

SUPPLEMENTING WITH VITAMINS AND MINERALS

The industry of dietary supplements is a big business. Manufacturers constantly bombard the public with messages about the benefits of dietary supplements, including vitamins and minerals.

Because athletes want to gain the edge over their competition, they can easily fall prey to this marketing. The truth is clear: little conclusive evidence exists that well-nourished athletes need nutrients above the recommended guidelines.

Vitamins and minerals help enzymes work, and they contribute to body tissues, structures and immune functions. They do not produce energy, but they assist the body in energy production, which is especially important for athletes. However, an excess of vitamins and minerals can lead to toxicity and other adverse effects.

No regulation currently exists to ensure the safety, effectiveness or quality of dietary supplements. Consumers are responsible to know what a product does, how much is safe to consume and if there are adverse effects from large dosages.

Fortunately, we do have well-researched guidelines such as the Recommended Dietary Allowances (RDAs) and Adequate Intakes (AIs) to help healthy individuals know how much to consume. We also have guidelines – the Tolerable Upper Intake Levels (ULs) on the maximum amount we should consume. Unfortunately, many individuals can exceed the ULs if they are not careful in selecting their vitamin and mineral supplements.

For example, niacin's RDA is 14-16 milligrams per day (mg/d). Niacin (vitamin B3) can be obtained from fortified grains, meat and seafood, peanuts and other foods throughout the day. One multi-vitamin/mineral (MVI) supplement includes 20 mg of niacin, which combined with the addition of daily dietary sources, could approach or go beyond the UL of 30-35 mg/d.

Another MVI, aimed at athletes, includes 75 mg of niacin, an amount significantly above the UL. Toxicity symptoms associated with doses at the UL include gastrointestinal upset and the dilation of blood vessels with redness, burning and tingling of the skin (niacin rush). Liver injury can occur with chronic high intakes of niacin.

Requirements of vitamin B6 are easily obtained from dietary sources such as fortified cereals, salmon, chicken, legumes, bananas and brussels sprouts. The RDA for vitamin B6 is 1.3 mg/d for ages 19-50. Consuming 3 oz. salmon and a banana during a day or even just one bowl of fortified cereal meets the recommendation.

The UL for vitamin B6 is 80 mg/d for women and 100 mg/d for men. A selected MVI marketed for athletes contains 75 mg/d supplement serving. Exceeding the UL may cause sensory changes including unsteady gait and impaired tendon reflexes, and can result in nervous system damage.

Bottom line: Be careful with supplements!

Athletes potentially at risk for nutrient deficiencies include vegetarians and those who restrict energy intake. If choosing to use an MVI, aim for one that provides 100% or less of the RDA/AI of nutrients and be careful not to exceed a nutrient's UL. Using highly fortified energy bars also contributes to daily recommended intakes.

Overall, a healthy well-balanced diet is the best way to provide your body with proper vitamins and minerals.