



## Margarine vs. Butter: The Trans Fat Debate

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Just when you thought you knew which types of fats to watch out for on nutrition labels, you begin hearing about "trans fats", and they're not even mentioned on the label!

Trans fats are formed during a process in which vegetable oils are heated and exposed to hydrogen gas. This process, called hydrogenation, changes the structure of the fat in some places along its carbon backbone. The added hydrogen exerts a slight pull that rotates the fat chain, changing the configuration from what in chemistry is called "cis" to "trans." Thus the name trans fats. The process is done to improve the texture and keeping quality of oil-based fats.

Trans fats also occur naturally, mainly in meat and dairy products. Overall, trans fats make up from 2 to 4 percent of the calories in our diet, compared to 12 percent for saturated fats and 30 percent for total fats.

Hydrogenated fats are nothing new. In 1911, cottonseed oil was first hydrogenated in the United States to produce vegetable shortening as a replacement for lard. The manufacturing process became more established in the 1930s as margarine entered the scene. As diets high in saturated fat became more strongly associated with high blood cholesterol and elevated risk of heart disease, more people began switching to lower saturated-fat products like vegetable margarine.

And, research has shown this was a good change. In the past 30 years since low saturated fat diets have been advocated, there has been steady progress in reducing the overall risk of developing heart disease among Americans. However, a spate of new research has brought trans fats into the limelight, conjuring confusion about the best recommendations for fat intake and heart disease once again.

Specifically Consumers are asking, "What's better for your heart, butter or margarine?" While most researchers still agree margarine is better, they recommend tub margarines over stick varieties to reduce the level of trans fats, and recommend spreading both butter and margarine lightly to lower overall calories from fat.

The evidence that saturated fat, like that found in butter, raises total and LDL cholesterol, or bad cholesterol, is still intact. What the new evidence on trans fats says is that Consumers at risk of heart disease need to be careful not to replace the saturated fat in their diets with foods high in hydrogenated oils, a mistake that's all too easy to make. Processed foods marketed low cholesterol and low in saturated fat are often the very foods high in trans unsaturated fats.

While there's no category for trans fats on the nutrition panel, foods high in trans fats are those that list partially hydrogenated vegetable oil on the ingredient list.

Common sources of trans fats include stick margarines, savory and fried snack foods such as crackers, potato chips and corn chips, and baked goods and pastries including packaged cookies, doughnuts and desserts.

The skinny on fats? Most experts emphasize reducing fat in general and replacing saturated fats in the diet with fats shown to have a beneficial effect on cholesterol levels. These are the non-hydrogenated polyunsaturated and monounsaturated vegetable oils. Polyunsaturated fats include safflower, corn and soybean oils; monounsaturated fats include olive and canola oils.

For more information, contact your local Colorado State University Cooperative Extension office.

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## Margarine Vs Butter: Which is the Best Spread for Your Health?

### Compare Some Interesting Facts About Margarine and Butter

By Cassidy Emmerson

I got interested in the debate over butter vs margarine when I discovered a thought-provoking sight one day. I had sticks of butter and a tub of margarine frozen in my freezer. Both had been there about the same length of time. When I inspected the butter, it was fine. It was still yellow in color, and it tasted fine when I used it.

The margarine, on the other hand, was a scary sight. When I opened the tub, the first thing I noticed was that it was no longer the consistency of margarine. It had turned into- believe it or not- a pale, powdery substance. There was no question that the margarine was no longer edible. But, I began to wonder, what does it turn into inside our bodies?

First, let's look at the origins of these two spreads. Butter is a natural dairy product that has been in existence for many centuries. Do you realize that it's even mentioned in the Holy Bible? If you look at Genesis 18:8, it reads, "And he took butter, and milk, and the calf which he had dressed, and set it before them; and he stood by them under the tree, and they did eat." Proverbs 30:33 reads, "Surely the churning of milk bringeth forth butter..."

Butter is a tasty spread that's made from milk cream. The cream is "churned." Churning turns the cream into a partially solid product. It takes a lot of cream to make butter: twenty one pounds of cream equal one pound of butter, in fact.

Margarine is far from being natural. It's a man made product. Margarine was invented by a French chemist in the late eighteen hundreds. Today, this spread is made by using vegetable oils.

When it comes to weight loss issues, according to research, butter has the same amount of calories and fat content in it as margarine does. Yet cardiologist Arthur Agatston, M.D, inventor of the popular "South Beach Diet", advises using a low fat substitute for butter. Dr. Agatston also advises his dieters to use canola or olive oil when possible.

On the other hand, Robert C. Atkins, M.D., the inventor of "The Atkins Diet", condones the use of butter for his dieters. Dr. Atkins. actually encourages his clients to eat butter, cream, eggs, cheese and bacon.

When it comes to cooking with either product, butter is the best choice. Why? Because it melts nicely. It also adds a sweet, buttery taste to favorite foods such as vegetables and potatoes.

Margarine doesn't fare as well when it's heated. According to scientific research, margarine actually turns into rancid trans-fatty acids. These acids, also called, "Trans Fats", are often avoided like the plague in today's world. Trans Fats are known to clog arteries. This clogging can lead to heart disease, strokes, heart attacks, and other medical problems.

Trans fats raise a person's Low Density Lipoprotein (LDL). The LDL is the "bad" cholesterol. They also lower the High Density Lipoprotein (HDL). HDL is the "good" cholesterol.

Three established health organizations- The Food and Drug Administration, the National Heart, Lung, and Blood Institute and the American Heart Association all agree that, in order to promote a healthy body, people should avoid eating trans-fatty acid or fats.

Health facts aside, as far as taste goes, some people prefer the creamy, rich taste of natural butter. Others prefer the taste of margarine instead. Your preference might well depend on what you're used to. That is, if you grew up eating butter, then you probably still eat butter as an adult.

In conclusion, you'll need to compare the facts yourself in order to decide what spread is better for you!

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### Takeaways

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❑ Dr. Agatston recommends a low cal spread; Dr. Atkins promotes the use of butter. a chemist named Hippolyte M<sup>A</sup>ge-Mouriez. It's made from margoric acid; hence its name.

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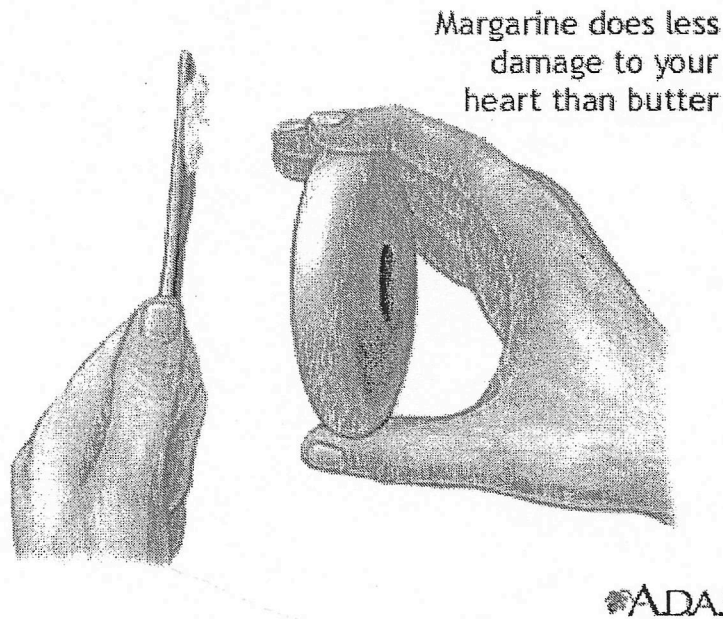
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## Medical Encyclopedia

### Margarine vs butter



The fats in margarine have a lower risk for causing heart damage than the fats in butter, because butter contains saturated fat. Eating too much saturated fat is one of the major risk factors for heart disease. A diet high in saturated fat may cause a soft, waxy substance, called cholesterol, to build up in the arteries.

**Update Date: 8/13/2004**

Updated by: A.D.A.M. Medical Illustration Team

**ADAM**



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## Butter vs Margarine

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### Butter vs Margarine

March 2, 2004 - 19:49

[Health](#)

#### DO YOU KNOW...

The difference between margarine and butter?

Both have the same amount of calories. Butter is slightly higher in saturated fats at 8 grams compared to 5 grams. Eating margarine can increase heart disease in women by 53% over eating the same amount of butter according to a recent Harvard Medical Study. Eating butter increases the absorption of many other nutrients in other foods. Butter has many nutritional benefits where margarine has a few only because they are added! Butter tastes much better than margarine and it can enhance the flavors of other foods. Butter has been around for centuries where margarine has been around for less than 100 years.

#### Now for Margarine...

- Very high in Trans Fatty Acids...
- Triple risk of Coronary Heart Disease...
- Increases total cholesterol and LDL (this is the bad cholesterol)
- Lowers HDL cholesterol, (the good cholesterol)
- Increases the risk of cancers by up to five fold.
- Lowers quality of breast milk ...
- Decreases immune response...
- Decreases insulin response.
- And here is the most disturbing fact....

#### HERE IS THE PART THAT IS VERY INTERESTING!

Margarine is but ONE MOLECULE away from being PLASTIC...This fact alone was enough to have me avoiding margarine for life and anything else that is hydrogenated (this means hydrogen is added, changing the molecular structure of the substance).

YOU can try this yourself: purchase a tub of margarine and leave it in your garage or shaded area. Within a couple of days you will note a couple of things: no flies, not even those pesky fruit flies will go near it (that should tell you something) ... it does not rot or smell differently...because it has no nutritional value, nothing will grow on it...even those teeny weeny microorganisms will not find a home to grow. Why? Because it is nearly plastic. Would you melt your Tupperware and spread that on your toast?

more info here:

Margarine vs. Butter

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**BreakTheChain.org**  
Stop junk e-mail  
and misinformation

## Is Butter Better?



**UPDATE (1/31/2006)** It seems like each week we receive an important notice about our health that contradicts what we've long been taught about the things we eat. One week butter is bad for you, the next it's good. When I first wrote an article on this chain letter back in 2003, I had no idea how long-lived it would be or how heated the debate would get. The Butter Battle wages on...

### SAMPLE CHAIN LETTER TEXT

BUTTER VERSES MARGARINE

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YOU can try this yourself, purchase a tub of margarine and leave it in your garage or shaded area, within a couple of days you will note a couple of things, no flies, not even those pesky fruit flies will go near it, ( that should tell you something) it does not rot, smell differently...Because it has no nutritional value, nothing will grow on it, even those teeny weeny microorganisms will not find a home to grow...Why? because it is nearly plastic. Would you melt your tupperware and spread that on your toast?

Yuck!

END CHAIN LETTER TEXT

What you're looking at above is not a coherent essay written by a single, knowledgeable author. It is actually a compilation of facts and opinions from many unidentified sources, incorporating a good deal of sensational and questionable information. However, its basic premise - that trans-fatty acids found in most margarine have been linked to heart disease and other conditions - is basically correct.

A 1994 Harvard University study, as well as research from other credible sources, concluded that a diet high in trans-fat doubles the chance for heart attack and decreases life expectancy. While trans-fats can occur naturally, they are most commonly associated with chemical preservative techniques, such as hydrogenation. During hydrogenation, liquid fats, like most vegetable oils, are infused with hydrogen atoms to make them semi-solid at room temperature. Unfortunately, the process produces trans-fatty acids, often in large amounts.



The dangers of trans-fatty acids have only recently been publicized. Health and dietary experts now recommend that you limit your intake of hydrogenated or partially hydrogenated foodstuffs as much as possible. In its 2005 revised nutrition guidelines, the U.S. Department of Agriculture warns of trans-fats. And, effective 2006, the U.S. Food and Drug Administration requires manufacturers to list trans-fat content on nutrition facts labels.

But, butter isn't necessarily the healthier alternative. While butter and Margarine have similar caloric values, butter is made from milk fat and is generally is much higher than margarine in saturated fat, which is also known to be detrimental to heart health. Margarine contains small amounts of polyunsaturated and monounsaturated fats, which are generally considered healthier than saturated. According to a recent study published in the Journal of the American Medical Association, switching from butter to margarine can greatly reduce blood cholesterol levels. Further, not all margarine is created equal. Many brands have developed semi-solid spreads without hydrogenation - and thus, no trans-fat. Most brands that are trans-fat free proudly and prominently state so on their packaging.

The butter versus margarine debate often comes down to the "naturalness" of each product. Margarine is indeed a durable foodstuff that can survive outside refrigeration without spoiling. However, its durability is not because margarine is chemically similar to plastic, as the letter above asserts. Rather, margarine is made from vegetable oils (corn, canola, olive, etc.), which are less susceptible to bacteria and fungi than dairy fats.

It is not true that margarine is "but ONE MOLECULE from being PLASTIC," and, even if it was, this doesn't mean that eating margarine is like eating plastic (though some would argue it tastes like it). Many items in nature are chemically similar to one another, but that doesn't make them similar in appearance or effect. It's not the molecules that a substance is made of that defines it, but rather how those molecules are arranged. Both butter and margarine contain fats, which are basically groupings of the elements carbon, hydrogen and oxygen. The difference is how those atoms are bonded together. (Naturally occurring fatty acids generally have one "cis" orientation, meaning both hydrogen atoms are on the same side as the carbon atoms. Trans-fatty acids, logically, have a "trans" orientation, meaning that at

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least one hydrogen atom is opposite the carbons. Essentially, the molecules making up both butter and margarine contain the same atoms, just in different configurations. Margarine has much more in common chemically with butter than it does plastic.

Both butter and margarine have their pros and cons. Butter is more natural (and some would argue more flavorful), is not hydrogenated and, thus does not contain trans-fats. Margarine, on the other hand, is cholesterol free, lower in saturated fats and is increasingly becoming available in trans-fat free varieties. Whichever spread you choose, experts say moderation is key. Too much of either is definitely a bad thing.

We'll give the final word on this argument to the American Heart Association, which addresses the 'butter v. margarine' debate on its web site:

Butter is rich in both saturated fat and cholesterol, so it's potentially highly atherogenic. That means it contributes to the build up of cholesterol and other substances in artery walls. Such plaque deposits increase the risk of heart attack and stroke.

Most margarine is made from vegetable fat and provides no dietary cholesterol. The more liquid the margarine (in tub or liquid form), the less hydrogenated it is and the less trans fatty acids it contains. On the basis of current data, we recommend that consumers follow these tips:

- Use naturally occurring, unhydrogenated oil such as canola or olive oil when possible.
- Look for processed foods made with unhydrogenated oil rather than hydrogenated oil or saturated fat.
- Use margarine as a substitute for butter, and choose soft (liquid or tub) margarines over harder, stick forms. Use margarine with no more than 2 grams of saturated fat per tablespoon and with liquid vegetable oil as the first ingredient.

The American Heart Association's Nutrition Committee strongly advises that healthy Americans over age 2 limit their intake of saturated fat and trans-fat to less than 10 percent of total calories. Healthy people should adjust their total fat intake to match their energy expenditure so they don't gain weight. To lose weight, it's helpful to limit total fat to no more than 30 percent of calories.

Minimize trans-fat intake. If you limit your daily intake of fats and oils to 5-8 teaspoons, you aren't likely to get an excess of trans-fatty acids.

BreakTheChain.org generally recommends against relying upon or forwarding health advice via e-mail chain letters. The medium is simply too unreliable. If you have a question about your particular risks from using butter or margarine, your best source of advice remains your family physician, who can analyze your health and diet and help you make the best decision for your situation. Break this chain.

## Information

Is margarine healthier than butter? Neither is ideal, because butter is loaded with saturated fat, and almost all margarines have some saturated fat and trans fatty acids. However, if you must use one or the other, margarine may be better than butter.

Here are some guidelines:

- Use canola or olive oil instead of butter or margarine.
- Choose soft margarine (tub/liquid) over harder stick forms.
- Choose margarines with liquid vegetable oil as the first ingredient.
- Even better, choose "light" margarines that list water as the first ingredient, because these are even lower in saturated fat.
- If you have high cholesterol, talk to your doctor about using margarines made from plant sterols or stanols. These substances, made from soybean and pine tree oils, can help lower your LDL cholesterol by as much as 6% to 15%. The AHA recommends further study for children, pregnant women, and those without high cholesterol, however.

Limit:

- Margarines, shortening, and cooking oils that have more than 2 grams of saturated fat per tablespoon.
- "Hydrogenated" and "partially-hydrogenated" fats (read ingredients on food labels) because these are high in saturated fats and trans-fatty acids.
- Coconut, palm, and palm kernel oils because they are very high in saturated fat.
- Shortening or other fats made from animal sources.

# Share The Wealth by Chris Gupta

Self-Sufficiency Is The Key To Empowerment And Freedom

November 24, 2004

## BUTTER VERSUS MARGARINE

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The following article (extracted from [Dr. Lawrence Wilson's information dense site](#)) is one of the best that I have seen on this issue. While the propaganda mill of the industry has hood winked us into thinking that their counterfeit copy is better - the real reason is the considerable profit that margarine, and other processed foods bring over the more expensive natural products. The cost of the margarine is based on denatured vegetable oil which only costs a few cents, while good butter may cost a few dollars. This provides considerable room for easy profits. It does not take rocket science to market margarine just slightly less than butter and pocket the resulting huge profit.

*Chris Gupta*

Dr. Price's older out of print edition of "[Nutrition and Physical Degeneration](#)" mentioned below is available free from my favorite [Soil and Health Library](#) till the end of this year when the copywrite laws change and the gem will be removed. CG  
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### BUTTER VERSUS MARGARINE

In the rush to lower cholesterol, many health authorities recommend eating margarine instead of butter. However, there is more to consider about margarine than just cholesterol.

#### WHAT IS MARGARINE?

'Hardening' vegetable oil by bubbling hydrogen through it at high temperature produces margarine. The hydrogen saturates some of the carbon-carbon bonds of the oil. The product then becomes hard or solid at room temperature. When the carbon bonds are saturated, the product is called a saturated fat. Margarine contains some saturated fat. Otherwise it would not be hard at room temperature. The ads and the packaging for margarine are often deceptive. Advertising often states it contains 'polyunsaturated oil'. However, the processing saturates or partially saturates the oil.

Margarine begins as chemically-extracted, refined vegetable oil. This is a poor quality product to begin with. **The high temperature needed to produce margarine destroys any vitamin E, and perhaps other nutrients left in the oil.** Also, the final product contains trans-fatty acids. These are man-made fatty acids. Research shows that trans-fatty acids increase inflammation in the body. This can worsen illnesses such as colitis and arthritis. Very recent research indicates that trans-fatty acids in margarine raise LDL levels. LDL is the "bad" cholesterol.

*Hardening agents used in the production of margarine include nickel and cadmium. Nickel is a toxic metal that in excess causes lung and kidney problems. Cadmium is among the most toxic of the heavy metals. It may contribute to serious diseases such as arteriosclerosis, high blood pressure and malignancy.*

#### WHAT IS BUTTER?

Cream is the raw material for butter. Butter is a partially saturated fat, just like margarine. However, butter is a natural product that does not contain trans-fatty acids. **Butter is an excellent source of fat-soluble vitamins such as vitamin A, D, E and K. These are not found to any degree in margarine.** The vitamin content of butter varies seasonally, depending on the diet of the animals from which it is derived. Butter also contains some milk solids, giving it a whitish color. Ghee or clarified butter does not contain the milk solids.

Dr. Weston Price identified a factor in butter that is essential for proper growth and development of the bone structure. He called it 'activator X' and wrote about it in his book, Nutrition and Physical Degeneration. Dr. Price was able to reverse severe tooth decay in children by feeding them one meal a day of highly nutritious food - including butter.

Although many people are sensitive to cow's milk dairy products, often butter is well-tolerated. This is because butter is almost a pure fat, and does not contain many of the allergens found in other milk products. **Butter made from certified, raw (unpasteurized) cream is available in some areas. It the best quality butter available next to making it from your own cow.**

#### IS AVOIDING BUTTER THE WAY TO CONTROL CHOLESTEROL?

The observations of many natural health practitioners indicate that a balanced body chemistry is the key to normalizing cholesterol. Dr. William Koch, MD, an eminent physician, wrote:

*"Cholesterol ... is no problem when the oxidations are efficient and diet is sensible. In all our observations, high levels drop ... it steadies to a good normal when the oxidations are re-established to normal."* (Normal oxidations refers to the efficient burning of food and the generation of adequate energy from food.)

Most cholesterol is manufactured within the body. A maximum of about 4% of all cholesterol comes from the diet. Cholesterol is the raw material for the adrenal stress hormones and the sex hormones. The body often reacts to stress by producing more cholesterol. This allows the body to make more stress-fighting hormones. As biochemical stress is reduced through a scientific nutrition program, cholesterol levels often decrease without the need for restrictive diets.

In fact, eating some animal products often helps balance body chemistry. In these instances, cholesterol levels or the cholesterol/HDL ratio improves although the diet contains cholesterol-containing foods.

In general, fast oxidizers or fast metabolizers can eat more butter and other fatty foods. True fast oxidizers run lower cholesterol levels. They also burn up fats more rapidly and efficiently. Slow oxidizers should restrict all fats and oils, including butter. However, a small amount of butter (1 teaspoon daily) may be eaten by slow oxidizers.

#### SUMMARY

The argument for eating margarine and other products containing hydrogenated oils are their lack of cholesterol. Margarine is also less expensive than butter. However, margarine contains refined, artificially saturated vegetable oil. It also contains harmful trans-fatty acids, and often residues of the toxic metals nickel and cadmium. Butter is a natural food and a good source of important fat-soluble vitamins. You will pay more for butter, but nutritionally it is well worth it.

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