

**What if Everything You've been Told  
about Nutrition for the Last 50 Years  
were Not True?**

# What if Everything You've been Told about Nutrition for the Last 50 Years were Not True?

compiled by Glenn Bever

## •Caveats

- I am not a doctor
- I am not a licensed nutritionist
- This is an awareness presentation
- Don't take my word for it (or anybody else's)—do your own research

## An Alternate Point of View

- Main Contentions:

- Saturated fats are actually good for you

- They don't cause obesity

- They don't cause heart disease

- They protect the body and repair it

- Poly-unsaturated Vegetable oils are (largely) bad for you

- Cholesterol is not your enemy

- Both obesity and heart disease are a function more of sugars, trans-fats, and poly-unsaturated fats

## An Alternate Point of View

- Further Contentions:

- A calorie is *NOT* a calorie. Fat calories are utilized differently than carbohydrate calories.
- All sugars are *NOT* created equal. Fructose is quite damaging to the body (including high-fructose corn syrup)—and this is found in *everything* these days (and often not identifiable). Fructose is metabolized differently than glucose.
- What the consumer thinks of as MSG is a subset of a larger class—and often neither one is labeled on products.
- Soy is really quite bad for you (in the way and quantity that Americans prepare and eat it)
- Food preparation should be from scratch in order to avoid the problems of ‘foods’ that our body does not know how to deal with (e.g., many compounds found in processed foods).

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MSG in many foods is not labeled as such. Flavoring mixes containing <50% MSG are not required to identify it on a label. It can also be labeled as ‘hydrolyzed protein’ or any of dozens of different names. Further, MSG is a subset of a class of free glutamic acids which can cause adverse symptoms in people. Simply asking if a product contains MSG can get you a correct, but misleading, answer of ‘no.’

Ref: [www.truthinlabeling.org](http://www.truthinlabeling.org)

Soy is a complex subject which I won’t go into much here. The synopsis is that it contains many toxins and, if consumed, should be done in moderation (asians traditionally use it as a garnish) and be properly prepared (long, slow, fermentation). Soy can be very damaging to infant brain development, and can contribute to kidney stone development.

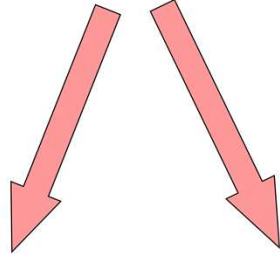
# SUGARS

- United States per capita consumption (all sources):
  - 1890: 5 lbs sugar/year
  - 1980: 26 lbs sugar/year
  - 2000: 135 lbs sugar/year
- Sugar is highly addictive

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Animal studies have shown that sugar is more addictive than cocaine. The more you have, the more you want.

# Sucrose



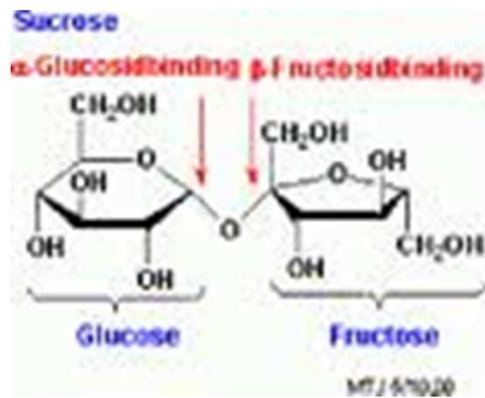
## Glucose Fructose

In animal studies, fructose was found to be harmful while glucose was not.

Ref:

<http://www.princeton.edu/main/news/archive/S26/91/22K07/index.xml?section=topstories>

<http://www.uctv.tv/search-details.aspx?showID=16717>



Sucrose (in sugar) is a di-saccharide that is broken down into glucose and fructose during digestion.

Animal studies conducted at USDA found that high levels of sugar in the diets of rats are very harmful.

These studies were repeated looking at high levels of glucose and fructose separately. Glucose caused no harm, but the fructose portion of sugar was very harmful. Either the females did not reproduce or the young did not reach adulthood. Fructose seems to interfere with the production of collagen in growing animals. This is one reason high fructose corn syrup and fruit juices are so harmful for growing children.

Studies at Princeton (supported by the U.S. Public Health Service) list sucrose as composed of equal amounts of the two simple sugars -- it is 50 percent fructose and 50 percent glucose -- but the typical high-fructose corn syrup used in this study features a slightly imbalanced ratio, containing 55 percent fructose and 42 percent glucose—with 3% other (higher saccharides).

They state that as a result of the manufacturing process for high-fructose corn syrup, the fructose molecules in the sweetener are free and unbound, ready for absorption and utilization. In contrast, every fructose molecule in sucrose that comes from cane sugar or beet sugar is bound to a corresponding glucose molecule and must go through an extra metabolic step before it can be utilized. This may be the reason that animals fed high-fructose corn syrup gained significantly more weight than those fed the same caloric amount of sucrose.

Regardless of whether manufactured high fructose corn syrup is worse than sucrose, both contain about half fructose and fructose is harmful to the body in much the same way that alcohol is. Glucose is metabolized by every cell in the body whereas fructose is metabolized only by the liver and cirrhosis is being seen even in children.

If you give sucrose a sweetness index of 100, then glucose is 74, HFCS is 120, and fructose is 173. Now sucrose and HFCS are nominally the same thing, except as noted above. It is obvious from the sweetness indices that fructose is sweeter than glucose.

## Fructose and Health

**LIVERS** of rats on high fructose diet resembled livers of alcoholics.

**MALE RATS** did not reach adulthood.

**ANEMIA**

**HEART HYPERTROPHY** (enlarged and exploded)

**DELAYED** testicular development in male rats

**COPPER DEFICIENCY** in combination with fructose interferes with collagen production, hence rat bodies fell apart (copper deficiency widespread in the U.S.).

**FEMALE RATS** were unable to produce live young.

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Glucose is metabolized by every cell in the body, but fructose is metabolized only in the liver. The livers of the animals on the high-fructose diet looked like cirrhotic livers, like the livers of alcoholics.

Another interesting finding was delayed testicular development in male rats. The hearts became very enlarged and finally exploded.

Fruit is fine in moderation, but avoid fruit juices and any product containing high fructose corn syrup. It is VERY important to keep fruit juices away from growing children.



# Why has Fructose Consumption Increased?

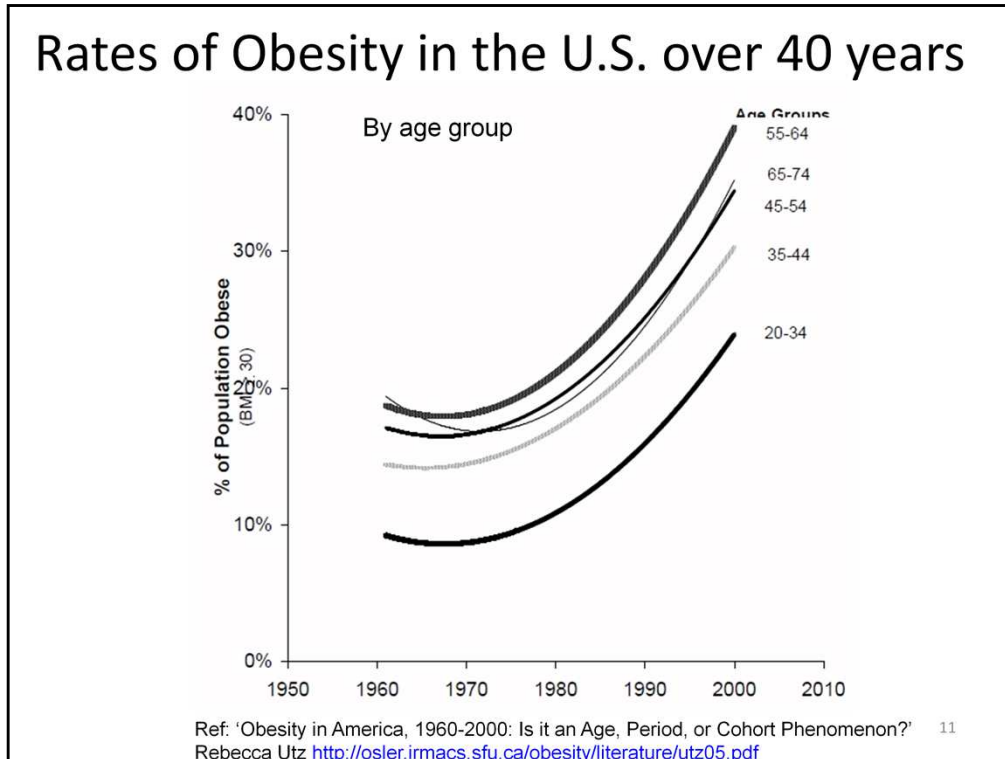
- Food was made cheap (1973) so that it would be a non-issue in Presidential Elections
- Invention of HFCS in 1966 (Japan). Introduced in USA in 1975—stabilized price of sugar. Because HFCS costs about half as much as sucrose it has found its way into virtually everything.
- 1982 call by AMA, USDA, AHA to reduce dietary fat intake
- Processed foods with low fat tasted bad, so sugar was added to make it taste better.

Ref: 'Sugar: The Bitter Truth'—Robert A. Lustig, M.D., Prof. of Pediatrics, Endocrinology, UCSF  
<http://www.uctv.tv/search-details.aspx?showID=16717>

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Three 'political' reasons for the increase in Fructose consumption and when, followed by the result of the new policies.

# OBESITY



This chart shows a clear rise in obesity rates since the 1970s. One could say it 'takes off'— in all age groups.

## Obesity vs Fat in the U.S. over 40 years

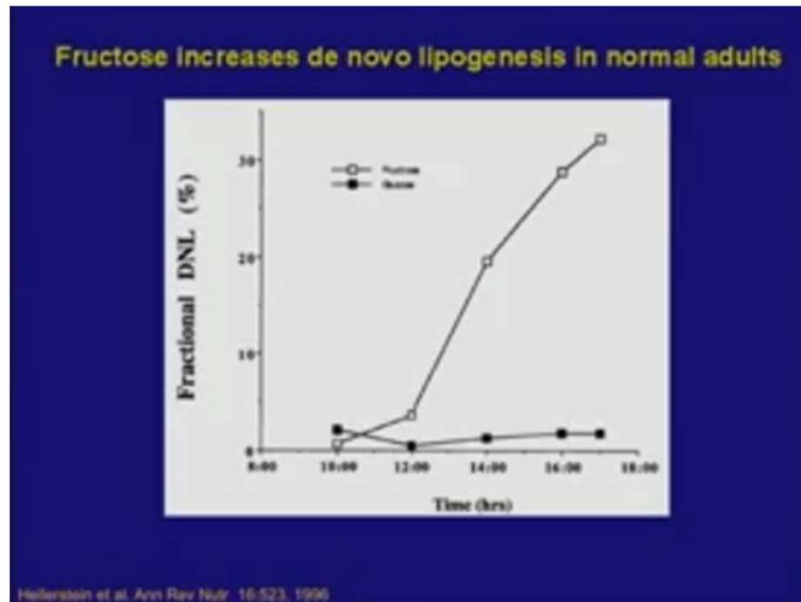


Ref: 'Sugar: The Bitter Truth'—Robert A. Lustig, M.D., Prof. of Pediatrics, Endocrinology, UCSF  
<http://www.uctv.tv/search-details.aspx?showID=16717>

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We are all eating more. Leptin is the signaller that tells the brain when to stop eating. The biochemical bio-feedback system is not working in obese people. Why? Of a 275 cal/day increase by teenage boys from 1990-1995, 5 g (45 cal) are from fat and 57 g (228 cal) are from carbohydrate increase. soda In 1982, USDA, AMA, American Heart Assn. recommended to drop our fat consumption from 40% to 30%. We did it. Look at what happened.

## Fructose metabolization as fat



Ref: 'Sugar: The Bitter Truth'—Robert A. Lustig, M.D., Prof. of Pediatrics, Endocrinology, UCSF  
<http://www.uctv.tv/search-details.aspx?showID=16717>

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30% of fructose metabolizes as fat, where almost none of the glucose does. That is what this chart shows.

So whether you believe high fructose corn syrup is the same as sucrose or not, both contain about half fructose and both metabolize about 30% of that half as fat.

25% of teenagers consume at least 12% of their total caloric intake as fructose.

“Fructose is a poison”—Robert A. Lustig, M.D.

The article below sketches some studies done that were sponsored by Pepsico indicating that fructose fuels intra-abdominal fat and raises cholesterol more so than glucose.

Pepsico spins it by saying that it doesn't apply to the real world because “pure fructose is not an ingredient in any of our food and beverage products.” True, but it is a major ingredient of HFCS (55%).

<http://www.dailymail.co.uk/health/article-1029501/Can-fruit-make-fat-Natural-sugar-fruit-fuelling-nations-obesity-epidemic.html>

## Consumption in the U.S. over 40 years

- Consumption in US from 1950-2000:

- Chicken up 3x
- Turkey up 3x
- Eggs down 1/3
- Milk down 38% (whole milk down 4x. Low fat up 5x)
- Cheese up 4x
- Butter down 2x (saturated)
- Shortening up 2x (trans-fat)
- Salad and cooking oils up 3x (polyunsaturated)
- Fruits and vegetables up 20% from 1970s
- Lard and beef tallow (saturated) down 40%
- Meat up 40% (trimmed weight)
- Grains up 1/3 (increase started in 1970s) (corn up 2x. Rice up 4x)
  - All other grains down 2x (oats, barley, rye)

Ref: 'Agriculture Fact Book 2001-2002'; Chapter 2: 'Profiling Food Consumption in America'  
USDA <http://www.usda.gov/factbook/chapter2.htm>

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Notice that the items in red represent decreases in consumption. Note also that it is mostly the saturated fat/cholesterol containing foods that have decreased *at the same time that obesity rates started soaring.*

## Consumption in the U.S. over 40 years

- Consumption in US from 1950-2000 (continued):
  - cane and beet sugar down 1/3
  - Corn sweeteners up 8x:
    - High fructose corn syrup up (from non-existent until 1970s to 65 lbs/person/yr in 2000)
    - Glucose up 2x
    - Dextrose same
  - Total caloric sweeteners up 39%
- “The proportion of fat in the U.S. food supply from meat, poultry, and fish declined from 33 percent in the 1950s to 24 percent in 2000. Similarly, the proportion of saturated fat contributed by meat, poultry, and fish fell from 33 percent in the 1950s to 26 percent in 2000.”
- Total caloric consumption up 16% from 1970.
  - Fats up 62% (3/4 of that veg. oils or trans-fats), grains up 43%, sugar up 19%, meats up 7% since 1970.
- Total obesity is up 2.5x to 3x since 1970.

Ref: 'Agriculture Fact Book 2001-2002'; Chapter 2: 'Profiling Food Consumption in America'  
USDA <http://www.usda.gov/factbook/chapter2.htm>  
<http://www.ers.usda.gov/AmberWaves/November05/findings/usfoodconsumption.htm>

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Data came from the USDA database.

## What can we conclude from this?

- Obesity rates started climbing when consumption of saturated fats decreased and consumption of unsaturated fats, carbohydrates, and sugars increased.
- Total caloric consumption increased 16% while rates of obesity increased by nearly 3 times.
- Fructose consumption metabolizes 30% more as fat than does glucose, and fructose consumption is up nearly 8 times what it was when obesity rates started climbing

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While caloric intake has increased over the period from 1950-2000, the demonized foods containing saturated fats have decreased in consumption. Also, high fructose corn syrup was introduced at the same time the obesity rates increased. Sugar and carb consumption has risen while saturated fat consumption has decreased. That does not make a strong case for cutting down saturated fats and increasing carbs for the purpose of losing weight. Liver disease results from fructose consumption, as it does from alcohol consumption—and is becoming more prevalent in children.

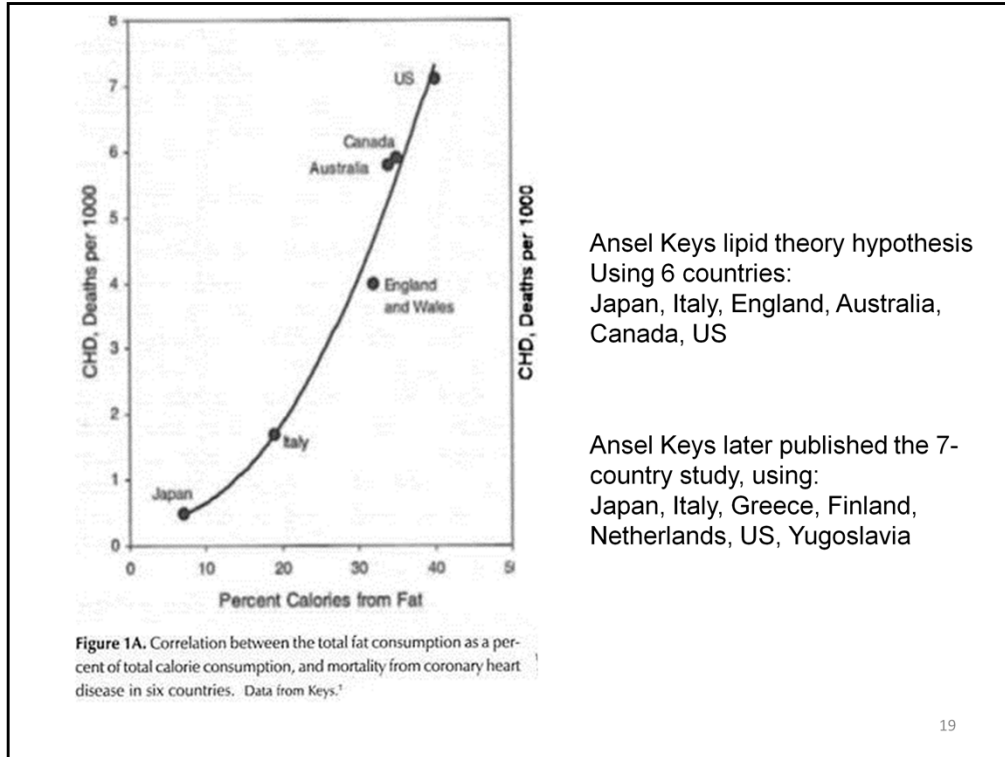


**WHERE DID IT  
ALL COME  
FROM?  
The Story of  
Saturated Fat  
and Heart  
Disease**

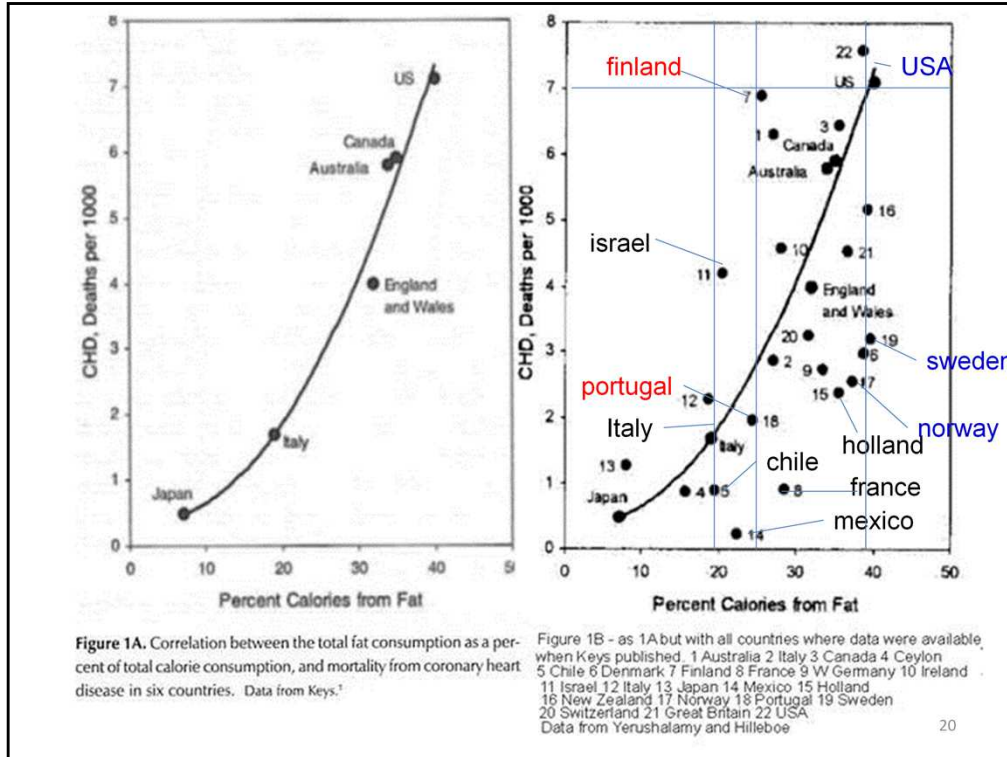
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## Where did it all come from?

- Ansel Keys lipid theory espoused in the 1950s is derived from a flawed study
  - He threw out reliable data and 'cherry-picked it'
  - Had he included all 22 countries instead of just the six, he would not have had any correlation between fat consumption and heart disease.
  - **Saturated fats and trans-fats were lumped together in studies and labeling before 2003.** It wasn't until then that trans-fat problems really hit the main stream. **By then saturated fats had been thoroughly demonized.**

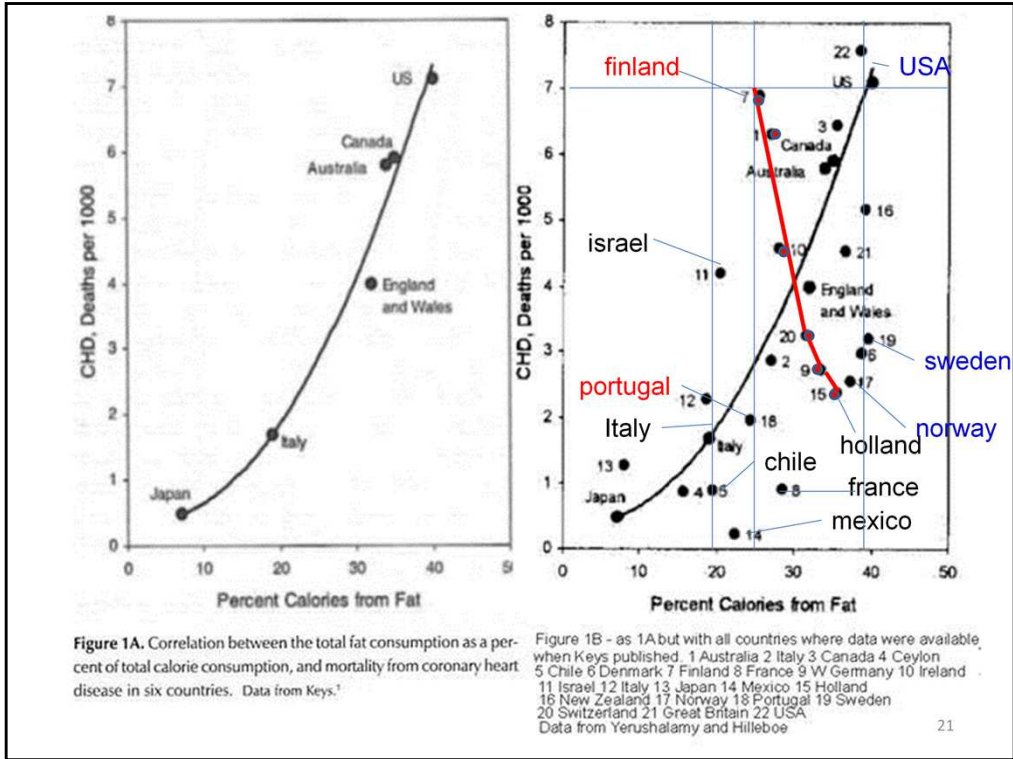


The later seven country study included: Yugoslavia, Italy, Greece, Finland, Netherlands, USA, Japan

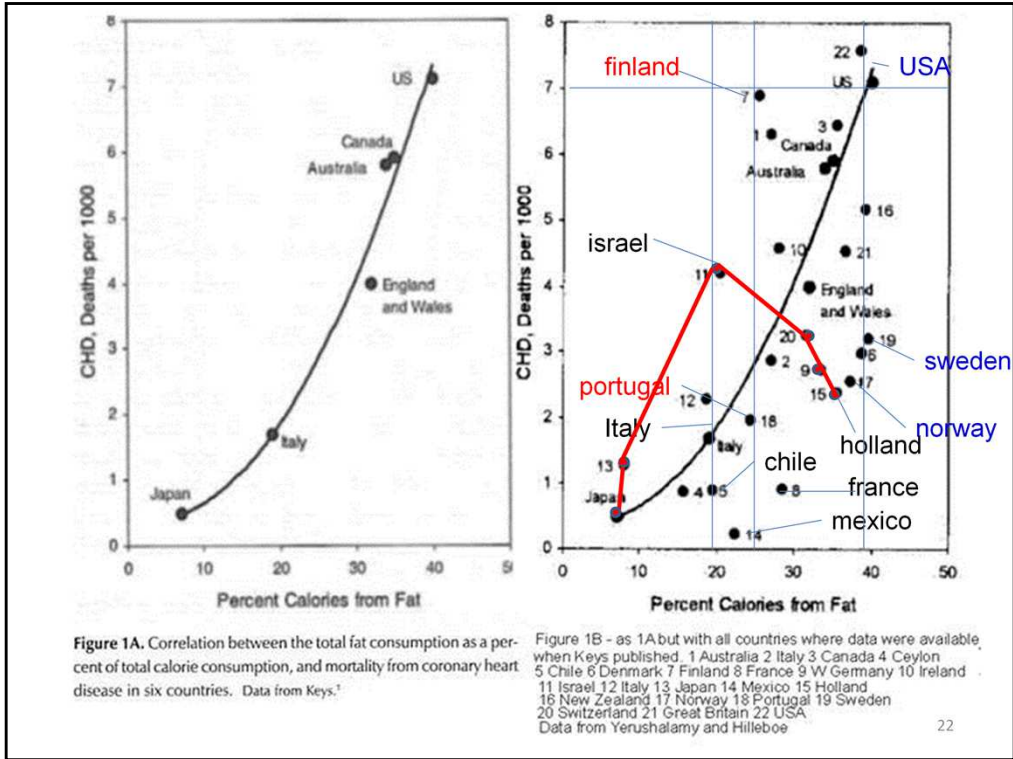


The second chart shows all the data set from 22 countries. The line Keys drew is not the only one that could have been drawn. Further, Italy and Japan had little fructose in their diet. Even Key's own work recognized an inter-correlation between sugar and fat in Western countries (like donuts).

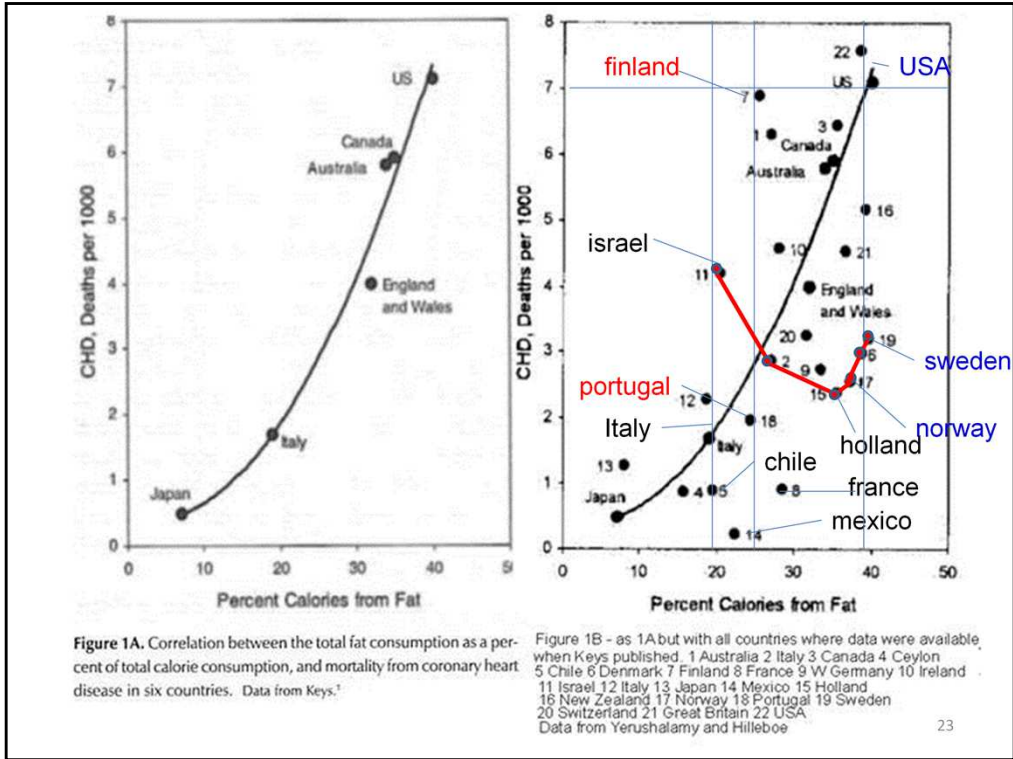
Keys did a multi-variant regression analysis, but he did not do it both ways. He held fat constant and looked at the sucrose (apparently believing that since the two were inter-correlated in use, sucrose was a good indicator of fat consumption), but he did not hold sucrose constant and look at the fat. He seemed to believe that there was no correlation between sucrose and heart disease when fat was held constant, but he did not hold sucrose constant and show that fat *still* correlates to heart disease.



Here I have drawn a red line using a different set of countries. Note the opposite trend from what Keys drew.

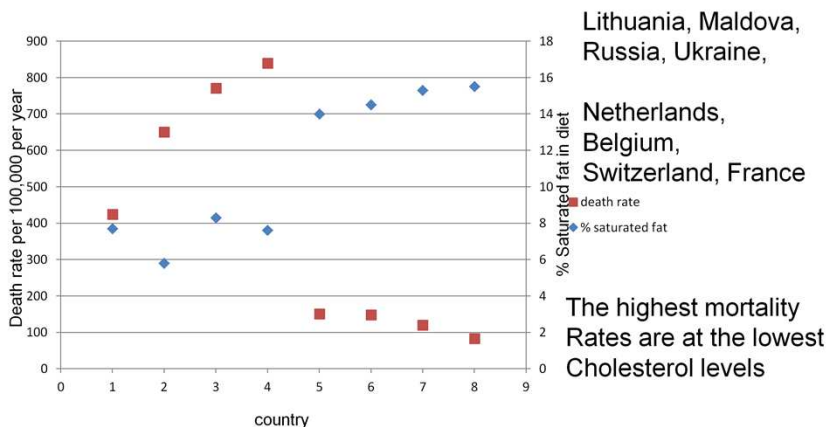


Here I have drawn a red line using a different set of six countries.



Here I have drawn a red line using a different set of six countries

## Death Rate vs. % saturated fat consumption



Ref: Jacobs, et al: Report on the Conference on Low Blood Cholesterol: Mortality Associations: Circulation Vol 86, No3 Sept 1992 <http://www.youtube.com/watch?v=XPPYaVcXo1I>

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Note here that the first four countries (Lithuania, Moldova, Russia, Ukraine) have low saturated fat consumption but high mortality rates, in contrast to the second four countries that have high saturated fat consumption but low mortality rates.



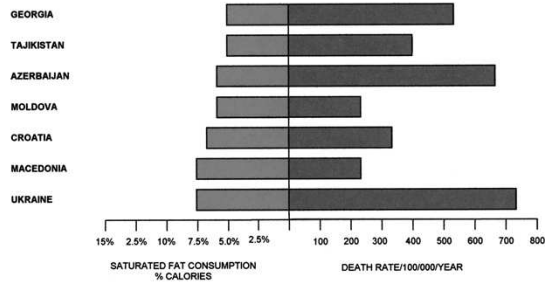
# Saturated Fat and Heart Disease

Lower rates of heart disease are associated with higher levels of saturated fat in the diet.

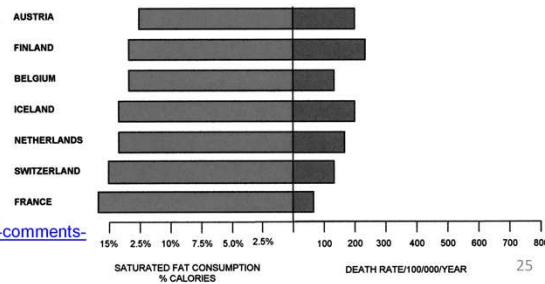
Ref:

<https://www.westonaprice.org/abcs-of-nutrition/1950-comments-on-the-usda-dietary-guidelines.html>

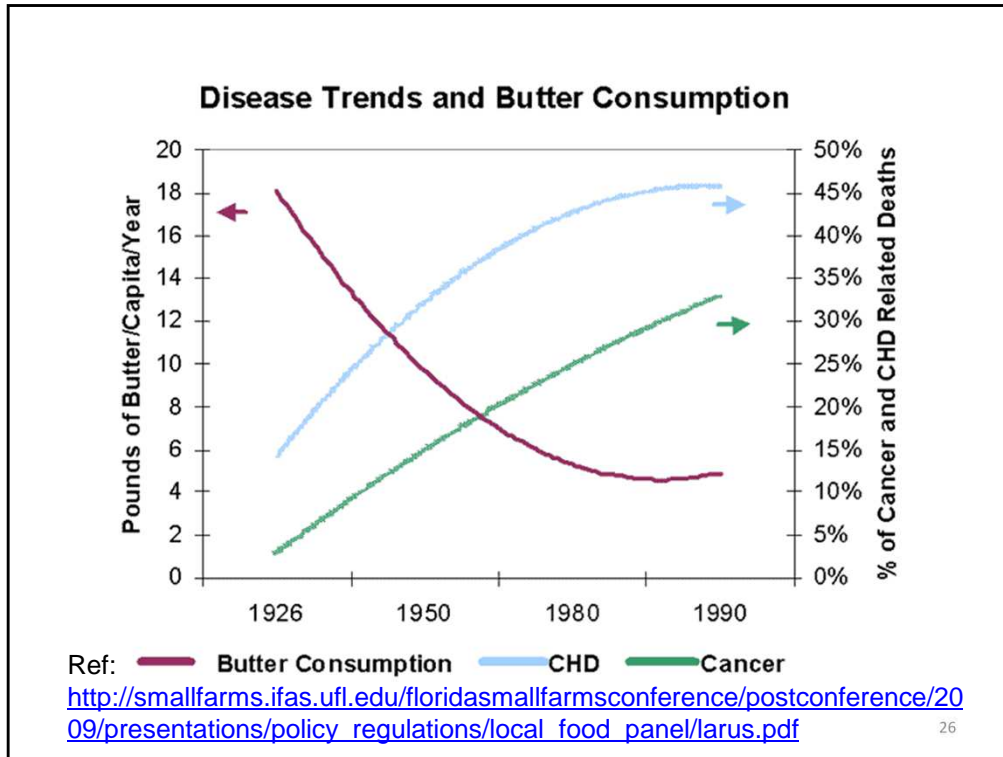
(FIG 1) COMPARISON OF HEART DISEASE DEATHS vs. CONSUMPTION OF SATURATED FAT % CALORIES (Countries with lowest saturated fat consumption)



(FIG 2) COMPARISON OF HEART DISEASE DEATHS vs. CONSUMPTION OF SATURATED FAT % CALORIES (Countries with highest saturated fat consumption)



These figures were put together from recent statistics on saturated fat consumption in Europe. As you can see, those countries with the highest consumption of saturated fat have the lowest rates of heart disease and those with the lowest levels of saturated fat have the highest rates of heart disease. France, with the highest consumption of saturated fat in all Europe, has the lowest rate of heart disease. You might call this the European Paradox—but only paradoxical if you assume that heart disease should be positively correlated to consumption of saturated fat.



While butter consumption in the US has plummeted, cancer and heart disease rates have risen dramatically. We do not know all the reasons for these epidemics, but one thing for sure, they are not caused by butter consumption because the trends are going in opposite directions.

## Recent Studies on Fats

LOWFAT = FATTER CHILDREN: Swedish study; Children on lowfat diets were fatter, consumed more sugar and had higher insulin resistance.  
([www.ub.gu.se/sok/dissdatabas/detalivv.xml?id=6979](http://www.ub.gu.se/sok/dissdatabas/detalivv.xml?id=6979)).

WHOLE FAT MILK = FERTILITY: Women drinking lowfat milk had fertility problems.

*(Human Reproduction, online February 28, 2007).*

WHOLE FAT MILK = LOWER WEIGHT GAIN: Swedish women using cheese and full fat dairy had lower weight gain as they grew older.

*(American Journal of Clinical Nutrition, 2007;84(6):1481-1488).*

## Studies on Fats

“There are exactly 18 CLINICAL DIETARY INTERVENTION TRIALS 3 of which were also double blinded that show NO REDUCTION AT ALL IN CORONARY HEART DISEASE MORTALITY THAT CAN BE ATTRIBUTED TO USING SATURATED FAT RESTRICTION. NONE ZERO. NOT A SINGLE RANDOMIZED CLINICAL TRIAL HAS EVER PRODUCED A REDUCTION IN CORONARY HEART DISEASE MORTALITY FROM USING SATURATED FAT RESTRICTION”

Ref: <http://www.nursetv.com/forum/post-30874.html?highlight=>

## Nutritional Study

From a critical assessment of the 2010 Dietary Guidelines Advisory Committee (DGAC) in in the journal 'Nutrition':

“No mention is made of a recent large meta-analysis that found there is **no substantial evidence for concluding that dietary saturated fat is associated with an increased risk of heart disease.** Not discussed are basic science studies demonstrating that *plasma saturated fat, the presumed cause for concern, is substantially determined by dietary carbohydrate.*”

Ref: 'Nutrition' Vol 26: Issue 10, pp 915-924 (October 2010)  
<http://www.nutritionjnl.com/article/PIIS0899900710002893/fulltext#sec9>

# **POLYUNSATURATED FAT**

- Heart disease was virtually unknown 100 years ago, when polyunsaturated oils were a very small part our diet.

## Studies on Polyunsaturated Fats

*" Modern diets can contain as much as 30% of calories as polyunsaturated oils, but scientific research indicates that this amount is far too high. The best evidence indicates that our **intake of polyunsaturates should not be much greater than 4 percent of the caloric total.**"*

*"Excess consumption of polyunsaturated oils has been shown to contribute to a large number of disease conditions including **increased cancer and heart disease; immune system dysfunction; damage to the liver, reproductive organs and lungs; digestive disorders; depressed learning ability; impaired growth; and weight gain.**"*

*"One reason the polyunsaturates cause so many health problems is that **they tend to become oxidized or rancid when subjected to heat, oxygen and moisture as in cooking and processing. Rancid oils are characterized by free radicals... New evidence links exposure to free radicals with premature aging, with autoimmune diseases such as arthritis and with Parkinson's disease, Lou Gehrig's disease, Alzheimer's and cataracts.**"*

*--Dr. Mary Enig*

Ref: <http://www.natural-cancer-cures.com/polyunsaturated-fats.html>  
<http://www.westonaprice.org/faq/787-faq-fats-and-oils.html>  
<http://www.westonaprice.org/know-your-fats/526-the-skinny-on-fats>

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"There are two types of EFAs, those of the omega-6 family and those of the omega-3 family. The basic omega-6 fatty acid is called linoleic acid and it contains two double bonds. It is found in virtually all foods, but especially in nuts and seeds. The basic omega-3 fatty acid contains three double bonds. It is found in some grains (such as wheat) and nuts (such as walnuts) as well as in eggs, organ meats and fish if these animals are raised naturally, and in green vegetables if the plants are raised organically.

...the EFAs [essential fatty acids] that we take in through fresh, unprocessed food are not rancid and do not become rancid in the body. In small amounts, they are essential for good health. In large amounts, they can pose health problems which is why we need to avoid all the commercial vegetable oils containing high levels of polyunsaturates." —Mary Enig, PhD

Too much omega-6 and not enough omega-3 is the norm in an American diet.

## Studies on Polyunsaturated Fats

“The fats in arterial plaque are in the form of *cholesterol esters* and 74% of the fatty acids within it are unsaturated, 26% saturated. 41% of these unsaturated fats in arterial plaque are the very polyunsaturates that the medical profession are recommending in the diet to combat heart disease [1]. In a typical diet, most polyunsaturates are from vegetable oils, not from animal fats. The plaque contains such fats as would be found in fried foods (that is, oxidised components of vegetable oils) and trans fatty acids from margarines, "vegetable fat" or shortening mixed into complexes with cholesterol [2]. Whereas dietary saturated fat looks like it may increase blood cholesterol, often this is seen as only an increase of the beneficial HDL cholesterol.”

Ref: [http://homepage.ntlworld.com/pshinde/index\\_nt\\_files/cholesterol.htm](http://homepage.ntlworld.com/pshinde/index_nt_files/cholesterol.htm)

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### References:

[1] Felton CV , Crook D , Davies MJ , Oliver MF; Dietary polyunsaturated fatty acids and composition of human aortic plaques; Lancet. 1994 Oct 29;344(8931):1195-6.

[2] Stachowska E , Dolegowska B, Chlubek D, Wesolowska T, Ciechanowski K, Gutowski P, Szumilowicz H, Turowski R; Dietary trans fatty acids and composition of human atheromatous plaques; Eur J Nutr. 2004 Oct;43(5):313-8. Epub 2004 Jan 27.



# **CHOLESTEROL AND SATURATED FAT**

**"In Framingham, Massachusetts, the more saturated fat 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, ate the most saturated fat, ate the most calories weighed the least and were the most physically active."**

**William Castelli, Director  
The Framingham Study**

**Source:** *Archives of Internal Medicine* 1992  
<http://www.powershow.com/view/1b78f-YWIOZ/Summary>

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When you look carefully at the studies claiming to show that saturated fats are bad, you find that they actually revealed the opposite. For example, the 40-year Framingham study, used to justify margarine sales, actually found that saturated fats were beneficial.

<http://www.powershow.com/view/1b78f-YWIOZ/Summary>

## An Alternate Point of View

•Regarding the Framingham Study and follow up research:

“total cholesterol levels and LDL levels don’t mean squat as long as the ratios of total cholesterol/HDL or LDL/HDL are low. Which, means, of course, that it is HDL that matters because a high HDL reduces the ratio [of LDL/HDL].

Let’s take this analysis a step further. What drives HDL up? A few things. Exercise. Alcohol in moderation. And—...—**fat in the diet, particularly saturated fat**. So, I’ll leave you to draw your own conclusions.

One of the crushing blows to proponents of low-fat dieting has been the realization that **although reducing fat in the diet typically reduces LDL levels a little, it reduces HDL levels a lot, leading to higher ratios**. The second blow came when it was discovered that **the lower LDL levels generated by the low-fat diet were composed of many more small, dense LDL particles, the very ones believed to cause heart disease**.

Now comes the rechristened Dr. Kannel [Framingham Study Original Director] telling us it doesn’t matter a flip what our LDL levels are as long as we have low ratios.”

--Michael R. Eades, M.D.

<http://www.proteinpower.com/drmike/cardiovascular-disease/framingham-flip-flop/>

## The components of Cholesterol and their relationships

HDL (measured) raised by saturated fat, lowered by trans-fats  
(higher is better)

LDL (calculated)  
(lower is better)

LDL (large buoyant) raised (slightly) by saturated fat

LDL (small dense), or Lp(a): that are small and lodge in the arteries, turn rancid and start plaque formation.

raised by carbohydrates, sugar—esp. fructose

raised by trans-fats (lower is better), possibly lowered by saturated fats

TRIGLYCERIDES raised by sugars and carbohydrates  
(lower is better) used as a marker for Lp(a).

TOTAL (measured)=HDL+LDL

$$\frac{\text{TOTAL}}{\text{HDL}} = \frac{\text{HDL} + \text{LDL}}{\text{HDL}} = \text{chol/HDL ratio}$$

**Triglyceride/HDL ratio is better predictor of heart disease. (lower is better)**

“The ratio of triglycerides to HDL was the strongest predictor of a heart attack, even more accurate than the LDL/HDL ratio” (Circulation 1997;96:2520-2525).

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This is just a crib sheet showing some commonly used relationships used in assessing a person's serum cholesterol. Note what foods affect which components. The relationships might surprise you. It is not enough to know what the total cholesterol value, it is important to know the ratio between HDL and LDL, and even more important to know what the triglycerides and low density (Lp(a)) value is. That is because they appear to be the only components that affect heart disease. A low triglyceride/HDL ratio (< 2) is considered ideal.

Ref: <http://www.yourmedicaldetective.com/public/523.cfm>

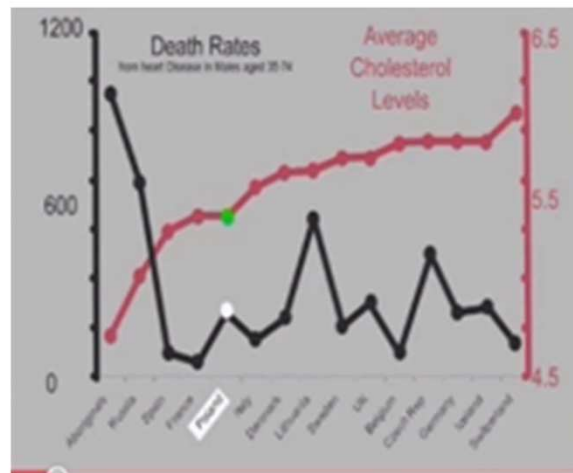
<http://pt.wkhealth.com/pt/re/circ/fulltext.00003017-199710210-00012.htm>

## Saturated Fats vs. Trans-fats

- (1) saturated fatty acids raise HDL cholesterol, the so-called good cholesterol, whereas the trans fatty acids lower HDL cholesterol;
- (2) saturated fatty acids lower the blood levels of the atherogenic lipoprotein, whereas trans fatty acids raise the blood levels of lipoprotein;
- (3) saturated fatty acids conserve the good omega-3 fatty acids, whereas trans fatty acids cause the tissues to lose these omega-3 fatty acids;
- (4) saturated fatty acids do not inhibit insulin binding, whereas trans fatty acids do inhibit insulin binding (see our page on diabetes);
- (5) saturated fatty acids do not increase C-reactive protein, but trans fatty acids do increase C-reactive protein causing arterial inflammation;
- (6) saturated fatty acids are the normal fatty acids made by the body, and they do not interfere with enzyme functions such as the delta-6-desaturase, whereas trans fatty acids are not made by the body, and they interfere with many enzyme functions such as delta-6-desaturase; and
- (7) some saturated fatty acids are used by the body to fight viruses, bacteria, and protozoa, and they support the immune system, whereas trans fatty acids interfere with the function of the immune system.

-- Ref: <http://www.bantransfats.com/transvssat.html>

## Cholesterol levels vs death rates



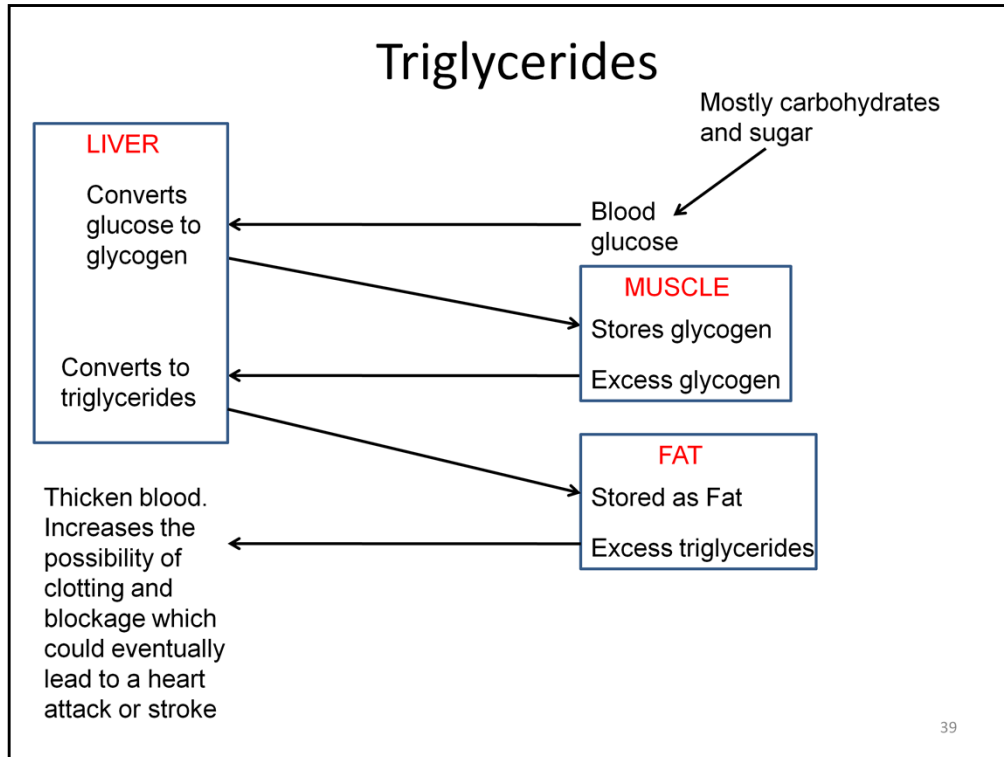
Ref: Dr. Malcolm Kendrick

<http://www.youtube.com/watch?v=i8SSCNaaDcE&feature=related>

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This graph relates cholesterol levels to death rates for several countries. It is derived from the World Health Organization (WHO) study 'Multinational Monitoring of Trends in and Determinants in Cardiovascular Disease.' No correlation between cholesterol levels and death rates can be derived from this data.

Left to right: Aboriginals, Russia, Spain, France, Poland, Italy, Denmark, Lithuania, Sweden, UK, Belgium, Czech Republic, Germany, Iceland, Switzerland



This is a simplified metabolizing diagram. Note that this process starts with carbs and sugars—not fat. Triglycerides are an important marker for heart disease and strokes.

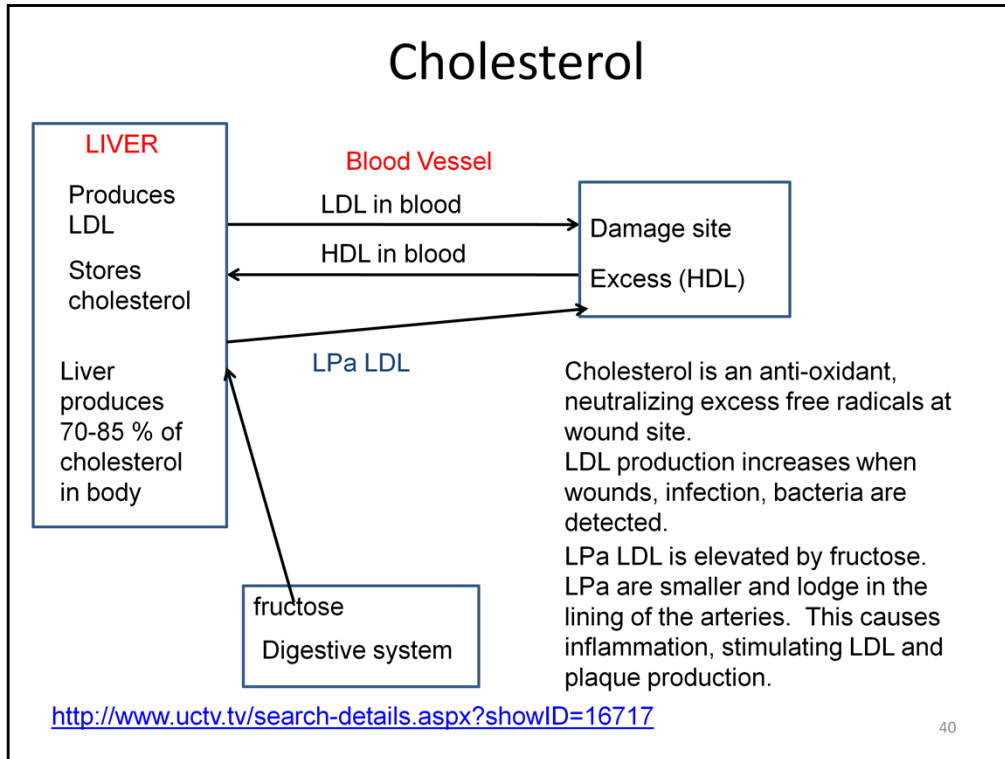
Triglycerides are very important to both obesity and heart disease.

“Your body transforms the carbohydrates you eat into glucose to be used for energy by your cells. Once the cells have what they need, the excess glucose is sent back to your liver and converted to glycogen. Glycogen can then be stored in your muscles. (Bodybuilders can eat more carbs and be able to store them since their muscles are larger than those of an average person.)

Once you've reached your capacity of glycogen, excess glycogen is sent back to your liver again, where it becomes triglycerides, which are stored as fat. Your body has endless storage space for this fat, as we all know.

Now some of these triglycerides are not stored as fat, but remain in your blood stream, which is where another problem lies. Excess levels of triglycerides thicken your blood, making it sludgy, which increases the possibility of clotting and blockage which could eventually lead to a heart attack or stroke. This is why it is so important to keep your triglyceride levels as low as possible.” [ This is done primarily by limiting material that converts to blood glucose—like carbohydrates and sugar.]

Ref: <http://www.healthy-heart-guide.com/lowering-triglycerides.html>



This is an approximation of cholesterol production and metabolizing.



## Studies have shown:

- Cholesterol:

- Conventional diets espoused for improving heart health can actually cause heart disease due to elevated Lp(a) LDL
- There is such a thing as too low Cholesterol (and it's a higher value than you might think). It is a marker for cancer and has shown a high correlation with Autism and aggression.
- Total Cholesterol values are not a good indicator of heart disease risk, but triglycerides/HDL ratios are.
- Cholesterol is necessary for every cell in your body and plays a key role in repairing damage—such as inflammation. Killing the repairing agent can make the problem worse.
- Cholesterol production in the liver is a precursor to androgen, testosterone, estrogen, progesterone, and Vitamin D. Inhibiting cholesterol production can cause hormones to be too low.

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I strongly recommend reading the Dr. Natasha Campell-McBride article:

<http://www.westonaprice.org/know-your-fats/531-cholesterol-friend-or-foe.html> which also provides several science journal references.

## Low Cholesterol:

•"Low cholesterol has been connected to **depression, anxiety, bipolar disorder and statistically higher frequency of violent behavior, suicide, Parkinson's disease, and cancer mortality**. Susceptibilities to tuberculosis and gastrointestinal infections are also associated with lower cholesterol levels. Most significantly, the death rate is doubled in older adults with lower total cholesterol and stroke and cataracts rates are higher."

Ref: [http://www.greatplainslaboratory.com/home/eng/cholesterol\\_deficiency.asp](http://www.greatplainslaboratory.com/home/eng/cholesterol_deficiency.asp)

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Total cholesterol numbers < 160 mg/dL total cholesterol are regarded as as being too low.

## A Note on Statins

- Statin Drugs:

- Statin drugs break the chain of cholesterol production in the liver—which inhibits hormone production.
- The NNT of at least one Statin is 100—meaning that 100 people have to take the Statin for 3 years to statistically prevent ONE heart attack.
- This is a multi-billion-dollar industry. Be suspicious of recommendations to take Statins based solely on a high cholesterol reading. High cholesterol may be the *effect* not the *cause* of a problem.

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Statin drugs have issues—as do all prescription drugs. The ramifications of Statin use can be profound. Muscle degeneration and severe memory loss have been reported by numerous people—including a former NASA astronaut /flight surgeon (Dr. Duane Graveline, author of “Lipitor: Thief of Memory, Statin Drugs and the Misguided War on Cholesterol”). It is hard to conclude, based on data, that Statin use improves one’s chances of prolonging life. It inhibits production of cholesterol in the liver—and also inhibits precursors for the creation of several other hormones—including testosterone, estrogen, cortisol, and even Vitamin D.

Cholesterol is needed to make CoQ10. Low CoQ10 is associated with muscle weakness and heart failure. If you are on statins it is important to ask your doctor about CoQ10 supplementation.

<http://www.cholesterol-and-health.com/Coenzyme-Q10.html>

[http://www.newmediaexplorer.org/chris/2003/12/13/statin\\_drugs\\_coenzyme\\_q10\\_depletion.htm](http://www.newmediaexplorer.org/chris/2003/12/13/statin_drugs_coenzyme_q10_depletion.htm)

[http://articles.cnn.com/2009-11-05/health/statins.heart.failure\\_1\\_statins-heart-failure-cholesterol-levels?\\_s=PM:HEALTH](http://articles.cnn.com/2009-11-05/health/statins.heart.failure_1_statins-heart-failure-cholesterol-levels?_s=PM:HEALTH)

<http://healthread.net/statincardiomyop.htm>

## Why Don't People Know this Stuff?

**“The reason why laymen, doctors and most scientists have been misled is because opposing and disagreeing results are systematically ignored or misquoted in the scientific press.”** -- Uffe Ravnskov, MD, PhD

<http://www.ravnskov.nu/cholesterol.htm>

“Clinical trials have shown that trans fatty acids increase LDL cholesterol and lower HDL cholesterol, **making them the only class of fatty acids... to have this dual effect.**” --Harvard School of Public Health

<http://www.hsph.harvard.edu/news/press-releases/2007-releases/press03272007.html>

## Why Don't People Know this Stuff?

"A generally held belief is that cholesterol concentrations should be kept low to lessen the risk of cardiovascular disease...we did a longitudinal assessment of changes in both lipid and serum cholesterol concentrations over 20 years, and compared them with mortality.

**FINDINGS:** Mean cholesterol fell significantly with increasing age. Age-adjusted mortality rates were 68.3, 48.9, 41.1, and 43.3 for the first to fourth quartiles...**Only the group with low cholesterol concentration at both examinations had a significant association with mortality (risk ratio 1.64)"**

**[In other words, people with lower cholesterol died earlier]**

**"We have been unable to explain our results. These data cast doubt on the scientific justification for lowering cholesterol to very low concentrations (<4.65 mmol/L) in elderly people."**

--Schatz IJ, Masaki K, Yano K et al: Cholesterol and all-cause mortality in elderly people from the Honolulu Heart Program: a cohort study: Lancet. 2001 Aug 4; 358 (9279): 351-5 <http://www.ncbi.nlm.nih.gov/pubmed/11502313>

**"Over the last 50 years, the Japanese have increased their saturated fat consumption by a factor of four. Over that period their rate of heart disease has dropped 60%"**

--Dr. Malcom Kendrick from a BMA meeting in Leeds 14 Nov 2007

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## Why Don't People Know this Stuff?

“At this time, **research** on how specific saturated fatty acids contribute to CAD and on the role each specific saturated fatty acid plays in other health outcomes **is not sufficient to make global recommendations for all persons to remove saturated fats from their diet.**”

--The American Journal of Clinical Nutrition, Vol 80, no. 3, 550-559, September 2004

<http://www.ajcn.org/cgi/content/full/80/3/550>

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This is a 'main stream' nutrition journal. CAD is coronary artery disease. Note the statement in red. What they are saying is that the jury is out on the dietary needs for saturated fats so they should not be making official recommendations as to how much (or little) needs to be consumed.

## Summary

- Saturated fats are actually good for you
  - They don't cause obesity
  - They don't cause heart disease
  - They protect the body and repair it
- Cholesterol is not your enemy
- Both obesity and heart disease are a function more of sugars, trans-fats, than saturated fat consumption
- A calorie is *NOT* a calorie. Fats calories are utilized differently than carbohydrate calories.
- All sugars are *NOT* created equal. Fructose is metabolized differently than glucose and fructose is toxic to the liver.
- Soy is really quite bad for you (in the way and quantity that Americans prepare and eat it)
- Food preparation should be from scratch in order to avoid the problems of 'foods' that our body does not know how to deal with.

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## Big Fat Lies



Reference: <http://www.youtube.com/watch?v=v8WA5wcaHp4>

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A humorous video, but introduces doubt regarding the lipid theory hypothesis. (The copy embedded here is not the best copy, due to the conversion I had to do. It is better to play it off of the youtube site.)



## FINAL THOUGHTS

- Think about food differently
- Do your own research
- Decide what works for you

## An Alternative Point of View

- Contact information:
  - [glenn@beverlabs.com](mailto:glenn@beverlabs.com)

# Website references

Native Nutrition:

<http://www.westonaprice.org>

Cholesterol links and information on fats.

<http://www.cholesterol-and-health.org.uk/sat-fat.html>

<http://www.ravnskov.nu/myth1.htm>

<http://www.westonaprice.org/know-your-fats/531-cholesterol-friend-or-foe.html>

<http://www.healthbeatblog.org/2008/02/the-cholesterol.html>

<http://www.healthbeatblog.org/2008/02/the-origins-of.html>

<http://www.thincs.org/>

<http://ezinearticles.com/?Cholesterol-Does-Not-Cause-Heart-Disease&id=35406>

<http://www.naturalnews.com/z022985.html>

[http://www.healthmyths.net/view\\_learning.php?learning\\_id=11](http://www.healthmyths.net/view_learning.php?learning_id=11)

<http://www.ravnskov.nu/cholesterol.htm>

<http://www.spaceoec.net/>

<http://www.cholesterol-and-health.com/index.html>

<http://www.jpands.org/vol11no3/colpo.pdf>

<http://www.treelight.com/health/healing/Cholesterol.html>

<http://www.drbriffa.com/blog/2009/04/17/no-evidence-that-saturated-fat-causes-heart-disease-its-official/>

If you are interested in cholesterol these two Youtube videos are short:

<http://www.youtube.com/watch?v=v8WA5wcaHp4>

<http://www.youtube.com/watch?v=UkhFe75b7r4&NR=1>

<http://www.youtube.com/watch?v=I8SSCNaaDcE&feature=related>

And if you have a bit of time, this one is 9 minutes:

<http://www.youtube.com/watch?v=awA2fsa94MI&feature=related>

<http://www.youtube.com/watch?v=XPPYaVcXo1>

If you like the technical stuff this is the REALLY interesting one:

<http://www.youtube.com/watch?v=fHIA8usGxEM&feature=related>

9 minutes of everything you never knew about statins:

[http://www.youtube.com/watch?v=jE\\_RIQY53ys&feature=related](http://www.youtube.com/watch?v=jE_RIQY53ys&feature=related)

Vitamin D and cholesterol:

<http://www.cholesterol-and-health.com/Vitamin-D.html>

A 30 minute interview with Mary Enig on trans fats:

<http://video.google.com/videoplay?docid=-616494190219208343&q=mary%2Benig&total=2&start=0&num=10&so=0&type=search&plindex=0>

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**HAVE A NICE  
DAY!**