Vitamins, trace minerals, and other micronutrients

Title: Vitamins, Trace Minerals, and Other Micronutrients

Author: Mason, Joel

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Interpretive Summary: This book chapter reviews our present knowledge about essential micronutrients, which include vitamins, trace minerals as well as some newly recognized essential nutrients such as choline. Information regarding the biochemical and physiological functions of each of the nutrients, their dietary requirements, potential toxicities, and signs and symptoms of deficiency states are included. There is also a description of how our understanding of what constitutes optimal intake has evolved over the past few decades.

Technical Abstract: This book chapter reviews present knowledge that is relevant for clinicians regarding the micronutrients, including vitamins, trace minerals as well as some newly recognized essential nutrients such as choline. Information regarding the biochemical and physiological functions of each of the nutrients, their dietary requirements, potential toxicities, and signs and symptoms of deficiency states are included. There is also a description of how our understanding of what constitutes optimal intake has evolved over the past few decades.
Vitamins and minerals are often called micronutrients because your body needs only tiny amounts of them. Yet failing to get even those small quantities virtually guarantees disease. Here are a few examples of diseases that can result from vitamin deficiencies.

A deficiency in vitamin D can cause rickets, a condition marked by soft, weak bones that can lead to skeletal deformities such as bowed legs. Partly to combat rickets, the U.S. has fortified milk with vitamin D since the 1930s. Just as a lack of key micronutrients can cause substantial harm to your body, getting sufficient quantities can provide a substantial benefit. Some examples of these benefits: Strong bones. Micronutrients — Nutrients needed in trace amounts by the human body for normal growth and development, including vitamins, trace elements, phytochemicals, minerals, antioxidants and fatty acids. Micronutrients help slow down the aging process, protect your body from disease and ensure that nearly every system in your body functions properly and optimally. Micronutrients don’t provide energy like macronutrients, so they can’t be measured in calories and most of them are not listed on a food’s nutrition label, which can make them a little more difficult to track. Here are the most important vitamins, minerals and other micronutrients to make sure you’re eating — plus the keto-friendly foods that contain them. Sodium. They include vitamins and minerals. Vitamins are necessary for energy production, immune function, blood clotting and other functions. Meanwhile, minerals play an important role in growth, bone health, fluid balance and several other processes. This article provides a detailed overview of micronutrients, their functions and implications of excess consumption or deficiency. Share on Pinterest.

What Are Micronutrients? Humans must obtain micronutrients from food since your body cannot produce vitamins and minerals — for the most part. That’s why they’re also referred to as essential nutrients. Vitamins are organic compounds made by plants and animals which can be broken down by heat, acid or air.