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Notes for B.Sc. part 3<sup>rd</sup>, paper  
V.

Question :- Write notes on Function  
of Vitamin ?

Answer :- Vitamins : Their Functions  
and Sources :-

The tables below list the  
vitamins, what they do in  
the body (their functions),  
and their sources in food.

Water-soluble vitamins :-

Water-soluble vitamins  
travel freely through the  
body, and excess amounts  
usually are excreted by  
the kidneys. The body  
needs water-soluble vitamins  
in frequent, small doses.

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These vitamins are not as likely as fat-soluble vitamins in frequent, small doses.

These vitamins are not as likely as fat-soluble vitamins to reach toxic levels. But niacin, vitamin B6, folate, choline, and vitamin C have upper consumption limits. Vitamin B6 at high levels over a long period of time has been shown to cause irreversible nerve damage.

A balanced diet usually provides enough of these vitamins. People older than 50 and some vegetarians may need to use supplements to get enough B12.

Nutrient	Function	Sources
Thiamine (Vitamin B1)	Part of an enzyme needed for energy metabolism; important to nerve function	found in all nutritious foods in moderate amounts; pork, whole-grain

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		or enriched breads and cereals, legumes, nuts and seeds.
Riboflavin (vitamin B <sub>2</sub> )	Part of an enzyme needed for energy metabolism; important for normal vision and skin health	Milk and milk products; leafy green vegetables; whole grain, enriched breads and cereals
Niacin (vitamin B <sub>3</sub> )	Part of an enzyme needed for energy metabolism, important for nervous system, digestive system, and skin health	meat, poultry, fish, whole-grain or enriched breads and cereals, vegetables (especially mushrooms, asparagus and leafy green vegetables), peanut butter...
Pantothenic acid	Part of an enzyme needed for energy metabolism	widespread in foods

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Biotin	Part of an enzyme needed for energy metabolism	widely spread in foods; also produced in intestinal tract by bacteria
Pyridoxine (Vitamin B6)	Part of an enzyme needed for protein metabolism; helps make red blood cells	Meat, fish, poultry, vegetables, fruits
Folic acid	Part of an enzyme needed for making new cells; important to nerve function	leafy green vegetables and legumes, seeds, orange juice, and liver; now added to most refined grains
Cobalamin (Vitamin B12)	Part of an enzyme needed for making new cells; important to nerve function	Meat, poultry, fish, seafood, eggs, milk and milk products; not found in plant foods.

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## Fat - soluble vitamins :-

Fat soluble vitamins are stored in the body's cells and are not excreted as easily as water soluble vitamins. They do not need to be consumed as often as water - soluble vitamins, although adequate amounts are needed. If you take too much of a fat - soluble vitamin, it could become toxic.

A balanced diet usually provides enough fat - soluble vitamins. You may find it more difficult to get enough vitamin D from food alone and may consider taking a vitamin D supplement or a multivitamin with vitamin D in it. Refer to Healthlink BC file # 68 e food sources of calcium and vitamin D

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For food source ideas and information on supplements, talk to your health care provider about the right supplement for you.

<del>Nutrient</del> Nutrient	<del>Function</del> Function	<del>Sources</del> Sources
Vitamin A (and its precursor <sup>y</sup> , beta-carotene) * A precursor is converted by the body to the vitamin	Needed for vision, healthy skin and mucous membranes, bone and teeth growth, immune system health	Vitamin A from animal sources (reti- -nal): fortified milk cheese, cream, butter fortified margarine, eggs, liver, beta-carotene (from plant sources): leafy, dark green vegetables; dark orange fruits (apricots, cantaloupe) and vegetables carrots, winter squash, sweet potatoes, pumpkin.