

A vitamin is an organic molecule (or related set of molecules) which is an essential micronutrient - that is, a substance which an organism needs in small quantities for the proper functioning of its metabolism - but cannot synthesize it (either at all, or in sufficient quantities), and therefore it must be obtained through the diet. The term vitamin does not include the three other essential nutrients: essential mineral (nutrient)s, essential fatty acids, and essential amino acids.

Some substances can be synthesized by a certain organism, but not by another: that substance is not a vitamin in the first instance, but it is in the second. Most vitamins are not single molecules, but groups of related molecules called vitamers. Vitamins are classified by their biological/chemical activity, not their structure. The thirteen vitamins required by human metabolism are: vitamin A (retinols and carotenoids), vitamin B1 (thiamine), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B5 (pantothenic acid), vitamin B6 (pyridoxine), vitamin B7 (biotin), vitamin B9 (folic acid or folate), vitamin B12 (cobalamins), [vitamin C](#) (ascorbic acid), vitamin D3 (cholecalciferol), vitamin E (tocopherols and tocotrienols), and vitamin K (quinones).

[vitamin D](#)

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Last update: **2022/06/22 23:05**

