

VITAMIN NEWS

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A REVIEW OF OUR PAST COMMENTS IN THE LIGHT OF LATER FINDINGS

It has been the purpose of Vitamin News to bring to the attention of the physician the therapeutic merits of vitamin products, particularly those supplied under the "V-P" trademark. Many statements have been made which at the time were not supportable by any recognized scientific research, but which were based only on results obtained that had been reported to the writer.

The readers of Vitamin News are entitled to know how many of these scientifically unsubstantiated statements suggesting therapeutic uses of vitamin concentrates have later, by more detailed research, been found correct, and a partial account is offered below.

Any credit due your humble servant for first recognizing an explanation for many of these facts can be considerably discounted in view of the newness of vitamin science in general, in which any practical minded person with some knowledge of biochemistry could not fail to see the obvious.

It should be emphasized that the statements made here were inspired by the results of clinical therapeutic experiences in connection with the use of "V-P" single vitamin concentrates and "Catalyn", representing the vitamins in their natural associated "complexes", while scientific proof had to wait for the preparation of the chemically pure vitamins with which tests were made, in most cases on test animals. It is obvious that scientific work must be done with chemically purified and identifiable materials in order to be able to positively attribute the effects in question to a specific influence.

Also, an opinion that may be the result of a very highly developed ability of judgment is only a guess from a scientific viewpoint until the properly controlled tests are made, which may be years subsequent to the expression of opinion, even though such opinions may be verified in a more practical, if less scientific, way by clinical tests.

And the scientific test, in positively establishing the relation between cause and effect, is only a small step forward. To go the whole way we have a long road to follow yet, to know from a biochemical viewpoint all that takes place. As yet, this represents an almost entirely closed book.

As a short cut, to enable present-day suf-

ferers to receive the relief that may be available by use of vitamin concentrates, we have followed the course of publishing clinical findings that were consistently reproducible, for in many cases no relief was possible otherwise, according to the best medical authorities.

The fact that many of the important attributes of vitamins herein described were FIRST NOTED TO EXIST BY CLINICAL USERS OF "V-P" PRODUCTS LONG BEFORE ANY MENTION WAS MADE OF THE EFFECT IN THE SCIENTIFIC LITERATURE, SHOULD BE CONVINCING EVIDENCE TO THE PHYSICIAN OF THE SUPERIORITY OF THE "NATURAL COMPLEX" CONCENTRATE OVER THE CHEMICALLY PURIFIED AND ANIMAL-TESTED PRODUCT.

Animal tests, we have repeatedly stated (Vitamin News, pages 45, 52 and 75), should be used only to suggest deficiency syndromes, not to make standardization tests, because of the fact that many of the purified vitamins are specific for species.

We have always found our Vitamin C concentrate more outstanding in performance than the findings of clinical investigations of ascorbic acid warranted. So has Szent-Gyorgi, the original discoverer of ascorbic acid. In his clinical tests he found that some other factor was responsible for the prevention of vascular fragility.

Los Angeles Times, New Lemon Vitamin Cure for Bleeding, Sunday, March 14, 1937, Editorial Section, Part II, page 1 and page 3.

". . . In repeated tests he (Szent-Gyorgi) found that his Citrin or Vitamin P from lemons or red pepper in fourteen days would clear up a hemorrhagic condition when pure Vitamin C from some other source was useless.

"As he describes it: 'The extracts were fractionated. The active substance (Vitamin P) was found in the end in a fraction consisting of practically pure flavon or flavonol glycoside. Forty milligrams of this fraction given daily intravenously to man, restored in a fortnight, regularly, the normal capillary resistance. Spontaneous bleeding ceased, the capillary walls lost their fragility towards pressure differences and no more plasma protein left the vascular system on increased venous pressure.' "

Does the "V-P" Vitamin C concentrate control vascular fragility? The following case is authentic:

Diagnosis - Purpura Hemorrhagica with Blood Findings Similar to Secondary Anemia.

Patient - Female, age 55.

Case of 15 years standing, of gradually increasing intensity to cause complete physical breakdown. Usual routine followed; taken to hospital where 5 blood transfusions were given. Patient did not respond.

Treatment: "V-P Catalyn" and "V-P" Vitamin C complex given at the rate of one tablet of each per hour. After the third day patient showed signs of returning vitality. Fourth day dosage reduced to four tablets of "Catalyn" and four tablets of Vitamin C complex per day. Eighth day patient was able to sit up in bed. Same dosage continued. Twelfth day patient up in convalescent's chair. Dosage continued at four "Catalyn" and four Vitamin C complex tablets per day. At the end of third week patient resumed light household duties. Dosage continued at four "Catalyn" and four Vitamin C complex tablets per day.

Treatment was begun eighteen months ago.

Patient now is active and in very good health.

Why this difference? Our Vitamin C concentrate WAS DEVELOPED BY TESTING VITAMIN C EXTRACTS MADE BY VARIOUS METHODS, FOR TREATING PYORRHEA AND SCURVY AS EXHIBITED BY MOUTH LESIONS; THE ONE FOUND MOST EFFECTIVE WAS THE ONE COMMERCIALIZED. Its chemical nature and complexity are matters that can be fussed over by future investigators. IT IS EFFECTIVE AND COMMERCIALY AVAILABLE AND HAS BEEN FOR FIVE YEARS. The human race devoured foods for how many thousands of years before any of us became endowed with sufficient curiosity to start a chemical investigation of them - not but what such efforts are laudable and valuable, but why starve to death waiting for complete knowledge? We haven't yet even mastered the chemistry of plain sugar metabolism. It was as late as

1920 that the molecular construction of our commonest carbohydrate, cane sugar, was first mapped (Irvine and Steele, J. Chem. Soc., 117:1474, 1920). And synthesis of it was not accomplished until 1928 (Pictet and Vogel, Comp. rend., 186:727, 1928). We still are in the dark as to how it is assimilated. If we have had to wait for a knowledge of sugar chemistry that long, is it reasonable to expect a complete knowledge of vitamin chemistry before making use of them therapeutically?

It is the physician's duty to TEST products offered and to watch critically for results - either good or bad. Failure to watch for untoward results after accepting a manufacturer's word has resulted in much harm in the case of Vitamin D of synthetic origin. The irradiated Vitamin D first made was not Vitamin D at all, but mainly toxisterol* ("Vigantol" in Germany and a proprietary Vitamin D, which is a household word in this country, promoted by one of our leading pharmaceutical firms). It invariably caused renal damage if continued for any length of time. We have seen many cases of hematuria and albuminuria in children where overdosage with this so-called Vitamin D was responsible. The remedy? Plenty of Vitamin A (preferably "V - P" Vitamin A complex). Some cases had so little renal parenchyma left that only continuous dosage with Vitamin A maintained a normal function.

These toxic effects have even been attributed to Vitamin D itself:

Eddy, W. H., and Dalldorf, Gilbert, The Avitaminoses: The Chemical, Clinical and Pathological Aspects of The Vitamin Deficiency Diseases, page 228, Williams & Wilkins Company, 1937.

"By further adjustment of the dose of Vitamin D Collazo and Kohler were able to produce nephrosclerosis which progressed to kidney insufficiency and death. Albuminuria and tubular casts were present in the urine. The larger arteries were sclerotic. Other manifestations of Vitamin D intoxication of this degree are metastatic calcification, phosphaturia and polyuria as well as hypercalcemia and phosphatemia. According to Collazo and Kohler these effects may be produced at will in various species and in man."

* "The belief has grown in recent years that . . . and that some of the earlier instances of toxicity were due to toxic products (toxisterol) developed by too prolonged irradiation of ergosterol . . ." - Eddy and Dalldorf, The Avitaminoses, page 229, 1937.

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A REVIEW OF OUR PAST COMMENTS IN THE LIGHT OF LATER FINDINGS (Continued)

1. VITAMINS IN HYPERTHYROIDISM. One of the first syndromes in which the multiple vitamin product ("Catalyn") was found of great value was in the condition of hyperactivity of the thyroid. If the disease had progressed to the state of thyroid enlargement, it was usually even possible not only to correct the toxicosis, tachycardia, and the general symptomatic situation, but also to reduce the glandular enlargement.

It is now five years since we announced the value of vitamin concentrates in the treatment of hyperthyroidea.

It is thirteen years since we called attention to the obvious fact that the health of the endocrines depended primarily upon vitamin nutrition. (See Lee, R., *The Systemic Causes of Dental Caries*, page 2, 1923.)

In *Vitamin News* of November 13, 1933, we made the following seemingly bold statement:

"'Catalyn' is the first specific remedy that can be depended upon to produce immediate results in all uncomplicated cases of toxic goiter. It is effective purely because it contains all the vitamins in such proportions as to as nearly as possible correct the deficiencies resulting from our present-day methods of food preparation.

"The iodine deficiency that so far has received the entire blame for goiter conditions is only a contributory factor. It becomes important only when a vitamin deficiency is present. Iodine alone therefore will not cure goiter, but the vitamin treatment does."

These statements, based only on consistent clinical results, are now supported by the following references, which show that Vitamins A, B, C, D and E are all concerned in the maintenance of a normal thyroid function.

Stepp, W., Kühnau, J. and Schroeder, H., *Die Vitamine (The Vitamins and Their Clinical Application)* Ferdinand Enke, Stuttgart, Germany, 1936.

"The law that all vitamins form a functional unit, none of them unfolding its physiological effect independent of the others, is especially apparent in the close correlations existing between Vitamin B₁ and the rest

of the vitamins. The relation of Vitamin A to Vitamin B₁ is antagonistic insofar as by generous Vitamin A supply the symptoms of lack of Vitamin B₁ are increased and inversely an A hypervitaminosis is favorably influenced by Vitamin B feeding (Yonechy, Chevallier). On the other hand Vitamin A as well as Vitamin B₁ oppose thyroxin and Vitamin D (Jusatz) . . ."

".

". . . The exact determination of the daily Vitamin B₁ requirement in man is difficult since it is largely dependent upon the intensity of the metabolic processes (Cowgill) (Palmerie). If the general metabolism is increased by the administration of thyroid or thyroxine, the Vitamin B₁ requirement rises. It is true, therefore, that symptoms of a Vitamin B₁ deficiency develop with thyroid administration along with an ordinarily sufficient Vitamin B₁ supply, and conversely the clinical syndromes of hyperthyroidism may be favorably influenced by an abundant Vitamin B₁ administration (Himwich, Goldfarb, Cowgill) (Sure and Smith).

"The administration of extracts of yeast affect symptoms of Basedow favorably (Abelin). Conversely with lack of Vitamin B₁ the production of thyroxin is restricted. Usually with Vitamin B₁ avitaminosis atrophy of the thyroid is found and likewise clinically symptoms of hypothyroidism (Verzar, Pighini, Kihn). Because of this fact a chronic Vitamin B₁ hypovitaminosis has been made responsible for endemic goiter besides the iodine deficiency. It has been shown in regions in Switzerland where goiter is rampant, that the nutrition of the people is markedly deficient in Vitamin B₁. In cows kept in barns during the winter and given vitamin-poor feed colloid goiters appeared, which were reduced as well with feed rich in Vitamin B₁ as with iodine (Fischer). In view of the close relationship between fat metabolism, iodine and thyroid (Chidester) the restorative action of Vitamin B₁ is possibly due to the fact that Vitamin B₁ may normalize the fat absorption and the lipid economy."

Sure and Smith, Hyperthyroidism and Nutrition: Vitamin B and Thyroxin, *J. Nutrition*, 7:548, 1934. (Abstract)

"It has been found that the albino rat can tolerate large doses of thyroxine for relatively long periods of time when administered orally to the full-grown animal on diets abundant in Vitamin B. Collapse, however, takes place readily when the ration is deficient in this dietary essential. Subcutaneous injection of thyroxin is decidedly more toxic than oral administration. It has been found that a highly concentrated Vitamin B extract from rice polishings exerts a remarkable protective influence in experimentally produced hyperthyroidism in the rat, and it is suggested to the clinician that oral or preferably parenteral administration of potent standardized Vitamin B concentrate may be indicated in toxic goiter, particularly in non-operative cases."

Svirbely, Joseph L., The Effect of Desiccated Thyroid, a - Dinitrophenol and Cortical Hormone Extract on the Vitamin C Content of Some Organs of the Guinea Pig Fed Graded Doses of Ascorbic Acid, *Journal of Biological Chemistry*, 111, 1:147 - 154, September 1935.

"Large amounts of ascorbic acid promote the general vitality and appearance of guinea pigs on a thyroid diet. The Vitamin C content of organs depends on the amount of ascorbic acid fed and decreases as the metabolic rate of the tissues is increased."

This finding that dinitrophenol destroys the tissue content of Vitamin C fits in very well with the discovery made by users of "Catalyn" that cataracts caused by dinitrophenol can be eliminated by the administration of that product, no doubt, mainly because of its content of Vitamin C complex.

Deutsch, H., Reed, C. I., and Struck, H. C., The Role of the Thyroid in the Calorigenic Action of Vitamin D, *American Journal of Physiology*, 117 :1, 1936. (Abstracted in *Endocrinology*, page 307, March 1937)

"Experiments carried out on two dogs show that after complete thyroparathyroidectomy large doses of Vitamin D produce no significant increase in the metabolic rate. Previous work has shown that the calorigenic action of Vitamin D on normal animals is not due to action on the parathyroids. The authors therefore conclude that the thyroid plays an important part in this reaction. Variation in metabolic rate roughly paralleled changes in body weight."

Singer, Eleanore, Effects of Vitamin E Deficiency on the Thyroid Gland of the Rat, *Journal of Physiology*, 87:287, 1936. (Abstracted in *Endocrinology*, pages 311-312, March 1937)

"Absence of Vitamin E from the diet changes the normal active rat thyroid to one with much colloid and low cuboidal cells. The normal appearance was restored by E extracts or wheat germ oil, and partially by alkaline anterior pituitary extracts. Iodine administration for four to ten days did not affect the histological appearance, nor did seven days of pregnancy. The table lists eleven types of experiments on fifty-seven rats and there are two plates with photographs of the thyroid sections."

2. DIABETES MELLITUS. The value of "Catalyn" and Vitamin B concentrate in improving the condition of the diabetic, with usually a definite reduction in the hyperglycemia, was soon noted when these products were first made available to the physician. The probability of an etiologic relationship between Vitamin B deficiency and diabetes was suggested in the 1923 article - "The Systemic Causes of Dental Caries" before mentioned. The present opinion is best stated in the words of Stepp et al.

"... The close relation of the Vitamin B₁ to carbohydrate metabolism has stimulated the use of it in the therapy of diabetes mellitus. The hyperglycemia and glycosuria - reducing effect of peroral yeast administration have been known a long time and in animal experimentation, at least, assured beyond objection (Beckel et al). Twenty years ago v. Euler and Swanberg established the antidiabetic effect of yeast extracts, and that has also been observed in man. It has been submitted that daily doses of dry yeast (10 to 30 gm.) in cases of diabetes of medium grade may entirely or partially replace insulin (Vogt, Hoepfner-Klotz, Melcer, Mansberg, Winter-Smith). v. Driglascki alone failed with yeast with his diabetics. The reason may be found in the length of time he used the yeast (eleven days), while Melcer, Gringoire et al insist on giving it for six to eight weeks before success may be expected. The effect lasts much longer than that of insulin. One might explain that with the necessity of refilling the depleted vitamin depots. Further investigation is necessary. Whether the insulin-like substance of the yeast (v. Euler) is identical with Vitamin B₁ has not been determined so far with certainty. In pigeon beriberi almost constantly a rise of blood sugar and blood lactic acid is found, which is removed by B₁ (and allegedly by insulin). On the

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other hand, as has been mentioned, the point of attack of Vitamin B₁ in the sugar economy is entirely different from that of Insulin. That does not speak against the possibility of an Insulin-like effect of Vitamin B₁ since we know that the radiation products of ergosterin (Vitamin D and A. D. 10) may entirely replace the parathyroid hormone, however different their working mechanism may be. Clinical trials with crystallized Vitamin B₁ have not shown any positive results so far. Purified Vitamin B₁ preparations in the hands of Sainton, Mills, and Labbe have proven to be strongly effective in diabetes. While Stepp failed to influence the blood sugar in health and diabetes, Williams and co-workers have reported frank successes with large doses of pure Vitamin B₁ in diabetes. It is evident that dosage plays a considerable role. Further investigations in this direction are urgently desired, because of the possibility that we may possess in Vitamin B₁ for the first time a true and physiologically vital peroral anti-diabeticum in an isolated and chemically homogeneous form. Since thyroxin increases the need of Vitamin B₁, as mentioned, the danger of symptoms arising from Vitamin B₁ deficiency in hyperthyroidism is real. Care is, therefore, necessary in morb. Basedow to procure an adequate supply of Vitamin B₁ (besides Vitamin A)."

3. VITAMINS AND THE HEART. Since loss of muscular vigor is a characteristic of both beriberi and scurvy, to say nothing of the paralysis resultant from Vitamin E or Vitamin F deficiency, and the specific damage to heart function due to the effects of Vitamin B deficiency on the nervous system, it is now clear why "Catalyn" was found to be so beneficial in many forms of heart disease, whether organic or functional.

Since our recommendations in "Catalyn" literature five years ago regarding the value of this product for cardiac disease, the following references have become available.

Cleveland Plain Dealer, "Reveal New Form of Heart Disease," April 20, 1937.

"St. Louis, April 19. A hitherto unrecognized form of heart disease in the United States caused by malnutri-

tion and a specific treatment for it were described today before the annual meeting of the American College of Physicians.

"Dr. Soma Weiss and Dr. Robert W. Wilkins of Boston reported that in 120 of their patients, enough to make it 'relatively common,' the specific form of heart disease was found and traced readily to nutritional deficiency.

"A 'rapid and often spectacular cure' resulted from the simple administration of Vitamin B.

"In the northeastern part of the nation at least 'the disease occurs principally among alcoholics, diabetics, food cranks and pregnant women,' the Boston physician declared.

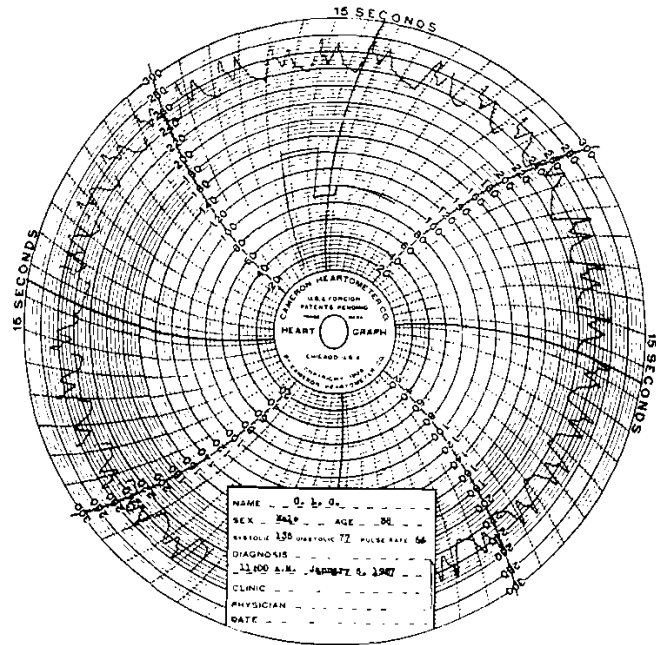
" 'In its pure form it develops in persons without organic heart disease' but when the two occur together 'failure of the heart is often precipitated or aggravated' leading to disintegration of the circulation and death if not treated."

In the December 15, 1936 issue of Vitamin News we offered as evidence of the effectiveness of our Vitamin B concentrate a sphygmogram of a patient before and after taking two tablets, a very definite improvement in regularity being shown within ten minutes.

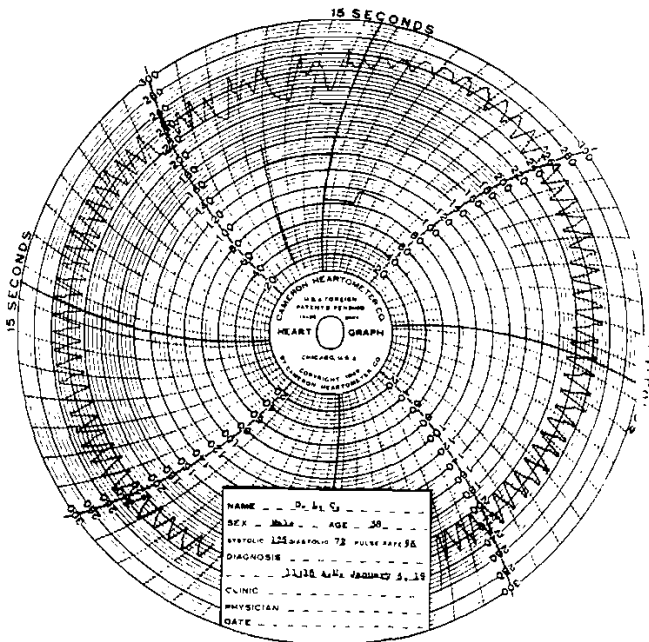
Herewith we show a still more striking improvement occurring in 15 minutes in a patient where the nervous balance was still more out of control. The third chart (after six days treatment) indicates approximately a normal nervous function.

None of our other concentrates alone have the slightest action in 15 minutes, according to sphygmograph tests. They do contribute, however, very much over a period of time to the resumption of normal physiological balances where the heart abnormality has been adding to the difficulty of other organs in accomplishing their functions. A reduced blood supply obviously aggravates a low nutritional supply, whether it be vitamins or other food elements required by each organ. In this manner a multiple vitamin deficiency may develop in the patient with cardiac disease. That is the probable explanation for the remarkable tonic action of "Catalyn" in these cases. Vitamin B deficiency is a key factor here, too, in that

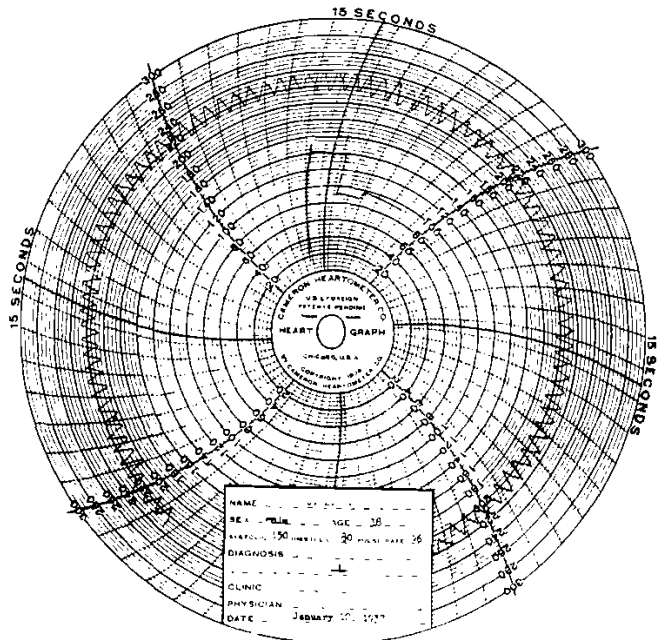
one of the first signs of its lack is a reduction of assimilative efficiency through the debilitation of the alimentary mucosa, to say nothing of the frequent loss of appetite also due to this cause. Now follow this with a breakdown of the nervous structures that control the heart and you will realize what an important "staff of life" Vitamin B is - and it normally would occur in ample quantities in our bread if we used only that made from unbleached flour, or better, that made from fresh whole wheat.



Before treatment



Fifteen minutes after taking two tablets of "V-P" Vitamin B complex.



Six days later, four tablets of "V-P" Vitamin B complex per day being taken meanwhile.

Edited by R. Lee