

Vitamin \Rightarrow A vitamin is an organic molecule which is an essential nutrient which an organism needs in small quantities for proper functioning of its metabolism. Sources of vitamins are plant & animal food products & dietary supplements. Some vitamins are made in the ¹³ human body from food products. In human there are ¹³ vitamins.

Vitamins are either —

- (4) fat soluble (can dissolve in fats & oils)
- (9) water soluble (can dissolve in water)

fat soluble \Rightarrow Vitamin A (retinol and carotenoids)
D (calciferol)
E (tocopherol)
K (Quinone)

Water Soluble \Rightarrow Vitamin B₁ (thiamine)
B₂ (riboflavin)
B₃ (niacin)
B₅ (pantothenic acid)
B₆ (pyridoxine)
B₇ (Biotin)
B₉ (folic acid)
B₁₂ (cobalamin)
Vitamin C (ascorbic acid)

food source →

(14)

Vitamin A	—	Cod liver oil
B ₁	—	Rice bran
C	—	Citrus, most fresh foods
D	—	Cod liver oil.
B ₂	—	Meat, dairy products, eggs.
E	—	wheat germ oil, vegetable oil.
K	—	leafy vegetables.
B ₅	—	Meat, whole grains
B ₇	—	Meat, dairy products.
B ₆	—	Meat, Grains
B ₃	—	leafy vegetables.
B ₉	—	Meat, organs (liver), Eggs.
B ₁₂	—	

Minerals : \rightarrow These are inorganic components of food that leave ash as residue when burned. In the context of nutrition, a mineral is a chemical element required as an essential ~~nutrient~~⁽¹⁵⁾ nutrient by organisms to perform functions necessary for life.

Minerals originate in the earth & cannot be made by living organisms. Plants get minerals from soil. Most of the minerals in a human diet come from eating plants & animals or from drinking water. The 5 major minerals in the human body are -

- i) Calcium ii) phosphorus iii) potassium
- iv) Sodium v) magnesium.

These 5 types of minerals are called macrominerals. Other kind of minerals is trace minerals that we need in small amounts. These includes -

- i) Iron ii) Manganese iii) Copper iv) Iodine
- v) Zinc vi) Cobalt ~~vii) ~~etc.~~~~

Mineral

Foods

Sources

Sodium —

Milk, breads, vegetables & unprocessed meats.

Potassium —

Meats, milk, fresh fruits & vegetables, whole grains, legumes.

Calcium —

Milk & milk products, legumes.

phosphorus —

Meat, fish & poultry, eggs, milk

Magnesium —

Nuts & seeds, legumes, leafy, green vegetables, chocolates.

Iron — Red meat, fish, poultry, legumes,
dried fruits, egg yolks. (16)

Manganese — Plant foods.

Copper — Legumes, nuts & seeds, whole grains,
drinking water.

Iodine — Seafood, iodized salt, bread,
dairy products.

Zinc — Meats, fish, poultry, vegetables,
whole grain.

Cobalt — fish, nuts, green leafy vegetables,
~~oysters~~ cereals.