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5-Synopsis of Lou Schuler’s article in *Men’s Health* magazine, October 2012

Paleolithic Diet -- Did Cavemen Have Abs?

The skull of *Bison antiquus* in archaeologist Mark Mullins’s living room in Colorado Springs looks like something Conan the Barbarian might wear to make a fashion statement. To picture this extinct animal, imagine an American bison – 2000 pounds of pissed-off, top-heavy bovine capable of hitting 30 miles an hour on a flat stretch of prairie – and add about 500 pounds and longer horns. Then amp up the intimidation factor by several times.

Now picture humans roaming the plains of Paleolithic era North America 15,000 years ago, people just like us in nearly every way except for the fact that they haven’t gotten around to inventing much of the stuff we now eat, wear, operate, or live in. You or I wouldn’t approach a *Bison antiquus*  armed with anything less than a bazooka, but the first people to populate North America tracked, killed, and consumed the beasts using nothing more than simple tools, like pointy sticks and flaked stones.

Archaeologist Mark Mullins explains “It was their ability to outsmart these mega-mammals that allowed humans to successfully kill the animals, which were so much stronger.” Mullins is 40 years old, slim, and obviously fit. He’s been collecting spear points, arrowheads, and other ancient tools since he was a teenager. His home in Colorado Springs houses one of the world’s largest private collections of artifacts from the Ice Age, a period that ended about 10,000 years ago. He’s spent his life working to piece together the story of the people who once populated our hemisphere.

Mark Mullins also eats like a cave man. The “Paleo diet” is a modern diet trend that’s based on foods that would have been available to our ancient ancestors before the invention of agriculture.

“I just went to what I thought these people ate,” he tells me (author Lou Schuler), adding that in the 2 years since he and his wife, Marisa, made the switch, he’s lost 70 pounds. So now he might be too much of a lightweight to tackle a ton of raging bison.

The name “Paleo diet” was coined by Loren Cordain, Ph.D, a professor of health and exercise science at Colorado State University in Fort Collins, where I meet with him the day after I met with Mullins. Professor Cordain shows me a wall of file cabinets packed with studies on various aspects of the diet, which today goes by many names, from “caveman diet” to “ancestral nutrition” to “evolutionary nutrition.” They all describe the same concept.

“Seventy percent of the typical U.S. diet is foods that our Stone Age ancestors wouldn’t have consumed,” Cordain says. According to him, these include grains, dairy, peas and beans, processed oils, added sugars, and alcohol. “What we’ve tried to do is replace these calories with real foods—fruits, vegetables, meats, seafood.” Although some Paleo advocates don’t like to admit it, research suggests that early humans were also processing and eating wild grains many thousands of years before they actually figured out how grow them as crops – they would simply pick them as wild plants.

Archaeologist John Williams, Ph.D. from the University of Colorado at Denver, says food remnants discovered at Ohalo II site near the Sea of Galilee show that Paleolithic people in the Middle East did not live by wooly mammoth alone. The archaeology site also shows that the people ate fish, fruits, wild barley and wild emmer wheat which were used in stews or porridge, olives, deer, gazelle, and birds.

A 1985 article in the *New England Journal of Medicine* argues that the human genome simply has not had enough time since the invention of farming in 10,000 B.C. to adjust to foods like grains, dairy, and beans (not to mention candy corn and Cheez Whiz), which were not staples in the human diet during the Paleolithic era. Another article, by famous author Jared Diamond, in *Discover* magazine in 1987 called agriculture “the worst mistake in the history of the human race.” “Skeletons from Greece and Turkey show that the average height of hunter-gatherers towad the end of the Paleolithic was 5’9” for men and 5’5” for women. With the adoption of agriculture, height crashed, and by 3000 B.C. had reached a low of only 5’3” for men and 5’ for women.”

The Lindenmeier archaeological site, just north of Fort Collins, is one of the few places where you can see the world almost exactly the way nomadic hunter-gatherers would have seen it when they camped here 11,000 years ago. The site overlooks a vast expanse of grassland; on a clear day it would have offered miles-long vistas. And because back then was an ice age, the prairie was covered with abundant snow in winter, which made the hulking *Bison antiquus* as easy to spot as a chocolate chunk in ice cream. This region has been studied and excavated on and off since the 1920s. It is best known as the burial ground for hundreds of artifacts from the Folsom period, the height of Paleolithic culture in North America. The Paleolithic people, as proved by the artifacts, took extraordinary care in crafting their tools – often they would bypass common stones in favor of precious and semiprecious stones because they were more beautiful.

The jewelry pieces show that they had plenty of downtime to take care of lots of things beyond simple subsistence and survival. What gave them all that time? Their food. In addition to bison, they also ate deer, pronghorn, rabbits, hares, turtles, and the occasional camel. These are all signs that Ice Age Coloradans were living high on the hog (even though there were no hogs on the continent back then). Their diet also included plenty of carbohydrates. In summer, they could munch their way through the landscape like Pac-Man. They would start low, where the first nuts and berries were ripening, and then climb to higher elevations to find the same plants reaching maturity later in the season.

Standing on the Lindenmeier overlook in Colorado, you can imagine a time when there was boundless food, water, and fresh air; when everyone got plenty of exercise; when people had the time to create objects that were beautiful for beauty’s sake; and when there was no such thing as organized warfare. People remained hunter-gatherers until they were forced to change. So, what forced prehistoric humans to give up such a productive, satisfying, and –more to the point—nourishing way of life? The simple answer is the weather. It seems that the stretch of the Paleolithic in which humans hit the top of the food chain and lived large was surprisingly brief, roughly 25,000 to 10,000 years ago. Before 25,000 B.C. life would have “sucked” for humans. But by 25,000 B.C. humans entered a true sweet spot: we had plenty of game to hunt and relatively few predators or competitors. Giant cave bears, for example, were mostly extinct by then. But then the planet warmed up at the end of the Ice Age and it all went to hell. Animal migration routes changed, leaving the humans in Europe with more mouths to feed but less prey to hunt (and smaller prey at that). Fishing made up for some of the reduction in available game, but when agriculture arrived in what we now call the Neolithic era after 10,000 B.C, it wasn’t because people were tired of hunting, It was because, for the first time in eons, the planet was warm enough and wet enough to provide actual growing seasons, and our ancestors were smart enough to take advantage of that. Domesticating animals started around this same time period.

Most of us today hunt and gather all our food in supermarkets, and our average height has returned to about a preagricultural 5’9”. But we’re also older and fatter, and many of us live with chronic conditions that, the paleo diet advocates say, are a consequence of diets filled with foods that human history did not mean for us to eat. Professor Cordain says “DNA evidence shows that basic human physiology has changed little in 40,000 years. Literally, we are Stone Agers living in the Space Age; our dietary needs are the same as theirs. Nature determined what our bodies needed thousands of years before civilization developed, before people started farming and raising domesticated livestock.”

Let’s return to the skull of *Bison antiquus* in Mark Mullin’s home—once I noticed the skull during the interview it was hard to focus on anything else. On the back of the skull is a fist-sized hole, where the top of the skull was smashed out with a large stone. Mullins says that whoever killed this ton-and-a-quarter beast would’ve eaten its fat-rich brains first. Ancient humans, who did hours of exercise a day and whose bodies had to keep warm through long, frozen winters, needed far more calories than we do. In 1923, the average thermostat in the U.S. during winter would be set at a brisk 64 degrees. By 1986, the average was a balmy 76 degrees. Combined with air-conditioning systems in summer time, our modern climate-controlled world has changed our metabolism, potentially requiring less calories and again leading to weight gain.

Bison brains to a Paleolithic human would have been a tasteful delicacy – but they also needed the calories desperately.