

Cofactors/Coenzymes – helpers of enzymes in the body. Enzymes cannot function at all without these substances. Some minerals are generally referred as cofactors while many vitamins are called as coenzymes. Cofactors include calcium, magnesium, iron, zinc, selenium, manganese, copper, and molybdenum.

*Additionally, these are the minerals that are/maybe needed in bone and teeth health: calcium, phosphorus, magnesium, silicon and vanadium.

Vitamins are organic micronutrients, unlike minerals. They are divided into two: 10 water-soluble vitamins and 4 fat-soluble vitamins. The water-soluble vitamins comprise of 8 members of the vitamin B complex, choline and vitamin C. We need to continually supply our body with water-soluble vitamins because most of them are not stored but rather excreted in the urine daily. In contrast, fat-soluble vitamins are stored in the liver so deficiency of these vitamins would not normally occur in short term dietary inadequacy. Thus in a daily basis, we need more water-soluble vitamins than fat-soluble vitamins.

Fat-Soluble Vitamin	Key Functions	Main Food Sources	Other Important Notes
Vitamin A	Vision and eyesight; maintenance of healthy tissues like the skin; antioxidant; important in the immune system	Yellow-, orange-, red-pigmented fruits and vegetables, eggs, milk, liver, animal and plant oils	Deficiency: xerophthalmia; toxicity: hypervitaminosis A
Vitamin D	Absorption of calcium and phosphorus	Fish and fish oils, eggs, mushrooms, milk and milk products	Sunshine vitamin; the skin can produce vitamin D when exposed to sunlight; vitamin D deficiency can cause the same diseases as in deficiencies of calcium and phosphorus
Vitamin E	Main fat-soluble antioxidant; nerve health	Plant oils	The function of vitamin E antagonizes that of vitamin K