



3055 BA SANGAM COLLEGE

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Worksheet 14

School: Ba Sangam College

Year:12

Subject: Home Economics

Name: _____

Strand	2 HEC 12.2 Food and Nutrition
Sub strand	HEC 12.2.3 Diet and Health
Content Learning Outcome	HEC12.2.3.1 Explore the utilization of micronutrients and the effects of malconsumption by individuals.

Vitamin	Function	Dietary sources	Characteristic
Vitamin E (Tocopherols)	It is necessary for metabolism. Acts as an antioxidant. Its antioxidant properties prevent oxidation of polyunsaturated fatty acids within the body, thus enabling them to reduce susceptibility to coronary heart disease.	Eggs Cereals Wheat – germ Vegetable and cereal oils such as corn oil-Animal fats, Pulse vegetables especially soya beans	A yellow, fat – soluble alcohol. Insoluble in water. Stable to heat and acids. Unstable to alkalis and ultra – violet light. A powerful antioxidant – delays rancidity.
Vitamin K (Quinone's)	Necessary for blood clot. Vitamin K is a component of prothrombin (a protein in the blood).	Liver Green vegetables Fish, Fish liver oil Manufactured by bacteria in the intestine.	Fat – soluble Insoluble in water Affected by irradiation

WATER SOLUBLE VITAMINS

There are six important vitamins in the group. Thiamine (B1) Pyridoxine (B6) Riboflavin (B2) Folic acid Nicotinic Acid Cyanocobalamin (B12)

Vitamin B group		
Functions	Dietary Sources	Characteristics
Thiamine B1 Essential for release of energy from carbohydrates.	Unprocessed cereals, wheat germ. Yeast, breakfast cereals (fortified). Heart, liver, kidney,	Extremely water soluble <ul style="list-style-type: none">• Unstable at high temperature• Sensitive to alkalis

Essential for upkeep of nerves. Necessary for appetite.	carcass meat. Milk, eggs, vegetables.	<ul style="list-style-type: none"> 70% loss during milling/processing
Riboflavin (B2) Involved in metabolism of proteins, lipids, and carbohydrates. Essential for up – keep of tissues – e.g., skin, eyes tongue Necessary for growth and good health.	Beef, liver, kidney, heart. Yeast, yeast extract. Milk, eggs, cheese. Green and sprout vegetables and seeds.	Water soluble <ul style="list-style-type: none"> Fairly stable to heat. Destroyed by alkalis. Affected by light e.g., milk in bottles
Nicotinic acid (Niacin) Involved in energy release from food. Essential for healthy skin. Prevents pellagra	Meat, offal, meat extract. Yeast, bran, wheat germ, flour, Fish, pulses, dried fruits. Some manufactured by bacteria in gut from tryptophan	Water soluble <ul style="list-style-type: none"> Stable to heat. Fairly stable to acids and alkalis. 80 – 90% loss in milling
Pyridoxine (B6) Acts as co – enzymes in the metabolism of protein. Assists in the formation of hemoglobin and structural proteins.	liver, cereals, wheat germ, fish, yeast, seeds are good sources.	Water soluble <ul style="list-style-type: none"> Reasonably heat stable. Affected by high temperatures. Sensitive to oxidation.

Activity

(10 marks)

1. What is the function of the following nutrients?

i. Vitamin E

ii. Vitamin K

iii. Thiamine (vitamin B1)

iv. Riboflavin (vitamin B2)

v. Nicotinic acid
