

A MOST OBSCURE BIOCHEMICAL PLAGUE

In the Middle Ages the term "plague" referred to widespread epidemics of disease the cause of which was then unknown. Such a plague might ravage the known world to kill one third of its population within the span of only several years. More recently, they were known to be caused by a transmissible agent, such as a bacillus or virus. In contrast the "biochemical plague" is created by specific defects of the civilized lifestyle which gives rise to equally specific chemical deficiencies and biochemical and physiological changes. These, in turn, give rise to a variety of complaints, physical changes, and diseases some of which may ultimately cause the demise of the individual.

In contrast to ancient plagues this modern "biochemical plague" is far more insidious but proving to be equally devastating to the health of the general public.

It is only conjecture that the primitive mammalian organism from which the human evolved, either existed at the time of the reptilian dinosaurs, or whether it evolved from a separate primitive living cell in some later era.

Regardless of that date and of the necessity for their survival, man's early evolutionary forms and his primitive and aboriginal ancestors spent their entire daylight hours, or a considerable percentage of those hours, out of doors with their entire body or large areas of their lightly clad bodies exposed to daylight or sunshine. On that basis, over

millions of years, the skin of those organisms and humanids was near constantly engaged in the synthesis of vitamin D which had the property of ionizing calcium in the living cell. Some of this vitamin was stored in the liver to maintain a constant level of the calcium ion in tissues during the winter season of ultra violet deprivation. The D vitamin, and the glucose and oxygen which were synthesized in vegetable cells, were absorbed by the countless living cells of the developing mammalian organisms, one of which was destined to become man.

The concentration of these three solar synthesized factors naturally rose and fell successively in the cells of those evolving organisms during the summer and winter of many millennia. This close association predicated that the cells which "learned" to utilize the plethora of ionized calcium of the summer seasons to control the oxidative liberation of energy from glucose and oxygen, and which "learned" to utilize the natural winter deficiency of that ion to enhance the energy transfer system within those cells in that period of deprivation, would be the more likely to survive. Consequently, calcium assumed a role in the energizing of cells by becoming intimately involved in one of the mechanisms of that process, such as in catalyzing the synthesis of ATP, in which process its excitation became inversely proportionate to the concentration of the ion.

The evolutionary process, therefore, also dictated that the body would develop an autonomic or automatic nervous system and ancillary adaptive functions of organs such as the lungs and intestines, and the skeleton which serves as a massive store of calcium, that are associated with their more obvious function of respiration, digestion and support. Acting in concert to create an adaptive system, and once stimulated by circulating deficiency of that all important ultra violet energy activated calcium ion, that system would protect the body from the effects of deficiency of that ion.

The particular design of the ancillary adaptive hyper-function of the secretory and smooth muscle function of the lungs and intestines was to give rise to the pulmonary retention of acidic carbon dioxide or to the intestinal diarrhoea of basic secretions. The increased acidity of all cellular fluids so created, that represented biochemical compensation for the seasonal deficiency of such a skin-generated vitamin, would facilitate the hyper-ionization of the residual molecular calcium of the body's trillions of cells. As a normal cellular concentration of that ion was thereby maintained the cell could repeatedly re-establish the 70 Mv. potential across the cell membrane the discharge of which is essential if cell function is to be excited.

The acidic hydrogen ion is the smallest of all ions with the ability of even penetrating solid copper tubing. Consequently varying concentrations of adaptive acidity are

reflected on relatively simple body secretions, such as saliva. In contrast, since the kidneys like the intestines are involved in adaption to ionic calcium deficiency by their excretion of base, the pH of the urine is usually the opposite of that of the saliva. For example in a non deficient non adapting person the saliva will be alkaline and the urine will be acidic. In contrast, the occurrence of an acidic saliva and an alkaline urine indicates the presence of deficiency giving rise to acidifying adaption.

Gross deficiency of ionic calcium which was artificially created by defects of lifestyle and which could be prolonged many decades or a lifetime, would therefore so enhance the energizing process that cell energy stores would eventually be exhausted. As persisting deficiency caused the "energy starvation" of cells it may directly affect cells comprising skeletal and smooth muscle, nerve, and secretory tissues to give rise to both direct complaints and physical changes in those tissues, some of which may deteriorate to develop a direct tissue related disease. Alternatively that direct starvation effect could influence a cell to reverse-mutate into an adaptive primitive form creating a malignancy. Moreover, as that starvation may give rise to the autonomic excitation of the adaptive functions of organs that could break down to create disease, it could be indirectly responsible for the creation of organ related mal-adaptive disease.

Therefore, the hazard of such adaptive function is that persisting deficiency may create such exhaustion and energy starvation of the adapting secretory, smooth muscle, and other tissue of the adapting organ, that they may be broken down to give rise to one or more acidifying "mal-adaptive" diseases, such as chronic asthma and ileitis-colitis, or to other such diseases.

Cancer may be shown to bear the same relationship as organ "mal-adaptive" disease to the "ionic calcium deficiency syndrome" which consists of a triad of particular causative lifestyle defects and of the complaints and physical changes that arise in tissues because of the deficiency. On that basis cancer may represent the progeny of a single cell which has mutated into a primitive form which existed during the primordial night prior to the time when the solar rays of the primordial dawn first synthesized oxygen, glucose, and vitamin D on earth. As such that cell could be energized by the fermentation of components in its environment which process which had no requirement either for ionized calcium or oxygen.

The civilized lifestyle creating chronic deficiency of the dietary and skin generated D vitamins, has made it possible for a large percentage of the general population to develop more severe deficiency of the D vitamins and of calcium over their entire lifetime, than aboriginal man might have experienced at the end of a single winter season. More seriously, that lifestyle may place successive generations of

deficient child bearing women in a position where each may give birth to a number of deficient children who invariably are fed and reared in the same deficient pattern. I define that process as "labile biochemical inheritance" to differentiate it from "loose genetic" inheritance.

As the ionic calcium deficiency may be increased in each successive generation the proneness of those children and adults to develop the direct complaints and indirect diseases of chronic ionic calcium deficiency will be progressively accentuated. Most of the offspring of such a third generation of mothers, particularly the later born children, will be destined to experience such ills at some stage of their life, either spontaneously or on the slightest secondary provocation.

It has been well documented that the onset of many complaints and diseases may easily be related to the presence of deficiencies, toxic excesses, and physical and psychic stress and that those ills may be relieved as those factors are relieved. Consequently, those many factors have long been considered as the sole and primary causes of those ills. The glaring and irrevocable fact remains, however, that innumerable other individuals may experience the same or more serious such factors, singly or in combination, for many decades and never become ill.

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The reason for such a clinical paradox may be that a non deficient individual, all of whose immediate ancestors had pursued an equally non deficient lifestyle, may be able to withstand an array of such secondary stresses for a lifetime and "never turn a hair"! Are they able to withstand those stresses and not develop "the symptoms and diseases of civilization" because neither the vitality of

their trillions of cells nor the adaptive potential of their organs to withstand stress had been compromised by the chemical stresses that are so frequently imposed on the general population by the civilized lifestyle?

A factor common to every complaint, physical change, and disease is altered cell function. A large percentage of the general population, particularly those attending health professionals, experience one or more of a vast array of mild to serious symptoms or an overt and disease, alone or in combination. Examples of these are chronic fatigue, headaches, indigestion, migraine, hypertension, diabetes, anxiety, psychoses, and others.

In the consideration of the therapy of those states one can be assured that, if the patient also demonstrates an acidic pH of their saliva, then behind what other more apparent factors may be playing a part in creating their health problems, may lie the direct effect of cell energy starvation and/or organ adaption against that deficiency.

An exception to that rule may occur if autonomic adaption to the deficiency has not involved the stimulation of acidifying organ functions. In those less common instances where the deficient diseased person will demonstrate a normal neutral to slightly alkaline pH test of saliva, the physician must rely on the identification of the

responsible lifestyle defects and of other complaints and physical changes to diagnose the presence of the deficiency.

A similar exception may occur if, for reason of their disease, a person has so radically altered their lifestyle that they sufficiently corrected their deficiency to cause the cessation of the adaptive acidifying function. That correction, however, may be entirely insufficient to cause the reversal of the established physical changes, which changes can only be gained by added supplemental therapy.

Individuals who show an acidic pH of saliva and who are not seriously symptomatic or diseased may be considered as being prone to develop those ills or at least being prone to early development of the ageing process.

Chronic deficiency of cells will initially cause normal cell mechanisms to be replaced by abnormal mechanisms which may be reversed if the deficiency is adequately treated. However, if the deficiency persists, those latter mechanisms may be replaced by irreversible mechanisms which do not respond to nutritional therapy but which demand that the therapist prescribe a concentrated natural or synthesized chemical substance. This is an agent that will "dove-tail" with the permanently altered cell mechanism to induce some semblance of normal cell function.

On that basis therapy of a deficiency state also raises the problem that it must be initiated before such irreversible physical changes have ensued. Therefore, the presence of an acidic salivary in a diseased individual, particularly in one who has been diseased for decades, does not necessarily insure the success of nutritional therapy.

The saliva test using a 1/2 cent strip of litmus paper may be easily performed and interpreted by public health nurses on students and workers, and by parents testing themselves and their children at home. Moreover, those performing this test may be easily instructed as to how to guide or advise those with an acidic pH test to correct the biochemical imbalance by the appropriate lifestyle changes and by taking the required vitamin and mineral supplements.

Prevention of a wide variety of diseases, through the recognition and avoidance of underlying causal deficiency factors, is more important to the health of the public than the specific nutritional therapy of the early reversible phase of complaints which may be directly caused by malnutrition, and is more important than the nutritional therapy of direct deficiency diseases which may arise from those complaints. Such prevention is far more important than the benefits provided by the best of drug therapy of the irreversible indirect "mal-adaptive" advanced disease which may eventually follow on the heels of such direct complaints and disease.

This thesis, promoting that latter approach, may be validated by the coordinated clinical research of physicians an/or of other health professionals. In such a project the same protocol would be applied to a wide variety of symptomatic and disease patients prior to and following therapy of the deficiencies, and to groups of non deficient controls. The accrued data would then be subjected to computer analysis designed to clarify the relationships between lifestyle defects, the direct symptoms and disease, and the indirect "mal-adaptive" disease in the same patient and the inter-relationships of those clinical findings in the general public.

To so demonstrate the specific therapy and the means of preventing the "plague" of the "symptoms and diseases of civilization" may far exceed the combined importance to public health of the treatment of some of those ills that have been afforded by the discovery of insulin, cortisone, penicillin, and of mephroamate which was the first of the tranquilizers.

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DIAGRAMS SHOWING THE RELATIONSHIP OF CHRONIC DEFICIENCY OF CALCIUM WHICH HAS BEEN RENDERED BIOLOGICALLY ACTIVE BY THE D VITAMINS, TO THE COMPLAINTS AND PHYSICAL SIGNS OF A DEFICIENCY SYNDROME INCLUDING ACIDITY OF SALIVA, TO ORGAN RELATED DISEASES, AND TO CELL RELATED CANCER.

DIAGRAM # 1: THE DIRECT AND NON ADAPTIVE "CELL ENERGY STARVATION" EFFECTS ON TISSUES AND THE DIRECT ADAPTING MUTATING EFFECT ON THE INDIVIDUAL CELL.

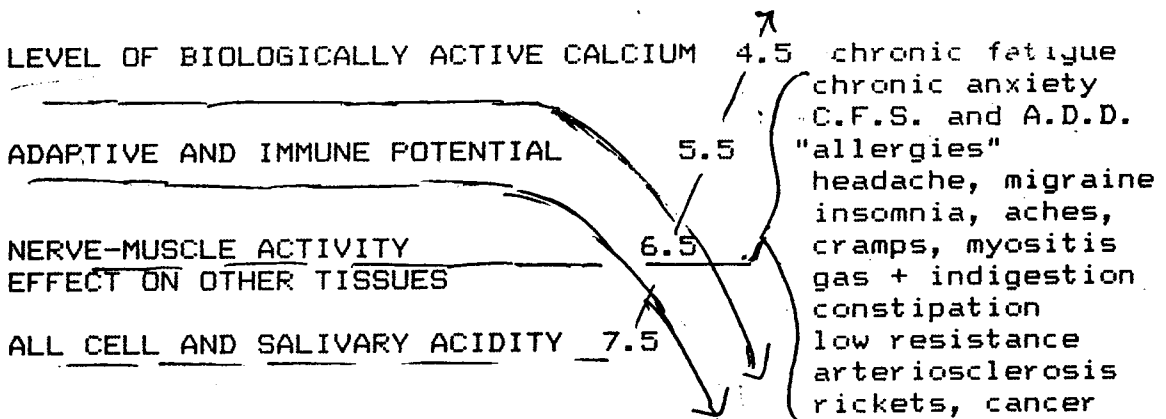
The direct effects of the starvation creating i) C.N.S. symptoms of central and peripheral anxiety-tension ii) skeletal and smooth muscle spastic complaints, iii) alteration in secretory tissue function, and iv) certain physical signs of muscle, finger nails and tongue..

THE DIRECT NON ADAPTIVE TISSUE EFFECTS

WITH OR WITHOUT

THE DIRECT ADAPTIVE CELL MUTANT EFFECT

WITH OR WITHOUT



While the following diseases represent the breakdown of adaptation of organs to the deficiency, cancer represents mutation maladaptation of a single cell to the same deficiency.

DIAGRAM # 2: INDIRECT AUTONOMIC-ADAPTIVE EFFECTS ON ORGANS

Through autonomic control the deficiency may excite the ancillary adaptive function of one or more organs to increase total body acidity thus facilitating the hyper-ionization of cellular calcium and effecting biochemical compensation for the deficiency and the starvation. Those functions may break down to create a disease and some will be reflected on the pH of saliva.

WITH OR WITHOUT

ONE OR MORE OF THE INDIRECT ORGAN MAL-ADAPTIVE EFFECTS

