

Evolutionists and Creationists at the Dinner Table

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The evolutionist and creationist debate about human origins has contested the content of textbooks, what is taught in classrooms, and what is discussed on the Internet. The controversy has spawned public-interest groups that continue to frame the debate. The National Center for Science Education monitors attempts to incorporate creationism into the classroom and textbooks. The Institute for Creation Research and the Discovery Institute have invested heavily in pushing for changes in the curriculum by teaching creationism as an alternative to evolution. While this dispute usually focuses on the reality of the fossil evidence for human evolution, a less formal battle is now being waged at the proverbial dinner table.

During the last two decades, a series of books has championed a look back to our Paleolithic past to understand what we should be eating today.^{1–8} The subtitles of these books entice readers with phrases such as, “Eat Like a Caveman to Achieve a Long Lean Body,” “Eat Fat, Get Fit,” “Get Healthy by Eating the Food You Were Designed to Eat,” “The Diet of Your Cro-Magnon Ancestors,” and “The Cookbook That Challenges Politically Correct Nutrition and the Diet Dictocrats.” In response to the success of this evolutionary perspective, which he found unacceptable, Zeolla,⁹ in his *Creationist Diet*, uses the Bible as a nutritional guide. Biblical nutrition and “God-given foods” insure a healthy diet for contemporary populations. Adding to this perspective, Colbert’s¹⁰ recently published book, “*What Would Jesus Eat?*” promises “The Ultimate Program for Eating Well, Feeling Great and Living Longer.”

The genealogy of Paleolithic diets can be traced to bioarcheological research that goes back three decades. In the late 1970s and early 1980s, emerging evidence suggested a decline in health following the shift to

agriculture. Skeletal remains demonstrated that populations that experienced a shift to primary food production showed an increase in infectious disease and nutritional deficiencies.¹¹ The rise in infectious disease was predictable. Agricultural populations are sedentary and experience an increase in population size and density. The domestication of animals that are disease vectors, combined with problems of waste disposal, creates an ideal breeding ground for pathogens and parasites. These demographic changes led to increased exposure to pathogens that are, in turn, more easily transmitted. The increase in nutritional deficiency seems counterintuitive. Factors including a narrowing of the dietary niche with reliance on a single grain, increasing vulnerability to blights from drought, and the rise in social inequality increase the potential for nutritional deficiencies.

This paradigm shift led to a reexamination of the forager’s diet that went beyond the gaze of bioarcheologists. In 1985, Eaton and Konner¹² in an influential article published in the prestigious *New England Journal of Medicine*, heralded the merits of a diet that mimicked the nutrition of our Paleolithic ancestors. Eaton, Shostak, and Konner¹³ expanded this analysis in *The Paleolithic Prescription*. This book proposes an integrated program of diet, exercise, and “design

for living” that reflects the Paleolithic pattern of human adaptation.

Eaton and coworkers¹⁴ analyzed archeological evidence of the diet and subsistence pattern of recent foragers to compute the nutritional properties of wild game and “uncultivated” vegetable foods. As compared to the average American, “average” pre-agricultural foragers consume half of their calories from dietary fat (20% versus 36%), more than six times the fiber (100 versus 15 g/d) and are thinner, having nearly half the skin-fold thickness of (9.6 versus 17 mm). In an ongoing research program, Eaton and coworkers have continually updated the database of game and “wild” vegetables^{14,15} fiber,¹⁶ and calcium,¹⁷ as well as a host of micronutrients available for consumption.

The disparity between the Paleolithic and current American patterns of diet, exercise, and life style is such that we have been described as “Stone Agers” living in the fast lane^{4,18}; that is, our genes cannot keep pace with the accelerated changes in technology. We are paying the price for the early hominids’ physiological adaptation for increased length of the small intestine and decreased length of the large intestine, which adapts us to a diet that selects for high-density food. Given this biological adaptation, and now living in an environment where an industrial food system produces massive amounts of low-cost, high-density foods, we can see the roots of our dilemma.

Eaton and colleagues have been unrelenting in their search for evidence that can be used to assess the Paleolithic diet. They realistically suggest that formal dietary recommendations based on the Paleolithic diet are premature, but point out that an “awareness of Paleolithic nutritional patterns

should generate novel testable hypotheses grounded in evolutionary theory."¹⁹ Except for Somer,⁸ a nutritionist, few subsequent authors have shown the care and commitment that characterize the Eaton team. However, the success of a dietary Paleolithic world view has not been lost on other authors. *NeanderThin*,¹ *PaleoDiet*,³ *Nourishing Tradition*,⁵ and *Charley Hunt's Diet Evolution*,⁷ while lacking scientific depth, are enthusiastic promoters of the Paleolithic prescription. It appears to be a message that their readers want to hear.

There is always a danger that the evolutionary model may be misunderstood and misapplied. For example, the evolutionary evidence that is said to underpin the *Eat Right 4 Your Type*²⁰ is either nonexistent or blatantly wrong. The authors, D'Adamo and Whitney, claim to have developed "individualized" diets that are based on an individual's ABO blood type. They offer a bizarre evolutionary rationale in which the origin of blood groups is keyed to events in hominid evolution. For example, they claim that blood type O is the oldest type, dating back to Cro-Magnon times. These early Cro-Magnon populations were meat-eaters and their descendants, individuals with blood group O, should eat what their ancestors ate. According to this notion, blood group O individuals, in addition to their carnivorous propensities, have hardy digestive tracts and overactive immune systems. In contrast, type A populations were the cultivators who evolved 25,000 to 50,000 years ago; they are characterized by sensitive digestive tracts and are best adapted to a diet with an abundance of vegetables. Blood type B, according to D'Adamo and Whitney, reflects the nomadic part of our history 15,000 to 10,000 years ago, when "tribes" were migrating out of Africa to Europe, Asia, and the Americas. Type B individuals, have the most tolerant digestive systems and can thrive on dairy products, but have a physiology that allows them to be flexible in their dietary choices. Finally, they say, the AB blood type appeared about 1,500 AD through intermingling of the other blood groups and is the most adap-

tive, despite being the rarest blood type.

Eat Right 4 Your Type has been successful: More than a million copies have been sold and the book has been translated into forty languages. Consequently, D'Adamo and Whitney have published "Cook Right 4 Your Type,"²¹ "Live Right 4 Your Type,"²² and "Eat Right, Cook Right 4 Your Type."²³ In case you have missed anything, there is an encyclopedia,²⁴ a guide to infant care,²⁵ a guide for fighting cancer,²⁶ and a guide for controlling diabetes.²⁷ If you have the cash, you can go to D'Adamo and Whitney's online "The Blood Type Store" and buy "ABO friendly food and drinks" featuring such items as "Live Cell AB," a friendly blend of cruciferous and noncruciferous sprouts. These supplements are claimed to enhance your blood type to make it a more effective physiological agent.

I would never have predicted that we would live in a world that would resurrect blood groups as a guide to good nutrition and health. In the 1950s, the golden age of blood-group research, the various blood groups were viewed as the key to the "new physical anthropology." Boyd²⁸ published *Races and the Genetics of Man*, providing a "modern" method that would be the salvation for racial studies. Even when evidence surfaced that the blood groups are subject to natural selection,^{29,30} they remained an important methodological tool for the biological anthropologist.

At the time, Kelso noted that clinical interpretation offered an alternative to traditional racial analysis. He saw that blood group B had the highest frequency in areas that had the greatest consumption of carbohydrates and that blood group A was distributed in regions that had high levels of animal-protein consumption. In 1958, I wrote my honors thesis at the University of Michigan on the role of diet as a factor in the selection for the ABO blood groups. Jack Kelso and I³¹ published our findings in the obscure *Southwestern Lore*, seeing these results as a challenge not only to the notion that blood groups were non-adaptive, but to their utility in racial classification.

The rejection of an evolutionary ap-

proach to diet has been most clearly stated by Zeolla⁹ in his book, *The Creationist Diet*. Zeolla found the Paleolithic diet interesting but, because he did not accept the tenets of evolution, he sought an alternative. *The Creationist Diet* is based on the books of Genesis 1-3. There are four variations of the creationist diet, each keyed to a major biblical event. The Edenic diet is restricted to raw fruits, raw vegetables, raw meat, raw nuts, and raw seeds. The Antediluvian diet includes the Edenic menu, but adds whole grains, legumes, and vegetable oil, as well as the use of cooking. "Clean" meats such as skinless chicken or turkey, and "clean" fish are added to the Noahic diet, which represents the third stage in the creationist diet. Finally, the Promised Land diet adds milk, milk products, and honey to the previously mentioned food items. Zeolla provides an easy solution for developing your own creationist diet by selecting foods from what he terms God-given foods, which include fruit, nuts, whole grain, legumes, skinless chicken, skinless turkey, "clean" fish, eggs in moderation, milk, and honey. Rejected are the "not God-given foods," which include refined grain; refined sugar; meats that are "unclean," fatty, red, or processed; butter and margarine; fried foods; and hydrogenated oils.

*What Would Jesus Eat?*¹⁰ was written in responses to Colbert's observation that many Christians were obese. He believes that a primitive diet of "the sort that Jesus ate that will cure the ills of Americans." Colbert has modified the Levitical laws related to food to fulfill his goals. For example, prohibitions against eating pork or shellfish (or, as he calls them, "cockroaches of the sea") are highlighted. While Colbert, a physician, has included an extensive discussion of the values of following kosher rules related to food, he seems to bend the rules enough to make them attractive to his audience. There is a companion cookbook¹⁰ that provides recipes that anyone who is familiar with Mediterranean cuisine would find comfortably familiar. Colbert is not so doctrinaire as to exclude items that found their way to the Old World after 1492. Tomatoes and spices, as well as Dijon

mustard and Worcestershire sauce, are found in some of the recipes. Colbert's book has sold over 150,000 copies. His medical practice is said to number 22,000 individuals. His web site, www.DrColbet.com has a nutritional counseling program that will tailor a diet to your blood type. His online store features 66 items that include multivitamins, milk thistle, Constipation Formula, and ADD (attention deficit disorder) formula.

Americans receive mixed messages about what they ideally should eat. Taubes³² recently described how current recommendations for a low-fat diet were never based on clinically verifiable data. Even the ubiquitous food pyramid, found on almost any food item that we purchase, has little impact on our diet. As a population, we fail miserably in our ability to follow published guidelines. Murphy and colleagues³³ found that only 22% of American diets met the recommended daily allowance for 15 nutrients and that 14% were consuming more than the recommended 30% of calories from dietary fat. Only 2% met both criteria. If *Homo sapiens*, the self-professed wise ones, are so smart, then why don't we eat right? Our evolutionary history may provide a key to understanding how we arrived at this dilemma. Time will tell if it will be the road map to better nutrition.

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