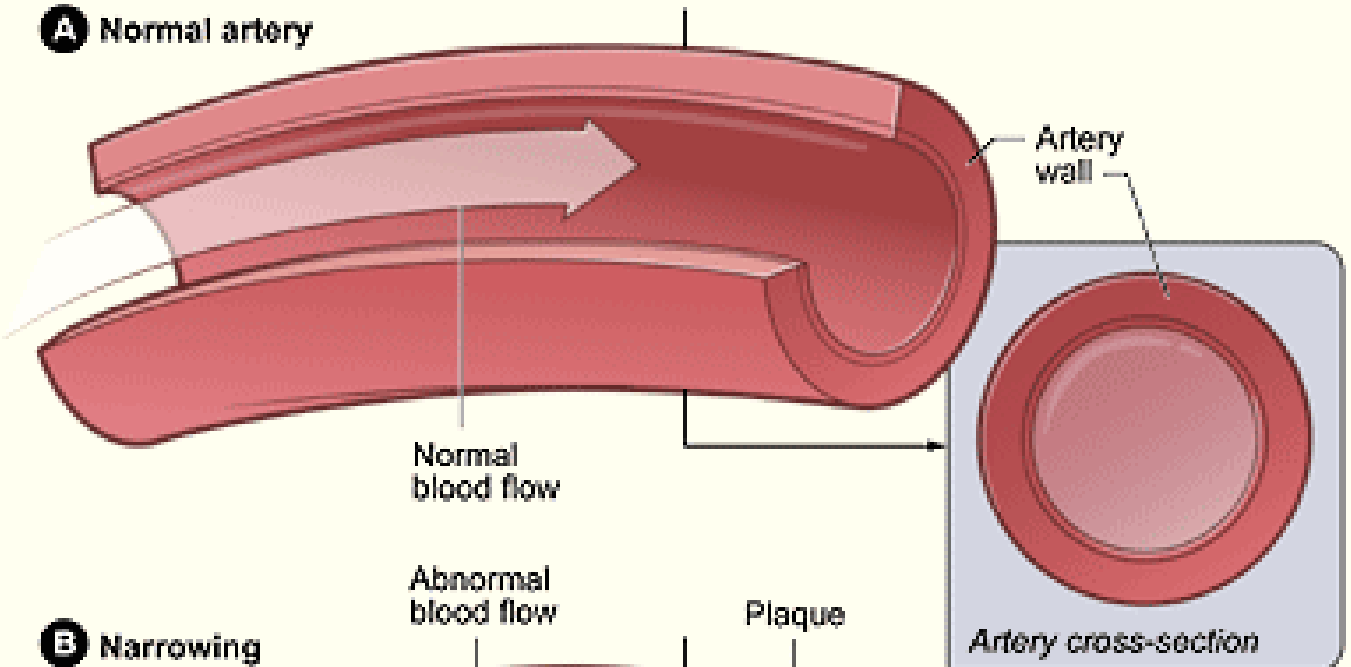
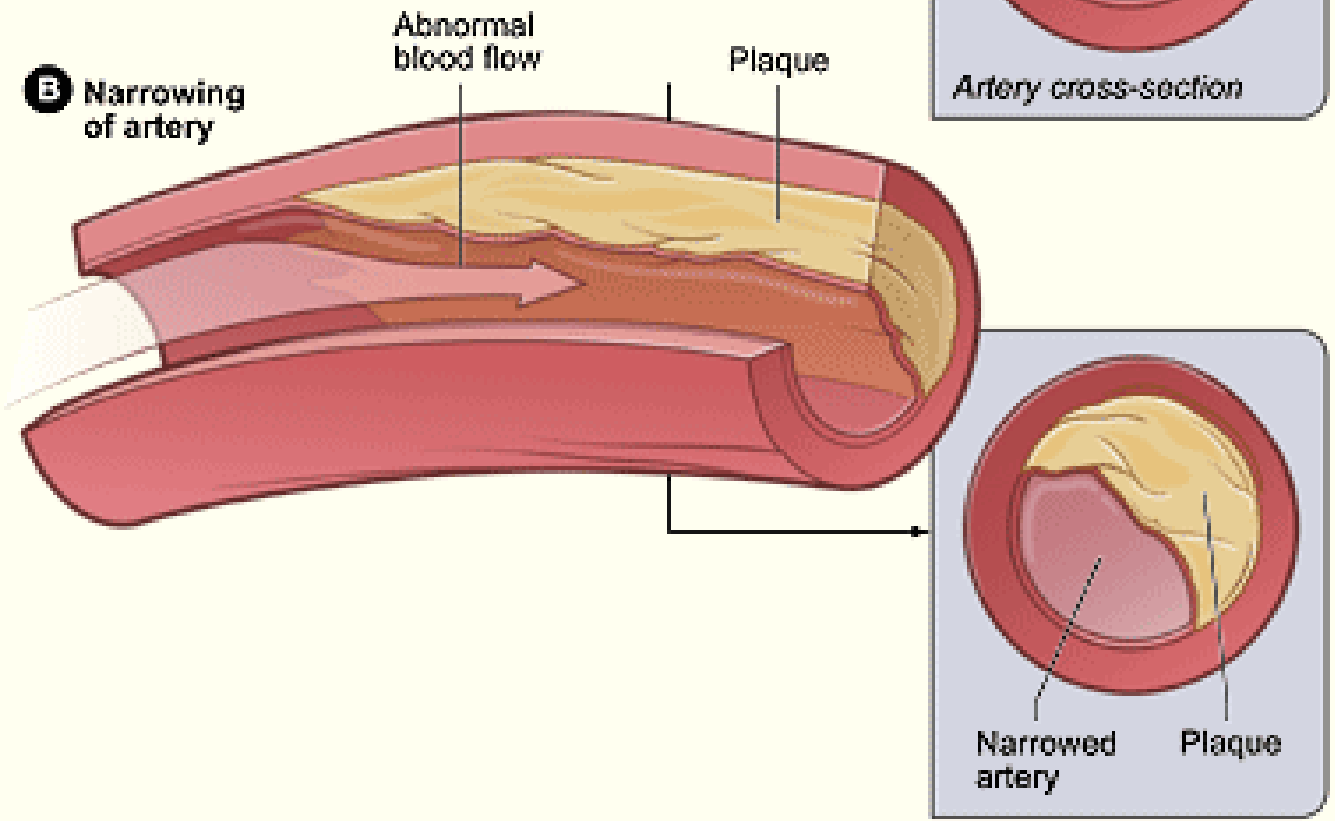


**A** Normal artery



**B** Narrowing of artery



# The 100-plus Year History of Vegetable Oils: How They Went Under the Heart Health Radar

*Christopher Cirino*

By Maureen Jones, RN. Preface by Christopher M. Cirino, DO MPH

There is a lot of truth to the adage "you are what you eat." Our bodies take nutrients from the environment and create the building blocks that construct and maintain them. The substances that are taken in by the body and metabolized are of three types: fat, sugar and protein. The diversity in which these substances are encountered, fiber-rich natural foods versus fiber-poor processed foods, probably makes the most important contribution to how healthy a food is. Although it would seem unfathomable for a governmental entity to prohibit or restrict one food in the diet, that was the result after the FDA recommended a diet low in saturated fats in the early 1970's. It gave industries the green light to produce foods that were "fat-free" in the eighties and increased the popularity of breakfast cereals and other highly processed foods.

Much of the momentum to modifying diets stemmed from earlier discoveries of heart disease, cohort studies and autopsy studies. Scientists found cholesterol plaques embedded in the coronary arteries in patients who had died from heart attacks. The thought process was that cholesterol and fats in diet could fuel the process of atherosclerosis, which ultimately leads to blocked vessels that supply the heart itself. In reality, the body synthesizes approximately 80% of the cholesterol that fulfills important functions in the body, such as producing sex hormones, being used in tissues and nerves sheaths, and assisting in bile production in the liver.

What followed were recommendations to diet that truly altered the landscape of available foods and threatened the health of the country. Along with the burgeoning obesity epidemic, which we still face, came increased rates of heart disease, high blood pressure, and diabetes. Our healthcare system became a "sick care" system, as pharmaceutical companies pocketed the profits from medications that only adjusted the pathway of dysfunction without approaching the source of the disease. Studies have clearly "pardoned" saturated fats as being guilty of heart disease; many of them showed an increased trend toward less heart disease.

Scientists have now come closer to understanding the source of heart disease, and cholesterol and saturated fats were more like innocent bystanders: inflammation causes atherosclerosis - the "foamy macrophages" that have been described are triggered by chemical signals like toll-like receptors and other cytokines which cause inflammation. And what causes inflammation? As complex systems, we interact with our environment through Ingestion (food), Inspiration (air), Injection (trauma / drug abuse), and Impression (stress states). It is from these interactions that toxins in air, such as pollution and cigarette smoke, and food, like processed foods and trans fats, trigger an inflammatory cascade in our vascular system.

What follows is a post from Maureen Jones, a registered nurse and certified keto coach. She describes the fascinating history of vegetable cooking oils, originally derived from cottonseed oil which were regarded as toxic waste at the time, contributing at least partly to the increased risk of atherosclerosis.

## The 100-plus Year History of Vegetable Oils: How They Went Under the Health Radar

Written by Maureen Jones, RN

What if there were an easy way for you to start to improve your health today and reduce your risk of developing a chronic disease?

There is good news! As a registered nurse and nutrition coach, I would like to share with you an overview of cooking oil. I'm not selling pills, potions, or snake oils. And although this dietary intervention *is* related to oil, I assure you there's no magic involved!

What comes to mind when you hear the words "cooking oil"? For some people it may be corn or canola; for others margarine, butter, or even Crisco. But how is a person to tell them all apart, and cut through all the layers of grease? Let's crack open the history book and take a look back in time.

The use of cooking oil derived from animal fat probably goes back 250,000 years, a time when archaeologists believe early humans started cooking with fire! Even more recently, during the colonial period in America, the majority of American homes used the animal-derived products butter or lard for their cooking. Lard especially added a distinct flavor and flakiness to baked goods. (Can't you just smell the biscuits now?)

In the 1850's rising entrepreneurs (with the help of technological advances at the time), began to profit from the commercial extraction of cottonseed oil. Initially the oil was used to make soaps and candles, or it was illicitly added to olive oil, animal fats, and lards. It wasn't long after that companies like Procter & Gamble learned to hydrogenate it, a process which turned the liquid oil into a solid, creating the first "[trans fat](#)", resembling lard.

[Crisco](#), for "[crystalized cotton oil](#)," was eventually marketed to the masses in 1911, targeting the open-minded, modern housewife. A few of the earlier ads claimed that Crisco "makes all your pies, cakes fried foods light and digestible" and "Crisco makes foods as wholesome as they are delicious." It was touted as the new, adaptable cooking oil. Placing a tub of Crisco in every American kitchen was Procter & Gamble's primary goal. Whether or not consuming these oils was actually healthy was not known at the time.

Since the Great Depression and into the mid 1900's, the federal government increasingly influenced the agricultural sector by subsidizing corn, wheat, and soybeans, in an attempt to stabilize farmer's income and food reserves. American farmers began growing soybeans to qualify for governmental support and to help revitalize their drought-laden soil (i.e. soybeans bring back [nitrogen](#) into the soil). By 1950, the soybean surplus and decreased cotton acreage led to soybean oil replacing

cottonseed oil as a cheaper alternative.

During the late 1940's, the [American Heart Association](#) (AHA) did not have the same influence as it wields today. Founded in 1924, it began as a fledgling, nonprofit organization of cardiologists who were intent on reducing cardiovascular disease and strokes. In 1948, the AHA accepted a \$1.5 million donation from Crisco's company Procter & Gamble. In the ensuing years, the AHA would make recommendations that shifted consumption from saturated fats to "heart healthy" vegetable oils. The AHA would maintain this position [until](#) recently, as accumulating evidence of harm from the consumption of trans-fat made it incontrovertible.

The physiologist and academician Ancel Keys attended to president Eisenhower after his first heart attack. He concluded that dietary consumption of fatty acids increased serum cholesterol. Landing himself on the cover of Time Magazine, Dr. Keys convinced America that consuming dietary fat was tantamount to heart disease. His epidemiological [Seven Countries Study](#) found direct associations between lifestyle and heart disease and gained him worldwide acclaim. The main takeaway was that saturated fat correlated with "bad" LDL cholesterol.

In 1961, the first official recommendation from the American Heart Association was to "reduce intake of total fat, saturated fat and cholesterol while increasing intake of polyunsaturated fat." The council helped shape the 1977 Dietary Guidelines for Americans. At one point trans-fat and hydrogenated oils were deemed "a great boon to Americans' arteries." Margarine and other plant-derived oils increased in use, while butter and eggs became a thing of the past.

It wasn't until the 1990's that emerging evidence clearly linked trans fats to cardiac risk. Wait, what?! Were the American people being misled all this time, eating foods that actually contributed to heart attacks? It appears so. By 2013, the FDA **removed** hydrogenated oils from their list of human foods *Generally Recognized as Safe* ([GRAS](#)). It was a huge step in the right direction! And guess what? Contrary to earlier conclusions, it turns out that saturated fats have a positive effect on HDL, the good cholesterol! In addition, the coinciding increase in both LDL and HDL does not have a direct connection to [heart disease](#).

Prominent studies today show that industrial seed oils, used in almost all packaged foods, can throw off the delicate omega 3 to 6 ratio, negatively affecting metabolic health. Even when not hydrogenated, these delicate omega 6 oils are highly susceptible to oxidation via light and heat. In order to produce canola oil, it must undergo heavy bleaching, heating, and deodorizing, which create toxic byproducts like formaldehyde.

Damaged, oxidized oils can actually "inflate" our adipocytes (fat cells), causing a direct correlation to weight gain. While it is widely accepted that sugars and simple carbohydrates "fan the flame" of metabolic dysfunction and obesity, it is now believed that these adulterated oils likely ignite the fire in the first place!

These past 75 years our nation has seen epidemic proportions of diabetes and heart disease. In addition, the obesity crisis is growing. The prevalence of obese adults is now 42.4%, and climbing. New York Times best selling author and nutrition journalist Nina Teicholz is convinced that the single biggest contributing factor to our nation's declining health is the dramatic increase in vegetable oil consumption. So how do we change the trajectory, and make positive food choices?

Just keep in mind- fats from natural sources (like eggs, olives, coconuts, avocados) are far healthier than fats from processed, industrial oils (such as Cottonseed, Canola, Corn, Soy, Sunflower, and Safflower). Eating an abundance of processed oils can be a slippery slope! Choosing healthy fats over processed oils is a powerful strategy to protect us and our loved ones from sickness. While nobody's perfect, simply trying our best to make healthy, whole food choices will strengthen our immune system and reap health benefits for a lifetime.

Maureen Jones lives in Wilsonville, Oregon with her husband Tom. They enjoy boating & surfing on the beautiful Willamette River. She is a Registered Nurse at 2 local free clinics and a certified keto coach. You can learn more at [ketos2you.com](http://ketos2you.com).

