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PUZZLE OF HUMAN EVOLUTION SOLVED

Genetic & Environmental Changes Triggered the Development of the Human Brain

The lost ability of prehistoric man to produce ascorbate (vitamin C) within his own body, compounded by later environmental and dietary factors, led to genetic and metabolic countermeasures which triggered the development of the brain—the key to man‘s ascendance over earth‘s living species, according to a new theory published in the **Journal of Orthomolecular Medicine** (volume 7, number 2).

Dr. Matthias Rath, a physician, scientist and author of the theory, believes it solves one of the greatest scientific puzzles known to mankind. A question which has remained unanswered until now is “what accounted for the rise of human to dominate among earth‘s living species?“ Dr. Rath postulates on the basis of his extensive research that the evolution of man as the dominant species on earth was not simply the random event that prevailing scientific theories would have us believe.

Current theories of evolution hold that the dramatic leap in human evolution during the past 2.5 million years was the result of natural selection processes. The underlying hypothesis is that only the fittest and most intelligent among our ancestors would have survived the harsh conditions which prevailed during much of this period to propagate so successfully. This hypothesis, however, cannot explain why a dramatic increase in brain size—among other significant developments—was limited to the ancestor of man and did not occur in other species. Dr. Rath suggests that human evolution is a fascinating combination of genetic, metabolic, environmental and nutritional factors.

According to Dr. Rath‘s theory, the scarcity of nutritious vegetation on earth during the lengthy periods of glaciation which began about 2.5 million years ago forced the human body in particular to compensate for nutritional deficiencies by making certain genetic and metabolic changes over generations in order for man‘s ancestors to survive. These changes accounted for a variety of physiological developments—perhaps most notably the quadrupling in size of the human brain.

The Key to the Solution

Dr. Rath puts forth a revolutionary and convincing explanation for the unique surge in evolution of humans among all mammals, and sheds light on a number of highly probable factors. Key to understanding Dr. Rath‘s explanation is the fact that at one time all mammalian species synthesized ascorbate within their own bodies. About 40 million years ago the ancestor of man—but not other species—lost this ability as the result of a genetic mutation that stopped the synthesis of ascorbate from glucose.

At that time early man lived in the central regions of Africa subsisting mainly on fruits and nutrients rich in ascorbate and other vitamins. The ample, dietary supply of ascorbate was a factor in causing the genetic mutation which resulted in the loss of the ability to synthesize ascorbate. No longer able to produce their own ascorbate, all descendants became dependent on dietary ascorbate intake. More than 30 million years later this genetic defect was completely unmasked by environmental conditions, triggering a major acceleration in human evolution.

With the advent of the Ice Ages about 23 million years ago, dramatic drops in global temperatures reduced vegetation all over the planet. The ensuing reduction of available nutrients affected all mammalian species in many similar ways. Human metabolism, however, was set apart from other species by the inability to synthesize ascorbate. With this genetic handicap and ascorbate intake approximating zero during the tens of thousands of years of each glaciation period, scurvy became the greatest threat to the evolutionary survival of man.

Scurvy is a fatal disease which results from total ascorbate depletion of the body and from a gross impairment of collagen and elastin synthesis. It is characterized by a virtual dissolution of the connective tissue throughout the body, including the walls of the blood vessels. Deprived of vitamin C, large numbers of sailors of recent

centuries died from scurvy in just a few months at sea—particularly from blood loss through the walls of the blood vessels. During the millennia of glaciation, the death toll from scurvy was so great (in the billions) that our ancestors in many regions were virtually rendered to extinction. For example, Neanderthals living in many parts of Europe became extinct during the last glaciation period which lasted from about 120,000 to about 15,000 years ago. Neanderthal fossils reveal obvious signs of scurvy: frequent fractures of bones and disrupted growth of teeth.

With scurvy as their greatest threat, our ancestors‘ survival and continued evolution became dependent on genetic and metabolic countermeasures. These countermeasures were focused on the vascular wall—particularly addressing the need to counteract blood loss through the walls of the blood vessels. As explained in considerable detail in Dr. Rath‘s paper, these very same countermeasures had a selective evolutionary advantage over thousands of generations which triggered the development of certain organs— most notably the brain. During the 2.5 million years since the beginning of the Ice Age— a relatively short time in the evolution of man — the human brain/body ratio has quadrupled in size while the brain/body ratio of other mammals have remained essentially unchanged, and man has become the dominant species on earth.

Implications for Human Health Today

Dr. Rath points out that the critical role played by ascorbate deficiency during human evolution has immediate implications for the health of human beings today. The loss of ascorbate synthesis in the ancestor of man has proved a double-bladed sword. Ascorbate deficiency promoted human evolution, yet also became the precondition for the most frequent human diseases today—including cardiovascular diseases and diabetes. These diseases are essentially unknown among most other animals, which to this day synthesize their own vitamin C.

This theory, buttressed by years of scientific research into cardiovascular disease and nutrition, supports the contention that vitamin C as a dietary supplement can play a very important role in promoting and maintaining optimum human health.