



SUMMARY

During the first third of the twentieth century, a major focus of research in physiological chemistry was the identification of vitamins, compounds that are essential to the health of humans and other vertebrates. In the year 1912 Funk, a polish biochemist coined the term "vitamine" to designate the antiberiberi factor. In the term vitamine *vita* suggests the essential nature of the factor and amine indicates the chemical structure. Later the same term was used for several unknown dietary factors. Not all the known factors have the amine structure. Therefore in 1919 the last "e" from the vitamine was discontinued from use thereby removing the implications of chemical structure. Vitamins are organic substances (*organic* means "carbon containing") that are only required in small amounts.

Vitamins are organic molecules that function in a wide variety of capacities within the body. The most prominent function is as cofactors for enzymatic reactions. In some cases, they are also precursors of hormones or act as antioxidants. The distinguishing feature of the vitamins is that they generally cannot be synthesized by mammalian cells and, therefore, must be supplied in the diet. Vitamin requirements vary from species to species and are influenced by age, sex, and physiological conditions such as pregnancy, breast-feeding, physical exercise, and nutrition. A healthy diet usually covers average daily vitamin requirements. By contrast, malnutrition, malnourishment disturbances lead to an inadequate supply of vitamins from which *hypovitaminosis*, or in extreme cases avitaminosis, can result. Medical treatments that kill the intestinal flora- e. g., antibiotics- can also lead to vitamin deficiencies (K, B12, H) due to the absence of bacterial vitamin synthesis. Since only a few vitamins can be stored (A,D, E, B12), a lack of vitamins quickly leads to deficiency diseases. These often



affect the skin, blood cells, and nervous system. The causes of vitamin deficiencies can be treated by improving nutrition and by administering vitamins in tablet form. An overdose of vitamins only leads to *hypervitaminosis*, with toxic symptoms, in the case of vitamins A and D. Normally; excess vitamins are rapidly excreted with the urine.

