

(Vitamin E labels by Dr. Johnson)

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The pictures are still fresh in our memory of scarcely breathing, ghost-like human skeletons in whom exposure and deprivation in prison and concentration camps have caused a terrible reduction of all body elements.

In addition to those pathetic symbols of human cruelty, the army of undernourished victims in liberated countries present a most serious challenge to medical rehabilitation. How can we rehabilitate a population to health?

With the destruction of livestock and the serious limitations of transportation facilities, one of the biggest problems is FAT SUPPLY. The body tissues need fat for maintenance and ^{also} to help assimilate hormones and oil-soluble vitamins.

The above-mentioned factor is one of the reasons why the interest of scientists has centered on V-E which is among other things a big economizer of fat. This vitamin prevents fat from becoming rancid and enables the human being to make the most of fat and thus get along on smaller supplies. Far beyond the digestive problem most other tissues, such as nerves and muscles, are also benefitted. V-E sees to it that the daily repair work, such as replacing used tissue elements, is being done and thus prevents most disease of the vital organs due to infectious and nutritious causes, and naturally everybody has heard of V-E as the anti-sterility factor.

For human nutrition V-E is best concentrated in the

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germ of cereal grain and green leafy vegetables. Our grandmothers seem^{ed} to have had a hunch of what is good and healthy. In many European countries rose hips were used to make preserves and they are the very sources of highest Vitamin E contents in nature.

Meanwhile the original sources are not~~more~~ the only sources of V-E. In the hands of doctors was placed a synthetic wheat germ oil in concentrated form. This development was very important because in some cases initial results could only be obtained after the more concentrated form was used. Vitamin E has come up the hard way into medical practice. Since its discovery its mere existence was discussed and even its essential value in human nutrition disclaimed. Although later results were most encouraging, many years of research will pass until its vital role will have been completely established.

X More from
Almost two decades have passed since Evans and Bishop in 1922 published their first report in science about a factor essential in dietary animal experiments for reproduction - called factor X. Lacking this factor, female rats absorbed their foetus in the womb. Male rats became sterile. In this case as in so many others, the weaker sex proved it could take it better than the stronger sex, for it was only temporarily affected. The male part never recovered its original valuable functions. This means that the male suffered irreparable damage of the reproductive organs but the female, when it got what it wanted and needed, started to function again.

The original, very impressive experiments gave V-E the

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name of antisterility vitamin, but it took quite some time until scientists accepted it as a worthy member of good standing in that illustrious society of the vitamins, because too many bewildering facts spoke against its admittance.

The family tradition of ^{VITAMINS} ~~the members~~ ^{AND} A & D permitted scientists to estimate their value by ~~divorcing~~ ^{divorcing} them from the diet of test animals. Resulting damage was specific for ^{each vitamin} each divorce, and when reconciliation was obtained they ^{lived happily} ever after without showing any ~~unpleasant symptoms of the time~~ ^{of their separation} of their separation. These specific test diets led to the discovery of all of its alphabetic predecessors and the complete restoration through their addition permitted standardization long before their chemical identity was reliably obtained. But it was difficult to deprive the diet of test animals of Vitamin E without very often damaging the animal organism through the methods by which this was achieved. When V-E deficient diets could finally be obtained, the resulting destruction was very often irreversible, nevertheless, at long last the international unit of V-E was finally created and the new Vitamin was born.

When its chemical synthesis was completed it turned out to be a triplet, the three parts of which looked chemically almost identical. The alpha, beta and gamma tocopherol, of which the alpha is the most effective. The word Tocopherol comes from the Greek:--Tocos- offspring, Pheren - to bear and ol - indicating its alcoholic nature.

Although the original experiments in cases of female sterility or early abortion suggested the clinical application

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it took nine years ^{before} ~~until~~ the first physician, Vogt Moeller, in 1931 used it on human beings. He treated two women who had a previous history of four and five abortions respectively and succeeded in obtaining normal pregnancy with healthy children.

Four years later he was followed by Watson and Tew who obtained good results in thirty-four out of forty-six cases. Although the issue is still under discussion, progress is being steadily made for the clinical evaluation of V-E in cases of female sterility.

In the course of further research Evans and Burr, in 1928, observed that V-E deficiency was not only limited to the reproductive organs but showed its destructive repercussions in degenerative changes of the nervous system. Young rats which were partially deprived of V-E became paralyzed at the end of the nursing period.

In the year 1938 many scientists all over the world tried to lift the veil of secrecy of the V-E relations to nerve and muscle degeneration. These findings, more than anything else, have created a new era of scientific interest.

Almost simultaneously, in 1940 Bicknell, in England and Wechsler, in New York reported the first improvement of cases, in which the fading and disappearance of skeleton muscles was caused through degenerative processes of the nervous system, called Lateral Sclerosis and Aniotrophic Lateral Sclerosis. These unpronounceable names cover diseases of various changes in the spinal nerves and

diseases of the muscle fibres leading to loss of function and elasticity. The knowledge of these diseases is largely based on the apparent symptoms and on microscopic evidence found after the victims have deceased so that the factors which cause them are open to speculation.

From all we know there are two different types of sclerotic diseases. The first, in which the degeneration and destruction takes a comparatively rapid course of one to three years. Today scientists believe that a poisonous factor, such as a virus infection or an inflammation of unknown origin could be held responsible for the more intense ravages which lead to inevitable destruction resistant to any type of treatment. The second one consists of a strange change in the behaviorism of the nervous cells. All of a sudden they refuse to be properly fed or change in a way to make them become highly sensitive to even a slight decrease in the necessary Vitamin supply. A multitude of diseases which may be complicated by these disturbances or caused by them are under investigation as to their benefit from V-E therapy.

During an interview on the aforementioned subject with Dr. Wechsler, which he kindly extended to me, several important factors were discussed. I asked him what induced him to use V-E in the therapy of those disorders. He said he was particularly impressed by the work of Emerson and Kinse in Copenhagen in 1931 and his interest was specially attracted by the fact that many of the Vitamin deficiency states and anemia in human beings or animal experiments created similar pictures as the ones in the above mentioned diseases.

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For a while the discovery of Vitamin B's influence on the dreadful pain of nerve inflammation in alcoholism and in nerve sclerosis of anemia had raised the hopes of the medical world for a new possibility for the treatment of these and many associated nervous disorders. When certain sobering results showed the V-B did not diminish the rate of destruction, Dr. Wechsler started the treatment with V-E. He said the results are encouraging in diseases which we have never been able to influence before, but he emphasizes the importance of early treatment before irreversible changes have taken place. So far very little is known about the mechanism of action of the V-E. Some investigators report startling results. Others can only obtain progress by adding other Vitamins such as the Vitamin B Complex and a third group reports negative results. It is quite possible that a yet unknown factor has to be added to enhance or increase the action of the V-E in nerve and muscle tissue metabolism to prevent degeneration. ~~X~~

The most general interest, however, will not only lie in the investigation of the vitamin therapy itself, but to find out what factors in human nutrition are responsible for making the human system more susceptible in these cases than in other nerve diseases. It is because of the increase of allergic diseases and of functional nervous disorders in the American population that we are lead to believe that a change in the nutritional habits may be partly responsible for the change of the function of the nerve cell.

In that connection I want to mention several other disturbances which are of equal interest and are to be put into this particular group.

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[Statistics have shown that in England and the U.S. there is an ever increasing percentage of people with hearing disorders. The war with its tremendous noises of plane motors, the pounding of diesel engines under the sea, in submarines, and the terrific crash of explosives, have added to these groups the soldiers whose auditory nerve has been damaged; also neurological war casualties, which almost resemble infantile paralysis in their symptoms, discovered by ^{Guillain} ~~Guillen~~ Barre, show all the elementary changes of the muscle system through deprivation and shock.

For all of the above-mentioned cases modern science has given new hope for recovery and rehabilitation with V-E. The fascinating aspects and the wide scope of future possibilities only convey a small impression of what this new research victory holds in store, and represents by no means the last chapter in V-E therapy. Let us remember the three outstanding qualities of V-E:-

1. Effect on sterility and habitual abortion.
2. The influence on ^{heretofore} ~~henceforth~~ incurable nerve and muscle diseases.
3. Stretching the limited fat supplies of starved countries by enabling the human organism to do more and better on less.

It is Nature's wise foresight to endow the cereal germ in our daily bread with this element for its own preservation and ours; for a better world which it will help to construct.

(X) Case Histories to be added on page 6

Generally the reader expects to be impressed with descriptions of sensational cases and miraculous results from these treatments, but from all reports it becomes quite clear that this cannot always be expected.

Out of four hundred and fifty cases of neuromuscular disorders, published in the Medical Literature magazine during the past five years. The records show eight complete recoveries and about three hundred and twenty-five improved when given V-E.

Following are two examples of successful cases recorded by George A. Blakeslee, M.D.:

Case 1. Mrs J.A., age 54. Admitted to the New York Post-Graduate Hospital, March 4, 1940. She complained of pains in the chest and extremities. This was associated with numbness in these parts and also an inability to walk. Diagnosis: (1) Multiple peripheral neuritis; (a white spead inflammation of peripheral neuritis) (2) Guillain-Barrie Syndrome. (Partial or complete paralysis through nerve inflammation.) Oral treatment of V-E was prescribed for her on March 25. She soon began to show increased strength in the extremities and greatly diminished sensory changes. In a few weeks the patient was able to walk unassisted, but continued treatment until her recovery.

Case 2. M.M., age 20 months, was first seen April 12, 1940. This baby was the second offspring and of normal birth. She was able to hold her head up at four months of age, but when one year old the baby was unable to stand or creep and all the muscles were flabby. When examined she could stand but not walk. Diagnosis: Amyotomia Congenita. (Inborn muscle weakness.) Oral

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V-E was administered on April 12. June 10 a second examination was made and the baby could walk unassisted across the room.