Vitamins are the essential nutrients that our body needs in small amounts. More specifically, an organic compound is defined as a vitamin when it is required by an organism, but not synthesised by that organism in the required amounts (or at all). There are thirteen recognised vitamins.

Vitamins can be divided broadly into two classes.

**WATER-SOLUBLE VITAMINS**
These vitamins are not stored in the body. As such, generally, they are required more frequently than the fat-soluble vitamins.

**FAT-SOLUBLE VITAMINS**
These vitamins are stored in the liver and fatty tissues until required. As such, they can be harmful if too much is taken in.

---

**VITAMIN A**
**RETINOL**
active form in mammalian tissues
Important for eyesight. Also strengthens immune system and keeps skin and linings of parts of the body healthy.

**VITAMIN B1**
**THIAMIN**
can also occur in pyrophosphate ester form
Used to keep nerves & muscle tissue healthy. Also important for processing of carbohydrates and some proteins.

**VITAMIN B2**
**RIBOFLAVIN**
excess turns urine bright yellow
Important for body growth, red blood cell production, and keeping the eyes healthy. Also helps processing of carbohydrates.

**VITAMIN B3**
**NICOTINIC ACID**
Helps with digestion and digestive system health. Also helps with the processing of carbohydrates.

**VITAMIN B5**
**PANTOTHENIC ACID**
Important for manufacturing red blood cells and maintaining a healthy digestive system. Also helps process carbohydrates.

**VITAMIN B6**
**PYRIDOXAL PHOSPHATE**
active form in mammalian tissues
Helps make some brain chemicals; needed for normal brain function. Also helps make red blood cells and immune system cells.

**VITAMIN B7**
**BIOTIN**
produced by intestinal bacteria
Needed for metabolism of various compounds. Often recommended for strengthening hair, but evidence is variable.

**VITAMIN B9**
**FOLIC ACID**
found as tetrahydrofolate in food
Important for brain function & mental health. Aids production of DNA & RNA. Important when tissues are growing quickly.

**VITAMIN B12**
**COBALAMIN**
usually contains CN as the R group
Important for the nervous system, for making red blood cells, and helps in the production of DNA and RNA.

**VITAMIN C**
**ASCORBIC ACID**
deficiency can cause scurvy
Important for a healthy immune system; helps produce collagen, used to make skin and other tissues. Also helps wound healing. Important for bone health and maintaining the immune system function. May also have a preventative role in cancers.

**VITAMIN D**
**CHOLECALCIFEROL**
natural form; different form used in supplements
Important for bone health and maintaining the immune system function. May also have a preventative role in cancers.

---

**Key**

© COMPOUND INTEREST 2015 - WWW.COMPOUNDCHEM.COM | Twitter: @compoundchem | Facebook: www.facebook.com/compoundchem
This graphic is shared under a Creative Commons Attribution-NonCommercial-NoDerivatives licence.