

**Ohisa William Muras Odiongo**

**County Health Officer**

**CHD- Lopa**

**South Sudan**

**No: AIPMS/218/007/2018**

**RE: DIPLOMA IN HUMAN NUTRITION**

**ASSIGNMENTS 3** Oct 31, 2018

1. Explain types of Carbohydrates and five functions of Carbohydrates in Human Body

Types of Carbohydrates are:

1. Monosaccharide – are the simple sugars which are in it simplest form and cannot be hydrolyzed into simpler form so far. Therefore, they are colorless, water soluble.
2. Disaccharides - are the sugars forms when two monosaccharides are combine together e.g. when sucrose and lactose are combine together.
3. Polysaccharides – are the large group of complex carbohydrates which have a big numbers of sugars molecules. Most polysaccharides are insoluble in water.

**Functions of Carbohydrates**

1. It is energy giving and regulation of blood – the Human body requires Energy for maintenance of its growth and development.
2. Prevent the use of Protein as the source energy in the absence of carbohydrates by maintaining the constant intake of carbohydrate in the body.
3. Breakdown of fatty Acids- Lipids play an important role in the metabolic and structural balance of the body, since it cannot be synthesis by the as being a poly unsaturated fatty Acids which are essential ,the intake of carbohydrate help to break it down to provide Energy.
4. Flavor and sweetener- carbohydrates provide food with flavoring agent which make the food to taste sweet with the help of receptors at the tip of the tongue.
5. Improve and clean the digestive system- eating of carbohydrate inform of fiber always help to clean and improve digestion by easing constipation and solidify stool during diarrhea.
6. For the following nutrients, can you say why they are important and name three sources? Are these foods micronutrients or macronutrients?. Carbohydrates, Proteins . Fats and oils

**Importance**

* They provide energy in the body
* Build and repair body tissues
* Maintenance of body functions and daily body activities

**Sources**

* Proteins from animals products such as meat, beef and chicken.
* Carbohydrate from dairy such as milk and yoghurt
* Carbohydrate from beans and pulse
* Fats from groundnut
* Eggs
* Sea food like fish and salmon.

These three Nutrients are in the group call macronutrients since the body requires them in a big amount for the provision of energy and body building and repair.

1. What nutrient deficiency do the following clinical signs/symptoms indicate?

|  |  |
| --- | --- |
| **Clinical signs/symptoms** | **Nutrients deficiency** |
| (a) Pallor | Due to lack of Iron in the body |
| (b) Goitre | Lack of iodine |
| (c) Bitot’s spots | Vitamin A deficiency |
| (d) Bilateral pitting oedema | **malnutrition** |
| (e) Severe visible wasting | Severe acute malnutrition |

1. What is the impact of malnutrition on communities? How can you help prevent some of the negative effects of malnutrition?

**Impact of malnutrition**

1. High death rate among children
2. Less income generation due to much attention is given to the sick
3. Growth failure among vulnerable group resulting to wasting and stunting
4. Risk of getting infections
5. Little or no development

**Prevention /what to be done**

* intensify farming mechanism to generate more food production
* strengthen the health institutions for provision of quality medical care
* embrace peaceful co-existence in areas with conflict to give time for agriculture
* household food security ( access and availability)

1. Who are the individuals most vulnerable to vitamin A deficiency, iodine deficiency disorder and iron deficiency anaemia in your community?. Imagine you have identified people in your community who are suffering from vitamin A deficiency, iodine deficiency disorder and iron deficiency anaemia. What can you do to address these problems?
2. Vitamin A deficiency-this is cause by lack of Retinol which is essential for bones formation ,growth, and differentiation of control of epithelial cells

* Children 6 months of age to years are most vulnerable to nutrients’ deficiency.

1. Iodine deficiency disorder- is cause by no or little iodine in the body. Iodine is very useful in the synthesis of the thyroid hormone and vital for growth and cell differentiation.

* The vulnerable groups for this deficiency are foetus, newborn, infants, adolescent and adults.

1. Iron deficiency- this is due to lack of iron in the body and Iron is very important for the formation of haemogolobin, the deficiency can be treated using iron.

* The vulnerable group of people are foetus, newborn and pregnant women.

1. Anemia – this is the condition of excess accumulation of fluids in the lower part of limps characterize by swelling of the legs. This can be treated using folic Acids.

* The most vulnerable group for this deficiency are foetus, newborn , pregnant women and women of child bearing age

**What can be done to address this nutrient deficiency in the community?**

* Create awareness in the community for health seeking behavior.
* Provision of folic acid by health workers to pregnant women for prevention of iron deficiency
* Children suffering from anemia their parents or caregiver should be encouraged taking them to health facility for medical attention.
* Community should be encouraged to use Iodize table salts to reduce the risk of getting goiter.
* Above all, dietary eating is important for healthy growth and body functions.

1. Identify at least four ways in which fiber helps us maintain a healthy digestive system.

* It help to regulate the body’s use of sugars, helping it to keep the hunger and blood sugar intact
* It help to lower glucose level and as well as blood cholesterols
* Insoluble fiber helps food to move through digestive system and help to prevent constipation too.
* Fiber help to reduce the risks of getting diseases like heart diseases and diabetic.