



VITAMIN NEWS



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VITAMIN G

In the early investigations of Vitamin B, the antineuritic vitamin, it was soon found that it contained a separate factor that was necessary to growth, that was more resistant to heat than the B, and occurred associated with B in varying proportions, being relatively high in yeast and low in corn. Different animal species were found to have varying requirements for the two components, pigeons being relatively immune to deficiency of the growth factor, while rats were susceptible to a deficiency of either.

The growth factor became separately designated as Vitamin G, and it is now known that a deficiency of this principle is a factor in the causation of secondary anemia, pellagra, cataracts of the eye, and various forms of dermatitis.

In pellagra Mellanby has stated that Vitamin A deficiency (caused by use of white corn as the principle food) is the cause of spinal cord degeneration, and the associated deficiency of G causes the skin lesions in areas affected by the cord deficiency. This theory explains the "symmetrical" appearance of the skin lesions. It also indicates the impossibility of a complete cure, in view of the cord degeneration.

As to its relation to anemic conditions, where there may be so many contributory factors, Vitamin G has been found to be of great benefit in certain types that fail to respond properly to other treatments. It can be safely stated that anemia can specifically result from Vitamin G deficiency, but that Vitamin G is not necessarily beneficial in any case of low erythrocyte count. Vitamin C is also known to be an important factor and so are E and F. Vitamin G is likely to be found of value in secondary anemias while the others are more valuable in pernicious anemia.

Sherman-Smith say of Vitamin G:

"Vitamin G is evidently a substance of coordinate importance with the longer known vitamins as an essential factor in normal nutrition and deprivation or serious shortage of this substance results in wide-spread injury to the body. Conversely, the liberal feeding of this substance may be expected to play a significant part in inducing a better-than-average nutritive condition."

Vitamin G deficiency has been demonstrated to be a specific cause of cataract of the eye in test animals.

We quote the Journal of Nutrition, January 1934, pages 97-106:

"Of 72 rats receiving diet 625 (deficient in G), 70 developed cataract between the 40th and 87th day ... diagnosed by gross observation with the naked eye."

Cataract is here suggested as a more reliable and constant indication of G deficiency than the dermatitis heretofore considered specific, as its appearance is more consistent and unmistakable.

"Catalyn" because of its vitamin content, has been demonstrated to be a valuable remedy for cataract. The cataract is known to be a deposit of calcium carbonate, and to aid in its resolution "V-P Phosphate" is very useful in supplying the phosphorus radical to make the conversion to calcium phosphate. Because there are always many other less conspicuous deposits of calcium carbonate in the body tissues the "Catalyn" and "V-P Phosphate" must be taken for several months as a rule before the cataracts are affected. When the rest of the deposits are dissolved, however, the cataracts disappear with relative suddenness.

The reference given above is only six months old. "Catalyn" with "V-P Phosphate" has been successfully used for cataract for three years.

It will be here noted that Vitamins A, C, D, F and G (probably also E) are concerned with some phase of calcium metabolism. A, causing by its absence kidney stones, C, being responsible among other things for the proper health of bone and teeth, D, ditto, but of less importance, F, being an agent that increases the diffusibility of calcium, making it available to the muscle and nerve functions, while G deficiency results in morbid soft tissue deposits of calcium. Only Vitamin B is omitted from this category, probably because of our present ignorance, as its antineuritic effect is no doubt wrapped up in a calcium reaction.

Some day the sciences of vitamin therapy and endocrinology will be established as secondary to the study of the biochemical reactions of the alkali metal salts, with calcium as the major factor. The problems of old age itself are matters of calcium metabolism, in all probability, and most of the symptoms of senility are due to direct changes in calcium metabolism because of hormonal and vitamin deficiencies.

Why is Vitamin G deficiency more productive of its specific reaction in old age? Because the vitamins act as nutritive agents for the endocrines and as age progresses, the endocrine organs become less efficient. More of the nutritional materials may be required to maintain the function.

This hypothesis applies to Vitamins B, C and E as well. In children, Vitamins A and D are required in relatively higher amounts, somewhat less in later years.

Edited by Royal Lee