



# Do I Really Need to Take Vitamins?

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Literature Education Series On Dietary Supplements

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Do you ever wonder, “Do I really need to take vitamins? Can’t I get what I need by just eating a good diet?” To obtain an intelligent answer, you need to consider two key issues:

- The adequacy of vitamins and minerals in our food supply;
- The dietary habits and nutrient intakes of Americans.

## **The adequacy of vitamins and minerals in our food supply**

An examination of our food supply over a 90 year period does show the nutrient level of foods in general has improved; albeit often modest improvements. However, it is also true that despite improvements in agricultural techniques which have improved crop yield, from 1909 to 1994 a decrease in the levels of key nutrients has occurred. The vitamin B12 levels in foods decreased about 5%, magnesium decreased about 3%, zinc decreased about 3%, and potassium decreased about 7%.<sup>1</sup> Of course on the face of it, a 3-7% decrease of key nutrients doesn’t sound too bad. On the other hand, this is a decrease of nutrients across our food supply as a whole. An examination of individual crops can reveal more severe decrease. For example, research has shown that growing conditions have caused certain crops to experience a 20% decrease in vitamin E and the essential unsaturated fatty acid linoleic acid.<sup>2</sup> Other research has shown that growing conditions can affect the calcium level of some crops by as much as 300%.<sup>3</sup> Likewise, certain agriculture technologies

decreased vitamin C and E levels in some crops by 2% and 13%, respectively; and the content of seven minerals decreased in those same crops.<sup>4</sup>

### Key points to consider:

- From 1909 to 1994, a 3-7% decrease Vitamin B12, magnesium, zinc and potassium levels occurred in our food supply.
- Growing conditions, agricultural technologies and nutrient content of the soil can negatively affect levels of some nutrients in crops by 20-300%.
- Food preparations and storage methods can decrease some nutrients by as much as 30%.

Aside from growing conditions and agricultural technologies, there is the simple fact that the nutrient content of foods can be directly related to the nutrient content of the soil in which they were grown. For example, the selenium content of plants, in particular cereal grains, is strongly influenced by the quantity of biologically available selenium in the soil in which they grow, that is, by their geographical origin.<sup>5</sup> As a result, it should not be too much of a surprise that, according to the USDA, the selenium content of fruits and vegetables is normally very low.<sup>6</sup>

In addition to the aforementioned issues, research has also shown that food preparation may decrease the activity of some vitamins; for example, keeping food hot for more than 2 hours results in more than 10% loss of vitamin C, folate and vitamin B6.<sup>7</sup> Vitamins are also lost during chilling, storage and reheating, including more than 30% of vitamin C and folate.<sup>8</sup>

## **The dietary habits and nutrient intakes of Americans**

The fact that our food supply may not be providing us with adequate levels of all of the nutrients is compounded by the poor dietary habits of Americans in general. Despite the fact that many individuals indicate that they try to eat a good diet, the United

States Department of Agriculture (USDA) has reported that only 10% of Americans actually eat a good diet. For example, only 17 percent of the people consumed the recommended number of servings of fruit per day.<sup>9</sup>

Key points to consider:

- According to the USDA, only 10% of Americans have a “good diet.” For example, only 17 percent of the people consumed the recommended number of servings of fruit per day.
- According to the USDA, Americans have failed to meet the RDA for several key nutrients, including calcium, vitamin E, vitamin B-6, magnesium, and zinc.
- Other research shows that more than half of all Americans consume significantly less than the recommended intake for calcium, chromium, copper, folic acid, vitamin B6 & vitamin E.
- Due to the inadequate intake of nutrients, *JAMA* recommends that all American adults take vitamin supplements.

Of course with such a poor dietary report card, it shouldn't be a surprise that USDA's Continuing Survey of Food Intakes by Individuals (CSFII) revealed that adult females failed to meet the RDA for five nutrients—calcium, vitamin E, vitamin B-6, magnesium and zinc; and adult males fell short of the RDA for vitamin E, magnesium, and zinc<sup>10</sup> (this doesn't mean that mean eat healthy food, just *more* food). The same survey from the USDA indicates that only 6 percent of female adults over 60 met the recommended calcium intake. When you consider that postmenopausal women are most susceptible to osteoporosis, this last nutrient inadequacy is particularly alarming.

Other research has shown similar results. For example, in an article entitled “The Great American Nutrient Gap”<sup>11</sup>, Dr. Melvin Werbach cites research from various scientific journals demonstrating that more than half of all Americans consume significantly less than the recommended intake for calcium, chromium, copper, folic acid, vitamin B6 & vitamin E.

Since people are clearly not getting an adequate amount of nutrients from their diet, this would seem to make a strong case for using dietary supplements as a “nutrition insurance policy.” In fact, the American Medical Association, or more specifically their journal (*JAMA*), actually stated:

*Most people do not consume an optimal amount of all vitamins by diet alone. Pending strong evidence of effectiveness*

*from randomized trials, it appears prudent for all adults to take vitamin supplements.*<sup>12</sup>

Considering that the AMA has not traditionally been in favor of the routine use of dietary supplements, this is truly a landmark recommendation on their part. Another statement made in the same *JAMA* study, helps to shed some light on why the change of position:

*Vitamin deficiency syndromes such as scurvy and beri beri are uncommon in Western societies. However, suboptimal intake of some vitamins, above levels causing classic vitamin deficiency, is a risk factor for chronic diseases and common in the general population, especially the elderly.*<sup>13</sup>

Apparently, the suboptimal intake of nutrients was significant enough to lead the AMA to the conclusion that supplementation is recommended for the general population. In fact, in the United States, roughly 5 to 10 percent of people older than 60 have clinical findings associated with vitamin deficiency.<sup>14</sup> Moreover, overt nutrient deficiencies are only the tip of the iceberg. Marginal deficiencies appear to be far more widespread and can cause a variety of nonspecific symptoms while they weaken the body's defenses against serious illnesses.<sup>15</sup>

### Conclusion

The customer question about the need to take vitamins verses just eating a good diet has an intelligent answer. In a nutshell, research shows our food supply doesn't necessarily provide all of the nutrients we need, most people don't eat a good diet, and most people aren't getting adequate amounts of key nutrients. Clearly, we do need to take supplements. Perhaps The Council for Responsible Nutrition said it best:

*The regular use of multivitamins and a few other nutritional supplements can measurably improve the nutritional status and lifelong health of the American public. Adoption of the concept of supplementation as a part of personal lifestyles, health care practices, and public policy would benefit individuals, would improve the health profile of the nation as a whole, and could significantly reduce health care costs.*<sup>16</sup>

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