

Editorial

Can One Vitamin Overcome the General Nutrient Deficiencies of the Average North American Diet?

In his book *The Sanctity of Human Blood: Vaccination is not Immunization*, Tim O'Shea records the shameful and dishonest history of what has been done by medicine, the drug companies and the institutions that are supposed to keep them honest and really interested in the health of the people. I have read many books that have inspired me and have made me proud to be a doctor. This one made me ashamed and really frustrated. I was confronted by the truth of what was happening in a field of medicine to which I had paid very little attention.

According to O'Shea the role played by vaccinations over the past 100 years has been grossly exaggerated and the harm that this has done, and still does, has been carefully hidden from public view. Only a dedicated searcher for the facts has been able to dig out the information. In brief, the vaccine industry has not been honest with the public.

In the same way the anti-nutrients establishment has been dishonest about the use of safe nutrients, such as vitamins, even when used in large doses. These are so safe that there have been no deaths reported that could be attributed to vitamins. In sharp contrast, in Canada and the United States more than 125,000 die each year in hospitals from the proper recommended use of drugs. For a complete and serious examination of these statements read Andrew Saul's review of Dr. Marcia Angell's surprising book, *The Truth about Drug Companies (JOM 20.2)*, surprising because it was written by an insider, a respected member of the establishment. Here is Saul's introduction to this important review.

"Is there some way (pharmaceutical) companies can rig clinical trials to make their drugs look better than they are? Unfortunately, the answer is yes. Trials can be rigged in a dozen ways, and it happens all the time.

Typically, any author making such an

uncompromising statement would, just for starters, be denounced for unjustified hostility to pharmaceutical medicine. For the coup de gras, the writer would be lampooned, and dismissed as an unqualified quack.

Not this time. This is the stentorian voice of Dr. Marcia Angell, former editor-in-chief of the *New England Journal of Medicine*. A highly respected and established medical insider (twenty years with *NEJM*), she does not shrink from employing the alternative health movement's most derogatory epithet, "big pharma," to attack an industry which, she says, "will do almost anything to protect exclusive marketing rights." Dr. Angell fairly rips into her discussion of patent-prolonging, profit-piling, non-innovative "me-too" drugs, which she reveals as the true daily bread-and-butter of the modern pharmaceutical industry.

And as for the few truly new blockbuster drugs, Dr. Angell shows that the clinical trials are often rigged. This is way beyond mere bias; it is blatant dishonesty. One "way to load the dice," she writes, "is to enroll only young subjects in trials, even if the drugs being tested are meant to be used mainly in older people. Because young people generally experience fewer side effects, drugs will look safer." Another of the "common ways to bias trials is to present only part of the data - the part that makes the product look good - and ignore the rest." She adds, "The most dramatic form of bias is out-and-out suppression of negative results."

We cannot be proud of the general health of our population. Every second Canadian has one or more chronic conditions, and the number of sick people increases exponentially. Medicine has not kept up with the problem. The best evidence is the increase in costs of treating the sick population. Modern medicine is very effective in dealing with horizontal medicine—the emergencies and trauma cases. Surgery, anesthesia and other diagnostic and treatment procedures are very good. The advances have been so great that

a surgeon finely trained and skilled 20 years ago if awakened from a Rip Van Winkle sleep 20 years later, would not be allowed to enter any modern operating room. But medicine has lagged far behind in treating the walking wounded; vertical medicine has not advanced much over the past 20 years. An internist brought back after 20 years would have little trouble practicing today and might even get better results. Modern medicine has become one of the major factors in causing death. This is described in the article, *Death by Medicine (JOM 20.1)*.

Now that we know how little we can trust the media fed by the medical journals why are we surprised that the information extracted from large scale studies of nutrients is not credible.

Media Reporting on Vitamins

Between 1930 and 1940 the headline news about vitamins was usually honest. This was the golden era of vitamin discovery. Noble prizes were given to pioneers who discovered or identified them and if they did not get this prize they, like Dr. Roger Williams, were given other honours for their work, his for the discovery of pantothenic acid and folic acid. Announcements were followed with great interest and studies using these vitamins were carried out as soon as they became available. Some of the best clinical studies conducted by curious physicians were reported. These reports gradually vanished with the introduction of the antibiotics and the steroid wonder drugs after WWII ended in 1945. Modern medical scientists believe that if it is not in the Medline it never existed. They believe that anything old must be inferior to anything new.

The pioneer physicians were not handicapped by the need to do these modern double-blind randomized trials that are so pernicious today. There was no money with which to do studies and physicians had to think—and behave as if they had

thought. Clinical studies, now called anecdotal, are roundly condemned, considered useless. The main purpose today of the double-blind controlled trials is to persuade regulating bodies that a product may be released on the unsuspecting public. A good deal of harm is done before they are withdrawn

Dr. David Horrobin criticized these large scale studies. He suggested that small scale studies using targeted populations looking for major difference between the treated and the control group are much more apt to be of any substantial value. The vitamin pioneers used the vitamin-as-prevention paradigm, which played a very useful role in discovering and isolating essential nutrients. It stated that vitamin supplements should only be used where the person is deficient in those nutrients. This seems too obvious. There is no point giving large populations extra vitamin C if they are already getting all that they need. It therefore became important to determine whether populations really did need extra supplements and then only to provide those in short supply.

The need is determined by the general nutritional state of the person. There are many whose diets are relatively good but still need extra nutrients due to biochemical individuality and other factors such as genetics or chronic deficiency. I have seen many patients whose nutrition was excellent but who still were sick and needed one or more vitamin supplement. A recent example was a man in good health except that for the past five years he had suffered from severe peripheral neuropathy of his feet. Five physicians skillfully diagnosed him but no one offered him any hope. His diet was good. But on niacin one gram three times daily after meals, he was well on the way to recovery in one month. To have given him any other nutrient would have been a total waste as he needed niacin and not any one of the other important nutrients.

Roger Williams discussed the fact that all essential nutrients are essential. Not one

is more important than any other except for the individual who is lacking one of them. He compared the nutrient requirement to an orchestra where all the musicians are equally important if we are to hear the quality of the music that was written. If during a concert the first violinist faints and the conductor beckons for the first drummer to come forth to replace him because the show must go on, one will not have music. A symphony becomes a cacophony. One must replace the missing instrument and performer. In the same way in the complicated mix of thousands of chemical reactions going on in the cells of our bodies replacing one missing essential chemical with another which is not the same will no longer permit that cell to carry on its normal function.

If all the members of the orchestra are superbly trained, play from the same score, and are led by the best conductor the music will be the finest. But if the members of the orchestra are not well trained, the conductor is incompetent and the music is lamentable, replacing one poor performer with a superb musician will do little to improve the quality of that performance. If the violins are not adequate increasing the number of drummers will be of little value. To improve the quality of the music all the players will have to be trained, and the conductor will need to be fired and replaced.

If the population to be tested is already healthy and not lacking in the nutrients adding any nutrient will not have any effect except for that part of that population which is deficient in that particular nutrient. If a major fraction of the group is deficient in that nutrient alone, adding the nutrient to the whole group will show up as a difference which can be measured statistically. If the general population is suffering a general deficiency of almost all the essential nutrients, as is true in North America, adding only one nutrient will have little impact because, like the orchestra of incompetents, putting in one superb mu-

sician will do little. The populations being tested have to be carefully defined. One has to determine whether the therapeutic trial is for prevention or for treatment.

The Recent Vitamin E Study

On March 16, 2005, the local media carried headline reports of a study which claimed that vitamin E was not helpful and in fact was dangerous. Except they did not say that it was dangerous. Such a statement would mean something. They said that it *might* be dangerous because that statement means nothing, as anything can be dangerous, even writing too much. The same publication several years ago carried a report which claimed that no one in North America was getting enough nutrients using the very low and inadequate daily allowances and that every one should take vitamin supplements.

The recent report claimed that vitamin E (doses of 400 IU) increased the risk of heart failure. The raw data showed that there was little difference in the actual numbers between those on the vitamin and those on placebo, but with huge populations small differences are exaggerated by the statistical analysis. The differences they found are probably due to random errors in the distribution between placebo and treated group. Percentage changes tell us nothing. If out of one thousand patients given a drug one dies and if out of another thousand given placebo two die then it is simple to convert a meaningless difference into a significant one by the percentage change, for in this case there is 100 percent decrease due to the drug. There is really a difference of only one. Should 999 patients be subjected to a drug to help only one? Perhaps if these drugs were entirely safe, but they are not.

The headlines did not convey the fact that the population being tested was a very sick population with advanced heart disease or diabetes. Half had previously suffered from heart attacks and one quarter

had had heart surgery. Almost all were on drugs, which we all know carry much more risk than do vitamins, as illustrated by the recent Vioxx recall.

Our populations are like an orchestra made up of incompetent musicians. It is highly improbable that replacing one single nutrient to such a group who are deficient in many more will have any great value. The headlines do not recognize this and they blame the vitamin for not restoring the health of the entire orchestra rather than the doctors who did these studies and did not take into account that they were doomed to failure from the beginning. Or is it the outcome they wanted?

There are ways that could have yielded meaningful data. If the population contained a subset of people who need extra vitamin E, as the Shute brothers recommended so many years ago, then the correct test is first to identify them. Out of the thousands of patients given vitamin E there must have been some who really did need it. If one were to select the people who were made much better by the vitamin they could then be tested once more. They could be divided into two groups and would be given either more vitamin E or placebo. If the placebo group got sick again and if they recovered once more on the addition of vitamin E then one would have evidence that for some people vitamin E really is essential.

Individual nutrients will not replace a grossly inadequate diet. Studies, large scale or small, which do not recognize this fact should never be planned or reported. If all the essential nutrients were replaced the matter would be different but theoretically if all the essential nutrients are replaced we are once more talking about whole and good food. Because vitamin deficiencies are usually multiple I assume that most of my patients have several deficiencies and even if they need only one, say niacin, I will still add others such as vitamin C and the B complex vitamins. As Pauling pointed out so many years ago they will do no harm and

they may be very helpful. The only rational way of treating with nutrients is to ensure first that the diet is optimal and then to use optimal amounts of the nutrients that are needed for individual patients. Standard nutritionists recommend the usual small vitamins doses while orthomolecular therapists use optimum doses which may be small or large. For orthomolecular physicians the important characteristic of the dose is not its size but whether it is doing the job it is supposed to do, to get the patient well.

In Summary:

- 1) Only sick populations are available for nutritional testing. These are therefore treatment trials, not preventive.
- 2) The findings that many, if not most, of these populations could be helped with Orthomolecular treatment, with the proper use of nutrition and nutrients in optimum doses is misrepresented.
- 3) Whenever possible the use of vitamins is given a negative slant by emphasizing potential, not actual problems, based upon shoddy research and shoddy reporting by the press.

–Abram Hoffer, M.D., Ph.D.