Editorials

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DOES ASCORBIC ACID DESTROY VITAMIN B12?

In 1974 Herbert and Jacob claimed that ascorbic acid added to a test meal in vitro destroyed vitamin B12 Since then Herbert has maintained that any dose of ascorbic acid greater than 2 g each day was dangerous and could produce pernicious anemia, a vitamin B12 deficiency. Although his conclusion that consuming ascorbic acid could destroy vitamin B12 was based upon an in vitro study which did not reproduce the conditions in the stomach, his work was given widespread publicity. Ascorbic acid is so safe that any toxic reaction would be quite remarkable. But even this shaky work has been invalidated by a recent report by Newmark et al., 1976. These authors used a similar test meal but analyzed it using two methods, (1) a radio assay method, and (2) a microbiological one. They found that vitamin B12 levels in their test meal were similar to values reported in the literature. In sharp contrast, Herbert's method yielded values very much lower. Secondly, they found that up to 0.5 g of ascorbic acid added to the test meal had no destructive effect whatever on the vitamin B12 They also pointed out that the official method of the American Organization of Agricultural Chemists and the U.S. Pharmacopeia calls for 4 g of ascorbic acid per liter of fluid. The mixture is autoclaved five minutes at 121 degree Centigrade as part of the test and does not destroy any of the vitamin B12

Herbert used a method developed for measuring vitamin B12 in serum where mild extraction procedures are adequate. However, in food the cobalamin (vitamin B12) is tightly bound and requires much more rigorous extraction conditions. They concluded, "Their low results are apparently due to inadequate extraction of the vitamin B12 in the samples during preparation for assay."

No Orthomolecular physician has ever reported a vitamin B12 deficiency induced by ascorbic acid. Our clinical judgment is supported by these recent biochemical findings.

REFERENCES

HERBERT, V., and JACOB, E.: Destruction of vitamin B12 by ascorbic acid. J. Am. Med. Assoc. 230, 241-, 1974.

NEWMARK, H. L, SCHEINER, J., MARCUS, M,, and PRABHUDESAI, M.: Am. J. Clin. Nutrition, 29, 645, 1976.

CRIME

Criminal or antisocial behavior, legally defined as crime, remains with us as a very difficult problem. There are no simple causes, and psychiatric treatment and social sanctions remain relatively ineffective. It is easy to show correlations between a large number of variables and criminal activity, but these have not led to any useful preventive or ameliorative measures. Perhaps this has been due to a single-minded preoccupation with psychosocial factors—the territory occupied by social workers, psychologists, psychiatrists, and others selected by society to deal with the problem. The biophysical environment, equally important, has been almost totally neglected. This environment includes our food which provides the nutrients each cell must have and our air, water, and all those chemicals which impinge on every living organism. This environment is also the inner environment which surrounds every cell. When it is defective so will be the environment of the cell.

Nutrition plays the most important role. Because food available to animals was unprocessed, it was difficult to suffer from malnutrition. Even so-called unbalanced diets were not as harmful as are our current technological diets. Primitive people have survived in excellent health on a few simple foods. Starvation, however, was not uncommon. Primitive man was often challenged by periods of fasting following abundance of food. Perhaps we have adapted to it and should fast now and then to force our bodies to react. Perhaps this explains some of the benefit of the fast in people who have no food allergies. But the type of malnutrition current today became possible only when our technology discovered how to separate our food into its chemical components and to reconstitute them into what appears to be food. These food artifacts are engineered to appeal to our visual and taste instincts. They are sweet and colorful, but they have almost ignored the prime function of food—to nourish. A California physician has declared, "If man made it, don't eat it." This is surely a powerful indictment of most of our processed foods.

The type of malnutrition which is particularly troublesome is that type which leads to criminal behavior, primarily the overconsumption of refined sugar and cereal products accompanied by a deficiency of fiber, vitamins, and minerals. For this type of malnutrition has a particularly pernicious effect in changing perception, thinking, and mood—all powerful antecedents of behavior.

The idea that malnutrition can be responsible for criminal behavior is beginning to spread. Recently the Ohio Division, Huxley Institute for Biosocial Research, held a weekend conference in Bowling Green on "Crime, Malnutrition, and the Orthomolecular Approach." The role of malnutrition and of allergies was explored. The conference was well attended and apparently had an impact on that part of Ohio. I was particularly pleased with a report presented by Barbara J. Reed, Chief Probation Officer, Municipal Court of Cuyahoga Falls, Ohio, and circulated at the meeting by Mrs. A. Kalita. I asked Mrs. Reed if she would prepare a report for this Journal. This I recently received.

MUNICIPAL COURT OF CUYAHOGA FALLS, OHIO

Barbara J. Reed, Chief Probation Officer

During the year of 1975, a total of 106 persons referred through the Probation Department of Cuyahoga Falls, Ohio, were given a written test for symptoms of hypoglycemia. Eighty-two percent of those taking the test reflected 15 or more symptoms, with some going as high as 50 or more. Those who cooperated with changing to a high-protein diet, plus taking supplements of B-Complex, vitamin A (10,000 units), vitamin C (300 mg, 4 times daily), zinc, magnesium, and bone meal showed a remarkable change in attitude and appearance.

For the first several months in 1973 the Probationers were referred to their

physician and told to take a copy of the symptoms shown on the test with them. Without exception, they were put on tranquilizers. This was most frustrating, so I simply began to carefully educate each individual with regards to what does what for the system, and then going over their diet each time they were in the office. Some responded within days, others took two months to five months to reach the point of feeling "good."

We have a number of people who have abused alcohol and/or drugs. Some were on prescription drugs and taking three to seven different kinds daily. Those people were usually the highest in symptoms and the most difficult to change in habits. I also discovered that the craving for alcohol and other drugs was diminished by a protein "cocktail" at breakfast consisting of: Mixing in a blender—4 oz. of unsweetened juice, 1 tablespoon (heaping) of protein powder, and 1 teaspoon *unheated* honey, with the option of adding an egg or 1/2 ripe banana on occasion, if desired. They were also asked to take the same supplements listed above, together with the high-protein, low-carbohydrate diet.

The diet* was carefully covered with each person with them listing foods or beverages consumed daily. They were particularly encouraged to leave those foods out of their diets for three to four weeks and then to be aware of how they felt when one of the foods was eaten again. One young man who had been doing very well decided to eat a pizza. His mother called the office to say his personality had immediately changed to that of being hostile, agitated, depressed, and restless. Needless to say, both the young man and his mother were quickly convinced.

Another young man, age 31, was referred to the Probation Department for Aggravated Menacing (reduced from Felonious Assault). He had held his wife and children prisoner with a *.22* rifle for several hours, and then had released them, but fired the rifle out the door toward the police before giving up. He was taken to the mental hospital and then brought to Court about a week later. He was under heavy medication and although docile, appeared to be only vaguely aware of his surroundings. After five months of high-protein diet, plus supplements, he "bounced" into the office with sparkling eyes and stated he had never before known what it was to "feel good."

My first observations that illness had something to do with crime began around 1965. I became aware that all women over the age of 33 referred for shoplifting proved to be anemic, low thyroid, etc.

On January 1, 1971, I was appointed head of a new probation department and set up records to better keep statistics on the people referred. By 1975 we were able to draw some definite conclusions and a report was included in our Annual Report to the Judges on the number of people suffering with symptoms of low blood sugar. (Also, I have begun to use the term low blood energy as many people confuse the word "sugar" and think they should eat more sugar.) A copy of our report is enclosed.

For about two years, one of the Judges has been ordering the Probationers to stay on the diet or face revocation of probation, which would send them to jail. The other Judge is also very interested in the Orthomolecular approach and they both look for the number of symptoms listed on the test to see "how sick" the person is. My effectiveness in changing the attitude of the Probationer has improved tenfold and we expect this to continue to improve as more skill and knowledge is gained.

At the end of probation (or the presentence) each individual is encouraged to stay on the diet. We have had no rearrests of those who cooperated, thus adding to my own conviction that people who feel good are not likely to commit crimes against family or society.

*** Taken directly from "Low Blood Sugar," a pamphlet printed by Karpat Publishing Company, P.O. Box 5348, Cleveland, Ohio 44101.**

In her letter she included the paragraph—

Because of your interest, an actual case history is enclosed from 1974, which is a very good example of work that is repeated over and over. This one is enclosed to illustrate the dramatic change in an explosive personality that would have simply been sent to jail previously. Another bit of interesting information is that after several years of illness, his attorney had finally been diagnosed as hypoglycemic about a year before this incident. He was surprised and delighted that this approach was taken. This is a clinical experiment conducted in the classical style. One applies a new program and compares the results with those obtained by previous programs. Double-blind methodology, even if it were of any value, would be impossible. How would one double blind good nutrition food to look like sugar or junk? The results are very interesting. What we now require are similar programs in large counties or municipalities with adjacent areas as controlled areas. In the control nothing new would be done. A study of several years' duration would be very convincing. If, in addition to simple dietary correction, the offenders were also checked for perceptual changes characteristic of the schizophrenias, and treated for these by megadoses of the appropriate vitamins, even more striking results would be obtained.

In short, a significant and large proportion of our criminal offenders are suffering from malnutrition induced by excessive consumption of junk processed food; of this group a significant and large proportion may be rehabilitated by a simple correction of the malnutrition.

THE PRICE OF CHEMICAL TRANQUILITY

"Ten years of tranquillizers by injection is enough"

Opponents of Orthomolecular therapy seize upon the flimsiest evidence or upon hypothetical biochemical changes which are no evidence at all to condemn the use of megadoses of vitamins. The best evidence for the remarkable safety of vitamins used in these doses is the paucity of real clinical evidence that patients have been harmed. There is little doubt that there has been a massive search of the literature for ideas by which to condemn these megadoses for clinical data showing toxicity is rare.

It is, however, important to know the actual side effects and toxicity of megadoses of vitamins, not because they are toxic but because they might be unpleasant and might interfere with treatment. These must be known, prevented, and, if they occur, steps must be taken to alleviate them. The same applies to the treatments used by toximolecular psychiatrists.

It appears to me that critics who cry to high heaven about the dangers of megadoses of vitamins seem remarkably complacent about the remarkable dangers and toxicities of the current tranquilizers. Of these, tardive dyskinesia is one of the most serious. Jus et al. (1976), "Epidemiology of Tardive Dyskinesia, Part 1," found that from a sample of 332 chronic schizophrenic patients treated on the average $14^{1}/_{2}$ years, 56 percent suffered from tardive dyskinesia. Age seemed to be a crucial factor. Tardive dyskinesia was present in 40 percent of patients under 49 and in 60 percent of the patients between 50 and 70. I will not review the serious manifestations of tardive dyskinesia which have been described recently in a paper by Dr. R. Kunin (this Journal, Vol. 5, 4-27, 1976).

There is perhaps a second, more serious, side effect of chronic tranquilizer medication; that is, the general immobility and interference with ordinary living. Patients may be free of many or most of the signs or symptoms. But they pay a very high price, the price being that they are simply not able to function. If this is going to be the main result of so-called "community psychiatry," perhaps it were better that we had not made the tranquilizer

discoveries.

In May of 1976 Mrs. G. F., age 37, consulted me complaining that she had been nervous for the previous 15 years. This followed the birth of a child. Since that time she had required 26 admissions to a psychiatric ward for treatment of her schizophrenia between 1961 and 1970. The diagnosis was given her, and she was advised nothing more could be done. Treatment included not only continuous injection with a long-acting tranquilizer since 1970, but a total of about 20 ECT over several admissions before 1970. However, the total number may be doubtful since she was hazy about the exact number of treatments. She came to see me upon the urging of her husband who felt that she was now static and he was concerned, as she was, that she would have to take injections of tranquilizers the rest of her life. "Ten years of taking injections was enough," she exclaimed.

Before her career as a chronic schizophrenic she could recall that when she was six she suffered visual hallucinations, but could not remember what they *were,* and that she had also heard voices in the past, but they were not present at the time she was examined. In her thinking she described having been paranoid in the past and still suffering from these feelings on occasion. Her memory was normal, but her concentration was poor. In addition to these minor schizophrenic symptoms she was very depressed, irritable, and argumentative, especially when she had had a drink.

At one time she was chronically tired and slept day and night, but when she was examined she was not able to sleep whatsoever without taking medication. One of the things that bothered her a good deal was her marked tremor in her arms, worse in her left one, and including the shoulder. Sometimes her legs also had this marked tremor, but the intensity varied. The previous summer she had, on her own, gone off all medication for about five months and the tremor had disappeared. It was clear that she was a chronic schizophrenic woman, immobilized by continuous treatment with an injectable tranquilizer which had suppressed most of her symptoms but had prevented her from functioning normally and had caused tardive dyskinesia. However, her psychiatrist remained convinced that much, if not all, of her tremor was hysterical.

She was started on nicotinic acid, 1 g, t.i.d., Pyridoxine, 1/4 gram, o.d., and was placed upon a special sugar-free diet.

When she was seen June 17, 1976, she reported that she had refused to accept any more of the injectable tranquilizers and most of the tremor was gone. She felt very much better, had a good appetite, was able to sleep better, and she was delighted with the fact that she was able to do her housework. She stated that until now the house was messed up* and dirty. She described how pleasant it was once more to be able to do this work and to live in a clean house. She was not yet well because she still felt excited, especially when her husband, who is an alcoholic, came home and they had an argument.

After she had improved on vitamins she saw the psychiatrist who had been treating her for a long time. He was not pleased when he discovered she was taking megavitamins and refused to see her or to provide any more medication for her.

Another patient of mine, a high school principal, had been chronically immobilized for four years by an injection of a tranquilizer every two weeks. When he was first seen he also was symptom free except that he was chronically tired, was unable to think, had no initiative, and felt too incapacitated to even look for work. His wife had been able to take this for only two years when she left him and he was left alone, looked after by an aunt, spending most of his time puttering about the kitchen or sometimes in the garden. The price that he was paying was almost too great because had it continued for several more years there was no doubt that he would have been a permanent charge on his insurance

policy or on the Department of Social Welfare. When it was discovered that he was allergic to cigarettes, which he had been smoking excessively, he abruptly discontinued the cigarettes, made a complete recovery within the month, and at the end of the second month after starting a cigarette-free program was back at work as a teacher.

It is extremely important for any psychiatrist to ask himself the question, "What is the price my patient will pay for the treatment which I recommend for him?" The question is psychosocial, not economic, even though the financial savings to patient, family, and community are vast when patients recover.

REFERENCES

JUS, A., PINEAU, R., LACHANCE, R., PELCHAT, G.. JUS. K., PIRES, P., and VILLENEUVE, R.: Diseases of the Nervous System 37, 210-214, 1976.