and quality of food nutrients consumed [6]. When a person does not eat proper food, it results to poor nutrition that leads to the malfunctioning of some organs of the body. Poor nutrition can also influence the mental and social well-being of a person [1].

The relationship between food nutrients and health maintenance was also revealed in the book of Daniel (1:1-21) in the bible. When Daniel and his companions were captured by king Nebuchadnezzar of Babylon they rejected the wine and meat offered by the king's steward and dwelled on vegetable (including pulses) and water. The king's steward was amazed when after ten days Daniel and his companion looked healthier than the other captives who were fed with meat and wine. The relationship between nutrition and health cannot be over

emphasized. It has been reported that mode of food consumption largely impacts the way the body functions. Eating poorly or well can make a big difference on both the physical and mental aspects of the body. Eating a healthy diet affects the body positively [7]. I urge everybody to eat well to remain healthy and productive.

References

1. Waugh A, Grant A (2010) Ross and Wilson Anatomy and Physiology in Health and Illness. 11th Edn; pp: 512.
2. European Food Safety Authority (2010) Scientific Opinion on Dietary Reference Values for water. EFSA Journal; 8: 1459-1507.
3. Appel LJ, Baker DH, Or OB, Minaker KL, Morris RC, et al. (2004) Dietary reference intakes for water, potassium, sodium, chloride, and sulphate. National Academies Press, Washington, DC; 4: 73-185.
4. Joint Collection Development Policy: Human Nutrition and Food" (1998) US National Library of Medicine, National Institutes of Health.
5. Frankenberger TR, Oshaug A, Smith LC (1997) A definition of nutrition security.
6. FAO Information Division (2017) Agriculture food and nutrition for Africa - A resource book for teachers of agriculture.
7. Simonson L (2017) Effects of Healthy Eating.