

Nutrition: Chapter 1

Nutrient Density - A measure of the nutrients provided by a food relative to its calorie content

Essential Nutrients - A nutrient that must be consumed

Calories - Unit by which energy is measured (measured in Kilocalories)

Fortified foods - the addition of essential nutrients to foods/foods, in which one or more essential nutrients have been added

Dietary supplements - Provide nutrients but do not offer all the benefits of foods

Phytochemicals - Found in plant based foods/ responsible for giving colors and flavor to plants/ non-essential nutrient but can be beneficial for health

Six categories of nutrients - Vitamins, minerals, water, carbohydrates, proteins, lipids

Micronutrients - are needed in small amounts: vitamins and minerals

Macronutrients - are needed in large amounts: water, carbohydrates, proteins, lipids

Three functions of Nutrients - Provide energy, form structures, and regulation

Provide Energy - Macronutrients are main sources of energy; used to maintain body functions, fuel physical work, and repair the body; micronutrients regulate bio-chemical reactions that released energy contained in macronutrients

Form Structures - water, fat, and protein comprise most body weight; with the exception of vitamins, all the classes of nutrients are involved in forming and maintaining the body's structure

Regulation - Body temperature, blood pressure, hormones and cell communication, speed up reactions

Malnutrition - Energy or nutrient intake greater or less than optimal requirements/ it can cause negative immediate and long term effects

Under nutrition - Too little of a nutrient or nutrients or calories; the more severe deficiency, the more dramatic symptoms

Over nutrition - Too much of a nutrient or nutrients or calories/ overconsumption of dietary supplements, nutrients, calories

Nutritional Genomics - The study of interactions between genes and nutrition

Three core principles of eating a healthy diet - Eat a variety of foods, balance your choices, and practice moderation

Scientific Method - Make an observation, propose a hypothesis, design & conduct experiment, develop theory based on the results

Epidemiological Studies - Studies that explore the impact of nutrition and health among population groups

Clinical Studies (intervention studies) - Observations & hypothesis that arise from epidemiological studies can be tested using clinical trials; intervention component; include an experimental group and a control group

Animal Studies - Can provide preliminary data that often lead to human subjects/ care must be taken when extrapolating animal results to humans

Biochemistry or molecular biology - Laboratory-based techniques to study nutrients functions in the body/ biochemistry to study chemical reactions that provide certain nutrients/ molecular to study how nutrients regulate our genes

Valid experiments - Quantifiable data, appropriate experimental population, proper controls, results must be interpreted correctly