



DIETARY SCAPEGOATING - GET TO KNOW YOUR FATS

What We Have Been Told

For several decades, researchers and politicians alike have constructed a case against saturated fat. Most notably, Dr. Ancel Keys observed in a 1970 study that heart disease was more common in societies that consumed higher amounts of animal fats. Keys compared the general diet & health patterns of several societies, specifically those that consumed significant amounts of meat and dairy with those that ate a plant based diet including nuts, fish, and seeds. This study concluded that not only was there a correlation between the incidence of coronary heart disease and total cholesterol; this incidence was also linked to the proportion of energy provided by saturated fat.² Subsequently, we have taken this observational study well beyond its mere findings to presume that saturated fats cause heart disease. However, this could not be further from the truth.

Keys went on further to say that societies who consumed a liberal amount of fat were some of the healthiest in his studies. A distinct example is the Mediterranean region, whose inhabitants tend to consume a relatively high fat diet including a considerable amount of cheese.⁴ While this is a less publicized finding of Keys, it is noteworthy. A common misconception is that because fat contains a higher calorie content per gram in comparison to carbohydrates and protein, we must avoid fat at all costs. Furthermore, increased fat in the bloodstream is caused by increased saturated fat in the diet. However, recent scientific evidence has proven that refined sugars and carbohydrates are more likely the culprit of increased blood lipid levels.⁹

Not All Fats Are Created Equal

Along with this highly publicized research against fat has come a considerable nationwide effort to limit dietary fat intake across the board.³ However, we must remember that not all fats are created equal. For instance, there are over 24 different kinds of saturated fats alone, each with a different structure and role in the body. Our diet typically contains four major classes of saturated fat:⁷

- Palmitic acid (1) is found in palm oil, butter, and eggs and myristic acid (2) is found in cheese, milk, butter, and beef. These saturated fats increase the size, not the number, of LDL cholesterol particles. On the other hand, these saturated fats increase HDL cholesterol. Therefore the net effect may be neutral.
- Stearic acid (3) is found in chocolate and beef. The dietary guidelines classify stearic acid as a non-cholesterol raising saturated fat.
- Lauric acid (4) is found in coconut oil and there has been some indication by researchers that it may not have a net effect on cholesterol.

In addition, trans fats and cholesterol have received equally harsh publicity along with an effort to eradicate them from the food stream. However, conjugated linoleic acid (CLA), a trans fat naturally found in grass-fed dairy products, has been found to have heart protective effects, anti-cancer effects, and shows promising findings in preliminary studies of weight management.

We must also remember that saturated fats and cholesterol are physiologically essential, in the proper amount. Saturated fats are responsible for cell membrane integrity and stiffness. They also play a critical role in skeletal health, as saturated fat is required for the incorporation of calcium into bone.¹² Also, saturated fats are needed for omega-3 fatty acid retention and provide antimicrobial properties.⁶ Cholesterol also provides structural integrity to cells, is a precursor to many hormones and vitamins, such as vitamin D, and plays an important role in gut health.⁴ Another benefit of consuming fat is that it aids in satiety, meaning that it helps us feel fuller longer. Therefore, it is irresponsible to recommend a reduction in total fat and saturated fat across the board.

Dietary Perspective -Changes in Diet

The American Heart Association has recommended a Low Fat diet for children. Breast milk has been touted as the ultimate food for development, containing some 50% of calories from fat, most of which is saturated fat.¹ Much research has been done to emulate human breast milk in a formula, which is an impossible feat. This conflicting action has confused consumers and directly affected their health. Masai and Kindred tribes of Africa subsist largely on milk, blood, and beef. They are virtually free of heart disease and have excellent cholesterol levels.⁸ Similarly, Mediterranean societies consume highly saturated fat diets from lamb, sausage, and cheese contributing to more than 70% of their caloric intake resulting in very low rates of heart disease.¹³ **Most notably, the Swiss have one of the longest life expectancies on one of the highest fat diets in the world.**¹⁰

Modern Fat Transition

After Keys' findings became highly publicized, shifts in dietary fat consumption occurred. The fat-free craze of the 80's led food manufacturers to respond by replacing fat with extra sugar and carbohydrates to make food palatable. As a consequence, the number of calories is the same or higher, and refined carbohydrates dominate many processed foods. This causes us to eat more, feel less full, and possibly consume more calories overall.

In an effort to further reduce saturated fat, manufacturers started using more unsaturated fats in their formulations-mainly by substituting vegetable fats. Vegetable fat is often subjected to harsh processing techniques using toxic chemicals, which can decrease the quality of the fat and increase the presence of free radicals. Moreover, most of these fats become hydrogenated through industrial processes. These hydrogenated oils do more harm than good, blocking absorption of essential fatty acids, causing increased blood cholesterol, a decrease in immune response, and atherosclerosis among other problems.⁴ There has been a 400% increase in dietary vegetable oil consumption over the past 100 years.⁵ We have replaced butter with margarine, even though moderate consumption of butter halves the risk of developing heart disease (Medical Research Council. 1991). Similarly, consumption of processed foods and sugar has increased some 60%.⁵ In the past 30 years, the proportion of energy from fat in the US has been reduced from 40% to 30%, and per capita butter consumption has dropped from 17.9 lbs. to 5.5 lbs. (1909-2012).¹¹ However, today 40% of all US deaths result from heart disease.⁵

In conclusion, the decrease in dietary saturated fat in the US has not caused a decrease in deaths from heart disease. We have wrongly pegged saturated fat as the cause of obesity and heart disease using only association and assumption based claims. However, scientific evidence has failed to prove these theories and new evidence is showing that other dietary components are likely more to blame. Saturated fat is purely a scapegoat.

Rules to Live By

1. Eat Whole Foods.
2. Steer Clear of Processed Foods.
3. Eat a Balanced Diet of Fat, Protein, and Carbohydrates.
4. Limit Carbohydrates to Fruits, Vegetables, and Whole Grains.
5. Eat Full Fat Dairy Products.

References

1. Alfin-Slater, R B, and L Atergood. Lipids, Modern Nutrition In Health and Disease. 1980.
2. Keys, A. Coronary heart disease In seven countries. Circulation. 1970.
3. Dietary Guidelines for Americans, 2010. Health.gov. U.S. Department of Health and Human Services. 2011.
4. Enlg, M,G., and Sally Fallon. The Skinny on Fats -Weston A Price Foundation. The Skinny on Fats -Weston A Price Foundation. 2000.
5. Enlg, M,G,. Trans Fatty Acids In the Food Supply: A Comprehensive Report Covering 60. Years of Research, 2nd Edition. 1995.
6. Garg, M,L, et al, FASEB Journal, 1988, 2:4:A852; Ollart Ros, RM, et al, Meeting Abstracts, AOCS Proceedings. 1998.
7. German, Bruce J., and Cora J. Dliard. The American Journal of Clinical Nutrition. Saturated Fats: What Dietary Intake? American Society for Clinical Nutrition. 2004.
8. Kang-Jey Ho, et al, Archeological Pathology, 1971, 91:387; Mann, G V, et al, Am J Epldemlol, 1972. 95:26-37
9. Malhotra, A,. Observations: Saturated Fat Is Not the Major Issue. Home. 2013.
10. Moore, T,J,. Lifespan: What Really Affects Human Longevity. 1990.
11. Per Capita U.S. Butter Consumption (Annual) Per Capita Butter Consumption (Product Weight). Dairy Markets Data & Graphs. University of Wisconsin at Madison. 2012.
12. Watkins, B A, et al, Importance of Vitamin E In Bone Formation and In Chondrocyte Function. Purdue University, Lafayette, IN, AOCS Proceedings, 1996; Watkins, BA, and M F Seifert, Food Lipids and Bone Health, Food Lipids and Health, R E McDonald and D B Min, eds, p 101, Marcel Dekker, Inc, New York, NY, 1996.
13. Wliiett, W,C, et al, American Journal Clinical Nutrition. 1995. 61(65):14025 -14065.