VITAMINS

Vitamins are organic molecules that are essential for normal health and growth. They are required in trace amounts and must be obtained from the diet because they are not synthesized in the body.

- Organic molecules with a wide variety of functions.
- Cofactors for enzymatic reactions

Before vitamins were discovered, it was known that lime juice prevented the disease scurvy in sailors and that cod liver oil could prevent rickets. In 1912, scientists found that, in addition to carbohydrates, fats, and proteins, certain other factors called vitamins must be obtained from the diet.

Why are they good for us?

- Greater need due to worse environment
- Improve immunity
- Prevent illnesses
- Slower aging

Types of Vitamin

Two distinct types:

Water-soluble

water-soluble vitamin is one that dissolves in water and as a result, is easily absorbed into the tissues of the body and metabolized more quickly than fat-soluble vitamins.

Fat-soluble

The fat-soluble vitamins are soluble in lipids (fats). These vitamins are usually absorbed in fat globules that travel through the lymphatic system of the small intestines and into the general blood circulation within the body.

Water Soluble Vitamins

Vitamin	Alternative Names/Forms
thiamine	vitamin B1
riboflavin	vitamin B2
niacin	nicotinic acid, nicotinamide
vitamin B6	pyridoxine, pyridoxal, pyridoxamine
folic acid	folate, folacin, pteroylglutamic acid
vitamin B12	cobalamin, cyanocobalamin
pantothenic acid	
biotin	
vitamin C	ascorbic acid

- Soluble in aqueous solutions
- Water soluble vitamins Used as cofactors by many enzymes
- Not stored in the body

Fat-Soluble Vitamins

Vitamin	Alternative Names/Forms
vitamin A	retinol, retinal, retinoic acid, beta-carotene (plant version)
vitamin D	calciferol, calatriol (1,25-dihydroxy vitamin D1 or vitamin D hormone), cholecalciferol (D3; plant version), ergocalciferol (D2; animal version)
vitamin E	alpha-tocopherol, tocopherol, tocotrienol

vitamin K	phylloquinone, menaquinone, menadione, naphthoquinone