The cave man diet essay sample

Food & Diet

The “ Cave Man Diet” diet is usually referred to as the “ Paleolithic Diet” referring to the Paleolithic or Stone Age era. It is also referred to as the “ Stone Age Diet”, or the “ Hunter-Gatherer Diet”. According to Eaton, the caveman diet has been around since at least the mid 1980s, if not thousands of years earlier. The Caveman Diet is modeled after what our ancient ancestors ate in prehistoric times. It places a lot of emphasis on protein and takes a step away from cultivated products such as rice and bread. There is really no single Paleolithic diet. Hunter-gatherer cultures in different parts of the world ate widely differing diets, due to the availability in each locality. Stone Age diets also varied significantly depending on the season. Generally, however, such diets included much lean red meat from game, as well as eggs, fish, fruit, nuts, and vegetables. The caveman diet is essentially a prehistoric version of Atkins, where all major dietary components are covered i. e. vitamins, fats, protein, fats, carbohydrates, antioxidants and phytosterols etc. Followers of the Paleolithic diet believe that overall health, and a healthy weight, can be obtained by eating such a diet. Early man ate a fairly consistent diet of wild plants and animals for a period of 2 million years, during which time the human body evolved to function best when fed such a diet, supporters claim.

The image of the caveman is commonly associated with the Stone Age. They are the first human ancestors. The Stone Age period runs from about 2 million years ago to the end of the Pleistocene, 10, 000 years ago, and during these period major climatic and other changes occurred, which affected the evolution of humans. Humans themselves evolved into their current morphological form during the later period of the Stone Age. Near

the end of the last ice age, 15, 000 to 9, 000 years ago, a large scale extinction of large mammals including the caveman (the mammalian megafauna) occurred in Asia, Europe, North America and Australia. This was the first Holocene extinction event. This event possibly forced modification in the dietary habits of the humans of that age and with the emergence of agricultural practices, plant-based foods also became a regular part of the diet. For areas with an early neolithisation, the Palaeolithic includes the Epipalaeolithic, and ends around 8, 000 years ago.

From archeological surveys it is evident that men are mainly involved in hunting. Most women had to either assist in the hunt or make tools for hunting. It seems likely that the better activity for women with children would be gathering (nuts and fruits), since young children could stay with their mothers, and slightly older children could help out like the removal of poisonous plant parts, or bones from meat, or the shells from shellfish Christopher (2003).

The “ caveman diet” resembles the familiar nutritionists’ food pyramid– turned upside down. Paleolithic dieters are limited to eating foods that can be found in the wild, killed, harvested, and prepared with bare hands and simple tools, and eaten raw. Archaeology provides considerable evidence for meat consumption by early man. Fossil animal bones at archaeological sites have been found to display cut and hammer marks, teeth marks and breaks that are consistent with meat consumption (Bunn, 1981). Stone artifacts found at such sites are also consistent with meat-eating (Potts & Shipman, 1981). Some archaeologists judge certain pathological changes in fossil human skeletons to be similar to those found in the skeletons of people who

suffer from vitamin A toxicity, a condition that could only have occurred if early man ate animal liver (Walker et al. 1982).

Bruce Watkins, PhD, director of the Center for Enhancing Foods to Protect Health at Purdue University, conducted a chemical analysis of elk, and antelope meats. He has published his results in a book called The Paleo Diet. In his analysis, he looked only at animals from the Rocky Mountains and found that wild game — venison, elk, antelope — contains a mixture of fats that are healthy for people; it lowers cholesterol and reduces the risk of heart disease, diabetes, and cancer. The meat of wild has more omega-3 fatty acids. Also, wild beasts have a ratio of omega-6 to omega-3 fatty acids that mirrors what's recommended today to lower risk of heart disease. The American Heart Association advises eating sources of food that have high levels of omega 3. That includes oily fish, such as salmon, halibut, swordfish, and tuna. According to Watkins it's a lean-meat diet, but with lots of fruits and vegetables and there weren't buckets of starch in the Paleolithic age. Donuts, cakes, cookies, and breakfast cereals were not part of the Paleolithic diet. Even 150 years ago, people didn't eat a lot of the refined carbohydrates that we eat today. There were whole grains, fruits, and vegetables.

Those on a low carb diet should get at least 60 to 70 percent of their daily calorie intake from fat. Carbohydrates should make up less than 10 percent, and in some cases, less than 5 percent of daily calorie intake. In the low carb caveman diet, carbohydrates were replaced with fats and proteins. The fat stored in the body is used as a main energy source, and by-products like Ketones are excreted in the urine. These are characterized by nail varnish (acetone), smelling breath and causes side effects such as nausea, fatigue

and loss of appetite. Although diets vary in their recommendations, as a general rule, a low carb diet is synonymous with a high-fat and moderate protein diet.

When carbohydrate intake is restricted, the insulin level decreases and the glucagon level increases. Glucagon is a hormone that causes body fat to be burned and cholesterol to be removed from the arteries. If carbohydrates are severely restricted, the body goes into a state of ketosis, burning fat with the subsequent production of ketone bodies in the bloodstream. The condition is called “ ketonuria” if ketones are spilled out into the urine. As a result the blood sugar level stabilize; insulin level drops; and because body is burning fat, weight is lost!

Voegtlin argues that gross differences in the anatomy of man and the herbivorous animals make him unable to successfully adapt to a diet based on plant foods, particularly carbohydrate-rich grains, as well as to a diet in which milk products, rich in lactose, predominate; and that the whole range of modern diseases stems from his abandonment of the food choices of his primitive ancestors, based largely on meat and rich in fat. He notes that, with the exception of vitamins C and K, all essential nutrients can be derived from animal foods, and that the cave man diet was certainly much richer in vitamins and minerals than our own. Modern devitalized plant foods-such as sugar and white flour-only hasten our decline. (Voegtlin, 1975)

“ Paleolithic man may not have had access to red bell peppers or oranges, but they did have fruits that had similar nutrients,” says Eaton, professor of radiology and anthropology at Emory University. “ They might not have had

potatoes, but they had roots and tubers.” Only in arctic environs did hunter-gatherers have a nutritionally limited diet, he says. “ We know that Eskimos had very little calcium, so they did have osteoporosis.” Cavemen ate a greater variety of foods. The diet was probably higher in protein than what we eat, since carbohydrates are so easy for us to encounter (rice, potatoes, bread, pasta, sweets, et cetera). The animals he was able to catch had a higher ratio of protein to fat in their flesh, since they were like today’s “ game animals”, not corn-fed beef.

Although the meat was lean, the caveman was able to obtain more fat. This is because, he ate much more of the animal, including the organs, bone marrow, tongue, eyeballs, which are higher in fat than muscle, and in addition, a fair amount is available as mesenteric (gut) fat. The fat from these sources, however, is less saturated than the marbled fat you find in the high-priced cuts of beef today. Archeological remains indicate that whereas meat from game carcasses was often left uneaten, the long bones were carried back into camps and chopped into pieces so that the marrow could be extracted. Organ meats were eaten immediately-and often raw-but muscle meat was preserved by drying, or by mixing it with tallow to make pemmican (Sally and Mary, 1999). All ruminant animals contain lots of saturated fat because the protozoa in their capacious guts do an efficient job of saturating the oils found in plant foods—whether these oils come from dried hay or green grass, from feedlot corn or the ripe grains of prairie grasses. Cavemen living near the seashore or waterways where fresh-water fish were available similarly would find themselves eating a high protein to fat ratio.

The caveman used to eat seasonal fruits and berries which had considerably less sugar. Some grass seeds were eaten, many of which were probably the precursors to today’s cereal grains, but the amounts were miniscule compared to what most people eat today. Nuts which were a good source of protein and fat and roots, like yams and sweet potatoes would have become their food. Root vegetables like carrots, turnips, parsnips and rutabagas which had a high percentage of dietary fiber were taken. Some people could get eggs and honey too.

Fish oils which are rich in (n-3) PUFA have been postulated to be beneficial in several disease states including atherosclerosis, hypertension and arthritis (Clarke et al. 1988). The major (n-3) fatty acids found in fish oil are eicosapentaenoic acid [20: 5(n-3)] and docosahexaenoic acid [22: 6(n-3)]. Fish oils have been shown to reduce hepatic lipogenesis and VLDL secretion and increase post-heparin plasma LPL activity (Daggy et al. 1987, Zampelas et al. 1994). There is much interest in the effects of (n-3) PUFA on the gene expression of many key enzymes (Simopoulos 1996). This interest, in part stems from benefits in later life associated with breast feeding (which contains long-chain PUFA) over formula-fed infants (Lanting and Boersma 1996) and from evolutionary evidence suggesting benefits of the diet of Paleolithic man where the ratio of (n-3) to (n-6) PUFA was much higher than present day (Broadhurst 1997).

Prohibited in the caveman diet are potatoes (less than 11, 000 years old), cereal grains (rice, wheat, barley, corn), dairy products, refined sugar products, most alcohol; especially distilled or foods that require cooking (the

caveman did not have any mechanism for boiling beans for 2 hours, for example)

Cavemen obtained about half of their calories from carbohydrates, but these carbohydrates were rarely grains. Most carbohydrates came from vegetables and fruit. Caveman consumed about 30 percent protein, although it varied with the season and geographic location. Much of this protein came from what people now call “ game meat” – undomesticated animals, such as deer and bison (Eaton SB and Konner, 1983). Based on contemporary studies of hunter-gatherer societies, caveman consumed relatively large amounts of cholesterol (480 mg daily), but their blood cholesterol levels were much lower than those of the average American (about 125 mg per deciliter of blood). There are a couple of reasons for this.

1. A) Domestication of animals increases their saturated fat levels and alters the ratio of omega-6 to omega-3 fatty acids. Most Americans consume an 11: 1 ratio of omega-6 to omega-3 fatty acids. But a more ideal ratio, based on evolutionary and anthropological data, would be in the range of 1: 1 to 4: 1. In other words, our ancestors consumed a higher percentage of omega-3 fatty acids – and we probably should too.
2. B) Gathering and hunting requires considerable physical effort, which means early humans exercised a lot, which would have burned fat and lowered cholesterol levels. According to Eaton et al., (1996), “ Their nomadic foraging lifestyle required vigorous physical exertion, and skeletal remains indicate that they were typically more muscular than we are today”.

Game meats and wild plant foods contain higher amounts of vitamins and minerals relative to their protein and carbohydrates. The fruits, nuts, legumes, roots and other noncereals that provided 65-70% of typical gatherer-hunter subsistence were generally consumed within hours of being gathered, with little or no processing and often uncooked. It seems inescapable that preagrarian humans would generally have had an intake of most vitamins and minerals that exceeded currently recommended dietary allowances (Eaton et al., 1996). Caveman used to consume an estimated 600 mg of sodium, and 7, 000 mg of potassium daily.

Dietary vitamin and mineral levels were 1. 5 to 5 times higher in caveman diet compared to today. Vitamin C is an important antioxidant, and 1. 8-13 grams of vitamin C is required daily. Analyses of the nutrient content of raw game meats indicate that raw bison (*Bison bison*), caribou (*Rangifer tarandus*), moose (*Alces alces*), and variety meats contain 5–15mg vitamin C/kg portions (US Department of Agriculture, 1989), an amount that should be sufficient to prevent scurvy in most people. Whale skin, organ meats, and the stomach contents of animals also would be expected to contain vitamin C.

Comparison of palaeolithic diet with US dietary recommendations

	Palaeolithic diet*	US dietary goals†
Protein (% energy)	34	12

Carbohydrate (% energy)	45	58
Fat (% energy)	21	30
Cholesterol (mg)	591	300
Fibre (g)	46	20–35
Vitamin C (mg)	400	45

* Adapted from Eaton & Konner (1985).

† Select Committee on Nutrition and Human Needs, United States Senate (1977).

Another popular diet is Atkins Diet. Dr. Atkins was the first person who brought the low carb diet to major prominence in the U. S. and is credited for defying “ the system” and offering a weight loss plan that works for most people. His diet plan is one that creates ongoing ketosis for weight loss. In his “ induction phase” the stores of glycogen in the liver are purposely depleted. Glycogen is the source for the body to obtain glucose quickly when it is needed, mainly for brain activity. In his “ maintenance phase” he advises that persons increase their carbohydrate intake to the point where they do not gain or lose weight. Dr. Atkins’ “ induction phase” may cause problems in persons who typically consume large quantities of carbohydrates, or who are prone to hypoglycaemia (low blood sugar), because their bodies may not be able to produce either glucose or ketones fast enough to supply the requirements of the brain and muscle activity, causing fatigue which may be

sudden or extreme. But there are few persons who have had major problems with this aspect of the Atkins diet. Dr. Atkins' diet does not restrict protein intake, which is the correct approach. However, his advice to add carbohydrate grams for the maintenance phase so that continued weight loss does not occur is not scientifically sound. There is no indication that a person will continue to loss weight below an ideal level even with no carbohydrate intake.

There is an important difference from the Atkins-style claim, which was that they ate meat which was lower in fat than domestic animals — grain-fed beef (grain again) may have 36% fat content while grass-fed has about 18% and wildfowl and venison about 3%-4%, like most fish. They had no salt-cured bacon. They had no easy sugar which did not emerge until relatively recently (Boyd Eaton, Mel Konner, and Marjorie Shostak).

Many aspects of the Paleolithic diet have proven health benefits. Nutritionists and scientists believe a Paleolithic diet and lifestyle might be an effective weapon against the adverse effects of modern affluence, reducing risk of heart disease, cancer, obesity, rheumatoid arthritis, and other conditions. Since this was the diet practiced during much of human evolution, advocates argue, it is the food that humans were designed to eat. Additionally, these advocates endorse the idea that milk (after weaning) and grains are not intended for human consumption.

If overweight people stick to the caveman diet, they will lose weight. The reason it works is because they wind up eating less. If they eat a load of french fries which are easy to digest, their body digests them and converts

any extra carbs to fat, and after the insulin surge and crash, they feel hungry again. If they eat stuff that’s harder to digest, the sugar trickles slowly into your bloodstream and it’s a long time until they are hungry again. Similarly, fats and proteins in your stomach take longer to digest, so they feel full longer.

There’s some evidence that diabetes is caused by repeated surges and crashes in the amount of insulin in your bloodstream. A steady level will be much healthier. Eating low glycemic index carbohydrates will reduce the insulin required. Sticking to a diet like the caveman diet, will have the cholesterol improve as well as their triglyceride levels. It may not reduce total cholesterol, but it seems to improve the ratio of HDLs to LDLs (the ratio of the good cholesterol to the bad). Caveman diet being rich in fruits and vegetables is rich in antioxidants which have been show to lower the risk of heart diseases and cancer. Leafy greens and nuts such as almonds are high in calcium. The modern food pyramid diet produces a net acid load on the kidneys. The human body should run at a slightly alkaline pH and a diet high in sugars produce a net acid body pH. The only way your body can counter this acidity is by leaching calcium from bone. A Paleo diet produces a net alkaline load on the kidneys, thus preserving bone tissue.

Like any diet, it has its disadvantages. This diet tends to lead to an unhealthy amount of fat consumption. Beyond that, it isn’t very balanced in terms of vitamins. Since it is very low on carbs, it can also make people feel very tired and weak. One of the disadvantages of fish oil feeding has been linked to increased peroxidation and possibility of reducing antioxidant status. There is also evidence that another hepatic microsomal enzyme (D5

desaturase) is affected by intrauterine diet (Ozanne et al. 1998) which has been linked to the development of insulin resistance. To examine these effects, the activities of the liver enzymes glutathione reductase, superoxide dismutase and catalase were measured to assess the influence of the fish oil diet on oxidative status throughout the study. Protein is recognized as essential for building bone, that animal proteins have a higher sulfur content than vegetable proteins; Further, paleolithic protein intake—most of it of animal origin—is estimated to have provided up to 35 percent of total energy (at least 2 times its contribution to modern diets).

A balanced Paleolithic diet is thought to be generally free of harmful side effects, although anyone excluding milk and dairy products should be careful to maintain sufficient dietary levels of calcium to avoid problems such as osteoporosis, osteomalacia, rickets, and tetany. It is a good thing to avoid sugars and seek out high fiber foods. However, people who eat low carbohydrates and a high protein will actually end up eating a healthier diet.

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