

# "Ignore What Doesn't Fit. How the Cholesterol Myths are Kept Alive"

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## The Diet Argument

*Let me take you down, 'cause I'm going to Strawberry Fields*

*Nothing is real and nothing to get hung about*

*Strawberry Fields forever*

Lennon/McCarthy

Saturated fat is the type of fat that dominates in animal food such as eggs, cream, meat and cheese and it is also abundant in palm oil and coconut oil. Today, too much saturated fat is considered just as dangerous to our arteries as are the greasy food leftovers destined for the sewer of our kitchen sink, but where is the evidence? For several years sceptical scientists including myself have asked the experts on the Swedish National Food Administration after the scientific studies that allow them to warn against saturated fat. Their usual answer have been that "there are thousands of such studies", or they refer to the WHO guidelines,<sup>1</sup> said to have been written by the world's greatest experts.

The main argument in that document is that saturated fat raises cholesterol, but high cholesterol is not a disease. What we want to know is if we are shortening our life or running a greater risk of suffering with a heart attack or a stroke, by eating too much saturated fat. To claim that it raises cholesterol is not enough; this is what scientists call a surrogate outcome. The proposition that high cholesterol is a risk factor for having a heart attack is only a hypothesis, and as I shall tell you later in this book, all the evidence shows that the proposition is plainly wrong. In fact, it is advantageous to have high cholesterol. For instance, more than twenty studies have shown that elderly people, with high cholesterol, live longer than elderly people with low cholesterol. The reader may disbelieve me and I can understand that, especially after everything we have been told about dangerous cholesterol, but it is true.

Recently the Swedish Food Administration published a list of 72 studies that they claimed were in support of their warnings against saturated fat. Together with eleven colleagues I scrutinized the list and what we found was that only two of them were in support.

Eleven studies did not concern saturated fat at all.

Sixteen studies were about saturated fat, but were not in support.

Three reviews had ignored all contradictory studies.

Eleven studies gave partially or doubtful support.

Eight studies concerned reviews of experiments where the treatment included not only a "healthy" diet, but also weight reduction, smoking cessation and physical exercise. So how did they know whether the small effect was due to less saturated fat or to something else? Furthermore, all of them had excluded trials with a negative outcome.

Twenty-one studies were about surrogate outcomes. In most of them the authors claimed that saturated fat raises cholesterol. But again, high cholesterol is not a disease.

Twelve studies were listed because they had shown that people on a diet which included a high proportion of saturated fat and little in the way of carbohydrates, reacted more slowly to insulin than normally. From that observation, the authors claimed that saturated fat causes diabetes. It is a normal reaction however, that if you cut the intake of carbohydrates radically, your metabolism is changed to spare

blood glucose. Saturated fat does not produce diabetes. More than a dozen experiments have shown that the best cure for people with type 2 diabetes is a diet with much saturated fat and little carbohydrates. In a few days their blood sugar normalises and many of the patients are able to stop their medication.<sup>2</sup> Another contradiction is, that for many years the consumption of saturated fat has decreased in many countries, while during the same time period we have seen a steady increase in the incidence of type 2 diabetes

To their honour the Food Administration published another list with eight studies which they said contradicted their warnings. However, that list was incomplete, to put it mildly.

Why didn't they include the many studies of the Masai people who have the lowest cholesterol ever measured in healthy people, although more than sixty percent of the calories in their food are derived from saturated fat<sup>3</sup>

Why didn't they mention that cholesterol in people who gorge on saturated fat on average is not higher than those who avoid it as if it was poison?<sup>4</sup>

Why didn't they mention the more than thirty studies, which had shown that patients who had suffered a myocardial infarction or a stroke had NOT eaten more saturated fat than healthy individuals.<sup>4</sup>

Why didn't they mention the nine studies which had shown that patients who had suffered a stroke had eaten *less* saturated fat than healthy individuals?<sup>5</sup>

Why didn't they mention any of the many unsuccessful dietary trials? If a high intake of saturated fat causes heart disease, a reduction of the intake should of course lower the risk. Until 1997 nine such trials had been published and when all the results were put together in a so-called meta-analysis, no reduction of saturated fat in the diet was seen to have any effect whatsoever. In a few of the trials fewer died from myocardial infarction, but in just as many mortality increased.<sup>4,6</sup>

Why is saturated fat still seen as a menace to health today? What is the evidence for this idea?

The truth is that there is none. The truth is that the warnings against saturated fat are based upon manipulated data.

### **Ancel Keys**

Ask any scientist in this area to list the names of those who have created the diet-heart idea and nine out of ten probably put the name Ancel Keys on the top.

Keys had no clinical experience; he was an American professor in physiology. One of his first contributions in this area of science was a paper from 1953 where he stated that myocardial infarction was caused by too much fat in the diet. As an argument he used a diagram showing the association between fat consumption and the mortality from heart disease in six countries. It looked very convincing, because all of the observations were in accord. On top were the figures from the US; at the bottom were those from Japan. In the US people ate five times more fat than in Japan, and heart mortality was fifteen times higher. The data from the other countries lay between those two data points, forming a beautiful curve starting in the lower left corner and ending in the upper right.<sup>7</sup>

What Keys was apparently unaware of was that the figures for fat consumption, which he had collected from the archives in FAO, did not reflect what people eat, but the amount of fat which was available for consumption. This is certainly something else because much of the available fat never reaches the human stomach. Some is eaten by rats, some is given to cats, dogs and other pet animals, and some is thrown away because of bad storage. In rich countries, where fat is considered synonymous with poison, most fat probably disappears in the kitchen or is cut away on the plate. In poor countries, where malnutrition and famine is a greater problem than heart disease, all fat is eaten.

The figures for the number of people who die from myocardial infarction is just as uncertain. These figures were taken from the archives in the World Health Organisation (WHO) and were based on death certificates.

But how often do you think that the diagnosis is correct on that piece of paper? Consider the fact that there is only room for one diagnosis on a death certificate. In most countries, less than ten percent of dead people are examined by a coroner. The diagnosis on the certificate therefore reflects what the doctor thinks is the cause of death. That the diagnosis not necessarily is true was shown in a Swedish study by Drs. George D Lundberg and Gerhard Voigt. They found that almost half of those whose cause of death was listed as a myocardial infarction according to the death certificate, had actually died from something else.<sup>8</sup>

The most serious error in Keys' paper was that he had excluded data that didn't fit his hypothesis. I shall tell you more about that in the following. Unfortunately, his paper is still used by to-day's experts as an argument for their dietary guidelines, as is another one, called *Seven Countries*; published in 1972.<sup>9</sup>

In that study Keys had followed sixteen population groups in seven different countries and from his observations, he concluded that one of the most important factors behind myocardial infarction was that there was too much saturated fat in the diet.

If you eat too much, he said, your cholesterol goes up. This was what he and other researchers had seen in their dietary experiments on healthy people. When they ate much saturated fat their cholesterol went up, and vice versa.

His message was swallowed by the rest of the world. Anyone who question this sacred dogma today is considered to be a quack, although lots of scientific studies have shown that it isn't true.

Keys' idea was questioned by Raymond Reiser, an American professor in biochemistry, who pointed to several errors in these experiments.<sup>10</sup> Instead of giving the test individuals natural saturated fat from animal food, many authors had used vegetable oils saturated by hydrogenation, a process that also produces trans fat, and to-day we know that trans fat does indeed cause cholesterol levels to rise. In addition, when cholesterol went up, researchers attributed the effect to high intakes of saturated fat when in fact it could have been due to low intakes of polyunsaturated fat, and vice versa.

Other researchers have studied this problem in recent time, but most of them have made similar errors. It is simply impossible to draw any valid conclusions about the effect of saturated fat alone from such trials.

What definitely argues against a cholesterol lowering effect from saturated fat is the outcome of modern dietary trials where scientists have used a diet low in carbohydrates with a high content of saturated fat to combat diabetes and/or obesity.<sup>11</sup> By avoiding bread, potatoes, cakes, cookies, candies and soft drinks these scientists have achieved amazing results. Even if the diet contained 20-50 percent of calories from saturated fat, there was no effect on the patients' blood cholesterol.<sup>12</sup>

But let me return to the *Seven Countries paper*. Apparently, very few have read the full 260 page report, because if you were to do that meticulously, as I have done, you will soon discover findings that are at odds with the idea proposed by Keys. For example, although the intake was almost equal in the Finnish population groups from Turku and North Karelia, heart mortality was five times higher in North Karelia than in Turku. The saturated fat intake was equal on two Greek islands, Crete and Corfu, but heart mortality was almost seven times higher on Corfu than on Crete.

Keys' lengthy report is loaded with irrelevant figures and tables and the conflicting findings are easily overlooked. One of the findings was that while the intake of saturated fat was associated with heart mortality, it was not associated

with the ECG findings. Those with a pathological ECG had not eaten more saturated fat than the others.

Whom are we to believe? The local doctors who wrote the death certificates, or the American experts who evaluated all the ECGs?

### **More contradictions**

During the eighties, American researcher Ronald Krauss found that the most useful risk marker, the best predictor of myocardial infarction among the blood lipids, wasn't the total amount of cholesterol in the blood, neither was it the bad guy which is generally accepted to be LDL cholesterol, but a special type of LDL particles, the small and dense ones. The most surprising finding was that if somebody ate much saturated fat, then the number of these small, dense LDL particles was shown to decrease.<sup>13</sup>

Isn't that the opposite to what we would expect? Why should we avoid saturated fat if it lowers the risk of dying from a heart attack?

Good question, and this was also my question to Ronald Krauss when I met him in Chicago a few years ago. Krauss is not only a brilliant researcher, he is also a member of the committee who write the dietary guidelines for the American people.

"Oh, you see", he answered, "the members of the committee do not always agree, and when we don't agree, we decide what to recommend by voting".

I wonder if the committee voted when they discussed the study by an Indian researcher, Malhotra. For six years he had registered how many people had died from a heart attack, from among more than one million employees of the Indian railways. According to Malhotra's report; employees who lived in Madras had the highest mortality. It was six to seven times higher than in Punjab, the district with the lowest mortality, and the people from Madras also died at a much younger age. But people in the Punjab consumed almost seventeen times more fat than people from Madras and most of it was animal fat. In addition they also smoked much more than in Madras.<sup>14</sup>

Many of the experts in the committee must have been skeptical of Malhotra's result: "How is that possible? How many of you believe in such nonsense? Raise your hands!"

### **The answer from the Swedish Food Administration**

I assume that you are curious to know how the *Swedish Food Administration* responded to our criticism. They did respond, but we couldn't find an answer to our questions about saturated fat. Indeed, we could not even find the term saturated fat in their text. Instead you could read statements such as "Our dietary guidelines are based on science...they are a synthesis of thousands of studies...they are based on the WHO guidelines."

### **Can we rely on the WHO experts?**

After almost twenty years of meticulous reading of the scientific reports about this issue I haven't found any valid argument against saturated fat, and I am not alone.<sup>15</sup> Instead, as you know already, there are a large number of contradictory observations. Let us therefore return to the WHO/FAO Expert Consultation<sup>1</sup> to see what the world's best experts have to say about it.

According to that paper, "the relationship between dietary fats and CVD (cardiovascular disease), especially coronary heart disease, has been extensively investigated, with strong and consistent associations emerging from a wide body of evidence". This statement is followed by a reference to a consensus report from the Nutrition Committee of the American Heart Association.<sup>16</sup> The only evidence presented in that report are studies claiming that saturated fat raises cholesterol, and

a single study claiming that intake of saturated fat may cause myocardial infarction.<sup>17</sup>

The first argument is not true, as you know already and the second is not true either. However, in the summary of that paper you can read that “our findings suggest that replacing saturated and trans unsaturated fats with unhydrogenated monounsaturated and polyunsaturated fats is more effective in preventing coronary heart disease in women than reducing overall fat intake.”<sup>17</sup>

You would probably think that the study was a dietary trial, but it was not. It was a study of 80,000 healthy nurses who had been studied for almost twenty years. At the start of the study and every following year, the researchers from Harvard asked them about their usual diet. At the end of the study the diet of those who had suffered a heart attack was compared with the diet of those who had remained healthy. The term “replacing” did not mean that they had replaced anything; it was a result of complicated statistical calculations based on the dietary information. The truth is, that on average there were just as many heart attacks among those who had the lowest intake of saturated fat as among those with the highest; this fact appears clearly from the tables in their report. Neither has any of the Harvard-researchers previous reports shown that..

### **Are dairy products dangerous?**

.Saturated fat is the dominating fat in milk, cream and cheese. This is the reason why everybody praise the lowfat dairy products, both for children and adults. But what does science tell us about that?

In a British report, the authors had put together data from ten large studies including more than 400,000 men and women who had been followed for several years. What they found was that the number of heart attacks and strokes were smaller among those people who had consumed the most dairy products.<sup>18</sup>

### **A more reliable method**

A relevant argument against such studies is that what the participants tell you about their diet is not necessarily true. Who can remember what they ate yesterday and how much? Can we be confident that they eat similar food and similar amounts of that food next week or next year?

A better method is to analyze the amount of fatty acids present in the fat cells, because the number of the short saturated fatty acids reflects the intake of saturated fat during the previous weeks or months.<sup>19</sup>

In at least nine studies researchers have used this method. In six of them the content was similar in patients with cardiovascular disease and in healthy individuals. In the rest the patients had fewer short chain fatty acids, meaning that they had eaten *less* saturated fat.<sup>20</sup>

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