How To Choose A Multiple Vitamin

A Research Review

by

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Sixty percent of adults in North America are presently taking vitamin supplements each day. Of these, multiple vitamin and mineral supplement products are used most frequently. The primary reasons cited for taking a daily multiple vitamin include:

- to enhance energy and well-being
- to help defend against degenerative diseases such as cancer, heart disease, osteoporosis and dementia
- to help manage existing health conditions such as arthritis and diabetes
- to slow the aging process

However, some people still argue that we can get all the vitamins and minerals we need from food alone in order to attain the Recommended Daily Allowances (RDAs) for each nutrient, therefore supplements are not necessary. Individuals who have done their homework on this subject know that 80 to 91% of the population do not achieve the RDAs for each vitamin and mineral each day, nor do they even come close. In fact marginal nutrient deficiencies are present in as much as 50% of non multiple vitamin and mineral users (1). As well, the RDA levels for each nutrient are only intended to guard against severe nutrient deficiency diseases such as scurvy (Vitamin C), pellagra (Niacin), and beriberi (Vitamin B1), but are not intended to serve as levels of vitamin and mineral intake that are optimal in regards to preventing degenerative diseases, slowing the biological processes of aging and maximizing our well-being and longevity (2). In the past two decades a great deal evidence has demonstrated that ingest ing certain vitamins and minerals at levels beyond which can be routinely achieved from food alone is associated with a reduction in risk of many degenerative diseases and appears to slow important aspects of the aging process. These research findings have led to the increased use of multiple vitamin supplements by the general public. However, knowing what to look for in a multiple vitamin is crucial in terms of deriving the best available benefits. Most multiple vitamin products include all vitamins and minerals from A to zinc, but often at insufficient doses to provide the disease prevention and anti-aging benefits you should be seeking. Here are the features you should look for in a multiple vitamin and mineral product to ensure that you get the protection and benefits you deserve:

Antioxidant Enrichment

A desirable multiple vitamin and mineral product should be enriched with antioxidants at the following levels: Vitamin C (500-1,000 mg), Vitamin E (200-400 IU, natural source), Beta-carotene (7,500-20,000 IU), selenium (100-200 mcg), Vitamin A (2,000-3,000 IU), with additional lycopene and lutein. These recommendations stem from the understanding that antioxidants quench and neutralize dangerous free radicals that are linked cancer development (free radicals damage the DNA of our cells causing cancerous mutations), heart disease, damage to brain cells linked to the development of Alzheimer’s disease and dementia, cataracts and macular degeneration of the eye (the leading cause of blindness in people over the age of 55), and accelerated aging of our skin and other tissues. Each day our tissues are bombarded with free radicals, which arise from our use of oxygen in normal metabolism (free radicals are a by-product of oxygen metabolism in the body). Other environmental factors increase our exposure to free radicals, including cigarette smoke, alcohol consumption, nitrosamines (nitrate treated foods), and other environmental agents (i.e., aromatic hydrocarbons, heterocyclic amines, nitric oxide), including the damage done to our skin and eyes by excessive sun exposure. A large body of evidence has demonstrated that bolstering our antioxidant defences can protect our tissues against the damaging effects of free radicals and has been shown to help reduce the risk of the degenerative diseases and conditions mentioned above. In fact, a number of clinical
trials reveal that even certain precancerous conditions can be reversed through targeted antioxidant vitamin and mineral supplementation. (3 - 65)

Antioxidant supplementation has also been shown to improve immune system function in older patients (who normally show immune decline with aging) and slows down key aspects of the aging process itself (66–71). The problem is that most multiple vitamins in the market place do not contain adequate antioxidant levels, forcing consumers to purchase additional Vitamin C, Vitamin E, selenium, Beta-carotene etc., to achieve appropriate antioxidant protection. This is too expensive, impractical and unnecessary as high quality multiple vitamins now contain everything you need in one product.

B-50 Complex

A well-designed multiple vitamin should also provide a full complement of the B-vitamins as a B-50 complex. Enhanced B-vitamin status through supplementation has been shown to help reduce risk of heart disease, reduce certain inflammatory states, improve detoxification processes and maintain brain and cognitive function as we age. B-vitamins are essential in the synthesis of brain chemicals required for thinking, memory and other vital brain activities. B-vitamins are essential for the synthesis of red blood cells, normal cell replication from one generation to the next and many more crucial functions (72 –106). Known for their anti-stress and anti-fatigue properties, a B-50 complex is an important element of a high-grade multiple vitamin and mineral formulation. Be sure your multiple vitamin contains at least 50 mg of Vitamins B1, B2, B3, B6, and pantothenic acid, as well as 50 mcg of B12.

Bone Support Nutrients

In North America, at least one on four women currently develops osteoporosis by age 50 and one in eight men develop this condition after the age of 65. In women, complications of osteoporotic fractures cause more deaths each year than the combined mortality rate from breast and ovarian cancers. Osteoporosis is an extremely important problem that requires a lifelong strategy to prevent its development. Central to the prevention of osteoporosis is the adequate daily intake of calcium, Vitamin D, magnesium, copper and zinc, which together are the essential bone strengthening nutrients. Studies show that across the population most adults (including 11-24 year olds) are lacking at least 500 mg of calcium per day in their diet, on average to prevent the future development of osteoporosis (107-121). Vitamin D nutritional status is also sub-optimal (Vitamin D is necessary to absorb calcium) as is the consumption of zinc (122-128). Thus, a well designed multiple vitamin should contain 350-500 mg of elemental calcium, 400 IU of Vitamin D, 15 mg of zinc, 150-250 mg of magnesium and 1-2 mg of copper. This is an important consideration for all individuals 12 years and older. In addition to high potency multiple vitamin and mineral many individuals require further supplementation with calcium and vitamin D to achieve optimal intake levels that protect against osteoporosis and cancer. If you are not exposed to adequate sunlight year round then your daily total vitamin D supplementation target is likely to be 1000 – 2000 IU per day. Have your blood level of vitamin D checked. If the value is below 85nmol/L then increase your vitamin D supplementation levels to achieve at blood value that is above 85nmol/L, and not exceeding 250 nmol/L.

Other Benefits

A multiple vitamin and mineral product that is antioxidant enriched, contains a B-50 complex and proper doses of bone building nutrients (i.e., 500 mg of calcium) can not only help defend your body and mind against degenerative conditions and slow the biological processes of aging, but can also help to improve the quality and texture of your skin, hair and nails, improve sleep quality, strengthen your immune system and enhance your daily energy level. All of these outcomes are frequently reported by individuals taking multiple vitamins that meet the criteria outlined in this review.
In my view, all individuals 16 years of age and older should take the nutrient doses provided by a high quality multiple vitamin and mineral product each day to optimize their health. (Unless contra-indicated due to a specific medical condition).

Below, see the daily doses contained within the Adeeva Multiple Vitamin and Mineral, which meets the criteria discussed in the review. This supplement or one of similar composition is an important foundation product for individuals who understand the importance of nutritional supplementation in health optimization, disease prevention and preserving their quality of life.

<table>
<thead>
<tr>
<th>Vitamin</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Vitamin A (palmitate)</td>
<td>2500 IU</td>
</tr>
<tr>
<td>Beta Carotene</td>
<td>10000 IU</td>
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<tr>
<td>Vitamin D (cholecalciferol)</td>
<td>400 IU</td>
</tr>
<tr>
<td>Vitamin E (d-alpha tocopherol succinate)</td>
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<tr>
<td>Vitamin C (ascorbic acid)</td>
<td>1000 mg</td>
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<tr>
<td>Vitamin B-1 (thiamine mononitrate)</td>
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<tr>
<td>Vitamin B-2 (riboflavin)</td>
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</tr>
<tr>
<td>Niacin (niacinimide)</td>
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</tr>
<tr>
<td>Vitamin B-6 (pyridoxine hydrochloride)</td>
<td>50 mg</td>
</tr>
<tr>
<td>Vitamin B-12 (cyanocobalamin)</td>
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</tr>
<tr>
<td>Folic Acid</td>
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</tr>
<tr>
<td>Biotin</td>
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</tr>
<tr>
<td>D-Pantothenic Acid (calcium d-pantothenate)</td>
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</tr>
<tr>
<td>Calcium (carbonate &amp; citrate)</td>
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<tr>
<td>Iron (ferrous fumarate)</td>
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<tr>
<td>Magnesium (magnesium oxide)</td>
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<tr>
<td>Zinc (citrate)</td>
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<tr>
<td>Copper (gluconate)</td>
<td>2 mg</td>
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<tr>
<td>Chromium (hvp chelate)</td>
<td>50 mcg</td>
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<tr>
<td>Manganese (gluconate)</td>
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<tr>
<td>Selenium (hvp chelate)</td>
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<tr>
<td>Molybdenum (citrate)</td>
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<tr>
<td>Bioflavonoids (citrus complex)</td>
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<tr>
<td>Lycopene (5%)</td>
<td>6 mg</td>
</tr>
<tr>
<td>Lutein (5%)</td>
<td>6 mg</td>
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References

25. Evans. Oxidative Damage in Alzheimer’s Dementia, p.178
28. Meydani, Mohsen. Vitamin E Requirements in Relation to Dietary Fish Oil and Oxidative Stress in the Elderly; Free Radicals and Aging, ed. 1. Emerit and B. Chance, Zurich, Switzerland, Bukhauser Verlag, 1992, p.411-418
33. Christen. Antioxidants and eye diseases, pp.145-175
42. Losonczy, Katalin, G., et al. Vitamin E and Vitamin C Supplement Use and Risk of all-cause and Coronary Heart Disease Mortality in Older Persons: The Established Populations for Epidemiologic Studies of the Elderly
70. Breecher interview with Dr. Blumberg. Also Vitamins, Trace Elements, and Immunologic Youth; Patient Care (March 16, 1993), pp. 21-22
82. Selhub J, Jacques PF, Wilson PWF, Rush D, Roseberg IH. Vitamin status and intake as primary determinants of homocysteine in an elderly population. JAMA, 1993;270:2693-2698
91. Goodwin JS, Goodwin JM, Garry PJ. Association between nutritional status and cognitive functioning in a healthy elderly population. JAMA 1983;249:2917-21