## Hong Kong Veterans Study

A. Hoffer, M.D., Ph.D.

Recently Nutrition Today, a well-known nutritional magazine published in the United States, carried a comprehensive description of severe malnutrition produced in prison camps. As a result I submitted the following letter hoping that Nutrition Today would give it widespread circulation since the topic was so important. However, after several months of consideration I received a letter from the editor who stated that he felt the letter was quite interesting but because it was lengthy and too late to be timely they could not accept it.

For this reason this letter is published here in order to give it widespread circulation and to illustrate the difficulties today in trying to get this kind of material into the standard psychiatric and nutritional literature.

A. Hoffer, M.D., Ph.D. Managing Editor

## Sir:

Your special issue (May/June 1973) on severe malnutrition produced in prison camps is timely. It spurred me to write to describe briefly the fate of Canadian soldiers kept prisoner in Japanese camps for 44 months during the war from 1939 to 1944. When they were released, only 75 percent had survived. They had lost about one-third of their body weight. In camp they suffered from classical scurvy, beriberi, pellagra, many infections, and from protein and calorie deficiency. They were rehabilitated in hospitals and were given doses of vitamins that were then considered high. Since then these Hong Kong veterans have suffered from a variety of physical and psychiatric conditions.

In response to continuous complaints from the Hong Kong Veterans Association, Dr. Richardson (1964-1965) compared the health

of a sample of these veterans against their brothers who had served in Europe. The Hong Kong veterans were as a group much sicker. The death rate from heart disease was greater and the incidence of crippling arthritis, nervousness, tension, weakness, and depression was much higher. In recognition of these findings, Hong Kong veterans receive much higher pensions. It is clear that these men have been deteriorating both physically and mentally at a rate much higher than normal and higher than that of soldiers who were not exposed to severe malnutrition.

The history of a small sample, about 12, is much different for they have been taking nicotinic acid 3 grams per day. These 12 have recovered and remain well as long as they take this quantity of vitamin regularly.

The first, C. P., remained very anxious, fearful, tense, and depressed from the time he left the prison camp until 1960. By this time his veteran's file had accumulated until it required two cardboard boxes to hold and weighed over five pounds. Most of the file contained results of frequent medical examinations and investigations. Throughout this period C. P. was heavily medicated with amphetamines to keep him alert and barbiturates to allow him to sleep. He did not get well on this regime. On one occasion he was investigated in a psychiatric ward, which made him worse.

In 1960, on his own, he began to take nicotinic acid, 3 grams per day, and two weeks later was well. At that time he was working in a special home with elderly people who were on a nicotinic acid research trial. He wanted to experience the side effects (especially the flush) because he was concerned about it and wanted to be able to discuss this intelligently with the others. He expected no therapeutic effect. He has remained well since, with the exception of a two-week interval in 1962 when he went on a holiday to the mountains and forgot to take his vitamins with him. Within two weeks all of his original symptoms came back. As soon as he started back

on, he recovered. The other 11 Hong Kong veterans have shown a similar response.

The 12 veterans on megadoses of nicotinic acid today are comparable to veterans who served in Europe, or to their own state of health before the war except that they are much older. They are markedly different from the majority of Hong Kong veterans who are not on this vitamin.

About 35 years ago it was reported that some chronic pellagrins required at least 600 milligrams per day of vitamin B3 to prevent the return of pellagra symptoms. This was astonishing then and unexplainable since pellagra as a nicotinic acid deficiency disease should have yielded to vitamin (small) doses. Today the concept of vitamin-dependency disease has developed. It is based upon the realization that there is a much wider range of need for nutrients than was believed to be true then. A person is said to be vitamin dependent requirements for that vitamin are much greater (perhaps 100-fold greater or more) than is the average need for any population. The optimum need is that quantity which maintains the subject in good health, not that quantity which barely keeps him free of pellagra. From this point of view the Hong Kong veterans have become vitamin B3 dependent as a result of severe and prolonged malnutrition. It is likely that any population similarly deprived of essential nutrients for a long period of time will develop one or more dependency conditions.

I have treated only three subjects for severe depression, anxiety, and a multiplicity of physical complaints who had survived concentration camps in Europe. All three recovered quickly when placed upon a high-protein, low-sugar, and frequent-feeding program combined with megadoses of vitamin B3.

With the world's population increasing, with the increasing frequency of major famines, and with the decrease in vitamin B3-rich foods, more and more of the world's

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population will suffer from vitamin-deficientinduced vitamin dependencies. This will have to be studied intensively and on a wide scale if we are going to halt the rapid increase in a number of degenerative diseases which are really vitamin dependencies.

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## REFERENCE

RICHARDSON, H. J.; Disabilities and Problems of Hong Kong Veterans, Canadian Pension Commission, Ottawa, Canada.