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WINTER 2000

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**Do you see a need for a multi-vitamin/mineral supplement in a person's diet? If not, why, and if so, how should they be integrated and what should people be looking for?**

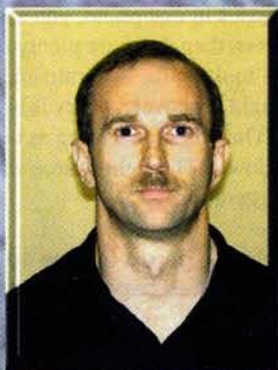


**Richard Winett, Ph.D.**

Most people still do not regularly eat a sufficient amount of fruits and vegetables. So, there is a need to supplement the diet with a generic multi-vitamin and mineral formula. Most are similar (if not exactly the same) so selecting the cheapest one (i.e., the store brand) makes the most sense. Just don't use the the higher potency ones. You don't need that kind of formula.

However, what must be understood is that supplements are not substitutes for food. Most of the evidence for the beneficial effects of eating fruits and vegetables, for example, is based on consumption of these foods not supplements. Real food also has nutrients not found in most supplements.

So, when all is said and done, there really isn't a substitute for real food and a good diet. (Editor: visit Richards website at <http://ageless-athletes.com>)



**Matt Brzycki**

Nothing I've read in the scientific literature has convinced me that those who consume adequate diets — in terms of caloric intake and composition — need multi-vitamin/mineral supplements. As a result of the increased knowledge and the availability of a variety of foods rich in vitamins and minerals, deficiency diseases are rare in first-world nations - even a marginal diet provides adequate vitamins and minerals. If a normal intake of vitamins and minerals was insufficient, there would be an abundance of deficiency diseases such as beriberi (thiamin), cheilosis (riboflavin), pellegra (niacin), scurvy (vitamin C), rickets (vitamin D) and kwashiorkor (magnesium and protein).

Active individuals have a greater requirement for nutrients than the norm. However, active individuals — in all likelihood — consume a greater number of calories, which include additional nutrients. I was quite active as an undergraduate student at Penn State, being a physical education major, competitive powerlifter and recreational runner. As part of a nutrition course in 1983, I had to record my dietary intake for two days. This included specifics about caloric intake and expenditure. At the time, I was taking a multi-vitamin/mineral supplement. A review of Day 1 showed that my intake of the measured vitamins and minerals was at least 105% of the Recommended Dietary Allowance (RDA). With supplementation,

several of the values were astronomical - one nearly 1100% of the RDA. By the way, my activity levels were such that I needed to consume a large number of calories — 3372.5 on Day 1 and 3755.0 on Day 2 — in an effort to *maintain* my 165-pound bodyweight. Imagine my nutrient intake if I was trying to increase my lean body weight.

Keep in mind, too, that RDAs are set by determining the "floor" below which deficiency occurs and the "ceiling" above which harm occurs. A margin of safety is included in the RDAs to meet the needs of nearly all healthy people. In fact, the RDAs are designed to cover 97.5% of the population. In other words, the RDAs exceed what most people require in order to meet the needs of individuals with the highest requirements. The RDAs do not represent minimum requirements and any failure to consume the recommended amounts is not necessarily indicative of a dietary deficiency.

That said, there's nothing wrong with taking a multi-vitamin/mineral supplement. I just don't see much of a need for it by individuals who consume diets that are adequate in terms of calories and nutrients. Supplementation may be warranted for vegetarians, some infants and pregnant or lactating females. Supplementation may also be appropriate for someone who purposely consumes a relatively low number of calories in order to reach a certain weight class in sports such as boxing, wrestling or judo. Otherwise, there's little need.

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**Brian D. Johnston**

I believe in obtaining micronutrients through whole foods, primarily since they contain beneficial phytochemicals, antioxidants, and possibly trace elements we have yet to discover, not found in supplements. The quality and balance also tend to be better in whole foods.

The dilemma, however, is that few people eat as nutritiously as they should. Moreover, how nutritious are the foods we eat once they reach our table or are cooked. An orange, for example, may be at its peak in nutrients while hanging on the tree, but lose a great deal of its vitamin C by the time it is picked, shipped to market, purchased, then finally eaten. So, a 'nutrient book' may state an orange has 60 mg of vitamin C, but it may actually contain only 40 mg or less (although I'm hypothesizing).

Although industrial countries do not contain thousands or millions of cases of vitamin deficient zombie citizens, we are uncertain what the long-term effects are of 'slight' deficiencies over the course of years or decades. Could slight reductions over time, something not noticeable short-term, result in premature death, hardening of the arteries, etc? Consequently, I recommend eating as well as possible, from a variety of nutrient dense foods, but taking a low dose multi-vitamin/mineral about every other day for insurance purposes. You should, likewise,

avoid high-potency vitamins, since they can result in poisoning, or mega-doses of any one vitamin, since each vitamin and mineral works best when in proper proportion to another.



**Ken Mannie**

A recent national public opinion survey, "Nutrition and You: Trends 2000," conducted by the American Dietetic Association (ADA), indicates that 38% of Americans agree with the statement: "Taking vitamin supplements is necessary to ensure good health." That's up 3% from the survey taken in 1997. We know that vitamins and minerals play an important role in the metabolism of protein, carbohydrate, and lipids. For the hard-working trainee/athlete, there is a moderate increase in the need for nutrients — though this can be met by consuming a balanced high-carbohydrate, moderate-protein, low-fat diet. In reality, individuals at risk for low vitamin/mineral intake are those who consume unacceptably low-caloric diets.

There are individuals in the strength training/athletic populations — in their obtrusive search for substances with ergogenic properties — who believe they need to take vitamin/mineral supplements in a cumbersome convoluted. While vitamin/mineral supplementation may improve the nutritional status of those consuming marginal amounts of nutrients, there is no scientific evidence of which I am aware that supports the general use of these products to improve athletic performance. Special situation cases, such as iron and calcium deficiencies — especially in young athletes and women of all ages — should be bookmarked as potential problems. This is especially true when it is feared that an individual has embarked on a self-inflicted, restricted calorie diet. If you're like me (God forbid), you may be taking a daily multi-vitamin (e.g., Centrum) as an insurance policy. I doubt that there is any harm in that, but the benefits are certainly arguable.

References: Roe, D.A., Vitamin requirements for increased physical activity. In: Horton, E.D., Terjung R.L, eds., "Exercise, Nutrition, and Energy Metabolism," New York, NY, Macmillan Pub. Co., 1989:172-179. Singh, A, Moses, F.M., Deuster, P.A., Chronic multivitamin-mineral supplementation does not enhance physical performance, Med Sci Sports Exer, 1992; 24: 726-732.



**Greg Bradley Popovich, MS MS**

What superficially appears to be a simple question is actually quite complex. The true need for a daily vitamin can really be assessed only on an individual basis. Several variables such as diet, geography, activity level, exposure to light, exposure to toxins, concurrent consumption of foodstuffs that may hamper absorption, and age all may determine whether a person could benefit from a daily vitamin. Other considerations include dieting for weight loss, lactose intolerance, food allergies, vegetarianism, and pregnancy.

I have followed the debate over taking vitamin and mineral supplements as "health insurance" for a number of years. For me, it's been like watching a tennis match, with one argument being served and effectively returned by the opponent. Let's be realistic; true nutritional deficiencies in modernized societies is rare. Do you know anyone who was admitted to a hospital for complications stemming from a nutrient deficiency? Probably not. However, I do believe that many persons may have a marginal vitamin and mineral intake. For readers of this publication, the question really is not a matter of preventing deficiency but rather it is about creating a physiological environment that allows optimal adaptation to the demands of exercise. Really, I quit concerning myself over this issue because in otherwise healthy persons, no vitamin or mineral exhibits toxicity at modest levels above the recommended intake. What harm will a conservative daily vitamin and mineral supplement do? Such supplementation is simple and inexpensive.

We insure our cars, our loved ones, our homes, our pets... Why not spend a few cents a day to insure our bodies? It is unlikely that the addition of a daily vitamin and

mineral supplement has ever been detrimental to anyone's training progress, unless perhaps someone choked to death on one. For the very frugal or cautious, they can consume such a supplement every-other-day. Nevertheless, because a vitamin supplement cannot cure all that ails one's dietary habits, it is most ideal to implement the use of a nutrient supplement after consulting with a qualified nutritionist who can thoroughly analyze your typical dietary intake.