

Narrowing the Focus

When it comes to vitamins, broad strokes are not as effective

By Tamer Abouras

One of the subtler, less noted marvels of modern medicine and the pharmaceutical industry is vitamin supplementation. Think about it: The diverse nutrient needs of the human body are somehow squeezed into a small (or not-so-small) pill or capsule. Is it too good to be true?

As a nurse practitioner, you likely have been asked whether vitamin supplements are beneficial. We spoke with three registered dietitians, two of whom are nurse practitioners, to learn their perspectives on which patient populations benefit most from supplementation and which types are most effective in addressing nutritional deficiencies.

Are They Worth It?

The leadoff question in each interview stemmed from an editorial published in the *Annals of Internal Medicine* in December 2013, which summarized three studies and concluded that “supplementing the diet of well-nourished adults with (most) mineral or vitamin supplements has no clear benefit and might even be harmful. These vitamins should not be used for chronic disease prevention. Enough is enough” (Guallar E, et al. Enough is Enough: Stop Wasting Money on Vitamin and Mineral Supplements. *Ann Intern Med.* 2013;159:850-851).

Jeffrey Harris, DrPH, MPH, RD, LDN, chairman of the nutrition department at West Chester University in West Chester, Pa., expressed the strongest agreement with the editorial, saying that “multivitamins provide

no chronic disease prevention benefit.” However, Harris noted that people in poverty could potentially benefit from a bioavailable multivitamin because it could tangentially supplement significant gaps and deficiencies in their nutrient intake. Supplementation should be addressed on a case-by-case basis, he said, especially for patients at risk for nutritional deficiencies.

Robyn Kievit Kirkman, NP, RD, CSSD, and Cheryl Winter, MS RD, MS RN, CDE, BC-ADM, FNP-BC, each verified the need to consider supplementation on a case-by-case basis.

“Everyone should be evaluated individually, based on where they are in their life cycle, their current food intake, stressors, medical history, etc.,” said Winter, who owns DiabetesSteps Rx in metro Houston.

Kievit Kirkman, who provides health and nutrition services at Emerson College in Boston and has a private nutrition practice, cited the Academy of Nutrition and Dietetics’ position that “additional nutrients from supplements can help some people meet their nutrition needs as specified by science-based nutrition standards such as the Dietary Reference Intake.”

All three experts remarked upon the poor regulation of vitamins and supplements in the United States and commented that in even the most benign cases, people are probably spending money on supplements that contain no active ingredient or are not being fully utilized or absorbed by their bodies.

The consensus, at least with regard to the efficacy of multivitamins, is that it depends greatly upon the person taking them. Harris pointed out that many



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people who take nutrient supplements tend to already be quite health conscious and fit and not in need of additional intake. Winter noted that doing so could “exceed the safe levels of nutrients.”

Harris, Kievit Kirkman and Winter agreed that if there were such a thing as a supplement scale or chain of command, obtaining necessary nutrients from a proper diet would be priority No. 1.

Before the encouragement of multivitamins, more targeted single-entity vitamins should be recommended to patients with identified deficiencies, they said.

Who Can Benefit and From What?

The consensus of the experts we interviewed is that multivitamin supplements cannot replace a healthy diet. There are, however, patient populations with narrower gaps and needs that tend to come up repeatedly.

Chief among these is vitamin D deficiency and insufficiency, a problem that is increasingly documented in the United States. As to causation, Harris pointed to the increased potency of sunblock in recent years, and Kievit Kirkman noted the high proportion of children and adolescents who drink little to no milk. Adequate vitamin D, ideally obtained through dietary sources but acceptable in any form, is important for infants and children throughout adolescence, the three dietitians said.

Aside from pediatric patients, three other populations are viewed as in need of supplementation: women in their child-bearing years, perimenopausal women and men and women older than 65.

Folic acid is essential for women in

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their childbearing years, and ideally supplementation should begin prior to pregnancy, Harris said.

In the past, prepregnancy and perinatal folic acid deficiency was linked to an increased risk of neural tube defects such as spina bifida. Women need 400 mcg to 800 mcg per day, whether pregnant or not, he said. Dietary amounts should be determined and a supplement added, as needed.

Perimenopausal women often require additional iron intake, according to Winter, who said that they “are still bleeding, therefore they lose more blood than menopausal women, who have stopped menstruating.” She recommended dosing of 18 mg per day for this group.

Vitamin B6 can be beneficial for women in perimenopause and menopause, to assist in managing sleep disruption and fatigue, Kievit Kirkman said. And Winter pointed out that the Dietary Guidelines for Americans and the Institute of Medicine recommend that “people over age 50 get 2.4 ug/day

vitamin B12, mainly from the crystalline form found in fortified foods and supplements. Age is associated with conditions like atrophic gastritis that may reduce a person’s ability to digest foodbound vitamin B12.”

Winter and Harris also mentioned the need for many older Americans to boost calcium levels, which tend to decline with age. Kievit Kirkman and Winter acknowledged the nutritional deficiencies of vegetarians and patients on weight loss programs, who tend to have insufficient intakes of various nutrients.

Supermarket vs. Drugstore

So if multivitamins are not the ideal method of meeting nutritional needs, what then should nurse practitioners recommend to patients? The experts interviewed for this article stressed that nutrients found naturally in foods tend to be more beneficial than those found in isolation. Harris said any research finding of chronic disease prevention or treatment based on increased intake of certain vitamins and supplements results from them being ingested in food.

For example, supplemental lycopene does not provide benefit to vision, but lycopene ingested in tomatoes does. A balanced diet with a minimal amount of processed foods has far more utility than a regular vitamin regimen, the experts said.

Although the vitamin and supplement industry is, in many ways, a subset of the broader pharmaceutical industry, the reality is that the vetting of these products by the Food and Drug Administration is far less rigorous than those for prescription medications.

The prevailing view from these experts is that any recommendation for supplementation depends largely on the patient. Patients whose access to available, affordable fruits and vegetables is limited might be better served by multivitamins, but even in those situations it is best to see if certain single-entity vitamins would suffice.

The socioeconomic and sociological underpinnings of nutritional shortcomings aside, the prevailing message is that it is far better for a healthcare provider to send patients to the supermarket than the drugstore. ■

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