

## **Q: Should healthy people take a multivitamin?**

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**A:** No. There is no scientific basis for recommending vitamin-mineral supplements to the healthy population.

(This commentary deals only with healthy people in the general US population. There are well-established guidelines for the use of supplements in pregnant and lactating women, infants, and individuals with a wide variety of health conditions.)

### **■ TAKE A PILL, OR EAT A HEALTHIER DIET?**

The Dietary Guidelines for Americans<sup>1</sup> reported that the US population consumes insufficient amounts of green leafy vegetables, fresh fruits, whole grains, and fiber and excessive amounts of refined carbohydrates, saturated fat, and sodium. This may result in inadequate intake of some nutrients. (The term “inadequate” intake is being used to differentiate this situation from “deficiency,” which is rare in the general population.)

So the real question is, Should we pop a vitamin pill every day and forget about it, or try to eat a healthier diet?

To answer that question, consider this: no supplement trial has ever been able to reproduce the health benefits of eating adequate amounts of fresh fruits and vegetables.

One reason is that natural foods contain far more compounds than the few we know about and can put in a supplement pill. For example, vegetables contain hundreds of antioxidant compounds, many perhaps acting synergistically, while so far we have been able to identify and isolate only a handful.

Second, nutrients have different health effects depending on the host's conditions. A calcium supplement will not increase bone mineral density unless accompanied by regular, weight-bearing exercise that stimulates bone accretion.

This is why most supplement trials have shown disappointing results. A recent National Institutes of Health state-of-the-science conference on multivitamin-mineral supplements<sup>2</sup> concluded that there is no consistent evidence that single-vitamin or multivitamin supplements help in preventing a wide range of diseases studied.

### **■ ‘AT LEAST IT WON’T HURT’ MAY NOT BE TRUE**

In spite of the lack of evidence, many will go on taking supplements, with the argument that “at least it won’t hurt.” They should be reminded that several supplement trials had to be stopped prematurely due to unexpected adverse effects.

In the Selenium and Vitamin E Cancer Prevention Trial (SELECT),<sup>3</sup> which evaluated supplementation to prevent prostate cancer, the group receiving vitamin E had more cases of prostate cancer than controls, and the group taking selenium had more diabetes cases. While these differences were not statistically significant, they were of enough concern to stop the trial.

A meta-analysis of vitamin E trials<sup>4</sup> showed a slight increase in the rate of all-cause mortality in those receiving the active supplement.

The bottom line: the evidence that supplements “won’t hurt” is even more limited than the evidence for their efficacy, because trials are usually not designed to address safety outcomes.

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doi:10.3949/ccjm.77a.10070

## ■ TELL YOUR PATIENTS THE THINGS THEY DO NOT WANT TO HEAR

Unfortunately, this means you have to tell your patients all the things they do not want to hear: cut the ice cream, eat more broccoli, exercise regularly. But because of their position of authority and credibility, physicians can play a crucial role in helping the US population improve its dietary and lifestyle habits.

The key is to introduce and support minor but sustained changes in the diet and physical activity. For example, we have shown that simply reducing consumption of caloric beverages (soft drinks) can result in significant weight loss in overweight adults, without any other dietary intervention.<sup>5</sup>

The other key is of course to modify the obesogenic environment we live in. Only by creating conditions that facilitate healthy eating and regular activity will we have a significant impact on public health. ■

## ■ REFERENCES

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