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## Role of Magnesium in health and disease

## Abstract

Magnesium is the fourth most common mineral in the human body after calcium, sodium, and potassium and is the second most common intracellular cation after potassium. In a 70 kg individual, there is an average of 25 grams of magnesium in reserve. Of total body Mg2+, ~99% is intracellular, with 53% in bone, 27% in muscle, 19% in soft tissues, and less than 1% in the serum. Roughly 30% of ingested magnesium through food or drinking water is absorbed by the intestine, although the extent of absorption depends on the body magnesium status (increased in case of Mg2+ deficiency). Magnesium homeostasis is further regulated through the secretion and reabsorption in the kidneys, where about 95% of the filtered magnesium is reabsorbed. Magnesium (Mg2+) is a critical micronutrient. It is an essential cofactor for over 300 enzymes involved in many of the normal functions of the body. Magnesium is implicated in over 80% of metabolic functions.Mg2+ is a cofactor in the activation of hundreds of enzymatic processes regulating diverse biochemical reactions, including energy metabolism, protein synthesis, muscle and nerve function, blood glucose, and blood pressure control.

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## Biography

Dr Agrawal founded Pharma Consultants and INVENTOR to fulfill his passion, capabilities and desire to assist pharmaceutical companies around the globe. He has actively worked in pharmaceutical and related industries for more than 28 years and started this firm in 2005. He is Editor-in-Chief of renowned IJM Today and honorable member of the editorial board of The Antiseptic. Dr. Sanjay Agrawal is also the illustrious member of the National Geographic Society and member of scientific committee of IDMA. His prestigious articles are published in various magazines and websites for example—The Antiseptic, NuFFooDS Spectrum, Pharma biz Dr. Agrawal strongly believes in instilling core values of quality, reliability & integrity in PHARMA CONSULTANTS and INVENTOR. He had received various awards for his valuable support and contributions in Healthcare and pharmaceutical sector Dr. Agrawal obtained his postgraduation in Biochemistry from prestigious institution, completed MBBS (Bio) and MBA from IMT. He has worked with many International and national Pharmaceuticals Company. Dr. Sanjay Agrawal is the patent holder of many research formulations

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