1. functional food is a food claimed to have an additional function by adding new ingredients or more of existing ingredients. The term may also apply to traits purposely bred into existing edible plants, such as purple or gold potatoes having enriched anthocyanin or carotenoid contents, respectively

b. **Functional foods** can be considered to be those whole, fortified, enriched or enhanced**foods** that provide health benefits beyond the provision of essential nutrients (e.g., vitamins and minerals), when they are consumed at efficacious levels as part of a varied diet on a regular basis.

C. When **food** is being cooked or prepared using "scientific intelligence" with or without knowledge of how or why it is being used, the **food** is called "**functional food**". Thus, **functional food** provides the body with the required amount of vitamins, fats, proteins, carbohydrates, etc., needed for its **healthy**survival

2. **Nutritional assessment** is used to determine whether a person or group of people is well nourished or malnourished (over-nourished or under-nourished). It involves the interpretation of anthropometric, biochemical (laboratory), clinical and/or **dietary** data.

b. **Anthropometry** is the measurement of physical dimensions such as height or weight, as well as the fat mass composition of the human body to provide information about a person's **nutritional** status. An index is a combination of two **anthropometric**measurements or an **anthropometric** measurement plus age.

3.

Life Stage	Change in Nutrient Needs
Pregnancy*	**Increased requirements:** energy, protein, essential fatty acids, vitamin A, vitamin C, B-vitamins (B_1, B_2, B_3, B_5, B_6, B_{12}, folate, choline) & calcium, phosphorus,** magnesium, potassium, iron, zinc, copper, chromium, selenium, iodine, manganese, molybdenum
Lactation*	**Increased requirements:** vitamins A, C, E, all B-vitamins, sodium, magnesium** **Decreased requirements:** iron
Infancy, childhood*	**Increased requirements:** energy, protein, essential fatty acids
Adolescence*	**Increased requirements:** energy, protein, calcium, phosphorus, magnesium, zinc (females only)
Early adulthood (ages 19-50)	**Increased requirements for males, compared with females:** vitamins C, K; B_1, B_2, B_3, and choline; magnesium, zinc, chromium, manganese **Increased requirements for females, compared with males:** iron
Middle age (ages 51-70)*	**Increased requirements:** vitamin B_6, vitamin D
Elderly (age 70+)*	**Increased requirements:** vitamin D **Decreased requirements:** energy; iron (females only)

Changing Nutrient Needs through the Life Cycle