



VITAMINS

B.Sc. Part-II
Dr. Vandana Kumari,
Department of zoology, R.C.S.
College, Manjhaul

INTRODUCTION

- Vitamins are substances that our body needs to grow and develop normally.
- These refer to any of a group of organic compounds which are essential for normal growth and functioning and are required in small quantities in the diet.
- Vitamins are biologically important. Although a micronutrient, it enhances the metabolism of macronutrients like proteins, carbohydrates and fats.
- Vitamins are also required for growth in children, formation of hormones, blood cells, tissues and bones.
- Vitamins cannot be synthesized or produced by the human body, hence our diet must include them.

CLASSIFICATION OF VITAMINS

On the basis of solubility vitamins are classified into two categories:

- Water soluble vitamins
- Fat soluble vitamins

WATER SOLUBLE VITAMINS

- A water-soluble vitamin is one that dissolves in water.
- It is easily absorbed in the body tissue and metabolized more quickly.
- Majority of vitamins are water soluble vitamins.
- - E.g. vitamin B complex, vitamin C.
- Any excess of water soluble vitamins are excreted through the urination process.
- Most of the water soluble vitamins are found in vegetables and fruits (citrus fruits).

FAT SOLUBLE VITAMINS

- Fat soluble vitamins dissolve in fat
- These vitamins are absorbed by fat globules within the body and carried throughout the bloodstream.
- Any excess of fat soluble vitamins don't immediately leave the body.
- Instead they are stored in the liver or fatty tissue.
- There are 4 fat soluble vitamins – Vitamin A, Vitamin D, Vitamin E and Vitamin K.
- Fat soluble vitamins are found in high fat food sources like egg yolk, sugar, fish, dairy product etc.

TYPES OF VITAMINS

Water soluble vitamins

1. Vitamin B1 - Thiamine
2. Vitamin B2 - Riboflavin
3. Vitamin B3 - Niacin
4. Vitamin B5 - Pantothenic Acid
5. Vitamin B6 - Pyridoxine
6. Vitamin B7 - Biotin
7. Vitamin B9 - Folic Acid (Folate)
8. Vitamin B12 - Cobalamin
9. Vitamin C - Ascorbic Acid

Fat soluble vitamins

- Vitamin-A - Retinol
- Vitamin-D - Cholecalciferol
- Vitamin - Tocopherol
- Vitamin-K