Vitamins and Health

Editors' Note

We *reproduce here an editorial from the Swedish journal of Biological Medicine* 7, *4-5, 1980. Dr. Lindahl addresses many of the questions which have been raised by critics of orthomolecular medicine. Our journal has carried information about the uses of nutritional therapy for many years. Our readers are aware of the criticisms and will be pleased to note that another journal has come to conclusions which are similar to ours.* We *welcome this Biological Medical journal and wish it rapid growth and development.*

The Swedish National Food Administration and the National Board of Health and Welfare and nutritional experts would seem at the present time to be agreed that certain foodstuffs are essential for a healthy life. Carbohydrates, fats and proteins or amino acids are required in large quantities to furnish the body with building elements and calories. Various minerals, including calcium and magnesium, are required in smaller a-mounts. Trace elements, including iodine and cobalt are needed in still smaller quantities. In addition there are a number of complex compounds known as vitamins, because when they were discovered they were considered to be particularly necessary for life—perhaps mainly because they were newly discovered and difficult to identify chemically and to determine quantitatively.

In the childhood of vitamin research it was demonstrated that extremely small amounts of various vitamins sufficed to ward off certain easily recognizable deficiency symptoms—for example, rickets, scurvy and beriberi. These minimum quantities or negligibly larger ones have since been adopted by the experts as "recommended doses".

Vitamins have always been regarded by the general public with great respect, admiration and interest. There has been a tendency to believe that since small quantities are beneficial larger amounts must be still more beneficial and promote good health. Since, for example, a deficiency of vitamin B1 (thiamine) produced, among other things, nervous symptoms, it was thought that thiamine should be of value in *all* types of nervous symptoms. The public still seems to hold the view that vitamins are beneficial in general, especially in the case of undiagnosed "spasm" while the ideologists of the medical profession and our few nutritional experts make great efforts to combat these views. People are advised not to take multi-vitamin preparations in the case of diverse unspecific states of weakness and general fatigue, and the importance of always making a diagnosis is emphasized, since such symptoms can signal a serious disease. It is firmly denied that vitamins have a "general roborant effect", though without adducing

factual evidence in the form of, for example, comparative tests. Vitamin preparations approved as medicines are permitted as vitamin content approximating to the officially recommended doses, and there is talk even of introducing prohibition of vitamin preparations containing more than 150 percent of the "recommended" vitamin dose. Similar action in the USA has recently been stopped by the citizen movement led by, among others, Ralph Nader on the grounds that vitamins are food stuffs. These must be able to be sold freely and taken in doses that the individual citizen himself decides.

It might be suspected that the National Board of Health and Welfare and the Swedish National Food Administration in an unholy alliance, might come down on the manufacturer that, for example, produces vitamin tablets with from 10 to 100 times the officially recommended dose.

In anxious attempts to protect the public against overdoses of vitamins use is being made of intimidatory propaganda implying that the supply of vitamins in excess of the "recommended dose" can lead to illness and poisoning. That vitamin D and, to some extent, A in excessive doses can produce side effects is well documented. The number of people that have been "poisoned" by vitamins seems to be small, however, and publications on poisoning are extremely rare. There would appear to have been no deaths in Sweden due to overdoses of vitamins taken without a doctor's prescription.

But what about all the other vitamins? Well, it is true that there are hardly any reports of poisoning from overdoses, but warnings are still issued nonetheless.

There are *conceivably* dangers from overdoses, and as we do not know the hazards we therefore definitely advise against them! As regards vitamin C a representative of the Swedish National Food Administration has said that it can produce cancer when given in excessive doses; he bases his view on a poor study in the rat, which does not in fact support this suspicion.

It is not possible that we do not know how *beneficial* "overdosing" with vitamins actually is, and that a large number of diseases and injuries can arise with the present "recommendations for underdosing". There is ample evidence for this including the research on vitamin C conducted by the Nobel Prize winner Linus Pauling. Other results point in the same direction. Overdosing with certain vitamins by a factor from 10 to 100 has a beneficial effect on certain diseases. The individual need for vitamins varies widely—by a factor of up to 20. The interaction phenomenon is of the greatest importance also in connection with vitamin dosage.

In the USA views supported by doctors and research workers hold that great benefits to health may be gained from massive "overdosage" of various vitamins. "Orthomolecular medicine" and "megavitamin therapy" are terms applied in this context. The epithet "overdosage" is, of course, an arbitrary one, and is based solely on earlier conceived opinions of vitamin-fashion creators of the day. The interesting question instead is: "What is the optimal vitamin dosage?"

In this issue some of these problems are approached and we hope that we shall be able to return with further views on the need for vitamins.

Our progress in this field must begin with the admission that our present knowledge on vitamin optima is almost negligible and that a considerable research effort is needed to establish these optima.

Since any health benefits from optimal dosages of vitamins must be assumed to be moderate but important and to require a long time to take effect, this research will presumably be extremely difficult to accomplish from the methodological aspect. It is, of course, *still more difficult* to establish a factual basis demonstrating that our official view on vitamin dosage is correct. Unfortunately, it would seem that official thinkers on vitamin dosage have no clear idea of the complexity of the problem, and the debate on vitamin needs will therefore on their side often be on a fairly superficial and abstract level.

OlovLindahl
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