ABSTRACT

Man evolved under a canopy of solar radiation containing light waves that synthesized glucose and oxygen and ultraviolet radiation which synthesized vitamin D. Consequently calcium which was rendered biologically active through being ionized by vitamin D, was destined to become involved in control of the oxidative energizing of cells. Chronic deficiency of either of the synergistic factors of calcium and vitamin D will, therefore, give rise to cell energy starvation that may result in complaints and physical changes in muscle, nerve, and other tissues.

In the same period of man's evolution the threat of such starvation created by the winter decline of vitamin D synthesis led to the evolution of adaptive functions in organs, such as the lungs and intestines, and in cells, that would compensate for seasonal ionic calcium deficiency.

The civilized lifestyle may impose a degree of that deficiency on a large percentage of the population, which far exceeds that which primate or aboriginal man experienced. The resulting exhaustion and energy starvation of the adapting smooth muscle and secretory tissues created by such protracted deficiencies may break down an adapting organ to create a "mal-adaptive diseases", such as chronic asthma, ileitis-colitis, diabetes, arthritis, osteoporosis, and hypertension. Likewise functional adapting genetic change, which have been noted to exist in various diseases, may be further altered to induce a malignant mutant.

As the adaptive device of some organs involves increased acidity of cytoplasm of cells, that acidity may be reflected on saliva. Consequently, an acidic state of that fluid may constitute warning of the presence of such deficiency playing a part in creating isolated complaints, physical signs, and overt disease including cancer, or in creating proneness to such ills.

Please note: In my opinion the benefit, to the health of the public, of this concept that will enable the prevention of much disease will surpass the combined benefits that it has received by the discoveries of penicillin, cortisone, insulin, and the mood altering drugs, that are prescribed in the therapy of developed disease.
A Calcium and Vitamin D Deficiency Plague

Editor:

Abstract
We evolved under a canopy of solar radiation which contained ultraviolet radiation capable of synthesizing the D-2 and D-3 vitamins in vegetable and animal matter, which vitamins had the capability of ionizing calcium to render it biologically active. The summer and winter seasonal rise and fall of that form of calcium during the millennia in which the primitive living cell evolved into complex mammalian forms, and the survival of the fittest dictum of evolution, predicated that the cells which utilized that form of calcium to effect control of their energizing by the oxidation of glucose would be the more likely to survive.

On the basis of such control, which possibly involved a mechanism such as the catalyzing of the synthesis ATP, deficiency of that ion gave rise to "cell energy starvation." That, in turn, caused the autonomic excitation of ancillary adaptive functions of organs which had evolved in the same interval of time to provide biochemical compensation for the deficiency of such a vital ion.

The civilized lifestyle made it possible for large percentages of such populations to experience greater degrees of vitamin D and calcium deficiency for their lifetime than their aboriginal ancestor would experience after a single winter season. The direct energy starvation tissue complaints and the indirect diseases of organs arising because of the breakdown of such adaptive function, which comprise "the symptoms and diseases of civilization," may be prevented by the avoidance of the causative lifestyle defects, or by the compensation for the deficiencies by taking the appropriate dietary supplements.

Presence of the deficiency may be detected by a simple litmus paper test of saliva, the acidity of which represents presence of acidifying adaptive function of organs.