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DEPARTMENT- MEDICAL LAB SCIENCE

COURSE- BCH 206

MATRIC NO- 18/MHS06/004

Q1. What is a functional food

A functional food is a food giving additional functions (often related to health promoting or disease prevention) by adding new ingredients or more existing ingredients

b. Describe the different types of functional food

- Conventional foods

-Modified food

-Medical food

- Food for special dietary

-Conventional food

These are the most basic of the functional food because they haven't been modified by enrichment or fortification. They are still in their natural state. Most whole fruits and vegetables fall into this category because they are rich in phytochemical such as lycopene, lutein. Quarcetin, biotin.

-Modified food

There are food that have been enriched, fortified or enhanced with nutrient or other beneficial ingredient for example calcium fortified orange juice, folic acid enriched bread.

-Medical food

It is defined as the food formulated to be consumed or administered under the supervision of a physician and which is intended for the special dietary management for a disease or condition in which distinctive nutritional requirement base on recognized scientific Principe are established by medical evaluation. Medical food includes specialized formulas designed for people who have specific health problems.

-Food for special dietary

These are simple to medical food but they are available commercially and don't require the supervision of a health Care provider. These food fill special dietary names that are due to specific health conditions such as obesity, gluten free food lactose free diary product and food designed to aid weight Loss are considered food for dietary use.

c. With relevant examples, give the clinical implications of functional foods

-Fortified margarines

Reduce total and LDL cholesterol

-Psyllium

Reduce total and LDL cholesterol

-Whole oat products

Reduce total and LDL cholesterol

-Tomatoes and processed tomato products

Reduce risk prostate cancer

-Fermented dairy products

Support GI health, boost immunity

-Cruciferous, vegetables

Reduce risk of certain types of cancer

Q2. What is nutritional status assessment?

Nutritional status 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. Describe anthropometric techniques of nutritional assessment and its applications

Anthropometry is the measurement of body height, weight & proportions. It is an essential component of clinical examination of infants, children & pregnant women. It is used to evaluate both under & over nutrition. The measured values reflects the current nutritional status & don't differentiate between acute & chronic changes

Q3. Describe nutrition as it relates to life stages

Nutrition is the science that interprets the nutrients and other substances in food in relation to maintenance, growth, reproduction, health and disease of an organism. It includes ingestion, absorption, assimilation, biosynthesis, catabolism and excretion.

The key stages in life include:

•Pregnancy

•Infancy

•Childhood

•Adolescence

•Adulthood.

-Pregnancy

A varied diet, providing adequate amounts of energy and nutrients, is essential both before a woman becomes pregnant (pre-conception) and during pregnancy .The mother's diet can influence the health of the baby

-Infancy

The process of producing breast milk is called lactation Breast milk provides all the energy and nutrients a baby needs for growth and maintenance during the first 4 to 6 months of life. In the first three days after birth, the mother produces a special form of breast milk called colostrum. It contains less fat, more protein and more protective factors than the breast milk produced later.

-Childhood

The energy requirements of children increase rapidly because they grow quickly and become more active. This means they have a high energy requirement for their size. Young children do not have large meatandeducation.com 2014stomachs to cope with big meals. Therefore, to achieve the relatively high energy intake for their age, they should consume small and frequent meals

-Adolescence

Adolescence is a period of rapid growth and development and is when puberty occurs.

The demand for energy and most nutrients are relatively high. Boys need more protein and energy than girls due to their later growth spurt.A growth spurt begins around 10 years of age in girls and 12 years in boys. In both sexes, an average of 23 cm is added to height and 20 to 26kg in weight. Before adolescence, both girls and boys have an average of 18% body fat, during adolescence, this increases to around28% in girls and decreases to around 15% in boys.

-Adulthood

Nutritional requirements do not change much between the ages of 19 to 50, except during pregnancy and lactation. On average, UK adults are having too much saturated fat and salt from food, and not enough fruit and vegetables. A poor diet can lead to diseases such as obesity, cardiovascular diseases, cancer andtype-2 diabetes.