



## VITAMINS

- They are the organic compounds which are required in small amounts in our diet but their deficiency causes specific diseases.
- Plants can synthesise almost all of vitamins but most of the vitamins cannot be synthesised in our body.
- Some of vitamins produce by bacteria of the gut.
- Vitamins are categorised by alphabets A, B, C, D, etc. Some of them are further termed as sub-groups e.g. B<sub>1</sub>, B<sub>2</sub>, B<sub>6</sub>, B<sub>12</sub>, etc.

### Classification of Vitamins

- On the basis of their solubility in H<sub>2</sub>O or fat they are classified into two groups.

#### (i) Fat Soluble Vitamins

- Vitamins which are soluble in oils and fats but not soluble in water are to be considered in this group.
- They are vitamins A, D, E and K. These can be stored in adipose (fat storing) tissues and liver

#### (ii) Water Soluble Vitamins

- Vitamins which are soluble in water but insoluble in fat or oils.
- Vitamin B & vitamin C are soluble in water so they can grouped together.

### Definition

organic compounds required in the diet in small amounts to perform specific biological functions for normal maintenance of optimum growth and health of the organism.

### Rack your Brain



Which vitamin is not found in plants?

### Previous Year's Questions



Which of the following is not a fat soluble vitamin?

**[AIPMT-2011]**

- (1) Vitamin B complex
- (2) Vitamin D
- (3) Vitamin E
- (4) Vitamin A

**Q4** Deficiency of which vitamin causes  
(i) Pernicious anaemia (ii) convulsions

**Sol.** (i) Pernicious anaemia is caused by deficiency of vitamin B<sub>12</sub>.  
(ii) Convulsion sare caused by deficiency of vitamin B<sub>6</sub>.



S.No.	Name of Vitamins	Sources	Deficiency diseases
(i)	Vitamin A	Carrots, fish liver oil, butter and milk	Xerophthalmia, night blindness
(ii)	Vitamin B <sub>1</sub> (Thiamine)	Milk, green vegetables, cereals and yeast	Beri beri (loss of appetite, retarded growth)
(iii)	Vitamin B <sub>2</sub> (Riboflavin)	Egg white, milk, liver, kidney	Digestive disorders, cheilosis (fissuring at corners of mouth and lips) and burning sensation of the skin.
(iv)	Vitamin B <sub>6</sub> (Pyridoxine)	Milk, cereals, egg yolk and grams, yeast	Convulsions
(v)	Vitamin B <sub>12</sub>	Fish, meat, egg and curd	Pernicious anaemia (RBC deficient in haemoglobin)
(vi)	Vitamin C (Ascorbic acid)	Amla, Citrus fruits and green leafy vegetables	Scurvy (bleeding gums)
(vii)	Vitamin D	Exposure to sunlight, fish and egg yolk	Osteo- malacia (joint pain in adults and soft bones) and rickets (bone deformities in children)
(viii)	Vitamin E	Vegetable oils like sunflower oil ,wheat germ oil,etc.	Increased fragility of RBCs and muscular weakness
(ix)	Vitamin K	Vegetable oils like sunflower oil, etc.	Increased blood clotting time