

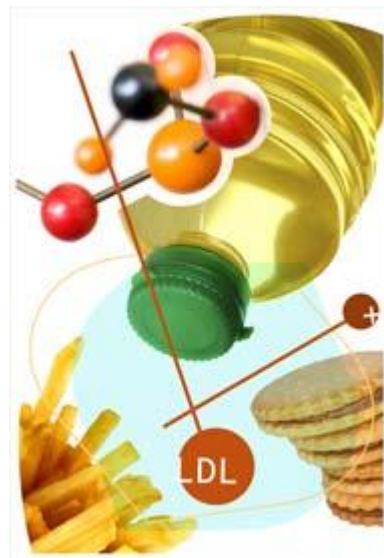


PERSONAL HEALTH

Butter or Margarine? First, Study the Label

By JANE E. BRODY
Published: September 5, 2006

The culinary battle between butter and margarine has raged for decades, but, it turns out, for the wrong reason. We now know that the partly hydrogenated fatty acids in margarine and many processed foods are harmful to health — more harmful, in fact, than the saturated fat in butter.



Stuart Bradford

This does not mean butter is healthier. But it does mean consumers need to pay far more attention to the fat content of all the foods they consume, both at home and in restaurants. The process commonly used to convert liquid vegetable oil into a fat with the consistency of butter, the baking qualities of lard and a long shelf life forms trans fatty acids, which every diner and snacker should avoid.

Gram for gram, trans fats, as they are commonly called, are more hazardous to the heart than the saturated fats that damage arteries. Like saturated fats, they raise the “bad,” or L.D.L., [cholesterol](#) that can become glued to arteries; but unlike saturated fats, they also lower the “good” H.D.L. cholesterol that clears away these harmful deposits.

Butter is not a heart-healthy choice because its saturated fat far outweighs the trans fat in traditional stick

Related Web Links

[New and Existing Oils and Fats Used in Products with Reduced Trans Fatty Acid Content \(Journal](#)

ARTICLE TOOLS
SPONSORED BY
THE LAST KING
OF SCOTLAND

More Art

MOST PC

1. B
2. K
3. I
4. E
5. M
6. T
7. M
- 8.
9. E
10. M

of the American Dietetic Association)
[Trans Fatty Acids and Cardiovascular Disease](#) (NEJM)

margarines. Also, butter contains cholesterol, which can raise blood levels of cholesterol in some people; margarine, which is made from vegetable sources, does not.

[Go to Co](#)



Readers' Opinions

[Forum: Fitness and Nutrition](#)

The good news is that a [Food and Drug Administration](#) ruling, which took effect in January, requires food companies to list the amount of trans fats on the [nutrition](#) label of every package. As a result, most companies have switched the fats they use so they can say “no trans fats” on the label.

The bad news is that some substitutions — to tropical oils like palm, palm kernel and coconut — are reintroducing more heart-damaging saturated fats to American diets and causing environmental devastation in several countries where palm and coconut trees grow.

[Chicago](#)

Also in 7

[Bost](#)

[Aust](#)

[Was mon](#)

Furthermore, consumers who use the “no trans fats” label proclamation as their buying guide can still end up buying a lot of what nutritionists call junk foods. And the F.D.A. ruling does not apply to foods sold in restaurants, bakeries, takeout and other retail food outlets where unsuspecting consumers could be loading up on harmful trans fats.



ADVERTI

That prompted the New York Department of Health and Mental Hygiene in March to ask the city’s 20,000 restaurants and 14,000 food suppliers to eliminate partly hydrogenated oils from kitchens and provide foods and food products free of industrially produced trans fatty acids.

[Get more out of nc](#)

What Trans Fats Do

The health concerns about trans fats go far beyond the effects on blood cholesterol. In [a report](#) in the June issue of The Journal of the American Dietetic Association, researchers led by Katherine M. Phillips, a biochemist at [Virginia Polytechnic Institute](#), reviewed what is known about trans fats and their alternatives.



INSIDE

The “trans” in trans fatty acids refers to the biochemical configuration of the fat molecule. Natural polyunsaturated fatty acids in vegetable oils have a “cis” conformation: the hydrogen atoms in each double bond are on the same side. But the processes used in partial hydrogenation results in some double bonds with a “trans” conformation: hydrogen atoms on opposite sides of each double bond.

This little biochemical switch turns out to have potentially devastating health effects. In

addition to raising bad cholesterol (especially the small L.D.L. particles that stick to blood vessels) and lowering good cholesterol, trans fatty acids raise blood levels of triglycerides and lipoprotein (a), which raise cardiovascular risk.

But that is not all. Trans fatty acids, when compared with cis-unsaturated fats, also raise blood levels of substances like C-reactive protein that are markers of bodywide inflammation and cellular dysfunction, also linked to heart and blood vessel disease.

Trans fats can interfere with the metabolism of essential fatty acids, the synthesis of healthful omega-3 fatty acids and the balance of prostaglandins, disrupting protection against blood clots. And high intakes of trans fats may cause insulin resistance, a marker of type 2 [diabetes](#).

In a [recent review](#) in The [New England Journal of Medicine](#) on the relationship between trans fats and [heart disease](#), even low levels of trans fats in the diet — a mere 1 percent to 2 percent of calories per day — were linked to a substantially increased risk of heart disease. In studies of 140,000 individuals, consuming 2 percent of calories as trans fats resulted in a 23 percent increase in heart disease.

In 1983, scientists at the [United States Department of Agriculture](#) estimated that the average American consumed 8 grams of trans fats a day (that's 3.6 percent of a 2,000-calorie diet), with 85 percent coming from foods containing partly hydrogenated oils and the rest from trans fats naturally present in meat and dairy products.

The low levels of trans fats in meats and dairy products result from hydrogenation by microbes in the gut of ruminant animals (cows, sheep and goats). In addition, small amounts of trans fats are formed when vegetable oils are refined at high temperatures.

1 | 2 [NEXT PAGE »](#)

[More Articles in Health »](#)

[Start your 14-day free trial of TimesSelect now.](#)

Ads by Google

what's this?

Review of trans fats

Global industry review and outlook. Available to purchase now
www.just-food.com

Trans Fatty Acid Analysis

Combined GC & Infrared system yields reliable ID for Trans Fats
www.spectra-analysis.com

Cholesterol Levels Safe

Get your cholesterol numbers into a healthy range—Free expert advice
Health.MSN.com/Cholesterol

Related Articles

- [AMERICA'S OIL CHANGE: Losing Trans Fats; Fat Substitute, Once Praised, Is Pushed Out of the Kitchen \(February 13, 2005\)](#)
- [CITYWIDE; Paying a Price for Doughnuts, Burgers and Pizza \(January 25, 2005\)](#)
- [THE MEDIA BUSINESS: ADVERTISING; A Warning in Expanding Waistlines \(July 10, 2003\)](#)
- [PERSONAL HEALTH; Pounds Lost on Atkins Diet May Quickly Return \(May 27, 2003\)](#)

Related Searches

- [Oils and Fats](#)
- [Cholesterol](#)
- [Medicine and Health](#)
- [Labeling and Labels](#)

TimesSelect



Araton: Owens and the No-Huddle News

ESCAPES »



36 Hours in Honolulu

MOVIES »



Movie Minutes: 'Guide to Recognizing Your Saints'

TimesSelect

Voters and 'Values'

The Christian right's ability to stir voter passions is based on psychology, writes Judith Warner.

FAS



Fas| and