

The Growing Influence of the Paleolithic Diet within the U.S.

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1. Overview

America is known for its wide cultural diversity, and the diets of Americans are no exception. Perhaps more than any other nation, Americans have created an incredible variety of specific diets available to choose from as seen from the proliferation of diet advice found throughout the American mass media. Practically any imaginable diet can currently be found within the U.S. While all these varied diets rise and fall depending on current trends, some are able to find more traction than others. In particular, the last few decades have seen a large number of trendy diets that have been wholly embraced by the masses for a short time, simply to be replaced by the next popular fad diet that comes along. Naturally, what is called the popular diet of the moment often is simply a label for an extreme style of eating. Radical diets such as Atkins, popularized by the doctor that promises fat losses by the elimination of practically all carbohydrates from the diet; to the Raw-to-four diet, in which a dieter only eats raw food until four in the afternoon, have seen high popularity in the U.S. and have been covered extensively in the media. In recent years however, the Paleolithic Diet has made a slow but steady growth in America, and its impact appears to be

having more traction and influence than previous fad diets (Marsden, 2015).

2. The Paleolithic diet explained from the viewpoint of its supporters

What makes the Paleolithic diet (more commonly referred to as Paleo) unique from other diets is that it wasn't created by anyone in particular. Instead, a group of scientists, anthropologists and physicians worldwide just claimed to have uncovered what was already there in the past: the diet to which the human species is genetically adapted to. This diet, which originated from our gatherer-hunter ancestors, was believed to have been consumed by everyone on planet Earth until around ten thousand years ago (Cordain, 2012). Proponents of the Paleo Diet maintain that the diets of our distant ancestors were void of agriculture, raising animals, technology, and processed foods. Under the Paleo diet, it is believed that health is optimized when people eat lean meats, seafood, fruits and vegetables without incorporating grains, dairy, refined sugars and oils, and processed foods into the diet. The goal is to mimic as closely as possible what ancient humans ate. To achieve this, Paleo eaters claim to solely rely on scientific studies to narrow as specifically possible exactly what was eaten by ancient man.

The studies used in determining what constitutes the ideal human diet include: 1. fossil records; 2. contemporary hunter-gatherer diets; 3. the nutrients in plants and wild animals; and 4. the diets of chimpanzees, which are the closest related species to man (Graber, 2004).

The Paleolithic era (also referred to as the Stone Age), began in Africa 2.5 million years ago and ended 10,000 years ago with the arrival of the first ancient farms in the Middle East. Although perhaps as many as twenty different species of ancient humans could be found during the Paleolithic era, there exists a common theme around what all these groups ate, regardless of where on the planet they lived. Simply by studying the diets of our direct ancestors throughout the world reveals the dominance of lean meats, fruits and vegetables. This remained firmly in place until agriculture and farming began ten thousand years ago (Cordain, 2010).

Noticeably absent from the Paleo diet are all grains and dairy products. The reason for this is that their consumption began only fairly recently in human history, when the Agricultural Revolution began 10,000 years ago. At the beginning of the Agricultural Revolution (merely 333 generations ago), grains and dairy were introduced into the human diet. Ten thousand years is a very small number when compared to the 2.5 million years that humans have lived on Earth. Until the start of the Agricultural Revolution everyone on the planet ate lean meats, fish, vegetables,

and fruits. Paleo diet practitioners believe that optimum nutrition is achieved when strictly focused on copying what our ancestors ate: meats, fruits and vegetables, all in a natural, unprocessed state as possible (Cordain, 2010).

Paleolithic people ate no dairy foods, as catching and milking a wild animal would have been too difficult. Only in recent history has man been able to farm domesticated cows, starting from around 6,000 years ago. Before cows, a now-extinct type of large cattle called aurochs roamed the earth. So fierce were these creatures that Julius Caesar wrote about them at length, describing them as ‘fierce creatures, ready to attack and decimate both man and beast at will’ (Cordain, 2012 p.53). Caesar, like most ancient people avoided these animals at all costs, determining that any ideas about attempting to domesticate such animals was simply too risky and not worth the effort.

As for cereal grains, there is evidence to show that ancient people only used them as a last measure to stave off starvation. Long ago, the technology wasn’t in place for whole grains to be able to have their tough cell walls broken down by milling to make them digestible. While our ancestors of the Stone Age had the use of fire for over the last 250,000 years, grains did not become staple foods until crude stone grinding tools appeared about 13,000 years ago in the Middle East. Not only grains, but even the use of sugar, which is so prevalent in our society today, could only

be found in honey which our ancestors would occasionally find (Cordain, 2010).

Over the last thirty years, more scientists and physicians worldwide are beginning to consider that the ideal diet was to be found in the diet of our Stone Age ancestors. The revolutionary scientific paper that started this trend was in 1985 by Dr. Boyd Eaton of Emory University in Atlanta, Georgia. Dr. Boyd published his landmark paper about the Stone Age diet in the prestigious *New England Journal of Medicine*, and this helped to bring the idea of the Paleo diet to the forefront of nutritional studies. Dr. Eaton applied to diet and health the fundamental idea of biology, which is the theory that natural selection occurs from evolution. The basic theme of his paper was that our genes determine our nutritional needs. Also, that our genes were influenced by the environment of the Paleolithic era, including the foods our ancestors ate (Cordain, 2010).

The popularity of the Paleo diet really took off in the U.S. in 2010 when research biochemist Robb Wolf wrote “The Paleo Solution: The Original Human Diet.” Until that time, the Paleo diet was considered a temporary fad among health circles, not really covered much in the mass media. Through scientific exploration and his meticulous attention to detail (not to mention very clever marketing schemes), Wolf attracted a lot of attention from the general public. Here was presented a way of eating that seemed to be very geared towards the way Americans ideally would like to eat;

in other words, the diet appeared to be very ‘achievable’ for the average person to be able to enjoy and continue with. Since Wolf’s book appeared, the Paleolithic diet has continued to rise in popularity. So widespread did its influence become that in 2013 the diet was Google’s most searched-for weight-loss method (Kolbert, 2014).

3. Reasons for the popularity of the Paleolithic diet in the U.S.

Why is the Paleo diet so attractive to health-conscious Americans of all ages and body types? There are three main reasons: 1. the current science on the Paleo Diet is promising; 2. More than other diets, Paleo has a wide variety of appealing foods to the American palate to choose from; and 3. the diet isn’t too complicated, and easy to follow (Cordain, 2010).

a. Supported by science

Nutritional science is not static, and is subject to continual flux and change. Over time, even beliefs a decade old by be replaced by more encompassing knowledge based on more comprehensive data, more experimentation and a better understanding of how the human body works. Although to date only a limited amount of scientific studies have been conducted on the Paleo Diet, the research which has been completed so far provides some evidence into its effectiveness to support weight loss, control diabetes, and reduce risk factors for heart disease. As an example, one such study by Lindeberg et al. published in *Diabetologia* found that individuals with heart disease who followed

the Paleo diet were able to more effectively control glucose than those on other diets (Cordain, 2010).

Even milk consumption, widely considered a staple part of healthy diets other than Paleo, has come under scrutiny. Recently a series of epidemiological experiments from the Harvard School of Public Health has linked dairy and the occurrence of acne, among other skin and inflammatory disease-related conditions. Further studies at the Royal Melbourne Institute of Technology have supported these results by demonstrating that acne and patients with skin-related issues have had a great reduction in their symptoms when fed a Paleo-style diet (Cordain, 2012).

Scientific evidence is the only factor in deciding which foods are included into the Paleo diet, and this is the main enticement of the diet to masses of people. Through science, we know exactly what ancient man consumed. It should be noted, though, that except for rare finds of tangible evidence, such as fossilized human feces and some mummified bodies which had full stomachs, any ideas of Stone Age diets must come from certain types of circumstantial evidence (all of which has stood up to scientific scrutiny). The four main sources of this evidence are: 1. studies of the diets of other primates; 2. studies of the isotopic elements found in fossils; 3. modern-day hunter-gatherer anthropological stories; and 4. a thorough examination of current human metabolic and biochemical pathways (Cordain, 2010).

b. Losing fat while remaining satiated

With such a wide variety of tasty foods to choose from, i.e. eggs, fresh fruits and steak, it can be very tempting to adopt this diet. It is a fact that many delicious meals can be consumed while losing weight at the same time. The ability to be able to eat high quantities of lean protein such as meats is very appealing to the American palate. Also appealing to followers of the Paleo diet is the fact that lean protein has twice the “thermic effect” (the ability to increase one’s metabolism to burn more calories) than either fats or carbohydrates. Thus, the body becomes more proficient and maintaining energy levels while burning off fat. Also, protein intake is the most satiating, or in other words, is the way to make one feel full the fastest. One cannot easily overeat on the Paleo diet — it is just too satiating. Thus it easily satisfies one’s appetite, causing one to feel less hungry between meals and therefore less likely to snack on unhealthy foods between meals (Sachs, 2014).

7 Major Problems of the Typical American Diet that Paleo Seeks to Remedy (Wolf, 2010):

1. Not enough protein
2. Too many of the wrong type of carbohydrates
3. Not enough fiber
4. Too much fat and the wrong type of fats
5. Too much salt and a lack of potassium
6. More acidic than alkaline

7. Not enough vitamins, minerals, and plant phytochemicals

c. Easy to follow

Unlike most meal replacement diets, the Paleo diet is very easy to follow, even when eating out. There is no strict calorie counting techniques involved, nor having to exist on a difficult low fat meal plan. An argument can be made that the quicker and more effortless a diet plan is, the more likely it can be sustained on a daily basis and lead to an increase in healthy habits. This especially can hold true in the modern age when people don't want to devote the time or energy into detailed diet scheduling. When faced with time constraints, the Pale diet can be a welcome alternative. By implementing common-sense principles about only eating anything plant, fish or meat-related relieves the individual from having to over-think on a daily basis what to and what not to eat (Marsden 2015).

As shown above, modern low-carb weight-loss diets should really be called 'high-fat' diets due to the moderate levels of protein they contain. Also, modern low-carb fad diets promote fatty, salted meats (such as sausage bacon and hot dogs) and dairy (butter, cream and cheeses). At the same time, proponents of these radical

high-carb diets advocate restricting the consumption of fruits and vegetables. All this is in stark contrast to the dietary pattern of our ancestors, who ate far more carbohydrates. Followers of other diets have to devote considerably more amounts of time and effort to maintain the 'right' amounts of protein, fats and carbohydrates and consider at every meal what the 'bad foods' are (Cordain, 2012).

4. Criticisms of the Paleo Diet

The Paleo diet follows some of the mainstream advice on diet, particularly about eating fewer processed foods, sugar and salt. As a high protein diet, the focus on ample quantities of lean meat and seafood can make people feel full more quickly than a standard diet, thus people will eat less. However, nutritional deficiencies found in the diet, like a lack of vitamin D and calcium, have led some experts to feel that this could lead to compromised bone health. Also, the high fish consumption that the diet requires carries the risk of toxins, particularly high mercury levels (Graber, 2004).

Another criticism of the Paleo diet is the lack of long-term research on trials involving human subjects. Up to now the clinical trials of the Paleo diet have been too few to show any statistical significance, or to

<i>Diet</i>	<i>Protein</i>	<i>Carbohydrate</i>	<i>Fat</i>
The Paleo diet	19-35%	22-40%	28-47%
Typical U. S. diet	16%	49%	35%
Low-carb fad diets	18-23%	4-26%	51-78%

reach any conclusions about its effectiveness long-term. Critics of the Paleo diet are quick to point out that serious trials have only begun within the last decade, and are primarily focused on subjects who reside in North America. They further state that only when sufficient trials are held on subjects world-wide, encompassing a wide spectrum of races and ethnicities, will Paleo be able to achieve the status of being a viable, sustainable diet (Graber, 2004).

In addition, many nutritionists and scientists claim the Paleolithic diet isn't healthy due to the elimination of so many basic foods, and even entire food groups. With the elimination of dairy and all grains from the diet, this is such a noticeable and sizeable deviation from the standard U.S.D.A. (United States Department of Agriculture) recommended diet that it requires a severe 'leap of faith' to even entertain the possibility of the efficacy of the Paleo diet. Furthermore, many dieticians find its restrictive, even finicky, requirements such as sticking with very lean, pure meats and plants, an unrealistic diet that the masses of people can follow (Graber, 2004).

On June 3, Scientific American ran a long story that ridiculed the Paleo diet as being totally unsuitable to maintain. The magazine suggested that the actual cave-man the Paleo movement was imagining — "a tall, lean, ripped and agile 30-year-old" was in fact an invention. Though cutting down on preservative-packed processed

foods was smart, the article noted that the idea of banning "any kind of food unavailable to Stone Age hunter-gatherers," including dairy products, grains and beans, was nutritionally bad advice. Further, Scientific American notes that just because a certain food may not have been readily available to our ancestors (i.e. milk and dairy products) doesn't necessarily mean that human bodies aren't able to effectively absorb and utilize the nutrients found within. As one critic of the diet noted, "The Paleo diet is founded more on privilege than on logic. Hunter-gatherers in the Paleolithic hunted and gathered because they had to. Paleo dieters attempt to eat like hunter-gatherers because they want to." Any diet that restricts certain food groups and emphasizes others isn't balanced, Scientific American concludes, and there isn't strong science to prove that Paleo-eaters live longer, or are healthier than those who don't follow the diet (Sachs, 2014 p.23).

Another periodical, U.S. News & World Report, in its 2014 rankings of "Best Diets Overall," announced that the Paleo diet was placed at the very bottom of the list, at number 31. "Experts took issue with the diet on every measure," the magazine scolded. In particular, the magazine emphasized how dangerous the Paleo diet is, due to the high levels of meat eaten (Kolbert, 2014).

Recently, a growing vocal protest of the Paleo diet has emerged from those criticizing just how environmentally unfriendly the diet is. Pound for pound, beef

production requires at least ten times as much water as wheat production. Also with beef, the calorie for calorie demands are twenty times as much energy. Cattle and livestock are major sources of greenhouse-gas emissions because of the massive fuel requirements to raise them, and the methane and nitrous oxide which comes from their waste. The American Journal of Clinical Nutrition concluded in one analysis that in terms of emissions, eating a pound of beef would be equal to driving forty-five miles. To contrast this, eating a pound of whole wheat would be like driving less than a mile (Kolbert, 2014). Therefore, from an environmental standpoint, the Paleo diet's emphasis on meat would have to be considered a disaster.

5. Conclusion

As knowledge about the Paleo diet becomes more mainstream, further evidence should begin to come to light on its effectiveness one way or another. There are so many diets and styles of eating throughout the world today that it may be impossible to accurately find the 'one perfect diet' that works well for everyone. People often find similar benefits with any change in diet. As University of Michigan professor Randolph Nesse (who might be called the father of evolutionary medicine) said, "There is this tendency to want to find the normal human diet, but every single diet you pick has an advantage of some sort. Humans have lived in all kinds of places and we have adapted to all kinds of diets" (Sachs, 2014).

The main problem with the Paleo diet is that it assumes our ancestors were a particular type of person, on a very specific diet, and that the human body is designed to process only certain types of foods. Barbara King, a prominent biological anthropologist argued that human genes could not be in control, as ancient hunter-gatherer groups adapted to local environments that were regionally and seasonally variable. Ancient man had to eat (and successfully so) only what was locally available. In addition, cultural traditions also had a role in determining what was consumed.

It is questionable whether or not the Paleo diet will be able to sustain its recent growth in popularity. The main hindrance to its expansion is the cost: this is a very expensive diet to maintain over time. Because of its prohibitive cost, the Paleo diet could also be called exclusionary, since only the wealthiest within a society could afford to eat that way. One survey found that the typical Paleo eater is a college-educated American, between the ages of 21-40, who is married without children — which just so happens to be the top demographic money-earner. When a person has to buy massive amounts of local grass-fed (instead of cheaper grain-fed) meats, along with having to substitute huge amounts of produce to replace the fiber in formerly-eaten grains, his or her food bill will be sharply higher (Kolbert, 2014). Therefore, it appears that the Paleolithic diet just may have peaked in popularity, and may be unable to gain any further momentum in the future.

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