Written by **Ed Hiserodt** on August 28, 2012

Food Fallacies

Americans make countless decisions about their diets every day. Many, concerned about weight gain and poor health, diligently inspect nutritional content labels. They are aware of an obesity epidemic in this country, attributed by some to our nation's wealth and ample access to food. But this epidemic also includes an alarming increase in diabetes, and an even more alarming knowledge that fatal heart disease fells one in four Americans.

Heart disease is considered to be strongly related to diet. It is a rational decision based on evidence at hand for us to eat foods that are advertised as "heart friendly" and to be amenable to taking prescription drugs that we believe will lower our risk factors for fatal or debilitating heart disease.

Until recently, your correspondent was among the vast majority of Americans who accepted this way of life. Opting for bacon, sausage, and eggs instead of cereal, skim milk, and artificial sweetener cloaked me with guilt. Trimming all fat from steaks was a must. Veggie burger eaters held a type of moral high ground. But exposure to the research underlying these ideas has caused me to question my acceptance of the *lipid hypothesis*.

The Lipid Hypothesis

The lipid hypothesis proposes a direct link between dietary fat consumption and heart disease. Specifically, it warns that saturated fats raise serum cholesterol levels, and high cholesterol levels cause the most common form of coronary heart disease — atherosclerosis — the formation of obstructive plaques on the inner lining of arteries.

This diet orthodoxy is reaffirmed each time we watch television commercials or walk down a grocery store aisle where products compete for top rank in heart health. For decades the U.S. Department of Agriculture (USDA) has indoctrinated Americans with the nutritional dogma that saturated fats and cholesterol are dangerous luxuries to be consumed sparingly. USDA's famous food guide pyramid, redesigned in 2005 as MyPyramid and more recently in 2011 as MyPlate, preaches the importance of fruits, vegetables, and whole grains in the diet, while lean meats, beans, and dairy are also given approving nods. MyPyramid allows fats only a cautious sliver while they are entirely absent from MyPlate.

Currently, the American Heart Association (AHA) and the American Medical Association affirm and promote these dietary guidelines. So do many physicians who prescribe cholesterol-lowering statin drugs in such quantities as to make Pfizer's Lipitor the "best selling drug" in history. But it was not always so. Tim Boyd of the Weston A. Price Foundation points out:

> Most people probably don't remember that back in 1962 the American Medical Association declared that the anti-fat, anti-cholesterol fad was not only foolish and futile but also carried some risk. In 1965 the American Heart Association accepted as fact that high vegetable oil intake led to high risk of heart disease. Yet by 1984 the experts were recommending margarine instead of

butter.

The New American is not a medical journal, nor does your correspondent allege any expertise in the healthcare field. What is being offered here is historical and statistical information that calls into question the lipid hypothesis, along with the opinions of medical researchers and, particularly, heart surgeons who regularly see the insides of arteries as part of their daily work.

Questions of interest to those who are following dietary regimens demanded by the lipid hypothesis should be:

• Where did the lipid hypothesis originate?

• Who was responsible for it and why has it gained wide acceptance in the United States?

• Does evidence show a link between a diet low in saturated fats and a lowered risk of premature death from heart disease?

We'll answer these three questions by examining points that have shaped healthcare in this country over the past century. First is the dramatic change in the American diet from 1900 to the present. Next is the change in causes of mortality over this period, considering the availability of modern medicines and the earlier lack of sanitation. Finally we will look at the ongoing contentious debate about changes in mortality causes.

The American Diet

The diet of an average American in 1900 was far different than that of today. A menu at New York's famed Waldorf-Astoria Hotel in 1899 contained the following main courses: Oysters, Béchamel style (served with a roux made from butter and flour), Bouchees Columbia (a pastry with a cream filling), Cold Ham of New England, Cold Roast Beef a la gélee ("larded with pork fat"), and Tongue, Chicago style. That's the crop. No tofu on wheat toast.

A visitor to the United States in the early 1900s remarked that the country "floated in butter." Cookbooks of the time featured recipes using lard, suet, tallow, and copious amounts of butter, resulting in diets consisting of 35-40 percent of calories from fats, almost all of which were saturated animal fats. A common breakfast of the time was "scrapple" — pork scraps and trimmings with cornmeal congealed into a loaf and fried in butter or lard — making us wonder how such breakfasters could construct the most prosperous nation in history without succumbing to massive heart attacks.

Flipping through the pages of the 1896 Boston Cooking School cookbook reveals that olive oil was the most common base of dressings, while the main ingredient of most sauces and condiments was heavy cream and/or butter. Vegetables and salads swam in this mixture considered just short of capital murder by today's dietary dictocrats. "Light" and low-fat versions were neither available nor, presumably, sought after.

Modern diets are vastly different. The "U.S. Food Supply" graph above compares fat in average diets in 1909 and 1985. Today the AHA recommends limiting saturated fat intake even further, to less than seven percent of total daily calories — a fifth or less of what our forebears enjoyed.

Saturated Fats: These are fats that are usually solid at room temperature. Animal fats are found in

meat, eggs, butter, cheese, lard (pork fat), and tallow (beef and lamb fat). Whole milk, including mothers' milk, is also high in saturated fats. Coconut and palm oils contain saturated fats, with coconut oil having the highest concentration of any food — about 92 percent saturated. (This is why movie theater popcorn isn't popped in coconut oil anymore, and why it doesn't taste as good.)

Monounsaturated fats: Olive oil is both high in monounsaturated fats and low in polyunsaturated fats. Canola oil and peanut oil have relatively high monounsaturates and high polyunsaturates. Macadamia nuts, almonds, and cashews are in the predominantly monounsaturated category.

Polyunsaturated fats: Virtually all polyunsaturated fats are liquid at room temperature and even well below. They include soybean, safflower, sunflower, corn, cottonseed, peanut, and canola oils in the omega-6 category, while fish oils predominate in the omega-3 class.

Trans fats: Trans fats by their nature are solid at room temperature even though they are derived from liquid polyunsaturates. The process of hydrogenation converts, for example, corn oil into margarine, or cottonseed oil into "all vegetable" shortening. Trans fats are also found in bakery products, snack chips, imitation cheese, and other processed foods.

The lipid hypothesis claims only polyunsaturated fats are healthy, and demonizes saturated and trans fats as being very dangerous. Monounsaturated fats are OK. Since this hypothesis is today's accepted truth, U.S. diets have seen:

• Butter consumption decrease by 72 percent;

• Lard consumption decrease by 80 percent;

• Use of shortening (in 1909 a mixture of lard and coconut oil) decrease by 64 percent in favor of today's partially hydrogenated vegetable oil;

•Trans fat margarine consumption increase by 550 percent, although manufacturers are finally moving away from trans fat processes;

• Oils — in 1900 mostly olive oil — give way to polyunsaturated vegetable oils by 1,600 percent!

Mortality

Our ancestors not only ate differently; they also died differently. In the days before antibiotics and other life-saving drugs, even a minor infection could prove fatal. Electrification of the country had begun, but most areas still had only marginally sanitary water supplies and poor sewage treatment. Cities contained a miasma of horse dung-laden dust contributing to lung disease. A look at U.S. mortality statistics from the Centers for Disease Control (CDC) comparing 1900 and 1998 reveals the effects of electricity, antibiotics, and advances in medical care (see chart above).

In 1900, acute illnesses and communicable diseases made up the majority of the top 10 leading causes of death. Once medical science reduced these, the top spots were left open for chronic diseases. It is true that "diseases of the heart" jumped from number four to number one as early as 1910 and have held the lead since 1921. Yet the rate of deaths from heart disease in 1910 was 158.9 per 100,000 persons per year; by 1998 it had risen to 268.2. Despite the dramatic decrease in consumption of saturated fats during the 20th century, the rate of heart disease had skyrocketed. The lipid hypothesis

suggests this rate should have decreased, based on changes in U.S. dietary fat intake.

Additionally, there are many kinds of heart disease, including hypertension, aortic aneurysm, cardiomyopathy, and congenital, inflammatory, and rheumatic disorders. One cardiovascular disease now claims more victims than any other. The National Institutes of Health names coronary heart disease (CHD), also called coronary artery disease, the most common form today. CHD is the narrowing or blockage of coronary arteries and is the main reason people have heart attacks. The technical term for "heart attack" is myocardial infarction (MI), which occurs when the coronary arteries are completely blocked, thus starving and killing the heart muscle.

One hundred years ago MIs were virtually unknown. In *The Oiling of America*, researcher Dr. Mary Enig notes: "MI was almost nonexistent in 1910 and caused no more than three thousand deaths per year in 1930. By 1960 there were at least 500,000 MI deaths per year in the US."

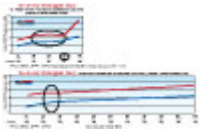
In 1956, American Heart Association founder Dr. Paul Dudley White, cardiologist to the presidents in the 1950s, expressed his frustration over the then-novel lipid hypothesis. "See here, I began my practice as a cardiologist in 1921 and I never saw an MI patient until 1928," White declared. "Back in the MI free days before 1920 the fats were butter and lard, and I think we would all benefit from the diet we had at that time when no one had heard the word[s] corn oil."

Campaign of Deception

The lipid hypothesis was born only three years before Dr. White made these comments. While known as the father of WWII K-rations, Dr. Ancel Keys is also considered by many to be the father of the lipid hypothesis because of his 1953 "Six Countries Study," where he compared percent of dietary fat calories to coronary heart disease deaths per thousand. His graph of Japan, Italy, England, Australia, Canada, and the United States indicated a causal relationship between consumed fats and CHD deaths. Why "Six Countries" rather than the 22 for which he had the data? Because he was doing what any scientific charlatan would do. He cherry-picked those data to match his foregone conclusion and simply ignored the rest. He later published a "Seven Countries Study," also whittled down from 22, and reached the same conclusion.

Despite his chicanery, Keys made the cover of the January 13, 1961 issue of *Time* magazine, much to the disgust of critics who challenged his conclusions. One of these was Swedish researcher Uffe Ravnskov, who "could not recall any study showing that high cholesterol was dangerous to the heart or the blood vessels, or that any type of dietary fat was more beneficial or harmful than another one. I became curious and started to read more systematically." His studies led to a book, *The Cholesterol Myths*, published in Sweden in 1991. By this time the lipid hypothesis had taken root in Scandinavia, and in a show of intelligent debate over a matter of great significance, Finland's Channel 2 television station set his book on fire.

The Framingham Study



Visitors to the city of Framingham, Massachusetts, are greeted with a sign announcing it as "The Town That Changed America's Heart." Its claim to fame is the Framingham Heart Study, an ongoing review investigating heart disease risk factors, in particular cholesterol levels versus CHD "events" per 1,000 population. In 1948, the original cohort was 5,209 men and women between the ages of 30 and 62 who

had no overt symptoms of cardiovascular disease nor had suffered either a heart attack or stroke.

Framingham is probably the most well-known of this type of study and is usually presented as *the* authoritative investigation. One of the researchers, Dr. Jeremiah Stamler, stated there was a "240 percent increase in risk" for those with blood cholesterol levels of 244 mg/dl as compared to those with a level of 182 mg/dl. His colleague Dr. William Kannel opined, "Total plasma cholesterol is a powerful predictor of death related to coronary heart disease."

The graph that appeared in the *American Heart Journal* seemed to indicate a deadly rise in CHD "events" at the 265 mg/dl cholesterol level (click on the "Framingham Study" image above).

But the graph — the first of two in the above image — is extremely misleading. Notice the "intervals" given below the x-axis: 121, 30, 30, 30, and 830. We are accustomed to seeing regular intervals on both x- and y-axes, while this graph has wildly irregular x-axis intervals.

Dr. Enig noticed this and used raw data to redraw the graph with constant x-axis intervals (see the second graph shown in the image above). The difference between the two points of Dr. Stamler's concern turns out to be 0.13 percent. But what does this mean in terms of risk from the higher levels? Where does the 240 percent come from?

The risk of "events" for a man with a serum cholesterol level of 182 mg/dl is 2.0 percent per year based on a nominal 20 "events" per year per 1,000 men. At the 244 mg/dl level the risk has increased from 2.0000 percent to 2.0026 percent, a 0.13 percent increase as shown by the study. Over a 60-year adult lifespan the increased risk rises from 2.0000 percent to 2.1560 percent — or essentially no increase at all. If anything, the Framingham Study suggests only a *minor* causal relationship between cholesterol and heart "events" and *nothing* about the relationship between cholesterol and deaths from MIs.

The far-less publicized 1987 follow-up to the original Framingham study is quite revealing. "Cholesterol and Mortality: 30 Years of Follow-up From the Framingham Study" in the *Journal of the American Medical Association* (JAMA) gave us these findings: "Over age 50 there is no increased overall mortality with either high or low serum cholesterol levels."

"In people with a falling cholesterol level (over the first 14 years of the study) for each 1 percent mg/dl drop of cholesterol there was an 11 percent *increase* in coronary and total mortality."

These findings were virtually ignored in the rush to confirm the lipid hypothesis, yet they are much more significant than the claims of Drs. Kennel and Stamler, which were swooned over. The first finding highlights the difference between "events" that are not fatal and overall mortality in relation to cholesterol levels. The second shows low cholesterol levels to be more hazardous than high levels. In other words, when it comes to "deaths" vs. "events," a regimen that lowers cholesterol is a shortcut to the graveyard. This follow-up study flies in the face of the lipid hypothesis.

Dr. William Castelli, director of the Framingham Study, was quoted in the *Archives of Internal Medicine* (July 1992, 12(7):1371-1372): "In Framingham, Massachusetts, the more saturated fats one ate, the more cholesterol one ate, the more calories one ate, the lower people's serum cholesterol.… We found that the people who ate the most cholesterol, the most saturated fats, ate the most calories weighed the least and were the most physically active."

The Anti-Coronary Club and the Prudent Diet

By 1956, the American Heart Association (AHA) had enough muscle for a fundraiser televised

simultaneously on the three networks broadcasting at that time. The purpose was to promote the lipid hypothesis in general, and what was termed the "Prudent Diet" in particular. This diet was to substitute corn oil and margarine for butter, cold breakfast cereals instead of eggs, and chicken and fish in lieu of beef. It was on this program that AHA founder Dr. White publicly refuted the lipid hypothesis with his terse comment that he longed for the diets from before 1920 when common fats were butter and lard — a diet from which he believed we would all benefit.

The next year, the "Prudent Diet" was put to the test. Dr. Norman Jolliffe, director of the Nutrition Bureau of the New York Health Department, initiated the Anti-Coronary Club, in which a group of businessmen, ranging in age from 40 to 59 years, were placed on the Prudent Diet. A control group of the same ages ate eggs for breakfast and meat three times a day. The "lucky" cohort suffered through with cold cereal and less appetizing fare. At the end of the study, dieters had serum cholesterol of 220 mg/dl compared to the happy eaters whose levels averaged 250 mg/dl — a great victory for reduced animal fat consumption. Well, sort of.

At the end of the report, published in the 1968 *Bulletin of the New York Academy of Medicine*, in small type befitting a footnote, was the following: "Eight deaths from heart disease among Prudent Dieter group. None among controls eating eggs every day and meat at every meal."

The National Heart and Blood Institute proposed a massive follow-up study involving one million men, but its pilot program involving 2,000 individuals found no decrease in the number of Prudent Dieter deaths, and the program was abandoned in 1968.

An Answer to Ancel

An even more revealing study appeared in the *European Cardiovascular Disease Statistics*, 2005 edition. The graph above summarizes its findings, which include data from some of those 15 or 16 countries Ancel Keys ignored in his discovery of the lipid hypothesis.

On the left side of the vertical line are saturated fat calories as a percentage of caloric intake. On the right side are heart disease deaths per 100,000 persons per year. The lipid hypothesis assumes long bars on the left should be associated with long bars on the right. Reality is just the opposite. For example, France consumes the highest percentage of saturated fats, but enjoys the lowest rate of heart disease deaths of the countries studied. Georgians have the lowest saturated fat intake and are rewarded as one of the leading countries for early death.

Who Benefits?

No one doubts the unprecedented increase in CHD/MI deaths since the early 20th century, but there is plenty of controversy as to the cause. Some scientists disagree with the lipid hypothesis and, based on evidence from studies such as those discussed above, postulate the blame lies in lowered traditional saturated fat intakes replaced by high carbohydrate diets along with chemically altered vegetable oils to which the human digestive system is not accustomed. Many lipid hypothesis adherents are swayed by the incessant propaganda on low-fat, high-carbohydrate diets, and most believe that the increased heart problems arise because we're not limiting fat intake to seven percent or lower. They are unaware of how CHD/MIs have increased during the period of low fat diets, and they apparently have had neither the time nor inclination to look at other analyses — those not financed by government or private interest beneficiaries — that raise serious questions about this type of nutrition.

Procter & Gamble never intended Crisco®, introduced in 1910, to contribute to high CHD/MI rates decades later (if indeed it does). The company marketed the partially hydrogenated cottonseed oil first as a product for soap and candle production. As that market faded, P&G logically found a new outlet for this product, promoting it as a "healthier" all-vegetable substitute for the popular version of shortening consisting of lard (pig fat) and coconut oil.

Kraft Foods, Wesson, Central Soya, and many other providers of trans fat shortening and liquid vegetable oils are on the bandwagon for the lipid hypothesis, and for good reason. In many cases such products are their primary source of sales. It is unlikely these multi-billion-dollar companies are going to change their business plans and drop profits by 95 percent to accommodate evidence contrary to the lipid hypothesis.

And what about the pharmaceutical industry? As mentioned earlier, Pfizer's Lipitor is the best-selling drug in history. Most users take it because they believe it will lower their risk of a heart attack. But the label says it "is a prescription drug used with diet to lower cholesterol" *and* "LIPITOR has not been shown to prevent heart disease or heart attacks." We have really taken the hook when a drug we buy to prevent a heart attack explicitly tells us there is no proof that it does any such thing.

Doctors, too, have a financial stake in aiding the status quo. Because of an ominous and onerous requirement of government medical programs and some insurance companies for what is called the lipid *profile*, doctors are being required to report the levels of blood lipids (cholesterol and triglycerides) of their patients to central data-collecting agencies. And if the patient has, say, high LDL cholesterol and the doctor hasn't "guided" the patient into taking a statin drug, then the doctor risks not being paid for his treatment. What comes next, jail time?

And From Here?

Our dietary lives are being slyly dictated by the U.S. Department of Agriculture and other government agencies, pharmaceutical companies, processed-food manufacturers, and lobbyists, such as the Institute of Shortening and Edible Oils. They are all pushing various versions of the Prudent Diet mentioned earlier. So we've tossed bacon and eggs and are eating cold cereal with fat-free milk and artificial sweeteners. How's that working out?

Our "heart friendly" diet is one totally alien to our genome and thousands of years of dietary history. We are encouraged to consume food substances or substitutes that were unknown to mankind until modern times. Yet we are baffled at what could possibly be causing a continuing epidemic of coronary heart disease and cancer?

Rebecca Terrell, a health professional in the Memphis area, contributed to this article.

Sidebar: Daring to Discuss Diet

I was inspired to write this article by a paper presented last year at the Doctors for Disaster Preparedness (DDP) Conference in Albuquerque entitled "Enjoy Eating Saturated Fats, They're Good For You!" The presenter was Donald W. Miller, Jr., M.D., a professor of Cardiothoracic Surgery at the University of Washington Medical School who, while both an academic and practicing surgeon, ordered a very low-fat, high-carbohydrate diet for his patients. His DDP presentation is available on YouTube. He concluded his discussion of this dietary regimen with three words: "I was wrong."

Dr. Miller had stumbled upon a two-part article in *Nexus Magazine* (Nov/Dec 1998 and Feb/Mar 1999) by Mary Enig, Ph.D. and her colleague Sally Fallon: These women fit together like two jigsaw puzzle

pieces — Dr. Enig with her uncompromising search for the truth, and Sally Fallon as a capable spokesperson. Fortunately Sally's presentation is also available on YouTube for those who would be interested in two riveting hours of information.

I am aware this article may engender a good bit of anger — toward me as I challenge accepted dietary orthodoxy that is so firmly ingrained in the minds of so many, or toward propagators of the lipid hypothesis, seen as manipulating the food and drug industries, or toward the USDA and other government agencies, who are promoting the lipid hypothesis with our tax dollars while completely ignoring evidence as noted in the European cardiovascular studies.

Government with its huge financial club is always poised to be an enemy of scientific truth. It is inevitable that on occasion politics and money will outweigh science. Dr. Enig discovered this firsthand: Among the first — if not *the first* — researchers to warn of the dangers of trans fats, she published an article calling for additional studies. A few weeks later she was called to a University of Maryland faculty meeting with four industry reps — Unilever, Central Soya, Kraft Foods, and the Shortening and Edible Oils lobbyist — who were angry about the publication "getting out." If research continued, funding would be threatened. It did, and it was. Not another penny. But Dr. Enig has been vindicated, with "consumer groups" and their pals in government — who once forced hydrogenated vegetable oils on the public in the place of animal fats and tropical oils — now running backward. In 2008, New York was the first U.S. city to ban trans fats from food prepared in restaurants.