

VITAMINS, MINERALS, & SUPPLEMENTS

The Basics

DEFINITIONS

Vitamins

Vitamins are compounds that have regulatory functions in the human body. They are required by our bodies, generally in small amounts, and obtained through food because the body cannot fully or wholly produce them on its own. This makes vitamins essential to life, and a deficiency of vitamins can lead to specific symptoms and diseases. Consuming adequate amounts of each vitamin is important in preventing disease (1).

Minerals

Minerals are elements that come from the earth (water, soil, and plants). They play a role in normal cellular activity, balance body fluids, strengthen bones and teeth, and participate in many other roles that help to regulate body functions(1).

Supplements

Dietary supplements are products intended to complete or enhance dietary consumption.

TYPES OF VITAMINS

The following chart categorizes vitamins according to their solubility (the form which they combine with to dissolve and become a solution the body can use) as well as basic body functions they play a role in.

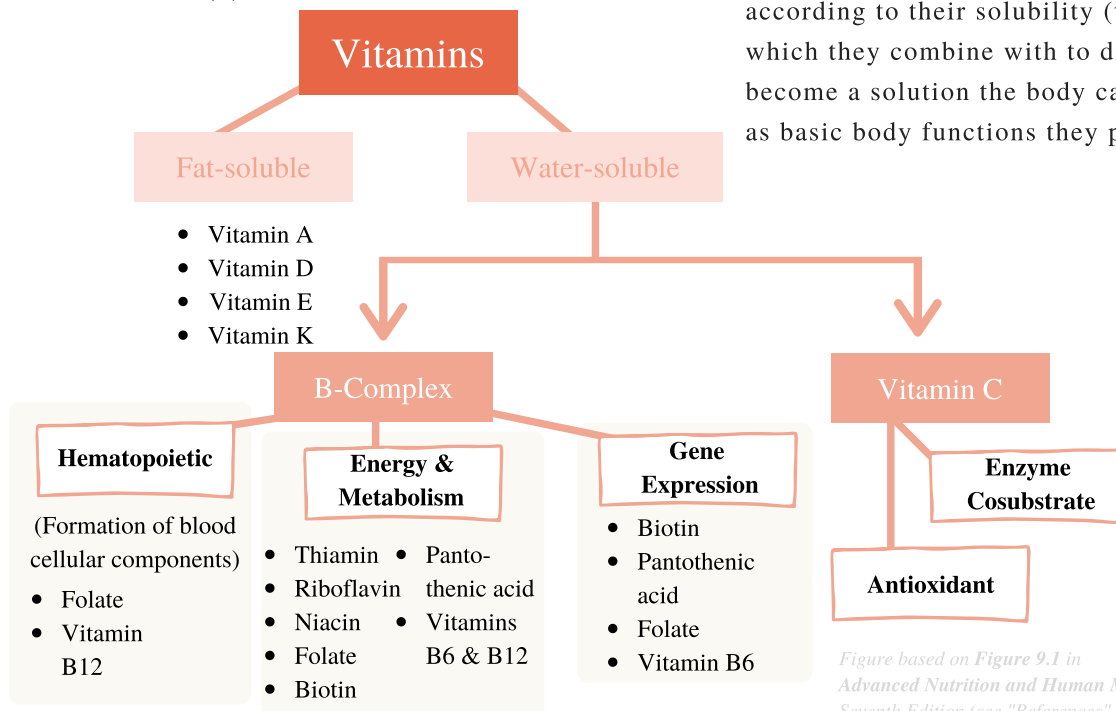


Figure based on Figure 9.1 in *Advanced Nutrition and Human Metabolism*, Seventh Edition (see "References" for full citation).



VITAMINS, MINERALS, & SUPPLEMENTS

The Basics
(continued from previous page)

TYPES OF MINERALS

Major

(Macro)

≥ 100 mg/day required

- calcium
- phosphorus
- sodium
- potassium
- chloride

Trace

(Micro)

<15 mg/day required

- magnesium
- sulfur
- iron
- zinc
- fluoride

Ultratrace

Necessary in microgram
(mcg) quantities each day

- copper
- iodine
- selenium
- chromium
- manganese
- molybdenum
- boron
- cobalt

DETAILS ABOUT DIETARY SUPPLEMENTATION

Always remember to read the label and examine the ingredients. Companies can change the ingredients in their products without warning or notice. Remember- "natural" does not equal "safe".

Contain one or more of the following ingredients:

- vitamin
- mineral
- herb or other botanical
- amino acid
- concentrate
- metabolite
- constituent
- extract
- combination

Potential intended form of ingestion:

- pill
- capsule
- tablet
- liquid form

REFERENCES

1. Gropper SS, Smith JL, Carr TP. Advanced Nutrition and Human Metabolism, Seventh Edition. *Cengage Learning*. 2018. ISBN: 978-1-305-62785-7.
2. Mahen LK, Escott-Stump S, Raymond JL. Krause's Food and the Nutrition Care Process, Edition 13. 2012. Saunders. ISBN: 978-1-4377-2233-8

