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The Importance Of Magnesium In The Human Body And Rich- Foods In Magnesium

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Abstract
In essence, every single cell has to have energy for it to react to a lot of signals that include growing, dividing, initiating or stopping the synthesis of a particular element, triggering an immunity response and beginning programmed death via apoptosis. The signals, communicated, executed and terminated in individual cells and between cells need to be interpreted correctly.
Keywords: *magnesium, cell, deficiency, serum, body*

Introduction

To operate and play a critical role in the physiology of both humans and animals, magnesium is needed for most major organs. In addition to being essential for the structure of bones and teeth, magnesium acts as a cofactor for more than 300 enzymes in the body, including binding to ATP for kinase reactions, affecting the permeability of the excitable membranes and neuromuscular transmission. In spite of these important functions, it is not yet known about magnesium physiology and homeostasis. Nutrition experts now conclude that the average person eats too little magnesium in his diet[1]. The effects of magnesium shortage are, in general, unnoticed; and there is no easy way to assess humans' intake of magnesium. Low magnesium levels are not known to be present in a large number of patients who were admitted to hospitals or healthcare facilities. Moreover, because magnesium is predominantly an intracellular cation (>99%), serum magnesium levels remain a poor predictor of tissue magnesium content and availability. In this review, the effects of magnesium deficiency on various disorders affecting human population will be discussed. It will examine the underlying cause of magnesium deficiency in major physiological systems, as well as their associated signaling pathways and its main role in regulating magnesium homeostasis. Consideration will be given to the impact of supplementing magnesium where possible, for example with alcohol. In conclusion, the need for the identification of easy and reproducible methods for the assessment of serum and cellular magnesium levels and for the identification of magnesium deficiency in order to mitigate related pathological conditions will be advocated in this review[1,2].

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Lack of magnesium

In the last 30 years, there has been consistent evidence of chronic magnesium deficiency and its effects on several major diseases through a number of epidemiological, experimental and clinical studies. However, it is not widely known that chronic malnourishment can be caused by too low serum magnesium levels and the main reason for this deficiency is a failure to properly reflect body mass stores of magnesium. In particular, serum magnesium levels are often within the normal reference range, usually the lowest quartile, in chronic magnesium deficiency, which may not lead to overt hypomagnesaemia[3]. This raises serious questions, namely i.e. whether chronic magnesium deficiency should be considered for high risk patients irrespective of serum magnesium levels, even if it is normal to do so? If recognised, should oral magnesium supplements be used to restore the body's stores? The recognition that magnesium has an essential role to play in human cellular function and bone health is a useful step towards developing a well reasoned and reasonable approach to these issues. Consideration and discussion are given to progressive testing for the assessment of magnesium status in adults.

Chronic magnesium deficiency

Due to the fact that commonly used serum magnesium often falls within the reference range and may not necessarily lead to overdiagnosed hypomagnesaemia in spite of prolonged magnesium deficiency and ii chronic magnesium deficiency may be associated with nonspecific symptoms, chronic magnesium deficiency is not recognised as a clinical problem.

Magnesium has low-toxicity in people with normal renal function; however, overzealous supplementation may potentially pose the risk of significant hypermagnesaemia (> 1.1 mmol/l) with its adverse sequelae. 1,8 The most common therapeutic modalities are intravenous infusion (slow rate) in patients with overt hypomagnesaemia; and orally (occasionally subcutaneously) for individuals requiring long-term supplementation. In acute asthma, an aerosol dose of magnesium sulphate has also been administered[3,4].

Magnesium-rich foods

The proper level of other minerals, such as calcium, potassium and zinc, can be maintained by magnesium. It's also responsible for producing energy, helping regulate blood sugar and chemical reactions. All of us depend on magnesium for proper operation of our hearts, muscles and kidneys. The mineral's also contributing to the formation of teeth and bones.

Some health conditions can lead to magnesium deficiencies, including:

- gastrointestinal diseases like irritable bowel syndrome, Crohn’s disease, and celiac disease
- diabetes
- kidney disease
- stomach viruses that cause vomiting and diarrhea

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Drinking too much alcohol or caffeine on a regular basis can affect your magnesium levels as well.

The National Institutes of Health recommends the following daily intake of magnesium:

- Children 1-3 years: 80 mg
- Children 4-8 years: 130 mg
- Children 9-13 years: 240 mg
- Teens 14-18 years: boys 410 mg and girls 360 mg
- Adults 19-30 years: men 400 mg and women 310 mg
- Adults 31+ years: men 420 mg and women 320 mg

The magnesium that you need in order to function is a vital mineral for your body. Dark leafy green vegetables, seeds and beans are some of the foods that have a higher magnesium content. There are also nuts and dark chocolate.

1. Whole Wheat
2. Spinach
3. Quinoa
4. Almonds, Cashews, and Peanuts
5. Dark Chocolate
6. Black Beans
7. Edamame
8. Avocado
9. Tofu
10. Cultured Yoghurt

Human body is full of magnesium which supports hundreds of chemical reactions. But a lot of people are getting less than they need. The body contains about 60% magnesium in bone, while the rest of it comes from muscles, soft tissue and fluid including blood, 1Trusted Source. In the biochemical reactions that are continuously conducted by enzymes, one of its primary functions is as a cofactor molecule called an assist molecule. In your body, he plays a role in over 600 reactions.

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