

Filling the Nutritional Gaps with Supplemental Micronutrients

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Understanding diet deficiencies can help determine whether supplementation is ideal or not for you. The Academy of Nutrition and Dietetics recommends obtaining essential micronutrients by eating a balanced and varied diet. Micronutrients are nutrients needed throughout life in small quantities. Though micronutrients are needed in tiny amounts, a diverse diet is needed to obtain the required amounts. Most people have persistent or periodic nutritional gaps in their diet, and there are times when the body requires more nutrients than the typical diet may provide — such as iron during pregnancy. Micronutrient deficiency in the United States refers to zinc, iron, iodine, vitamin D, manganese, magnesium, chromium and phosphorous. In refugee populations and internally displaced peoples, the micronutrient deficiency list and their respective resultant diseases will expand to include vitamin C (scurvy), niacin (pellagra) and thiamin (beriberi).

About one-third of United States citizens take a multivitamin/ mineral (MVM) supplement. Dietary supplements are intended to supplement the diet — not prevent or treat disease. Yet, the most common reasons people cite for using dietary supplements are to “improve overall health” and to “maintain health.” Because there is no standard definition or composition for MVM supplements, studying their health benefits in epidemiological studies is difficult. So, instead of looking at the health benefits of micronutrients in MVM form, let’s look at the importance of some of the micronutrients by themselves.

Zinc is required for at least ten enzyme functions impacting DNA synthesis, immunity, wound healing, blood sugar control and sex organ development. Good sources of dietary zinc include seafood, beef, eggs, nuts and beans. Zinc deficiency can occur in individuals that have high cereal and low meat consumption. Pregnant and lactating women have increased requirements for zinc and are at increased risk of zinc depletion. Children lacking sufficient zinc intake are at increased risk of growth failure in the central nervous system and reproductive systems.

The thyroid gland controls how the body uses energy and makes proteins. Iodine is required to make thyroid hormones like thyroxine (T4) to promote normal thyroid function. Iodine deficiency is one of the biggest worldwide public health problems. Too little iodide (salt of iodine) causes goiter or enlargement of the thyroid gland from too much release of the thyroid-stimulating hormone (TSH) from the pituitary gland. Other tissues that need and use iodine include the salivary glands, pancreas and breasts.

If you get a lot of sprains or the joints in your body pop, you may be manganese deficient. Though manganese is needed in only trace amounts, one-third of Americans do not get enough from their diet. This is because of soil depletion or low intake of foods containing manganese such as whole grains, legumes and green leafy vegetables. Deficiency in manganese can lead to various health problems like high cholesterol levels, hypertension, infertility and heart disorders.

Selenium is a component of several enzymes, particularly glutathione peroxidase, an important antioxidant enzyme that prevents cellular damage from free radicals. Selenium also plays a role in the prevention of cataracts, supporting a strong immune system and helping to reduce the risk of some cancers. Seafood is one of the best sources of selenium, along with eggs, mushrooms and Brazil nuts. The wide range of protective benefits of selenium makes it important that we eat varied diets or take supplements containing at least 50 mcg.

A healthy diet should provide nearly all the nutrients you need, but many people don’t eat the healthiest of diets. It’s important to discuss your dietary intake and requirements with a healthcare provider who is well versed in nutrition to make the right decisions on what type of supplement will best help fill in the gaps or may have added health benefits. <https://www.CustomHealthandWellness.com/shop>