

Mineral Elements

Minerals are inorganic substances required by the body in small amounts for a variety of different functions. They are components of enzyme systems, give us structure, and are essential for nervous system function. The body requires different amounts of each mineral. A deficiency or imbalance of these elements in an otherwise nutritionally adequate diet can lead to very diverse and indefinite metabolic abnormalities many of which are classified as diseases by our medical establishment.

There are currently 57 recognized metal or non-gas elements that make up the human body. 23 to 24 of these elements are currently considered essential for our bodies, as are 3 gasses – Oxygen, Hydrogen, and Nitrogen. More than likely, all naturally occurring elements play some kind of role in human metabolism. Below is a list of these 23 elements and one or more of the roles they play in the body.

Because of its water content, (~65%) the human body contains more oxygen by mass than any other element, but more hydrogen by atom than any element.

23 Essential Mineral Elements in the Human Body In Order of Amount

Mineral / Approximate content	Use in the body
Carbon 12kg	A component in virtually every molecule found in the body: it has led science to classify humans as carbon based.
Calcium 1kg	Primarily stored in and a structural component of bone and teeth, calcium is also essential for blood clotting, nerve transmission and energy production.
Phosphorus 750g	Essential component of bone and cells, ATP production and integrity of DNA and RNA.
Potassium 225g	An essential electrolyte, it is essential for muscle contraction.
Sulfur 150g	Essential for collagen production, it has anti-inflammatory properties and a role in blood sugar regulation.

Sodium	Another essential electrolyte, it is essential for proper cellular respiration
100g	
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Chlorine	See sodium above.
95g	
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Magnesium	Last of the essential electrolytes, it is essential for muscle relaxation, as well as vascular health and function.
35g	
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Silicon	The most essential element for collagen formation and health and calcium management.
30g	
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Iron	Essential for proper delivery of oxygen to the cells and removal of carbon dioxide.
4.2g	
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Fluorine	Possible small role in teeth and bone strength.
2.6g	
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Zinc	Essential for healthy immune and reproductive systems and initial growth to maturity.
2.4g	
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Strontium	Small role in bone health.

320g

Copper

Necessary for healthy cardiovascular, nervous and skeletal systems.

90mg

Regulates Zinc and collagen.

Cobalt

Necessary for healthy red blood cells and formation of vitamin B-12.

20mg

Vanadium

May have a role in sugar management.

20mg

Boron

Works synergistically with Silica and Magnesium in bone structure;

18mg

Anti-inflammatory; Anti-oxidant and hormone activator.

Iodine

Essential for proper thyroid function, prostate and breast tissue health.

15mg

Effective cellular heavy metal mobilizer.

Selenium

Essential for proper thyroid and liver functioning and a healthy immune system.

15mg

Chromium

Essential for insulin production and sugar and fat metabolism.

14mg

Manganese

13mg

Essential for proper brain and nerve function, fat and sugar metabolism and connective tissue production.

Molybdenum

8mg

Activates three important enzymes: Aldehyde Oxidase which acts to break down the toxic waste acetaldehyde produced by candida fungus, xanthine oxidase for purine elimination, and sulfite oxidase to convert sulfites into sulfates.

Lithium

7mg

Important for nerve function and repair, cognitive performance, and mercury detoxification.

Silver

2mg

Plays a role in proper immune system function as a natural antibiotic.

Other Elements which currently have no Known Metabolic Function

Aluminium

Antimony

Arsenic

Mercury

Nickel

Niobium

Barium
Beryllium
Bismuth
Bromine
Cadmium
Caesium
Cerium
Gallium
Germanium
Gold
Indium
Lanthanum
Lead

Polonium
Radium
Rubidium
Samarium
Scandium
Tantalum
Tellurium
Thallium
Thorium
Titanium
Tungsten
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PUBLISHED IN 1899

The Physiological Role of Mineral Nutrients

Author: Loew, Oscar, b. 1844 Volume: no.18

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Assimilation; Minerals Publisher:

Washington : G.P.O. Year: 1899 Possible ...

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