Paleolithic diets as a model for prevention and treatment of western disease

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KEY POINTS FROM THIS ARTICLE:

1) There is evidence that “lean meat, fish, vegetables, tubers, and fruit can be effective in the prevention and treatment of common Western diseases.”

2) “There are no obvious risks with avoiding dairy products, margarine, oils, refined sugar, and cereal grains, which provide 70% or more of the dietary intake in northern European populations.”

3) “If stroke, coronary heart disease, type 2 diabetes, and cancer are preventable by dietary changes, an ancestral-like diet may provide an appropriate template.”

4) “Paleolithic diets are increasingly acknowledged as templates for healthy diets, partly because very low age-adjusted rates of cardiovascular disease and other nutrition-related disorders have been observed among contemporary hunter-gatherers and traditional horticulturalists.”

5) The majority of Westerners are affected by atherosclerosis and associated abnormalities.

6) Paleolithic human’s principal foods included ripe fruits and berries, shoots, flowers, buds and young leaves, meat, bone marrow, organ meats, fish, shellfish, insects, larvae, eggs, roots, bulbs, nuts, and nongrass seeds. Today, these foods provide only about one quarter of the caloric intake for the average European or American. Today, we “get most of our energy from grains (grass seeds), dairy products, refined fat and sugar, and legumes.”

7) Paleolithic humans ate fruits, which contain fructose. High intake of fructose may cause abdominal obesity and metabolic disturbances, including diabetes type 2, high blood pressure, blood lipid disorders, and fatty liver. “Approximately two-third of dietary fructose in the US population is provided by non-natural foods and additives, mainly sucrose and high-fructose corn syrup.” [Read:
   • The Fat Switch by Richard Johnson, 2012
   • Fat Chance by Robert Lustig, 2013
   • Salt, Sugar, Fat by Michael Moss, 2012]
8) Most Paleolithic humans probably had regular high-meat intake. “Of the 229 hunter-gatherer populations studied during the 20th century, the majority (73%) were estimated to get more than half their caloric intake from meat, fish, and shellfish.”

9) “Hunter-gatherers have had exceptionally favorable levels of serum cholesterol, blood pressure, and other cardiovascular risk factors, even with very high-meat consumption.”

10) Studies do not support that meat causes atherosclerosis, the main cause of cardiovascular disease. The notion that “animal protein” causes atherosclerosis is based on studies with milk proteins, typically casein. \[\text{Casein}\]

11) Most Paleolithic humans probably ate nuts, which provide a high amount of energy for the amount of work involved. Nuts are typically rich in monounsaturated fat, protein, soluble fiber, and micronutrients, while low in saturated fat.

12) “Roughly three-fourths of the calories in Western countries is today provided by foods that were practically unavailable during human evolution: wheat and other cereal grains, dairy foods, refined fats, and sugar.”

13) Wild seeds from the grass family (Poaceae), which includes today's wheat, rice, and maize, were almost never consumed by Paleolithic humans, and “rarely or never from one plant species every day.”

14) Legumes were also unavailable for most Paleolithic humans.

15) “When seeds from any one particular plant species are consumed in large amounts on a regular basis, an interesting situation arises. The plant kingdom contains thousands of bioactive substances and other natural chemicals, phytochemicals, many of which are thought to be part of the defense system against herbivores. The highest concentrations are generally found in the most vital parts (sprout, seeds, and beans).” Prehistoric foragers were able to limit the negative health effects by having access to a large number of various plant species.

16) Plant lectins [category of protein] are especially deleterious. Grains have a higher lectin content than seed products. “Lectins in wheat, rye, rice, and potatoes bind to receptors in the ‘host organism’. “Plant lectins are unusually resistant to enzymatic breakdown in the intestines, and can penetrate the intestinal mucous membrane, finally being deposited in the internal organs. The long-term, potentially negative effects of plant lectins alone may include atherosclerosis, diabetes, and autoimmune diseases.”

17) Milk-based diets have been linked to increased myocardial infarction.

18) “Internationally, cardiovascular mortality has been positively associated with the intake of dairy products.”
19) “Experiments have found that casein, the dominant milk protein, promotes atherosclerosis.” [Casein]

20) Studies indicate “cow's milk as a potential cause of diabetes (type 2), although junk food is likely worse.”

21) Studies suggest that cow's milk may contribute to prostate cancer, and high-milk consumption has been associated with an increased risk of prostate cancer.

22) Milk may be a cause of breast cancer. “A high intake of cow's milk in childhood may lead to greater attained height, which is one of the most consistent risk factors for breast cancer.”

23) A high-milk intake does not appreciably lower the risk of fracture in the modern world.

24) Absorption of calcium [and other minerals] is inhibited by phytates in grains and beans. Additional losses are linked to increased acid-producing foods, such as dietary salt and cereal grains.

25) Paleolithic diets did not include grains, milk, refined fats and sugar.

26) Paleolithic diets had greater intake of fiber and micronutrients.

27) “There are no known nutrients in grains, milk, or refined fats, required by humans, that are not provided by a mixture of meat, fish, shellfish, fruit, vegetables, nuts, and eggs.” [Key Point]

28) Paleolithic diets were often high in protein.

29) High carbohydrate diets from consumption of yam, sweet potatoes, taro, and fruit is acceptable and apparently healthful. However, consumption of grains, dairy, refined fats, and sugar are not.

30) Studies of the Paleolithic diet benefits include:

   • Reduced waist circumference
   • Reduced blood sugar and glucose tolerance
   • Reduced blood pressure
   • Improved blood lipids
   • Improved satiety

31) “In summary, a Paleolithic diet may serve as a model for healthy foods, in particular, in clinical trials in comparison with other prudent diets. Hypothetically, food choice is more important than counting calories or macronutrients in order to avoid common health problems in the Western world. Lean meat, fish, shellfish, vegetables, tubers, fruit, berries, nuts, and eggs can relatively safely be tried in the prevention and treatment of disease.”
32) “Dairy products, margarine, oils, refined sugar, and cereal grains, which provide 70% or more of the dietary intake for modern humans, are not an optimal food choice for long-term health.”

COMMENTS FROM DAN MURPHY:

**We should avoid consuming:**
Dairy products, margarine, oils, refined sugar, and cereal grains. Sadly, these products provide 70% or more of the dietary intake for modern humans.

**We should be consuming:**
Lean meat, fish, vegetables, tubers, and fruit.


Lindeberg S. 2009. Modern human physiology with respect to evolutionary adaptations that relate to diet in the past. In: Richards MP, Hublin JJ, editors. The


