



## Interesterified Fat -- Is it Worse Than Trans Fat?

It was inevitable that food manufacturers and the edible oil industry would find a substitute for trans fats, now that [consumer backlash](#) is forcing the issue.

After all, we're talking big business here. Over 90 percent of the money Americans spend on food is spent on the processed stuff.

Now that the [health dangers of trans fats](#) have been clearly exposed, the food industry would do you a great favor by returning to the use of natural saturated fats for frying and in baked goods. But that would mean reversing their entirely unscientific, 50-year campaign to vilify saturated fats, and would bring an end to the enormously powerful edible oil industry.

Since that's not about to happen, it's time for a quick review of the bad news about trans fats, followed by an investigation into what seems to be a fast-growing substitute: interesterified fats.

### Why Trans Fats are Being Replaced in Processed Foods

Trans fats cause a host of health problems. Among the most serious, trans fats:

- Raise your LDL ("bad") cholesterol levels and lower HDL ("good") cholesterol levels
- Are believed to contribute to auto-immune disease, cancer, heart disease, fertility problems, and bone degeneration
- Inhibit insulin receptors in your cell membranes and are the main cause of type 2 diabetes, characterized by high levels of insulin and glucose in your blood

### The Trans Fat Replacement -- Interesterified Fat

Interesterified fats have been an ingredient in foods in the U.S. since the 1950s. They were introduced in Europe even earlier -- in the 1920s -- and have been in widespread use there for the last 15 years as a substitute for partially hydrogenated oils (trans fats).

These fats are oils that have been chemically altered. They are hydrogenated and then rearranged on a molecular level.



Although technically not the same as partially hydrogenated oils, the unnatural manipulation of lipid molecules in interesterified fats raises similar health concerns to those caused by trans fats.

### **The Process of Interesterification**

The interesterification process hardens fat, similar to the hydrogenation process, but without producing oils that contain trans fats. The end product, like trans fat, is less likely to go rancid and is stable enough to use to fry foods.

There are three ways to modify natural fat:

1. Fractionation
2. Hydrogenation (the process used in trans fat production)
3. Inter-*ester*-ification

Interesterification acts on compounds in oil known as *esters*. The process combines a natural vegetable oil with stearic acid and alkylonic catalysts. Either enzymes or chemicals are used to modify the molecular structure of the oil in order to make it perform like a fat. The end result is a fat rich in stearic acid.

Interesterification is similar to the process that creates trans fats. Like hydrogenation, which generates unnatural trans fats, interesterification also produces molecules that do not exist in nature.

The highly industrialized process of interesterification may result in a product that is trans-free, but that product will still contain chemical residues, hexanes, and other hazardous waste products full of free radicals that cause cell damage.

### **The Use of Interesterified Fat is Already Raising Health Concerns**

[Studies](#) show that interesterified fat raises your blood glucose and depresses insulin production. These conditions are common precursors to diabetes, and can present an even more immediate danger if you already have the disease.

After only four weeks consuming these fats, study volunteers' blood glucose levels rose sharply -- by *20 percent*. This is a much worse result than is seen with trans fats.

Insulin levels dropped 10 percent on the trans fat diet used in the studies, and twice that on the interesterified fat diet. Study results conclude interesterified fat

affects the production of insulin by your pancreas, as opposed to the insulin receptors in your cell membranes.

Interesterified fat also reduces levels of good (HDL) cholesterol.

### **The Problem with All Processed Vegetable Oils**

Natural vegetable oils that have been altered create problems for your body at the cellular level. These fats are no longer in their natural state, and your body doesn't know how to handle them. Your system will try to make use of them and in the process, these fats end up in cell membranes and other locations where they can wreak havoc with your health.

If you are male, the danger of these man-made fats is an increased risk of heart disease. In men, these unnatural oils trigger an immune response as they enter your artery walls. As your body attacks this unknown intruder, your arteries become inflamed, leading to a dangerous build-up of plaque.

If you are a woman, your body will react somewhat differently. Processed vegetable oils don't appear to trigger an immune response in the arteries of women. Rather, they get deeper into your body and into fatty tissues like those of the breast, increasing your cancer risk.

Finally, a problem with processed vegetable oils no matter what your gender is the accumulation of the toxic byproducts of the catalysts used to change the oils from their natural state. These catalysts are created from metals like aluminum and nickel. They build up in your nervous system, are difficult to eliminate, and can lead to neurological problems and other health concerns.

### **How to Recognize Interesterified Fats in Your Food**

You'll find interesterified fats in the same types of processed foods that use trans fats.

Products such as:

- margarine and shortening
- fried foods like French fries and fried chicken
- doughnuts



- cookies
- pastries
- crackers
- processed foods like cereal and waffles
- salad dressings
- mayonnaise

### **Interesterified Fat Will Likely NOT Be on List of Ingredients**

If you're in the habit of reading product labels, you may or may not see the word "interesterified" fat among the list of ingredients, even if it's in there.

The FDA has ruled that food manufacturers can use terms like *high stearate* or *stearic rich* fats in place of "interesterified." To confuse things even further, if you see the terms *fully hydrogenated vegetable oil*, *palm oil* and/or *palm kernel oil* on labeling, the product may or may not contain interesterified fat.

And beware [eating out](#), because while restaurants and their suppliers are touting removal of trans fats from the foods they serve, very little is being said about the fats that are replacing them.

The bottom line is that if a processed food label includes "vegetable oil" as an ingredient, you can be absolutely sure you're about to consume either interesterified fats, or trans fats.

And if a processed food product is labeled "0% trans fats" or "no trans fats" but is made from vegetable oils, you can be certain it contains either interesterified fats or fully hydrogenated vegetable oils.

### **Position on Interesterified Fats**

I'm a firm believer in eating foods in the *most natural unprocessed state* as possible.

Foods that have been altered by an industrial process do not metabolize in your body the same way natural foods do, and eating them is an invitation to serious health problems.

[My firm position](#) is that you shouldn't knowingly put interesterified fats into your body. You can be virtually assured that no one knows at this time what the long-term health concerns of this product will be.

It took the mainstream medical community and food manufacturers 30 years to determine and admit that trans fats are dangerous to your health. It could take another 30 years for the truth to come out about interesterified fats -- or any other substitute fat that does not exist in nature.

### Options to Consider

Fortunately avoiding these fats is relatively easy as they are in virtually all the foods that trans fats are, so by avoiding trans fat you will also avoid interesterified fats.

If you're like most Americans, your diet consists predominantly of processed food. And eating processed foods, especially those with a long shelf life, means you're consuming interesterified fats, trans fats, or some other type of man-made ingredient that your body was not designed to metabolize.



- If you want to avoid dangerous fats of all kinds, your best bet is to [eliminate processed foods](#) from your diet.
- Use [butter](#) instead of margarines and vegetable oil spreads. Butter is a healthy whole food that has received an unwarranted bad rap.
- Use [coconut oil](#) for cooking. It is far superior to any other cooking oil and is loaded with health benefits.

### Related Links:

- » [Trans-Fat: What Exactly is it, and Why is it so Dangerous?](#)
- » [Surprise -- Saturated Fat Really Is Good For You](#)
- » [The Case of the Phantom Fat The Dangers of Trans Fat](#)