

# Correspondence

## Vitamins on Trial: Bad Science— Misleading Conclusions

People are confused about vitamins: Should we take them, or are they a waste of money? Conventional dietary wisdom says we can get all the vitamins we need from a good diet. But Canadians are nonetheless enthusiastic vitamin poppers. A 2005 survey by Health Canada showed that 57 percent are regular consumers of vitamin supplements, and believe they increase everyday well being and ward off the threat of future serious illness.<sup>1</sup>

Skeptics argue that such faith is misplaced; that research shows vitamin supplements simply don't work. Vitamin poppers are wasting their money, dupes of the supplement industry. And this is where the argument gets emotional. Defenders of vitamins parade the many published studies that do seem to support a role for vitamin supplements in chronic disease prevention, while the skeptics gleefully jump all over any new study that appears to show otherwise.

Recently, it's the skeptics who have been winning. First we learned 14,641 male U.S. doctors given 400 IU of vitamin E every other day (or placebo), or 500 mg of vitamin C daily (or placebo), were not protected from cancer or heart disease, and might even have increased their risk of hemorrhagic stroke. Then a study of antioxidants C, E and selenium for the prevention of prostate cancer was cut short after a midway analysis of the data failed to show any protection.

### *Breaking Basic Laws of Physiology*

While there are many criticisms that could be levied at these studies, one stands out above all others – you simply cannot get reliable data by studying vitamins one at a time. The reason for this should be obvious. No vitamin works alone. Rather, each works in concert with all the other vitamins and essential nu-

trients – the trace minerals, amino acids and essential fats. Roughly 40 essential nutrients are required to maintain and repair tissues, and regulate the innumerable body processes required for health. And deficiency of any one of these will cause illness.

Therefore, studying the health effects of vitamins one at a time, or even in small combinations, breaks this fundamental law of physiology. When we investigate the impact of vitamin C and E supplements on heart disease or cancer in isolation we have no way of capturing the influence of other possible deficiencies that might be present in our study population. For example, deficiencies of vitamin D, omega 3 fats or B-vitamins are also known risk factors for heart disease and cancer, and all too common in North America.<sup>2-4</sup>

### *The Problem with Studying Complex Systems*

Suppose the auto industry makes the observation that cars must have spark plugs in good working order to run well. Although this might seem obvious to any car owner, if we follow the current logic of vitamin research we would not blindly accept a claim like this, but rigorously test it. So we put new spark plugs in a series of malfunctioning cars hoping to make them run again. Might work in some, not in others.

But if a significant number of cars failed to respond, we wouldn't be entitled to conclude that spark plugs are useless. If we did, we might expect to draw a scathing response from the auto industry, and leave knowledgeable car owners shaking their heads in disbelief. But this is what we've been doing with vitamin research. We test vitamins in isolation, and when we can't get them to work on their own, we discard them.

Such singularly focused "spark plugs research" tells us nothing, one way or the

other, about the role of vitamin supplements in health and disease. The scientific approach that reduces everything to studying one variable at a time may work for drugs or surgical interventions. But it is generally doomed to fail when we try to study complex systems, whether it is cars or human health.

Thoughtful researchers are at last beginning to see the limitation of single nutrient clinical trials and have called for a moratorium on research until we can figure out how to study nutrition in all its complexity.<sup>5</sup> In the meantime, we need to acknowledge the inherent difficulties of testing intimately interactive nutrients one at a time. And we should rightly remain skeptical about the results of clinical trials that persist in this approach.

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## References

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## The Doctor Who Lived: Holistic Psychiatrist Defeats the Maryland Board

Alice W. Lee-Bloem, M.D., a holistic psychiatrist practicing in Olney, Maryland, has successfully defeated the Maryland Board of Physicians and protected her legal right to continue practicing orthomolecular psychiatry and energy medicine.

After a raging, two-year battle in the Maryland courts and at the administrative level, Dr. Lee-Bloem delivered a crushing legal defeat to the Board in three ways. First, the Administrative Law Judge (ALJ), Geraldine A. Klauber, of the Maryland Office of Administrative Hearings, dismissed most of the charges by the Maryland Board against Dr. Lee-Bloem, stating that as a matter of law, the Board of Physicians could not prosecute the practice of alternative medicine and energy medicine through the peer review process. To keep the prosecution alive, the Board grasped at straws and charged Dr. Lee-Bloem with violating the "standard of care" of one patient only. Second, after a three-day trial, the ALJ wrote a 50-page decision, stating that the Board had no legal grounds to prosecute Dr. Lee-Bloem in the first place, having failed to define what the "standard of care" was, let alone convince her of any violations of the same. And third, as of February 5, 2009, the Board issued its final decision to dismiss all charges against Dr. Lee-Bloem without any conditions or probation. This complete dismissal of a case by the Maryland Board has set a new precedent and is the first decision of its kind in the history of the State of Maryland for a holistic physician.

Mr. Jacques Simon, the lead attorney in this case, brilliantly executed the legal defense and assault against the Board on behalf of Dr. Lee-Bloem through the proceedings in the state courts and at the administrative level. With national legal expertise in protecting integrative medi-

cine and physicians who practice cutting edge medicine, he defeated the Maryland Board in its efforts to quash alternative medicine, which efforts were marred by legal and constitutional deficiencies. Mr. Alan Dumoff, an attorney practicing in Maryland, added many years of additional experience, acumen, and skill in defending alternative medicine as he supported Mr. Simon and Dr. Lee-Bloem on this case as the local counsel.

-<http://www.drbloem.com/hp/victory.htm#readmore>