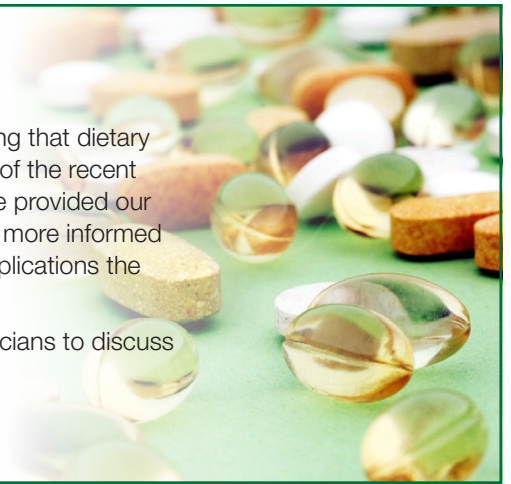


## EMERSON RESPONDS:

We have received questions from professional customers regarding recent media suggesting that dietary supplements may be unnecessary or even harmful. In response, we provide this overview of the recent media and research on which it is based. We have reviewed the original research and have provided our expert opinion as well as links to other resources. We hope that this allows you to become more informed about the issues so that you are able feel increased confidence in deciding what clinical implications the study may or may not have in your practice.

We always encourage you to make an appointment to speak with one of the on-staff physicians to discuss any additional concerns or questions.

Thank you for choosing Emerson Ecologics.



October 26, 2011

### Is This the End of Popping Vitamins?

Wang S

New York Times, Health and Wellness Section

Oct 25, 2011

#### Article Overview:

This article argues that the body of research is growing that demonstrates that dietary supplements do not provide much benefit and don't make healthy people healthier. The article also goes on to review several studies from 1994 to present that demonstrate the lack of efficacy or potential harm of beta carotene, vitamin C, vitamin E, and multivitamins.

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#### Strengths of this article:

- The article emphasizes that good nutrition consistently demonstrates benefit in lowering disease risk.
- It also quotes several researchers who explain that when used at high doses, micronutrients transition from a nutritional role to more of a pharmacological role, and that further research is necessary to better understand the mechanism of action of nutrients.
- The article describes how many consumers report feeling better with use of dietary supplements.

#### Limitations of this article:

- This article chose to review only six studies that demonstrate harm or lack of efficacy, which is not necessarily reflective of the totality of research. For example, the Archives of Internal Medicine study on multivitamin use and mortality, published this month, was cited without putting it into context with several other similar studies published this year which demonstrated a neutral or beneficial effect of multivitamins on mortality.
- The article does mention the challenge in researching individual nutrients due to the fact that dietary intake of nutrients in study participants can vary so widely. It fails to note, however, that the methods used to analyze data in this type of research can transform conclusions from stating that there is benefit to saying that there is harm. In other words, the data can be "massaged" to meet the bias of the researcher. This is an ongoing challenge when research is published by groups trying to defend or to criticize the dietary supplement industry.
- Many of the cited studies utilized single isoforms of the vitamin under study without accounting for intake or blood levels of other isoforms. Vitamins such as vitamin E and beta-carotene typically occur in nature and in the body as a number of stereoisomers which act collectively. Overburdening the system with one form can create deficiencies of other forms and impede the physiological actions of the vitamin complex.
- The harm noted in these studies were confined to specific subsets of the population, i.e. smokers, and the conclusions may not be applicable to other populations.
- The quality of the dietary supplements in these studies could have affected the results, particularly when a synthetic form of the vitamin, i.e. dl-alpha-tocopherol for vitamin E, was used. Synthetic forms of vitamins are not bioidentical to the forms of the vitamin found in nature and some studies have demonstrated that they may have different effects. In addition, some of the studies did not control for the specific supplement used, for instance the multivitamin studies. Multivitamins are not created equal and this is a strong confounder of the results.



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### **Suggested actions based on this research:**

- As practitioners and dietary supplement users, we have a strong desire to understand how and why nutrients work. We should continue to pursue high quality research that can better guide our practice of medicine and identify the patients best suited for a specific treatment.
- One of the most important benefits for patients who seek guidance from healthcare professionals is that they obtain individualized supplement recommendations. Individualizing a dietary supplement program in the context of each person's dietary and health issues minimizes the potential for harm from unnecessary or contraindicated supplements.
- We agree that dietary supplements are best used in conjunction with a healthy lifestyle including a healthy plant-based diet, stress moderation, and an active lifestyle. We recommend that you promote these foundational behaviors with all patients.
- We emphasize the importance of evaluating the body of research when drawing conclusions on safety and efficacy of a nutrient, rather than forming a judgment based on any single study.

### **Additional Resources:**

**View this article:** [Click here to view this article.](#)

**Clinical Research Summaries:** [View a balanced summary of research on several popular dietary supplements.](#)

**Clinical Essentials:** [View evidence-based summaries and research citations for dietary supplement ingredients.](#)

