

## *Editorial*

# Is Oil Healthy?

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In 1898, William Osler gave a presentation about angina pectoris. His statement on the rarity of this disorder in 1898 is poignant considering the frequency with which cardiovascular illness is encountered today [1]. Scholars debate what has caused a disease that was once considered a rarity to become so commonplace.

It is difficult to embrace the gene theory because it is most unlikely that there has been any substantive alteration of the gene pool between the 19th, 20th, and 21st centuries. Physical activity is often touted as a major factor, yet gymnasiums and organized exercise classes were not abundant in the 19th century. Similarly, it is challenging to contemplate that stress levels were significantly different in each century.

That leaves us to reflect on the most significant aspect of lifestyle, which is nutrition. While food such as meat, fish, poultry, potatoes, vegetables, and fruit have remained commonplace, the consumption of sugar-laden products, such as sugary drinks and ice cream, processed food, and cheese has increased.

After the end of World War I and into the early 1920s, the identification of cardiovascular disease accelerated and coincided with the increased availability of monounsaturated and polyunsaturated oils. In the 19th century, it was unusual to eat processed food that was preserved in a box, a bag, or a can. A common preservative used in this packaging method was processed oil.

At the same time, these oils were increasingly used for cooking at home. As the restaurant industry flourished, offering more availability and variety, the public developed a habit of eating out several times a week, exposing themselves to restaurant meals that were frequently prepared with oil. A cardiovascular disease epidemic onset seemed to coincide with the widespread exposure to oils. There is now science both in animal and human studies that indicate how oils promote vascular injury.

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Tsunoda employed a high-monounsaturated oil diet in a 4-month murine study, which resulted in obesity and diabetes [2].

Rudel, in a 4-month murine study, confirmed ingestion of monounsaturated or polyunsaturated fats created atherosclerosis with each diet, albeit more with the monounsaturated oils [3].

Rudel also conducted a 5-year African green monkey study on the ingestion of monounsaturated, saturated, and polyunsaturated fats. The monounsaturated and saturated fat groups developed equivalent amounts of coronary atherosclerosis; the polyunsaturated group developed less [4].

Blankenhorn utilized 18 human subjects to examine the influence of diet on the appearance of new lesions in human coronary arteries. Each quartile of increased total fat consumption—either monounsaturated, polyunsaturated, or linoleic acid—was significantly associated with the formation of new lesions [5].

Ong studied the effects of fat and carbohydrate consumption on endothelial function in 16 men, finding that the high-carbohydrate diet increased flow-mediated dilatation, which was decreased by the monounsaturated fat diet [6].

Vogel examined the postprandial effect of components of the Mediterranean diet on endothelial function, observing that meals prepared with olive oil reduced flow-mediated dilatation by 31% while meals prepared with canola oil reduced it by 11% [7].

Christian Rueda-Clausen found that consumption of olive, soybean, and palm oils had a similar acute detrimental effect on endothelial function in 10 healthy young subjects. All oils resulted in an endothelial impairment of 31% and an increase in triglycerides [8].

The Lyon Diet Heart Study examined the effects of a Mediterranean diet high in oil in men with heart disease. In the 4-year follow-up, 25% had sustained a major cardiac event (heart attack, stroke, or death) [9].

**Table 1. Summary of oil studies and results**

Investigator	Subject	Oil	Result
Tsunoda	Murine	Monounsaturated	Obesity and diabetes
Rudel	Murine	Monounsaturated or polyunsaturated	Atherosclerosis with both diets
Rudel	Monkey	Monounsaturated, saturated, or polyunsaturated	Atherosclerosis with both diets
Blankenhorn	Human	Monounsaturated, polyunsaturated, or linoleic acid	Atherosclerotic lesions progressed in all groups
Ong	Human	Monounsaturated	Decreased flow-mediated dilatation
Vogel	Human	Olive oil	Decreased flow-mediated dilatation
Rueda-Clausen	Human	Olive, soybean, palm oil	All oils created 31% endothelial impairment and increased triglycerides
DeLorgeril	Human	Mediterranean diet with oil	25% major cardiac events at 4 years

By way of contrast, with my colleagues in a study of persons with significant cardio vascular disease, we reported arrest and reversal of vascular disease. 198 participants with significant coronary artery disease were requested to follow whole food plant-based nutrition without oil. At nearly 4 years of follow up 99.4% of the 89% adherent participants had no major cardiac events (heart attack, stroke, or death) [10].

In summary converging lines of evidence indicate consumption of processed oils whether monounsaturated, polyunsaturated, or saturated contribute to endothelial dys-



function and atherosclerosis.<sup>5</sup> To my knowledge there is no study with oils that has successfully reversed coronary artery disease. Studies that purport the benefits of oil indicate merely a slowing of disease progression but not halting or reversing disease. As an example, the Predimed study, which was industry supported, claimed the prevention of cardiovascular disease with the Mediterranean diet. At study onset, no selected participants had a diagnosis of cardiovascular disease. At five years of follow-up, all three diet groups had sustained scores of major cardiac events of heart attack, stroke, or death. Specifically, these events occurred in 96 participants in the olive oil group, 83 in the nut group, and 109 in the low-fat group. A more accurate title of the study would be “The Creation of Cardiovascular Disease with the Mediterranean Diet.”

Avoiding these oils enables disease arrest and reversal. Our earlier study indicated these benefits, when coupled with whole-food plant-based nutrition without oils, can be sustained beyond 12 years [11].

## References

1. Osler W. The Lumleian lectures on angina pectoris. *Lancet* 1910;1:697–702, 839–844.
2. Tsunoda N, Ikemoto S, Takahash M, et al. High monounsaturated fat diet-induced obesity and diabetes in 57Bl/6J mice. *Metabolism* 1998 Jun;47(6):724–730.
3. Rudel L, Kelley K, Sawyer J, Shah R, Wilson MD. Dietary monounsaturated fatty acids promote aortic atherosclerosis in LDL receptor-null, human ApoB100-overexpressing transgenic mice. *Arterioscler Thromb Vasc Biol.* 1998;18:1818–1827.
4. Rudel L, Parks J, Sawyer J. Compared with dietary monounsaturated and saturated fat, polyunsaturated fat protects African green monkeys from coronary artery atherosclerosis. *Arterioscler Thromb Vasc Biol.* 1995;15:2101–2110.
5. Blankenhorn D, Johnson R, Mack W, el Zein HA, Vailas LI. The influence of diet on the appearance of new lesions in human coronary arteries. *JAMA* 1990;263(12):1646–1652.
6. Ong P, Dean S, Hayward C, Della Monica PL, Sanders TA, Collins P. Effect of fat and carbohydrate consumption on endothelial function. *Lancet* 1999;354(9196):2134.
7. Vogel R, Coretti M, Plotnicks G. The postprandial effect of components of the Mediterranean diet on endothelial function. *J Am Coll Cardiol.* 2000;36:1455.
8. Rueda-Clausen C, Silva F, Lindarte M, et al. Olive, soybean and palm oils have a similar acute detrimental effect over the endothelial function in healthy young subjects. *Nutr Metab Cardiovasc Dis.* 2007;17:50–57.
9. de Lorgeril M, Salen P, Martin J-L, Monjaud I, Delaye J, Mamelle N. Mediterranean diet, traditional risk factors, and the rate of cardiovascular complications after myocardial infarction: final report of the Lyon Heart Study. *Circulation* 1999;99:779–785.
10. Esselstyn CB Jr, Gendy G, Doyle J, Golubic M, Roizen MF. A way to reverse CAD? *J Fam Pract.* 2014;63:356–364.
11. Esselstyn CB Jr. Updating a 12-year experience with arrest and reversal therapy for coronary heart disease (an overdue requiem for palliative cardiology). *Am J Cardiol.* 1994;84:339–341.

