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# POISON

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HYDROGENATED OILS

BY MIKE ADAMS



**POISON**

**IN THE**

**FOOD**

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The Health Ranger



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# The truth about hydrogenated oils and our nation's disease epidemics

I'm about to share with you a true story about how the world's population is being poisoned by an ingredient that is intentionally added to our food supply. I'm going to share with you details of how the World Health Organization implored nations to outlaw this ingredient in 1977, but the food companies continued to lobby for keeping the ingredient legal because it was convenient for them and boosted their profits, never mind that it was wreaking havoc on the health of consumers. What kind of havoc? – Cancer, heart disease, low-birth-weight infants, malformed brains and nervous systems in fetuses and infants, infertility in men and women, breast cancer, prostate cancer, weight gain, type 2 diabetes, rotting teeth and gums. I'm going to name a lot more right here in this program.

I'm talking about hydrogenated oils. Hydrogenated oils are poisons, in the sense that they were never intended for human consumption. They don't exist in nature. They're not found in any natural, raw, unprocessed foods at all. In fact, there is no nutritional requirement whatsoever in the human body for hydrogenated oils, or for trans-fatty acids which are produced as a side effect of the hydrogenation process.

But what's really amazing about this story is not all the damage that this ingredient causes, nor all of the diseases that it has promoted, nor the direct correlation between the skyrocketing rates of diseases and the increasing consumption of foods containing these hydrogenated oils. The real story here is about how our lawmakers and our so-called "health leaders" have refused to outlaw this ingredient, even though they are fully aware of the dangers that it poses to human health. There has been no real attempt out there to protect consumers from this toxic, even deadly, ingredient. As usual, it's all about big business. The government organizations out there that are supposed to be protecting consumers have once again ended up protecting the big food giants. Those huge manufacturing companies that have big lobbies in Washington seem to run everything that happens there these days. This ingredient remains legal, even while it is killing people in the United States and all around the world.

Now, when I say "killing people," how many people am I talking about? Let's take a closer look at some of the statistics surrounding the consumption of hydrogenated oils. The current estimate is that around 30,000 Americans die each year as a result of consuming this ingredient. But that figure looks primarily at heart disease deaths; it did not consider some of the other problems with hydrogenated oils. Since hydrogenated oils produce such a widespread toxic effect throughout the body at the cellular level, it is very likely involved in many more deaths which can't be traced back to this particular ingredient. But let's look at some of the statistics here beyond that. Just a 2 percent increase in calories from trans-fatty acids is associated with a 93 percent increase in the risk of coronary artery disease. That's quite shocking. Eat a little bit more of this unnatural, man-made processed fat, and your risk of heart disease skyrockets. You wonder why so many people are dying of heart disease, heart attacks, strokes and atherosclerosis today – just take a look at what they're eating. It's hydrogenated oil! It's found in literally thousands upon thousands of products currently being sold to consumers every single day from grocery stores like Safeway, or places like Wal-Mart and K-Mart, or convenience stores. These retailers are selling to consumers products that contain hydrogenated oils, which have been strongly correlated to an appalling number of diseases.

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Astoundingly, 70 percent of the soybean oil consumed in this country is partially hydrogenated. 70 percent! Even just a few decades ago, in 1979, the American public was consuming 10 billion pounds of fat and oil per year, and 60 percent of that was hydrogenated. That is a massive mountain of disease-promoting oil being funneled into people's mouths in this country. The result is that we are the single most diseased nation. Period. We're not just the single most diseased nation on the Earth today – we're the most diseased nation that has ever been observed in the recorded history of human civilization. There is no other nation that has suffered from these chronic diseases, because no other nation has had the lack of wisdom to feed its people foods that actually kill them! But we are doing that today here in the United States and around the world.

Americans consume 5 to 10 percent of their calories in trans-fatty acids. As much as one tenth of every calorie that goes into a person's body in America is from trans fat. You might ask, "Well what's so bad about trans fats? I mean, we eat fats all the time don't we? They say fats are good for you." We're supposed to have healthy fats. Lots of healthy foods have fats in them: Nuts, seeds, avocados. We've all heard about the incredible health benefits of olive oil, flax oil, salmon oil and macadamia nut oil. There are lots of healthy fats out there, so what is wrong with trans fats? Well, it all has to do with the chemistry of these fats and the way they change the shape of the molecules. You see, your body is made up partially of physical matter, right? When they say, "you are what you eat," they're not just making that up. It's absolutely true at one level; physically, you are what you eat. You are more than what you eat at emotional, intellectual and spiritual levels, of course. But at the physical level, you are what you eat. Your body consumes these oils and uses them to create cell membranes. Now, why are cell membranes important for your body? Well, you are not just a collection of skin, bones and organs. **Each organ is really a collection of smaller structural units of function in your body called "organelles." Organelles are made up of cells, and cells have membranes.** Membranes are the transportation and communication systems of the cell with the outside world. The outside world consists of the blood that nourishes each cell with oxygen and nutrients and transports away waste products. Each cell in your body is sort of like a small city. It has its own power system inside called mitochondria. It has its own nervous system and its own communications system. It has its own DNA blueprint, so that it knows what it's supposed to do. It also has a transportation system. All of this transportation and communication happens with your cell membrane.

The membrane, then, must be flexible in order to function correctly. It must be adaptable, malleable and porous. It must allow some nutrients to come through it, and it must allow waste products to go out. It must be able to shift its shape; for example, if it needs to shift to the side or flow through a blood vessel. Now, flexible cells are healthy cells. Flexible cell membranes give you a healthy body, because the total health that you have in your body is really just an accumulation of the health of each of your individual cells. Your health at the cellular level is represented by your whole-body health when you zoom out and take a look at the big picture.

If your cells are unhealthy, your organs will be unhealthy. If your cells can't get rid of waste products, can't be malleable and porous, and can't allow nutrients, hydration and oxygen to come in, then your organs and body systems aren't going to function correctly. Your whole body is going to begin to break down. When it breaks down, you end up with symptoms, such as joint pain, inflammation, loss of memory, inability to produce insulin from your pancreas, or inability to detoxify the blood with your liver or kidneys and so on. These symptoms then get diagnosed as disease. They are given disease names. Then you have a label. They say that you have heart disease, cancer, kidney failure or arthritis. Or, they say that you have Alzheimer's disease, fibromyalgia or cystic fibrosis. Or they tell you that you have breast cancer or prostate cancer. These are all names given to a set of symptoms that result from a body lacking cellular health. If you are healthy at the level of each cell, you are never going to experience any of these symptoms, and you'll never be labeled with any of these diseases. This is why cellular health is so critical to your overall body health.



Now, what does all of this have to do with trans-fatty acids? It has everything to do with it, because when you eat processed foods and consume trans fats, your body recognizes it as looking similar to regular fat and starts building new cell membranes out of it. The problem is that trans fats have a certain molecular structure, and that structure is rigid and not malleable. It is not flexible. It does not allow for easy osmosis or the absorption of nutrients in and out of the cell.

Remember, your body is building new cells all the time. You're recycling cells constantly. You're building new red blood cells every second. New skin cells and new nerve cells are being built. But when you've been consuming trans-fatty acids, then all the cells that have been newly constructed now have rigid cell membranes. That means that those cells can no longer function as normal, healthy cells. This leads to rapid aging and the acceleration of all sorts of degenerative diseases – the diseases currently ravaging our society. For all the diseases that you hear about out there – obesity, diabetes, cancer, heart diseases, high blood pressure and hypertension, Alzheimer's disease and so on – this is the root cause of it. Hydrogenated oil is certainly one of the strongest, if not the primary, factor in the cause of these diseases in society today.

With the help of research staffers, I was able to go through over 500 different books on health, nutrition and wellness and look for important quotes and citations about hydrogenated oils. From that, we pulled out some of the most interesting results obtained from consuming hydrogenated oils. These are the diseases and conditions caused by the consumption of hydrogenated oils. Get ready, here's the list: Heart disease, breast cancer, prostate cancer, colon cancer, low-birth-weight infants, high bad cholesterol/good cholesterol ratio, high blood sugar levels, weight gain, interference with the absorption of essential fatty acids, damage to brain cells, tumor growth, progression of type 2 diabetes, raising of serum cholesterol, impairment of immune system function, promotion of Attention Deficit Hyperactivity Disorder (ADHD) and Attention Deficit Disorder (ADD), impairment of the development of brains of fetuses, gall bladder disease, liver disease, blood stagnation and blood stickiness (I'll talk about why this one's important a little bit later), the blocking of your body's creation of natural pain-reducing hormones (known as eicosanoids), the creation of free radicals that promote inflammation and joint pain, the creation of nutritional deficiencies that cause your body to lack healthy oils and essential fatty acids, the promotion of cystic fibrosis, lowering of essential fatty acids in breast milk, the clogging of artery walls and the promotion of atherosclerosis, gum disease, rotting teeth, low tissue oxygen intake, infertility, blood vessel damage, high blood pressure, weakened cell walls, compromised cellular structure, dandruff and acne.

Well that was a fun list. If you look at that list and walk around your local mall, movie theater or grocery store while carrying this list with you, you can pretty much find people who have all of those things. They're not hard to find. These are what people are suffering from today; these are the diseases that are prominent. Just ask any doctor. Read to him or her this list, and they'll tell you, "Yes, that's what we see. Ninety-nine percent of our patients come in with that kind of stuff." This is what they handle on a daily basis, aside from trauma patients -- people who've broken their legs or accidentally ripped their calf open with a chainsaw or some weird accident around the house or farm. In terms of disease, however, the list above names the stuff that people are dealing with, and it's all promoted by an ingredient that is intentionally manufactured and added to foods. Trans fats are being deliberately put into foods right now every single day by food companies. It's being sold without question by retailers. In a sense, this ingredient is being defended by our government regulators, the FDA and the USDA, by the default of their having refused to outlaw it. They have refused to educate the public about avoiding this dangerous, even deadly ingredient.

Amazingly, the American Heart Association, which I think has done far more harm than good in this country, had actually promoted hydrogenated oils in the 1970s and 1980s. In 1965, the AHA changed its

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diet heart statement, and it deleted any recommendation stating that people should decrease their intake of hydrogenated oils. In other words, before 1965, the AHA's position was that these were dangerous. But in 1965, it decided that they were no longer dangerous and that they were perfectly safe. "These are fine for you!" There's a lot of interesting history about the American Heart Association which the Association doesn't necessarily want people to know. This is part of that history. Even to this day, the AHA hasn't taken a strong stance on this issue. They should be using their power and position to stand up and say, "Hey, this is a dangerous ingredient. People need to be avoiding this." They should be calling national press releases. They should be pushing for legislation that would outlaw this ingredient. It should be banned; in fact, some day it will be banned. This ingredient WILL be history, but it will take some time and political pressure. You can bet that food companies will be fighting this all of the way. Why? Well, we'll get to that in a minute. For now, it's basically because it's a huge convenience to food manufacturers to be able to use hydrogenated oils.

With all of the negative side effects that trans fats cause, including the conservatively estimated 30,000 deaths per year caused by this ingredient, you would think that somebody would stand up and say, "Hey, maybe this is dangerous. Maybe this is something we should ban." Can you imagine if an herb killed 30,000 people a year? Or a vitamin? Can you imagine, if vitamin C caused 30,000 deaths a year, how hard the FDA would jump on that? They'd be raiding vitamin C facilities all around the country. They'd be wiping it off the shelves. All the evening news would have top headlines about how dangerous vitamin C is – the cable news networks, the national newspapers, the magazines – this would be all over the place. Doctors would be earnestly warning their patients, "Don't take vitamin C. It's dangerous!" The FDA loves to discredit nutritional supplements. But when it comes to food ingredients, they pretty much stay silent. They give it the old silent treatment: "No, we're not going to say anything. Just let people keep on eating it." Yet, 30,000 people a year are still dying from it; I think it's a lot more than that, actually. What about those infants being born without fully developed brains, or those born with low birth weight? They're not included in that statistic. Aren't those infants being denied a normal, healthy life simply because their mothers were consuming hydrogenated oil without knowing any better? Mothers don't know any better because the FDA refuses to ban this ingredient, because the American Medical Association refuses to take a stand and warn people about it. Shouldn't those children have the right to be born healthy? Shouldn't they? I think they should.

Make no mistake. This has always been about big business, and it continues to be about profits versus health. You can bet that when the equation is how much money a company can make versus how many people it can save in terms of health, it's always going to choose the former. It's going to say, "Hey, how do we maximize profits?" Forget about what this does to consumers. Let's face it, economically speaking, a food company has zero financial risk from the health effects of its foods. As long as those ingredients remain approved by the FDA, a food company can continue to use those ingredients with near-zero liability. It is shifting the cost of the health effects of its ingredients to the consumers. So let's say that every 100 lbs of hydrogenated oils you consume causes \$100 in associated healthcare costs. Remember, Americans are consuming well over 10 billion pounds of hydrogenated oils today. It's probably not unreasonable to suppose that there's \$10 billion in healthcare costs, loss of productivity and loss of quality of life associated with the consumption of this ingredient. So we'll say that for every pound there is \$1 in associated cost. This is just for demonstration purposes; it's only an estimate, not a scientific number. My point here for you is that the food companies don't bear this financial burden. If you eat 5 lbs of hydrogenated oils, they don't pay you \$5 to cover your healthcare costs, do they? No. In fact, not only do you, the consumer, pay that \$5 out of your own pocket or through health insurance, you also pay the food company to buy the oil from them in the first place. So you just cost yourself twice. You paid them for the ingredient that promotes disease, and then you have to cover your own healthcare costs.

This is the dirty little secret of the food industry which they pray nobody ever figures out. As soon as people figure out that there is a financial consequence to the consumption of foods and food ingredients, then people are going to start saying, "Hey, maybe we should hold these food companies accountable. Maybe we should have a class action lawsuit and sue them over use of hydrogenated oils which they have known to be dangerous for literally decades." This is classic Big Tobacco stuff, except that it's Big Food companies instead of Big Tobacco. It's hydrogenated oil instead of nicotine, right? It's causing cancer and heart disease instead of lung disease. But it's all harmful, and it's all a big sham by big companies who are making big bucks by exploiting the health of consumers.

That leads us to the reason why food companies love to use this ingredient. Again, this comes down to economics. You'd be surprised how many decisions are just driven by economics out there. In order to understand this, it's probably best if you play a little role here and do an experiment with me. Let's imagine that you run a food manufacturing company – we'll call it Crafty Foods. Now, this is your company and it's your job to make money for your shareholders. You happen to be in the food industry, so you're going to make sure that your food products get lots of shelf space and are priced and promoted accordingly, so that there's lots of demand. Now, let's say that you, for some odd reason, happen to actually care about your customers, okay? You decide you're going to use nothing but healthy oils for the very first manufacturing run here at Crafty Foods. So you decide to use olive oil, maybe some canola oil and healthy nut oils, and you're going to use whole grain wheat instead of refined white flour. You run your first batch of food products, then your accountant suddenly comes to you and says, "You know what? We've got a problem. The ingredients that you just purchased for this food is going to cost us too much money. We can make more money by switching over to cheaper ingredients like white flour or soybean oil." You say, "Okay, making money is important. We're a business, after all. Let's switch over to those cheaper ingredients." So you go to white flour and soybean oil instead of whole grain flour and olive oil. Now you have cheaper ingredients, but, hey, most consumers can't tell the difference. It still tastes the same, it's all basically salt, sugar and fat anyway. You just throw in a little bit of MSG or some chemical taste enhancers to spice up the foods, then you ship those out in your box labeled "Made By Crafty Foods."

Alright, so your products go onto shelves and, in a couple of weeks, something bad happens. All of your retail distributors start reporting to you that your products are leaking oil into the boxes. Suddenly, the products are all going rancid on the shelves! Consumers are buying them and finding that they're all greasy and some of the oil has gone bad, and they're returning those products. Suddenly, grocery stores are losing a ton of money, and they're demanding refunds from you. What are you going to do? You're the president of Crafty Foods. What are you going to do!?

Well, your chemist comes to you and says, "You know, we have a solution to this. We could use an artificial fat. It's made from soy bean oil, but it won't run out of the crackers and cookies that we make. It's solid at room temperature, has a wonderful creamy texture, and consumers absolutely love it – they just eat it up. By the way, it's dirt cheap. I mean, you can make it for just pennies per pound." You say, "Well, great! What's that stuff? Let's use that stuff." They say, "It's just hydrogenated soybean oil. Everybody's using it. It's been completely approved by the FDA. It's recognized as a safe ingredient and consumers love it. So let's use it." You say, "Okay."

So you start using hydrogenated oils. Your products are selling like crazy, because they now have about a two-year shelf life. They won't go bad. In fact, those foods are in a state of suspended animation on the shelf, it seems. Hey, your company is Crafty Foods, and that's a pretty crafty solution right there, really. You can use those hydrogenated oils almost as a preservative. Your foods are impermeable. They last forever on the shelf, so you don't get those product returns any more. The oil doesn't leak out, the consumers still love the taste, and it's dirt cheap to manufacture. Everybody wins, it seems.

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Then, a few years later, one of your chief scientists approaches you and says, "You know, we found out that these artificial fats we're putting into our foods are actually killing people. They're causing heart disease and hardening of the arteries, diabetes, nervous system damage, cancer and a lot of other things like that. So we have a problem. What are we going to do?" So instead of being an honest, ethical president of Crafty Foods and saying, "We should shift to something else now that we know this; maybe we should use a healthy oil again," you instead say, "Hey, we're a big, powerful, multibillion dollar firm now. We've got money to buy off the regulators." You start making donations to the right lawmakers, senators and congressmen, and you start making sure that some of your people are involved in the big decisions at the FDA, or you cultivate ways to lean on the FDA. You make sure that this ingredient stays legal. Then you try to discredit anybody who says that hydrogenated oils are bad for you. The way you do this is to take a couple of million dollars out of your own bank account (because you've been raking in a fortune selling this stuff to people) and set up a front organization that sounds scientific but actually just represents you and a couple of your food group buddies. It may be the "Center for Nutritional Science for Food Manufacturers" or something like that. I'm just making that up. It sounds really scientific, but the whole purpose behind it is to discredit any author, doctor or researcher who says anything bad about hydrogenated oils. Through that organization, you can concoct many of so-called "scientific studies" funded by your company, and you can issue a lot of press releases, thanks to your pull at the mass media around the country. They will run your press releases for you because your company's been spending hundreds of millions of dollars a year advertising with them. You can pretty much create whatever news you want. You could create a study that says hydrogenated oils are good for people, and they would run that as headline news.

If you did not have ethics, and if you were caught up in greed and profits as the president of this fictional company, Crafty Foods, this is what you would do. This, I believe, is a fairly accurate, although shortened, description of what's happening out there today. Each and every day, there are decision makers at large food manufacturing companies caught up in these same decisions. How are they going to make a profit? How are they going to keep shareholders happy and meet the demand of consumers who want these fats in their foods? How are they going to make all of this work? How are they going to do it without having to switch to expensive ingredients. That's really the big question. For decades, the answer to them has been to use hydrogenated oils. So that's how and why it's done. It's done because it makes more money for them.

The real story about hydrogenated oils has been covered up, because if the truth gets out, it's going to force these companies to reformulate their foods. If you're a food company, you don't want to reformulate your products. It costs money. It requires a change in inventory and product labeling. It runs the risk of changing the taste of the food, which could cause you to lose customers. There are a lot of risks in reformulating a food product, and that's why these food manufacturing companies don't want to do it. That's why they've leaned on the FDA for so long to keep this ingredient legal.

So make no mistake – the priority has always been about making money. It's always been about moving products and putting whatever they can into consumers mouths to make money, regardless of the long-term health consequences. That is how we have ended up with so many dangerous ingredients in our food supply. Hydrogenated oil is just one of them. Others would include sodium nitrite, monosodium glutamate, aspartame and artificial colors. High amounts of sodium are another dangerous ingredient. This is what's happening today in America. Knowing all of this, what do you do in order to defend yourself? How do you protect your own health in this environment? What can you really do?

The answer is unbelievably simple. It's embarrassingly easy. All you have to do is exercise your eyes. Every food product has something called the ingredients list. It's mandated by law. It's one of the few wonderful things which the FDA has actually done to protect consumers. Don't take it for granted; in some countries,

an ingredients list is not required. But in the United States it is required, and if hydrogenated oils are used in a food product, you will find them listed on the label. So all you have to do as a consumer is be smart enough to pick up a product, find the ingredients label and look for the word "hydrogenated." These oils will typically read as "partially hydrogenated soybean oil" or "hydrogenated soybean oil." It's typically soybean oil, but it doesn't have to be; it could be some other kind of oil. Soybean oil is just the cheapest, so it's used by most food manufacturing companies. "Hydrogenated" is an easy word to find. It stands out. It has a unique shape. So it's a no-brainer: If you see that word, put that product back on the shelf. That is an act of incredible power. That is how you, and millions of others out there who are finally learning the truth about hydrogenated oils, are going to change the future of food manufacturing companies.

You're going to change their product formulations by altering your demand. When you stop demanding hydrogenated oils, they will be forced to reformulate their products. If you refuse to buy them, eventually they will have to shift to something else that is more acceptable to consumers. So put those products back on the shelf. Better yet, if you have already purchased such products and have them in your home, and you haven't yet eaten them or opened them, take them back and demand a refund. This really gets a lot of attention out there, because grocery stores hate to get stuff back. Oh, they hate it with a passion. Of course, manufacturers hate it when you take something back to a grocery store that was selling their product. It gets a lot of attention, because most people typically don't take food back to the grocery store. Something has to be really messed up in order for most people to demand refunds. I think this stuff is worth taking back.

If you're learning this for the first time, and you discover you have a lot of hydrogenated oils in your pantry or in your refrigerator, take it right back and say, "Hey, why are you guys selling me this stuff?! I just learned the truth about this ingredient. The World Health Organization tried to outlaw this. It implored countries to ban hydrogenated oils. Doctors, researchers and nutritionists know this is poison. We know this causes heart disease. We have the statistics. We have the studies. Why are you still selling this to me?" They probably don't know why. They're just selling it because they're running a grocery store. They're just selling whatever people want, regardless of the health consequences. They have no responsibility for what's on their shelves, but demand a refund. You'll get some attention. If everybody starts returning these products, these companies pretty soon are going to have to make a new economic decision. They're going to have to decide to start making products without hydrogenated oils. In fact, that is the future of manufactured foods in this country. Now, that doesn't mean that it's going to be healthful food just because it doesn't have hydrogenated oil in it. It could still be made with refined white flour, high sodium, chemical taste enhancers, excitotoxins, artificial colors and all sorts of other things. But at least they won't have hydrogenated oils.

One more thing: If you happen to be an expectant mother, or if someone you know is either trying to conceive or is already pregnant, I implore you to copy this information and get it into their hands. Do whatever it takes to get this information in front of them. They need to know, right now, that if they eat hydrogenated oils while they are carrying a baby, they're going to harm the brain development and even the long term health of their child. They're going to have pregnancy complications. The baby will have low birth weight. The baby will definitely have an impaired nervous system. Please, get this into their hands. I don't care if you have to copy it, or pirate it or whatever. Get this into their hands. Help them out. Teach them this information so that they don't harm that child.

It's one of my great passions to help educate women about how to follow outstanding nutrition in order to have healthy babies. I think it's one of the most important things we can do in this country. We've got to have a healthy generation. The generations being born today and those born in the last 20 years are children whose parents were fed processed foods. They were fed excitotoxins and hydrogenated oils with trans-fatty acids. They were fed high-fructose corn syrup, refined grains, high glycemic index sugars. They

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were fed all of these additives; as a result, look at what we have today. We have unprecedented problems with the mental health of children. Their learning ability is impaired. We have aggressive behavior and all sorts of behavioral disorders. We have rampant diagnoses of ADD and ADHD. To this day, most parents in this country continue to feed their kids the same garbage that caused these problems in the first place – the same junk foods, the same processed foods and the same dangerous ingredients like the one we're talking about right here.

If we're going to break this cycle, and if we're going to have a generation of healthy babies in this country for a change, then we've got to start educating the women who are conceiving the next generation. We've got to get education into their hands so that they can start making informed decisions about what they wish to consume and what health effects they wish to impart to their unborn children.

Now, where are you going to find hydrogenated oils at the grocery store? This is the hard part. If you're used to eating a lot of processed foods, as most Americans certainly are, then you're going to find it quite a shock trying to avoid this ingredient. Oh yes, you're in for a big one here! Once you start reading ingredients labels, you're going to find out that practically every cookie, cracker, baked good, margarine and bread product are all made with hydrogenated oils. Even many dips, creams and sauces will have hydrogenated oil lurking on the back of their labels. You're going to be amazed by how many products you can find this ingredient in. It's going to blow your mind. But it's important to wake up, open your eyes and find out how often you've been poisoning yourself and your family by buying these products in the past. Realize what you've been doing and stop buying these products from this day forward.

People ask me if they should go through their pantry and refrigerator and throw out everything that has hydrogenated oil in it. I always think to myself, "What kind of a question is that?" What do you mean, "Should I throw it out?" I just told you that this ingredient causes cancer, diabetes, heart disease, brain disorders, nutritional deficiencies in essential fatty acids; it makes your cell membranes stiff so they can't function correctly, and it accelerates aging. Why would anybody ask me, "Should I still eat it?" Of course throw it out! Throw it out or take it back. Don't put that stuff into your mouth. It's not even a question. You say, "But what about the cost?" Well, you've already spent that money. You're not going to save any money by eating it. I say go get some healthy food; in fact, unprocessed food is a lot less expensive than processed foods. If it's a money issue, you shouldn't be buying packaged, manufactured foods in the first place. You should be buying bulk ingredients from your local food co-op and fixing them without a lot of processing. It's a lot less expensive than buying packaged groceries. I was explaining this to someone else several months ago, and he said, "Well, I don't want to waste those foods, so I'm going to feed them to my dog." I thought to myself, "What kind of a cruel dog owner are you?" That's animal cruelty right there. You know what these ingredients do. Do you realize that all of these aging and degenerative effects are multiplied in a dog, in terms of dog years? Aging is already seven times faster in a dog. Why are you going to accelerate it even further by feeding a dog hydrogenated oils? That's just insane. In fact, a lot of what goes into common pet food is also insane, but that's another book, another topic.

Don't feed this stuff to your animals. That's animal cruelty. It really is. You certainly wouldn't feed it to your children, right? Knowing what it does to their brains, you wouldn't feed it to them. Why would you feed it to an animal? The only animal you would feed it to is an animal that you hated. The only person you would feed it to is a person you were trying to harm. So throw it out. Don't let anybody consume it. Something interesting will happen when you do throw this stuff out. In fact, you can take this opportunity to run an experiment. This is a famous experiment. You can take a tub of margarine made with hydrogenated oil, put it outside, and see if any creature from the environment will come along and eat it. Just try this for yourself and find out. Normally, if you put food outside, something will come along and eat it sooner or later, right?

A bird, squirrel or stray cat maybe. Certainly insects, right? Lots of insects will scurry along and find this stuff, and they will take care of it in no time. Try putting a piece of bread outside and see how long it lasts. Put some fruit out there. Put some nuts out there. They all vanish, usually in a matter of hours. Then, try putting a tub of margarine outside. From doing this experiment, you'll find, as I have done several times, that creatures won't touch this stuff. They will come along and check it out, then decide not to consume it. Even insects won't touch this stuff.

That tells you something right there. If no animal, creature or insect will eat this, maybe it's not food. Maybe it's more like plastic fat. That's not a bad description, actually. It's an unnatural fat, plastic-like, called "funny fat" by some doctors and researchers. It's not something that exists in the natural world. It's just been made up by humans for all the reasons which we've discussed, including the convenience for food manufacturing companies.

So now that you've done the hard stuff and have gotten all of these hydrogenated oils out of your life and out of your house, it's time to start buying some healthy oils. Now you've started reading ingredients labels. Now it's time to start making some nice, healthy and informed food choices. You can find margarine products now that don't have trans fats in them at all. In fact, pretty soon, in January of 2006, the FDA is actually going to require that food companies list the trans-fatty acid content on nutrition labels. This book is being written in the summer of 2005, so we don't have very long to go yet. That's going to be a great improvement. Finally, after decades of evidence, the FDA has made one choice. But instead of banning the ingredient, they're just requiring it to be labeled. But that's enough to get food companies to reformulate a lot of their products. Now, food companies are beginning to tout their "no hydrogenated oils" products. So you can look for these labels. Just as when you go out to buy healthy grains, you look for those whole grain labels, when you want to look for healthy oils, you're going to look for those "no trans fats," "no trans-fatty acids," or "no hydrogenated oils." That's what you want to look for. It's pretty easy to find. In six months from now, it'll be even easier to find. So just read before you buy. Don't put something into your mouth if you haven't read the product package yet. I mean, that's what little babies do; they put things in their mouth before they know what they are. But as adults, we're not supposed to do that. We're supposed to check things out first, especially before we swallow it and make it part of our cell membranes. So be sure to read all these labels, and you can quite easily buy healthy products.

Now, in terms of healthy oils and good nutrition, you now have an opportunity to rebuild your body at a cellular level. This is quite true – remember how I said you are what you eat? When you used to eat those hydrogenated oils, you were building really stiff cell membranes which were accelerating aging and degenerative diseases throughout your body. Well, now, when you're purchasing healthy oils, you have the opportunity to rebuild new, healthy cells with flexible cell membranes that can communicate, can move nutrients in and out, and can handle water and salt appropriately – cell membranes that basically make you youthful and healthy again. You achieve that by consuming plenty of healthy oils. Again, these have to be oils that are in their unprocessed state. They need to be cold processed if at all possible. Unfortunately, heat makes oils unhealthy. It can even create trans-fatty acids without the hydrogenation process. So you don't want heated oils, you want cold pressed oils. So if you're buying olive oil, look for cold-pressed extra virgin olive oil. Or, if you want to get some really healthy oils into your body, do what I do. I eat a lot of raw nuts each and every day. They have to be raw – not roasted, salted, or flavored. I eat raw cashews, macadamia nuts, almonds and even raw peanuts from time to time. Just eat raw nuts if you want to get those healthy oils into your body. You can also consume cod liver oil, flax oil or macadamia nut oil as a nutritional supplement. Just make sure that you get some of these healthy oils. You can even eat oily fish, such as salmon.

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These oils will then become part of your new cell membranes. Before very long, you will not only look better, you will feel fantastic. You will feel more youthful. Your nutritional-related diseases and symptoms will begin to dissipate just from avoiding hydrogenated oils. It's amazing how much you can transform your health just from avoiding one ingredient that's responsible for so much damage in the human body. In fact, in terms of dietary changes, if there were just two things that I would ask most people to do in order to improve their health, they would be, number one, stop drinking all soft drinks and all sweetened beverages, and number two, avoid all hydrogenated oils. Those are the top two things. If you get those hydrogenated oils out of your life and you stop consuming those soft drinks, you are well on your way to avoiding most of the major chronic diseases so rampant in our society today.

Unfortunately, these two things are things that people are really used to consuming. I mean, they want to have those baked snack chips, cookies, crackers and party dips, and they want to wash it all down with a six pack of soda. That seems to be the American way. If you look at the foods served at all social occasions, it's the same garbage that we've been talking about here. Social foods are the worst. Those continental breakfasts that you have at hotels when you travel are loaded with sugars, refined grains and hydrogenated oils. If you go to restaurants, you're going to get this stuff – all the pastries, crackers and, of course, that butter substitute they give you. You have to avoid this everywhere; you can't just avoid it when you buy groceries. You have to avoid it when you're traveling, eating out at restaurants, eating over at a friend's house, or when you're invited to a party. No matter where you go, you've got to steer clear of hydrogenated oils.

By the way, when you do all of that, your brain function will dramatically improve. You will begin to notice that, over a period of time (it'll take a few weeks or a few months), your brain begins to function as it had decades ago. You'll have improved memory and creativity. That brain fog begins to clear up. It's like a brand new, sunny day in your own head. Now, things suddenly start to make sense. You start to get the big picture. You start to have more awareness and lucidity. This is a natural result of consuming lots of healthy oils and avoiding the consumption of unhealthy oils or trans-fatty acids. You can't help but experience this. A causes B – it's natural cause and effect.

So that's the shocking, but true, story of hydrogenated oils. That's why companies use them, why people consume them and why we're seeing all of the terrible, ravaging health effects they're having right now on our population, including those members of our population who haven't even been born yet. Think about the fetuses and infants. They're all suffering from this as well. So it's time to do something different. You can start with yourself, by avoiding this ingredient. I hope you will also consider being part of a grassroots movement by spreading the word. Help educate others about the dangers of this ingredient. Consider writing your lawmakers in Washington. Consider telling them how strongly you feel about the fact that this ingredient should be banned. It should be outlawed in any civilized nation. There's no reason to have this ingredient in the food supply other than for the financial convenience of food companies, and that's not a justifiable reason to compromise the health of an entire nation. It's simply not acceptable. If they continue to use hydrogenated oils in food products, they should pay the healthcare costs that they're causing in all consumers. That's what I think. If they're going to have a dangerous ingredient, they should be financially responsible for the effects of that ingredient on consumers.

This is a serious issue; it's a big deal. It's going to take a huge grassroots movement to get this changed. Remember, the status quo makes everybody who's got money, power and influence out there happy. The food companies are just fine the way things are. It is only through awareness, grassroots education and the sharing of information that this is ever going to be changed. If you just sit back and keep munching on those crackers, and you keep drinking those soft drinks and keep poisoning your brain, you're not going to make



any difference in the world. You can just eat yourself into oblivion, like all other Americans out there. But if you want to make a difference, then clean up your diet, regain your mental clarity and join this grassroots effort to help protect the health of not only the people living today, but future generations here in America. It's time to ban this ingredient. It's time to hold these food companies up to a higher ethical standard, so that the ingredients they use are at least safe, if not outright healthy. As a minimum, they shouldn't be damaging to human health. It should be a basic standard that we abide by in this country.

Remember, if we can get this ingredient banned, we can save the lives of at least 30,000 American citizens each and every year. 30,000 people – that's a huge number. Those people don't deserve to die just from eating foods.

## Statistics and consumption

- A 2 percent increase in calories from trans-fats is associated with a 93 percent increase in the risk of coronary artery disease.
- For men, a 2% increase in trans fatty acids increases the risk of developing coronary heart disease 25% over the next 10 years.
- Commercial shortenings made with partially hydrogenated soybean oil have 25-50 percent of the fat as trans fatty acids.
- Approximately 70 percent of the soybean oil consumed in this country has been partially hydrogenated.
- As of 1979, the American public was consuming 10 billion pounds of fat and oil per year. Sixty percent of that was partially hydrogenated oil.
- Today, Americans consume from 5 to 10 percent of their calories as trans-fatty acids.
- A 2% increase in calories from trans fatty acids raises the risk of diabetes 39%.

## Results of consumption

The following diseases and conditions are documented effects of consuming hydrogenated oils:

- Directly promotes heart disease
- Promotes cancers: breast cancer, prostate cancer, colon cancer
- Results in low birth weight infants
- Raises LDL (bad) cholesterol and lower HDL (good) cholesterol
- Raises blood sugar levels and promotes weight gain
- Interferes with the absorption of essential fatty acids and DHA
- Impairs brain function and damages brain cells
- Accelerates tumor growth
- Accelerates the progress of type-2 diabetes
- Raises serum cholesterol
- Impairs immune system function
- Promotes attention deficit hyperactivity disorder (ADHD)
- Impairs development of the brains of fetuses
- Causes gallbladder disease

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- Causes liver disease
- Causes 30,000 deaths per year in the United States alone
- Clogs blood, makes blood cells stick together
- Blocks the body's creation of natural pain-reducing hormones (eicosanoids)
- Causes the creation of free radicals that promote inflammation
- Creates nutritional deficiencies of healthy oils and essential fatty acids (EFAs)
- Promotes cystic fibrosis
- Lowers essential fatty acids in the breast milk of nursing mothers
- Clogs artery walls and promotes atherosclerosis
- Cause gum disease and rotted teeth
- Lowers tissue oxygen intake
- Causes infertility
- Directly damages blood vessels
- Causes high blood pressure
- Weaken cell walls and compromises cellular structure
- Causes dandruff and acne

## The experts speak

The following are quotes about hydrogenated oils from doctors, researchers and nutritionists. They are segmented by author:

### Spontaneous Healing by Andrew Weil MD

Trans-fatty acids, or TFAs, may be extremely toxic, even though medical scientists have been very slow to recognize the danger. Even now, as they are finally beginning to admit that margarine may be worse for the heart than butter, they are still focusing solely on margarine's content of saturated fat rather than on its abundance of TFAs. The body builds cell membranes out of cis-fatty acids and also uses them in synthetic pathways for hormones. We do not know what it does with TFAs; if it tries to use them in the same ways, the result might be defective membranes and hormones. I believe that TFAs in the diet damage the regulatory machinery of the body, significantly compromising the healing system. Remember that TFAs are rarely found in nature, only in fats that have been subjected to unusual chemical and physical treatment. Some researchers refer to them as "funny fats," but there is nothing funny about what they may do to us.

### Encyclopedia of Nutritional Supplements by Michael T Murray ND

Trans fatty acids and **hydrogenated** oils can contribute to the following disorders:

- Low birth weight infants
- Low quality and volume of breast milk
- Immune suppression
- Essential fatty acid deficiencies

## Reversing Diabetes by Julian Whitaker MD

I'm more concerned about trans fatty acids, for they are like nothing Mother Nature has ever seen before. These chemically altered fats are cropping up everywhere: in margarine, **hydrogenated** oils, peanut butter, baked goods, and fried foods. Recent research suggests that trans fatty acids are even more harmful than saturated fats. They increase the risk of heart disease to a greater degree than saturated fats, for in addition to raising total cholesterol, they lower protective HDL cholesterol. They also have been implicated in cancer of the breast and prostate, diabetes, immune dysfunction, and infertility. Drs. Walter Willett and Alberto Ascherio of the Harvard School of Public Health have estimated that 30,000 premature deaths every year are attributable to our consumption of trans fats. The good news about these harmful fats is that they are very easy to avoid. Select whole and natural foods over prepared, fried, and processed and you will escape these highly damaging fats.

Nuts and seeds have a bad reputation because they are so high in fat. However, if those nuts and seeds are in their natural state, their oils are among the most healthful. Too bad we have a preference for roasted nuts, for once they are heated their delicate oils are damaged. The same goes for nut butters. Although most brands of peanut butter you'll find in the grocery store are made with roasted nuts and then **hydrogenated**, resulting in harmful trans fatty acids, there's nothing wrong with eating modest amounts of raw nut butter. You'll find these in your health food store.

## Prescription For Dietary Wellness by Phyllis A Balch

Since 1930, the increased use of pasteurized dairy products and **hydrogenated** oils has increased in direct proportion to the number of deaths from **heart** attack. The March 1998 issue of Harvard University's Women's Health Watch reported that in one major study, a 2 percent increase in calories from trans-fats was associated with a 93 percent increase in the risk of coronary artery disease, the precursor to **heart** attack.

## A Physicians Guide To Natural Health Products That Work By James Howenstine MD

**Hydrogenated** fats could be considered slow poison. You do not drop dead like you would with cyanide but your **arteries** and ability to fight cancer gets impaired.

**Hydrogenated** fats are an artificial product that are hard for the body to eliminate. These artificial, abnormal fats raise the level of LDL (bad) cholesterol and decrease the level of HDL (good) cholesterol.

## Know Your Fats by Mary G Enig

Research carried out in Europe (Koletzko 1991) shows that the trans fatty acids have an undesirable effect on the birth weight of the infant. Dr. Koletzko (1992) in Germany has identified the partially **hydrogenated** vegetable fats and oils as a factor in low birth weight infants, and also in interference with proper levels of the elongated omega-3 fats (called DHA) in the **brains** of infants.

Research has shown that consuming trans fatty acids raises the blood sugar levels and causes people to weigh several kilograms more than people consuming the same amount of fat that is not **hydrogenated**.

People who have a tendency to develop diabetes will be made more likely to respond poorly to trans fatty acids in their diets and be pushed in the direction of developing diabetes.

All the commercial shortenings made with partially **hydrogenated** soybean oil have 25-50 percent of the fat

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as trans fatty acids. Commercial shortenings made with partially **hydrogenated** canola oils have the same or even higher levels of trans fatty acids

Diets high in omega-6 fatty acids, and diets high in partially **hydrogenated** vegetable fats have been reported to adversely alter immune function.

Problems such as attention deficit disorders (ADD) and attention deficit hyperactivity disorders (ADHD) have been studied in relationship to essential fatty acid deficiency and adverse effects of the partially **hydrogenated** vegetable fats and oils.

Partially **hydrogenated** vegetable fats and oils are a factor in low birth weight infants, and also in interference with proper levels of the elongated omega-3 fats (called DHA) in the brains of infants.

## A Physician's Guide To Natural Health Products That Work by James A Howenstine MD

There is no doubt that the refined oils, **hydrogenated** fats, and a severe lack of the Omega-3 fatty acids are contributing to our diabetes epidemic. The control of blood sugar depends on adequate amounts of the minerals zinc, chromium, vanadium, and magnesium, which are lacking in the foods grown in soil treated with Phosphorus, Nitrogen, and Potassium fertilizer used by most farmers. We are being poisoned by pesticides, lack of essential fatty acids, toxic trans fat isomers and toxic additives.

## Herbal Medicine Healing Cancer by Donald R Yance Jr

...a diet rich in **hydrogenated** fats like margarine can influence the initiation step in carcinogenesis, especially in relation to free radicals, and a diet high in animal fats can influence the promotion stage of tumors by acting on initiated cells to elicit cancer growth.

Unnatural and/or denatured fats, such as margarine or other **hydrogenated** oils, disrupt the metabolic process and interfere with the properties of the cell membrane. Oils must be fresh and not denatured in any way or they can become extremely volatile and dangerous, possibly causing and/or promoting cancer. These essential fatty acids can take on Jekyll and Hyde characteristics: They are vital and life-sustaining in their pure form, but dangerous and life-harming when processed.

Women with a higher intake of trans fatty acids have more than three times the breast cancer risk than women with a low intake of these denatured polyunsaturated fats. This cancer-causing artificial fat is contained in margarine, all commercial oils found in the supermarket, commercial cookies, crackers, snack foods, frozen foods, deli foods, mayonnaise, fried foods, and all foods labeled "partially **hydrogenated**." Read your labels carefully.

Supplementing the diet with GLA supplements becomes important if there is a deficiency of delta-6 desaturase. Many things influence delta-6 and can cause a deficiency or underactivity. For example, a diet high in refined sugars, starches, and **hydrogenated** fats will completely alter this pathway and lead to eicosanoid imbalance favorable for tumor growth. The resulting high blood insulin levels cause more damaging Series II eicosanoids to form.

## Disease Prevention and Treatment by Life Extension Foundation

**Hydrogenated** fats deliver a serious blow by reducing activity in the omega-6 and omega-3 cascades (probably by inhibiting the enzymes delta-6-desaturase and delta-5-desaturase). This suggests that the consumption of partially

**hydrogenated** vegetable oils may have an adverse impact upon the relative distribution of the final end products of the essential acids in terms of prostaglandin concentrations. Also, as trans fatty acids increase in the diet (replacing cis unsaturated fatty acids), LDL cholesterol is (typically) raised, but the beneficial HDL cholesterol is decreased. Trans fatty acids also increase Lp(a) levels relative to other fatty acids (Mensink et al. 1990, 1992; Zock et al. 1996).

In 1993, doctors at Harvard Medical School found that women who ate 4 or more tsp of margarine a day had a 50% greater risk of developing heart disease compared to women who ate margarine only rarely (Harvard School of Public Health 2002).

A study involving 600 men (ages 64-87), determined that every 2% increase in trans fatty acids increased the risk of developing coronary heart disease 25% over the next 10 years (Oomen et al. 2001). The influence of different types of fats can also be observed in the progression of diabetes. For example, the risk of diabetes was not increased among 84,204 women whose intake of fats came chiefly from nuts, seeds, and avocados, but a 2% increase in calories from trans fatty acids raised the risk of diabetes by about 39%. Conversely, a 5% increase in calories from polyunsaturated fats lowered the risk of diabetes 37% (Salmeron et al. 2001; Mercola 2001b).

The American diet is full of fat. When the very tiny blood vessels nourishing our joints fill with fat from our food, oxygen exchange is hampered, and the body has difficulty removing waste products. As a result, body tissue may weaken or break down. For example, saturated or **hydrogenated** fats can enhance or harm regulation of hormonal substances called eicosanoids. Eicosanoids are important to pain patients because they help to control inflammation and pain—especially in the joints.

### Heinermans Encyclopedia of Fruits, Vegetables and Herbs by John Heinerman

**Hydrogenation** is generally done to cheap plant oils like palm and coconut or animal fats from which shortening and lard are made. After **hydrogenation** what you have is a bad-smelling and loathsome-looking grease that would be quite unacceptable to any normal human being. But the magical skills of clever food technologists are used to bleach, filter and deodorize this rank stuff with a myriad of chemicals into a pure, snowy white, odorless, tasteless, highly artificial fat.

Today's number-one killer disease in America is coronary heart disease. Or, put another way, there have been NO decreases in heart disease for the past 30 years! The use of **hydrogenated** cooking oils by the food industry is the cause. Way back in 1956, the respected medical journal, The Lancet (2:557), issued this dire warning: "The **hydrogenation** plants of our modern food industry may turn out to have contributed to the causation of a major disease!" How tragically prophetic they proved to be.

### New Choices In Natural Healing by Bill Gottlieb

While they may lack saturated fat, **hydrogenated** products such as margarine can be even more dangerous to your heart. Three studies have found that trans-fatty acids can raise cholesterol even higher than saturated fat, according to Alberto Ascherio, M.D., Dr.P.H., assistant professor of nutrition at the Harvard School of Public Health. And the damage isn't only to your arteries.

"When you eat foods containing these processed **hydrogenated** oils, it's like putting sugar in a gas tank—it messes up the combustion of your body," says Dr. Klaper. "The cell membrane is transformed from having this flexible, pliable curve that it gets from the 'right' fats such as polyunsaturates to becoming straight and rigid through **hydrogenation**. The trans-fatty acids are not incorporated into the new cell membrane, so cells can't divide properly. When they do divide, they can have unstable membranes that are prone to breaking, which might put you at increased risk for various diseases, including cancer."

## Poison In The Food: Hydrogenated Oils

### Herbal Defense by Ralph T Golan ND

**Hydrogenated** and partially **hydrogenated** cooking oils and margarines (which are not only sold by themselves but can be found among the ingredients of a vast array of packaged foods) are purified with strong chemical processing that not only taints the product but removes nutrients. Even more important, they are exposed to extremely high temperatures that twist the fatty-acid molecules. This processing changes their shape from a cis configuration to what's called a trans form.

The rise in cancers and other illnesses has been attributed in part to Americans' increased use of these highly processed, "deformed" fats. This is logical, since the fat we eat is what our cells become. Since fats are used as materials to build cell membranes, it makes sense that misshapen, twisted fatty-acid molecules will create messed-up cells. "Good" fats with the correct structure fit into the membranes properly. But "bad" fats with their irregular shape fit into cell membranes like a broken key. The unnatural fatty acid disrupts the cell's functioning, locks out the natural-form fatty acids that are actually needed there, and leaves a defective problem cell. Further, trans fats block the conversion of LA to one of the helpful prostaglandins.

### Encyclopedia of Fruits Vegetables Herbs by John Heinerman

Years of dietary abuse, such as in frequently consuming foods cooked in or made with **hydrogenated** oils, can cause the blood to become somewhat thick and stagnant. Not only is overall circulation slowed down, but artery walls, especially those leading to the **brain** and **heart**, become narrower and occasionally clogged with clumps of thick blood and bacteria.

### Heart Frauds by Charles T McGee MD

Unprocessed vegetable oils contain several double bonds between their carbon atoms, all referred to as being in the cis configuration. Only cis bonds are found in fresh foods. Fatty acid molecules are bent a precise number of degrees at each cis bond.

High heat treatment can cause these double bonds to break. Some hook back up the same way. Some flip over 180 degrees and reconnect, forming what are called trans bonds. At a trans bond the molecule straightens into a new shape. All of the common brands of vegetable oil and salad dressings contain trans fatty acids. The processing involves heating the oils in a partial vacuum for 12 hours at 385 degrees Fahrenheit.

Molecules with the trans bonds comprise an average of 15 percent of all fatty acids in these oils. In margarine and average of about 35 percent of all of the molecules become trans fatty acids, but some brands may run as high as 48 percent. **Hydrogenated** or partially **hydrogenated** products contain these abnormal trans bonds because the **hydrogenation** process requires high levels of heat.

The body can't use trans fatty acids as essential fatty acids. Not only that, trans fatty acids block the common enzyme that starts essential fatty acids down their metabolic pathways into prostaglandin regulation hormones.

### Power Healing by Leo Galland MD

Unlike sodium, trans-fatty acids are not essential nutrients and appear to play no beneficial role in human nutrition. Most of the trans-fatty acids consumed today are artificially produced by food manufacturers. The dangers of trans-fatty acids in the diet have recently received scientific attention that is long overdue. To understand the toxic potential of trans-fatty acids, you have to know how they affect the body's use of EFAs. this means that each molecule of an

EFA has two or more double chemical bonds. The double bonding twists the molecule, giving it a serpentine shape. When incorporated into a cell's membranes, the snakelike EFA molecules add fluidity and flexibility to the membrane. EFAs, unfortunately, are rather unstable when exposed to air. The double bonds break down rapidly, producing a toxic form of fat that can be detected in food by its rancidity. Preservatives may be added to food to prevent this breakdown from occurring, thereby increasing the shelf life of the food. A natural preservative for fatty acids is vitamin E (alpha-tocopherol), but the most commonly used preservatives are the synthetic antioxidants BHT and BHA.

A more efficient way to prolong shelf life, however, is to **hydrogenate** the fatty acids, destroying the EFAs. In **hydrogenation**, the double bonds are broken by hydrogen gas and the unsaturated fatty acids become saturated with hydrogen. This means that all sites for chemical bonding are filled. Naturally saturated fatty acids are commonly consumed in meat and dairy products. They are also manufactured in your liver and stored in your body's fat cells. Saturated fatty acids are straight, not twisting, in shape, and impart stiffness and solidity to membranes. Human cell membranes usually have one saturated fatty acid lined up alongside one unsaturated fatty acid, producing just the right blend of stiffness and flexibility for responding properly to signals sent from other cells.

In present-day food processing, the **hydrogenation** of vegetable oils is usually not complete. It is partial. Partially **hydrogenated** oils are easier to work with and produce a softer foodstuff than fully **hydrogenated** oils. Chemically, partial **hydrogenation** converts EFAs into trans-fatty acids, which are unsaturated fatty acids that twist abnormally. Trans-fatty acids do not have the serpentine shape and fluidity of naturally unsaturated fatty acids (which are called cis-fatty acids). Trans-fatty acids are stiff and straight, like saturated fatty acids, but because they are unsaturated, they replace natural cis-fatty acids in the cell membranes. The result of trans-fatty acid consumption is stiff cell membranes, abnormal response to signals from other cells, and an increase in dietary requirements for EFAs. Partially **hydrogenated** vegetable oils, which are ubiquitous in manufactured foods, are loaded with these antinutrients.

By eating meals and snacks of high nutritional density and avoiding junk, you not only increase your consumption of vitamins, minerals, and bioflavonoids, but also decrease your exposure to the antinutrients with which junk food is loaded. As the term implies, antinutrients actually interfere with the body's healthful functioning. Aside from alcohol, the most important antinutrients in the U.S. diet are salt (specifically, sodium) and trans-fatty acids, which are produced by the partial hydrogenation of vegetable oils. The small amounts of sodium or of trans-fatty acids that occur naturally in food pose no health hazard. It is the addition of sodium chloride to food that raises the sodium concentration to levels that are unsafe for many people. High-sodium foods are those that taste salty or that contain sodium chloride as an ingredient, listed on the food's label. Most trans-fatty acids enter our diets from the addition of partially **hydrogenated** oils, which are usually listed on the label.

In the first edition of *Superimmunity for Kids*, written ten years ago, I warned parents about the dangers of raising their children on margarine and other foods built from partially **hydrogenated** oils. My arguments derived from research on the chemical effects of trans-fatty acids and knowledge of how this chemistry could distort cell function. Clinical studies have vindicated the warning. High consumption of trans-fatty acids raises cholesterol levels and increases the risk of heart attack, especially among women. Dr. Walter Willett, chairman of the department of nutrition at Harvard University's School of Public Health, estimates that consumption of trans-fatty acids in the United States accounts for thirty thousand premature deaths per year.

### Staying Healthy With Nutrition by Elson M Haas MD

Saturated and **hydrogenated** fats seem to be worse in regard to increasing cholesterol and causing vascular congestive problems than the vegetable-source unsaturated ones.

Saturated fats and **hydrogenated** vegetable oils, which contain high amounts of saturated fats in place of their once polyunsaturated oils, both raise serum cholesterol.

## Poison In The Food: Hydrogenated Oils

The strongest correlation for breast cancer has been with the intake of the trans-fatty acids that are created when vegetable oils are **hydrogenated** to make margarine and solid vegetable shortening.

Oxidation in our body of such substances as the fat molecules, particularly from polyunsaturated fats, and from eating other oxidized fats such as **hydrogenated** oils and rancid oils, causes the genesis of free radicals, unstable molecules that can lead to cellular and tissue irritation and damage, which leads to chronic inflammation, especially in the vascular lining.

Dandruff is a form of dry skin of the scalp. Often this results from an improper diet high in certain fats, such as **hydrogenated** fats and fried fats, and deficient in important essential fatty acids, which are found in the vegetable oils and fresh nuts and seeds.

Acne vulgaris (the medical name) is tied to an overproduction of the oil in the sebaceous glands of the skin. More water intake, eliminating fried foods and **hydrogenated** fats from the diet, and taking extra vitamin A and zinc will often reduce acne outbreaks.

An article by Wayne Martin in the November 1989 Townsend Newsletter for Doctors provides a great deal of support for the theory that cholesterol itself is not the culprit it is thought to be in the atherosclerotic process, but it is the **hydrogenated** and homogenized fats used and consumed in so many foods that are the disease-causing factors.

The primary dietary focus of the cardiovascular disease prevention diet is fat intake. The diet should be low in fat in general and particularly low in saturated fats (animal fat plus coconut and palm oils) and the **hydrogenated** fats (all margarines) and oils such as used for frying foods.

## The ADD Nutrition Solution by Marcia Zimmerman CN

These fats are especially bad for those with AD/HD because they block the enzymes in the body that reconfigure dietary unsaturated fats into the longer-chain polyunsaturated fats needed for brain function. Researchers have found that those with AD/HD had lower levels of these important brain fats than those without the disorders.

## Food Swings by Barnet Meltzer MD

Trans-fatty Acids: Bad. Trans-fatty acids are man-made, and are considered by some in the medical profession to be even more harmful than saturated fats. They are thought to play an active role in the hardening of arteries, and are also considered a risk factor for heart disease. They raise bad low-density lipoprotein (LDL) cholesterol and lower beneficial high-density lipoprotein (HDL) cholesterol. In addition to cardiovascular disorders, trans-fatty acids have also been linked to cancer, diabetes, and infertility.

## Saturated Fat May Save Your Life by Bruce Fife ND

If **hydrogenated** oils are eaten, trans fatty acids from these oils are used as building blocks when cell membranes are made. This is where the shape is important. Normal fatty acids link together in a tight bond because of their horseshoe shape. Trans fatty acids cannot link together or to other fatty acids in the proper manner. This weakens the cell wall and hampers or even destroys normal cellular function.



## Anti-Aging Manual by Joseph B Marion

Saturated animal fats and fried **hydrogenated** vegetable fats slow down blood flow, make Red blood cells stick, clump together, lowering tissue Oxygen intake; and with white flour and sugar contributes to hardened, narrowed **arteries**, makes blood platelets clump for possible clots, angina, **heart** attacks, and strokes (often in **brain** nerve centers controlling the senses and body movements).

We humans need 16 to 20 grams of Fat per day (8-20% of diet), limiting the long-chain **hydrogenated** Saturated Fatty Acids (SF A) under 10%, and Trans-fatty acids, that can interfere with metabolic processes. Trans-fatty acids form in 15-40% of **hydrogenated** oils; comprise about 25% of margarine, antagonistic to essential Fatty acids, impair liver conversion of HDL cholesterol to bile salts for intestinal excretion.

[Consuming] **hydrogenated** cooked fats in excess causes cardiovascular disease, high blood pressure, diabetes, liver and gallbladder disease, obesity and cancer. There is a causal relationship between fat intake and the occurrence of cancer, especially breast, prostate and colon cancers. Compared to the heart disease-free 40 grams of fat consumed per day by Nigerians and the Japanese, Americans fat out with 150 grams of fat per day, mostly **hydrogenated** and saturated fats; causing their obesity problems, hypertension, high blood pressure, and cancer.

Saturated fats, fried or cooked fats tend to be non-absorbable by body cells, and can clog the Immune Lymph, impeding the Immune defenders in Lymph fluid. These solid Fats at room temperature thicken the blood, congesting capillary and artery circulation; and produce cancer-causing substances in the body, courting cell breakdown. All fats should be ingested with adequate antioxidant Vitamins...

Overcooked **hydrogenated** fats and fried foods' rancid lipid peroxides are immunosuppressive, and cause liver cell damage; abnormal structured trans-fatty acids suppress anti-inflammatory Prostaglandin E-1; and dietary Fat over 20-25% of daily calories is hazardous.

High intake of cooked, **hydrogenated**, saturated fats and animal fat/ Protein foods increases Estrogen, linked to tumor development, and increased cancer risk 2-3 times, cystic fibrosis and cysts.

## Elements Of Danger by Morton Walker DPM

Trans fatty acids in margarine and other **hydrogenated** foods are twice as likely to increase the ratio of total cholesterol to high density lipoprotein (HDL) cholesterol. They do this because TFAs (trans fatty acids) increase low density lipoprotein (LDL) cholesterol while lowering HDL cholesterol.

## The Crazy Makers by Carol Simontacchi

Women who consume large amounts of trans-fatty acids (as found in margarine and other **hydrogenated** products, for example) have lower amounts of essential fatty acids in their breast milk. **hydrogenated** fats are not adequate for optimum development of **brain** tissue.

Harmful amounts of trans-fatty acids are passed on to her child. In fact, trans-fatty acids are transmitted through the placenta into the fetus, impairing formation of the **brain** tissue. Trans-fatty acids block the metabolism of the beneficial oils, reducing their potential in the body. Avoid the trans-fatty acids found in margarine, shortening, and products made with **hydrogenated** oils. Read the small print on packaged products carefully.

## Poison In The Food: Hydrogenated Oils

### Textbook of Natural Medicine Volumes 1-2 by Joseph E Pizzorno and Michael T Murray

In the tissues of plants and higher animals, the insertion of double bonds always results in the cis geometry. The message "partially **hydrogenated** vegetable oil" on food labels indicates that a natural oil has been chemically modified in a process that converts some of the cis unsaturated fatty acids to the trans form. Oleic acid is transformed into its trans isomer, elaidic acid, which is the most abundant trans fatty acid in most **hydrogenated** oils. In human tissues, trans unsaturated fat behaves as if it were saturated, meaning more risk of **heart** disease...

### Textbook of Natural Medicine Volume 2 by Joseph E Pizzorno and Michael T Murray

Many researchers and nutritionists have been concerned about the health effects of margarines since they were first introduced. Although many Americans believe margarine is better than butter and saturated fats, the opposite is true. Margarine and other **hydrogenated** vegetable oils not only raise LDL cholesterol, they also lower HDL cholesterol, interfere with essential fatty acid metabolism, and are suspected of being causes of certain cancers. Although butter may be better than margarine, the bottom line is that they both need to be restricted in a healthy diet while natural polyunsaturated oils like canola, safflower, soy, fish and flaxseed oils should be used to meet essential fatty acid requirements. The requirement for essential fatty acids is not high - just 1 tablespoon of a high quality flaxseed oil will provide more than enough in most cases.

### The Vitamin Revolution by Michael Janson

Both animal fat and partially **hydrogenated** oils can increase inflammation and elevate the amount of cholesterol and fat in the blood. There is evidence that a deficiency of omega-3 oils is associated with various skin disorders, arthritis and joint stiffness, prostate problems, irritable bowel syndrome, premenstrual syndrome, depression, phobias and schizophrenia. These oils have a short shelf life, and they are generally removed from our food supply through processing for manufacturers' convenience. Deficiencies are therefore common.

Let's get back to trans fatty acids. In their natural state, edible oils exist in a specific three-dimensional spatial configuration. When oils are highly processed during **hydrogenation** with heat and catalysts, they are partially converted to a different configuration called trans. These fatty acids do not participate in the normal pathways of fatty acid metabolism. They actually block the conversion of the natural cis fats to their active metabolites. Partially saturated or partly **hydrogenated** oil almost invariably contains trans fats. These fats increase the risk of developing heart disease and cancer more than natural saturated fats. In addition, trans fats interfere with normal immune function.

### Home Safe Home by Debra Lynn Dadd

Margarine is a processed polyunsaturated vegetable fat, sold as a "healthier" alternative to butter. It is **hydrogenated** oil, which means that hydrogen gas is bubbled through a tank of liquid polyunsaturated oil in the presence of nickel. The process turns cheap polyunsaturated fats such as corn or safflower oil into saturated fats. So when you think you are getting a polyunsaturated fat in your margarine, you are actually getting the very saturated fats the margarine sellers claim they are helping you avoid.

The **hydrogenation** of oil into hard fat (margarine, vegetable shortening) destroys or deforms the essential fatty acids in the oil. Lack of essential fatty acids can contribute to neurological disease, heart disease, arteriosclerosis, skin diseases, cataracts, arthritis, high blood-cholesterol levels, and cancer.

## Healing Miracles of Coconut Oil by Bruce Fife ND

**Hydrogenated** oil is twice as bad as saturated fat in promoting **heart** disease. What makes this even worse is that during cooking, **hydrogenated** oil is absorbed into foods more readily than saturated fat so that you get more fat per serving.

## Eat To Beat Cancer by J Robert Hatherill

The process of hydrogenation is accomplished by bubbling hydrogen gas through oil, which produces trans-fatty acids. Recent human studies indicate that consumption of trans-fatty acids in margarine and shortenings may contribute to higher rates of cancer and **heart** disease. Food makers add these to improve the creaminess of a product, and to extend its shelf life.

## Prescription Alternatives by Earl Mindell RPh PhD and Virginia Hopkins MA

To spare your liver, you should also avoid ... foods high in fat (especially **hydrogenated** oils and fried foods). Other factors that can stress the liver include exposure to pesticides, solvents, paints and gasoline.

Some villains in the heart disease drama directly harm artery walls. One of these villains is high homocysteine levels, often caused by a deficiency of B vitamins. Another such villain is rancid oil, such as unsaturated vegetable oils teeming with unstable molecules. The partially **hydrogenated** vegetable oils are equally if not more toxic to the heart.

Essential fatty acids (EFAs) are especially essential for people with unstable blood sugar, making it very important to cut out the EFA-blocking **hydrogenated** oils found in chips, baked goods and nearly all processed foods.

Most of the good and all of the bad prostaglandins are made from GLA oils, or gamma linoleic acid, a type of essential fatty acid found in fruits, vegetables and grains. You need GLA to make the majority of the good prostaglandins, but then you need to make sure it goes down the good prostaglandin pathway. What drives GLA down the wrong pathway to the bad prostaglandins? The biggest culprits are dietary: **hydrogenated** oils such as margarines, and a diet high in refined carbohydrates and sugar will drive GLA oils down the bad pathways. Viral illnesses and excessive adrenal hormones secreted in response to stress can also create more bad prostaglandins and a deficiency of good ones.

GSH is one of the most abundant substances in the body, and as long as we have a good supply of its building block cysteine (glycine and glutamic acid are rarely in short supply) and its cofactor selenium, it will be hard at work doing its detoxifying chores. GSH levels drop as we age, and can be depleted by an overload of rancid oils (such as polyunsaturated and partially **hydrogenated** vegetable oils), overexposure to poisons such as pesticides, and pharmaceutical drugs that stress the liver such as acetaminophen and aspirin.

These partially saturated, manmade fats were designed not to go rancid, but they have been found to actually cause **heart** disease. Since **hydrogenated** oils are found in most chips, cakes, cookies and other processed foods, this is another great reason to go for the whole foods.

## Poison In The Food: Hydrogenated Oils

### The Omega Solution by Jonathan Goodman ND

Experts haven't yet defined the optimal level of essential fatty acids (EFAs) in the diet. There's good evidence, however, that most Americans don't get enough. In addition, a number of common conditions, such as diabetes, infections, or digestive problems, can deplete the body of EFAs. Also, many processed foods contain **hydrogenated** fats, which may form compounds called trans-fatty acids. These compounds may reduce the level of EFAs in the body. They've also been linked with heart disease.

### Beating Cancer With Nutrition by Patrick Quillin

A defective cell membrane is built from **hydrogenated** fats (trans fatty acids), too much saturated fats, has been "tanned" by exposure to excess sugar floating through the bloodstream and various nutritional deficiencies. A healthy cell membrane allows the cell to "breathe" aerobically and expel waste products. Otherwise, cancer can be the result.

### Prescription For Nutritional Healing by Phyllis A Balch CNC and James F Balch MD

Factors that can contribute to acne include heredity, oily skin, hormonal imbalance, monthly menstrual cycles, and candidiasis. Nutritional deficiencies and/or a diet high in saturated fats, **hydrogenated** fats, and animal products can also be involved.

A diet that is low in protein and high in carbohydrates and fats, especially saturated fats, fried foods, and **hydrogenated** fats, is hard on the liver and may not provide sufficient protein building blocks necessary for repair.

### The Unofficial Guide to Beating Stress by Pat Goudey

The one thing just about all researchers agree on is that **hydrogenated** or partially **hydrogenated** fats and saturated fats can damage your **heart**, blood vessels, and just about all your organs.

### Eat Right Live Longer by Neal Barnard MD

From a chemistry standpoint, it's very simple. Certain oil molecules are curved. Those curly little molecules make the oil stay liquid. When manufacturers **hydrogenate** oils, however, the hydrogen atoms often attach on opposite sides of the carbon chain in what is called the trans configuration, which straightens the molecule out. When that happens, the oil becomes solid. Food chemists found that this is an easy way to turn liquid vegetable oil into spreadable margarine. But the resulting trans fats increase LDL and reduce HDL—just the opposite of what you want—and promote heart disease in the process.

Saturated fat is even worse than cholesterol in foods because it stimulates your liver to manufacture more cholesterol. The term "saturated" simply means that the fat molecule is completely covered with hydrogen atoms. Saturated fats are easy to recognize. They are solid at room temperature, while unsaturated fats are liquids. You will find them in three places: animal products, baked goods, and fried foods. **Hydrogenated** oils are liquid oils that have been chemically hardened. Unlike other vegetable oils, these two villains are loaded with saturated fat. Most people never cook with them, but large commercial bakers use them because they are cheap, have a long shelf life, and impart a smooth texture to foods.

## Heinermans Encyclopedia of Fruits, Vegetables and Herbs by John Heinerman

First of all, the process of **hydrogenation** originated as a way of making low-cost soap from discarded animal fats. From there it eventually crept into the powerful food industry.

For the sake of your health and to prevent getting heart disease, you should cease and desist in eating such greasy fare. Instead, you ought to seriously consider eating only those foods which have been either fried or baked in safflower, sesame seed or sunflower seed oils. A recent Veterans Administration hospital dietary study showed that the average serum cholesterol was 17% higher on a diet rich in palm oil than on a diet containing equivalent amounts of a highly unsaturated safflower oil. This is by no means a trivial difference since a 10% drop in serum cholesterol would mean 24% less heart disease in the United States.

A report published in the February 1984 issue of the American Journal of Clinical Nutrition, for example, showed beyond a doubt that when **hydrogenated** fat was systematically fed to swine, it induced far more hardening of the arteries than swine fed other types of fat such as some of these seed oils.

## The Omega Diet by Artemis P Simopoulos MD and Jo Robinson

Our bodies "expect" to be fed the same types and ratios of fat that nourished our cave-dwelling ancestors. When we eat French fries cooked in partially **hydrogenated** vegetable oil instead of wild plants; or wolf down a fat-laden hamburger heaped with mayonnaise instead of meat from a lean, free-ranging game animal, our bodies register the insult.

## Vitamin Bible for the 21st Century by Earl Mindell

Studies have found that large amounts of "processed" polyunsaturates in the diet can increase the formation of carcinogens. This seems to happen when vegetable oils are **hydrogenated** to make them into solid shortenings—a process that, in effect, turns unsaturated fats into saturated ones. I'd suggest you supplement your diet with vitamin E (200-400IU daily) to help prevent lipid per-oxidation (fats rusting in the body); avoid products containing **hydrogenated** oils; increase your intake of cruciferous vegetables; and switch your polyunsaturated oils for monounsaturated ones, such as olive and canola.

We all know that saturated fats give an unhealthy boost to cholesterol levels and unsaturated fats don't. But recent studies have shown that when unsaturated fats are **hydrogenated** (a process which solidifies them so they resemble butter at room temperature) they not only continue to raise cholesterol levels, they do something that saturated fats don't— they lower the levels of the body's HDL (good cholesterol)! Look for nonhydrogenated or trans-fatty acid—free margarine. Better yet, use olive or canola oil instead.

## Get Healthy Now by Gary Null

We have been told that margarine, made from "polyunsaturated fats," is good for our hearts and will lower cholesterol. That is simply not true; it is loaded with the fatty acids that contribute to heart disease. Instead of margarine, use olive oil, canola oil, or other oils such as flaxseed, almond, safflower, sunflower, or soy. Of these, olive oil would be on the top of my list. But don't have margarine.

## Poison In The Food: Hydrogenated Oils

### Optimum Health by Stephen T Sinatra MD

There has also been some evidence that trans-fatty acids, compounds produced during the **hydrogenation** process, may raise LDL levels, reduce HDL levels, and increase the amount of LP(a) in the blood, all of which may increase the risk of coronary artery disease. LP(a) is an ugly lipoprotein that has been shown to be a risk factor for developing heart disease.

Omega-6s are necessary for the production of both good and bad eicosanoids, but an excess of omega-6s has its downside. The problem with omega-6 essential fatty acids is that an enormous amount of omega-6 may be absorbed into the body from the diet. Not only are omega-6s found in many of the vegetable oils we commonly use, but they are contained in the trans-fatty acids found in margarine and in partially **hydrogenated** oils, which are found in almost all processed foods. Remember that an excess of omega-6 intake can stimulate an overproduction of arachidonic acid. Since many vegetable oils contain considerable quantities of linoleic acid (an omega-6 oil), deficiencies of linoleic acid are uncommon. However, you must remember that the polyunsaturated acids containing linoleic acid, such as safflower oil, corn oil, peanut oil, and even canola oil, are all prone to excessive lipid peroxidation (lipid peroxidation occurs when fat is metabolized in the presence of oxygen). So while they are a good source of linoleic acid, these polyunsaturated fats are easily oxidized and are therefore a tremendous source of free radical stress in the body. It is overwhelming free radical stress that accelerates premature aging.

### Dangerous Grains by James Braly MD and Ron Hoggan MA

It is particularly important to avoid all **hydrogenated** fats, oils, and margarines. The evidence indicates that when eaten in excess, these man-made oils, found in many processed foods, behave as pro-inflammatory, carcinogenic substances in our bodies.

### The New Whole Foods Encyclopedia by Rebecca Wood

Unrefined coconut oil is free of the toxic trans-fatty acids found in **hydrogenated** and refined oils. It does not clog the arteries or cause heart disease. It's easy to substitute coconut oil for shortening, lard, or butter in pastries. However, reduce the coconut oil measurement by 25 percent because it is almost pure fat. It's more concentrated than shortening, lard, and butter, which contain upwards of 20 percent moisture and/or milk solids.

**HYDROGENATION:** This process saturates the fatty acids to render a solid or semisolid product like margarine and shortening. Most processed cheeses and commercial peanut butters also contain **hydrogenated** oil. Avoid all **hydrogenated** products.

### Health And Nutrition Secrets by Russell L Blaylock MD

The brain uses large amounts of DHA for construction of synapses and dendritic connections. EPA is found only in small amounts in the brain, but does seem to play an important role in its function. Consuming flaxseed can enhance the body's store of DHA, but it must be first converted by an enzyme, delta-desaturase. Some people have a poor supply of this enzyme, or what they do have has been damaged by chronic disease, high intake of partially **hydrogenated** oils, viral infections, or by a high insulin level.

## Elements Of Danger by Morton Walke DPM

TFAs in margarine and other **hydrogenated** foods are twice as likely to increase the ratio of total cholesterol to high density lipoprotein (HDL) cholesterol. They do this because TFAs increase low density lipoprotein (LDL) cholesterol while lowering HDL cholesterol. Also TFAs have many other adverse effects, which contribute to gum disease [and] rotted teeth...

## Healthy Digestion the Natural Way by Dr Lindsey Berkson

Food stressors: Excessive consumption of nutrient-poor foods: sugars, refined carbohydrates (white flour products like pastries, pastas, and cookies), alcohol, caffeinated beverages (black tea, colas, and coffee), table salt, saturated animal fats; excessive intake of animal foods, **hydrogenated** and processed oils; overeating of processed foods; and overeating in general.

### Four Factors That May Tax the Immune System of the Gut

1. Eating excessive amounts of refined sugar on a daily basis.
2. Eating refined (processed and **hydrogenated** ) oils on a daily basis.
3. Eating the same foods over and over again (repetitive eating).
4. Eating foods you are allergic to (you may not be aware of these).

## The Miracle Of Fasting by Paul C Bragg

Diseases of the heart do not build up rapidly. It takes a long time to harden and block an artery! Heart disease has many causes . . . tobacco, alcohol, an unhealthy diet heavy in **hydrogenated** and saturated fats such as those in meats and dairy products and lack of exercise. It is possible for a person to have half-blocked arteries all over their body without the slightest indication that anything is wrong.

## New Foods For Healing by Selene Yeager

Although margarine and vegetable shortening have been touted as healthy alternatives to saturated fat, they're not always good choices. Studies indicate that **hydrogenated** fats—the kinds used in making margarine and shortening—can clog the **arteries** just as much as saturated fats.

## Encyclopedia Of Natural Medicine by Michael Murray ND and Joseph Pizzorno ND

Considering the effects of fats and oils on agglutination and cell membrane function, certain fats are best avoided by infertile men, while intake of others should be increased. Saturated fats, **hydrogenated** oils, trans-fatty acids, and cottonseed, coconut, and palm oils should be avoided.

## Natural Alternatives to Over-the-Counter and Prescription Drugs

A healthful diet rich in natural whole foods like vegetables, fruits, whole grains, and beans is the first recommendation for treating acne. All refined and/or concentrated sugars must be eliminated from the diet. Foods containing trans-fatty acids, such as milk, milk products, margarine, shortening, and other synthetically **hydrogenated** vegetable oils, as well as fried foods, must be avoided.

## Poison In The Food: Hydrogenated Oils

### The A-to-Z Guide to Supplements by James F Balch MD

There are two basic categories of essential fatty acids, designated omega-3 and omega-6. Omega-6 EFAs, which include linoleic and gamma-linolenic acids, are found primarily in raw nuts, seeds, and legumes, and in unsaturated vegetable oils, such as borage oil, grape seed oil, primrose oil, sesame oil, and soybean oil. Omega-3 EFAs, including alpha-linolenic and ei-cosapentaenoic acid (EPA), are found in fresh deepwater fish, fish oil, and certain vegetable oils, among them canola oil, flaxseed oil, and walnut oil. In order to supply essential fatty acids, these oils must be consumed in pure liquid or supplement form and must not be subjected to heat, either in processing or cooking. Heat destroys essential fatty acids. Worse, it results in the creation of dangerous free radicals (see Chapter Six, Anti-oxidants). If oils are **hydrogenated** (processed to make the oil more solid, as is commonly done in the production of margarine), the linoleic acid is converted into trans-fatty acids, which are not beneficial to the body.

### Healing With Whole Foods by Paul Pitchford

Saturated animal fats, **hydrogenated** fats (e.g., margarine), and excessive protein place a burden on liver metabolism [and] can cause abnormal formations such as cancer...

### Brain Longevity by Dharma Singh Khalsa M.D. with Cameron Stauth

Trans-fatty acids glob together in your cells—including your **brain** cells—and wreak havoc on normal cellular function.

### Earl\_Mindells\_Secret\_Remedies by Earl Mindell RPh PhD

Diet may also account for the alarming rise in asthma, due to the increase of chemicals in our food, higher amounts of sugar in processed foods, and manmade **hydrogenated** fats.

### The ADD Nutrition Solution by Marcia Zimmerman CN

A child's first three years are the most critical in his or her development of healthy self-esteem. Therapies, such as nutrition and behavior modification, are better utilized at this early age as well. Nutrition is the best therapy you can use for your preschool child, whether he or she is ADHD or not. Healthy eating habits can easily be taught to young children. Their young **brains** are easily molded by good nutrients, but they can just as easily be disrupted by harmful ones like **hydrogenated** fats and additives.

### Food And Healing by Annemarie Colbin

Studies on the effect of **hydrogenation** found that it can alter cell-membrane function, making the membranes more permeable to carcinogenic substances.



# The hidden history of hydrogenated oils

## Syndrome X by Jack Challem Burton Berkson MD and Melissa Smith

In the early 1900s, manufacturers learned how to hydrogenate oils—that is, artificially saturate liquid vegetable oils with hydrogen to form solid fats loaded with unhealthy trans-fatty acids, which increase the risk of **heart** disease. Crisco vegetable shortening, a cheap replacement for butter made out of partially **hydrogenated** oil, went on sale in 1911, and other shortenings and margarines made out of partially **hydrogenated** oils followed.

During the 1960s and 1970s, many people mistakenly thought saturated fat was the chief villain in **heart** disease, and this belief launched an aggressive campaign against saturated fat to lower cholesterol. As saturated-fat phobia swept across the land, officials advocated the use of omega-6-rich vegetable oils and corn-oil margarines, and food companies were quick to add omega-6-rich oils and partially **hydrogenated** oils to all kinds of convenience food products (because they are more resistant to spoilage than omega-3 fatty acids).

## Know Your Fats by Mary G Enig

In 1965 the American **Heart** Association (AHA) changed its Diet/**Heart** statement by (i) deleting the recommendation to decrease the intake of **hydrogenated** fats and by (ii) removing a negative reference to the trans fatty acids. The revised statement encouraged the consumption of partially **hydrogenated** fats (Committee Print, Dietary Goals for the United States, 2nd Edition, U.S. Government Printing Office, Washington DC 1977). In the 1970s and the 1980s, the AHA continued to promote the partially **hydrogenated** fats as long as they contained twice as much polyunsaturates as saturates.

At the very times that U.S. government-sponsored research results, such as those of the National **Heart** Lung and Blood Institute's Lipid Research Clinic (LRC) trials, lent additional credence to the anti-saturated fat view, it became clear to some that the prevailing interpretations of these research results were fatally flawed: The measurements of dietary fat intake did not acknowledge the existence of trans fatty acids and consequently were inaccurate. The interpretations of the results of these LRC trials, however, were the basis for the 1984 National Institutes of Health Cholesterol Consensus Conference, which in turn gave rise to the National Cholesterol Education Program (NCEP). The NCEP program encouraged consumption of margarine and partially **hydrogenated** vegetable fats.

## Herbal Medicine Healing Cancer by Donald R Yance Jr

In 1977, the World Health Organization issued a notice to all the nations of the world that the processed oils used in cooking and food preparation were of great danger to the health of all peoples. They even advocated legal action by governments against the production of such oils. Even though that warning was sounded more than twenty years ago, not one nation has taken any steps to outlaw the processing of oils or to formally warn people of their dangers.

## Poison In The Food: Hydrogenated Oils

### The Omega Diet by Artemis P Simopoulos MD and Jo Robinson

By 1979, the American public was consuming an estimated 10 billion pounds of fat and oil per year, of which 60 percent was partially **hydrogenated** oil.

Today, Americans are consuming from 5 to 10 percent of their calories as trans-fatty acids. Studies show that amounts greater than 5 percent of your calories can have negative health consequences.

### Heart Frauds by Charles T McGee MD

George V. Mann, of the department of biochemistry, Vanderbilt University, tried to put the last nails in the coffin of the cholesterol theory and bury it in 1977. Mann wrote an article in the New England Journal of Medicine titled, "Diet-Heart: End of an Era." He pointed out that the Framingham and Tecumseh studies did not show a cause-effect relationship between cholesterol intake, blood cholesterol levels, and coronary artery disease. He was one of the first to publicize the finding that "risk factors for coronary artery disease don't count after the age of 55." He also warned about dangers from abnormal trans fatty acids produced in the processing and **hydrogenation** of vegetable oils (i.e., margarines.)<sup>34</sup>

## About the Author



The Health Ranger (Mike Adams) is a holistic nutritionist with over 5,000 hours of study on nutrition, wellness, food toxicology and the true causes of disease and health. He is the author of *The 7 Laws of Nutrition*, *Grocery Warning*, *Health Seduction*, and many other books available at <http://www.TruthPublishing.com>.

Adams is also the creator of the popular *Honest Food Guide*, a free downloadable nutritional guide found at <http://www.HonestFoodGuide.org>. In addition, more than 1,500 free articles on health, nutrition and wellness have been authored by Adams and are available at <http://www.NewsTarget.com>.

Adams uses no prescription drugs whatsoever and relies exclusively on natural health, whole foods, superfoods, nutritional supplements and exercise to achieve optimum health. To prove the value of nutrition and physical exercise in enhancing health, Adams publishes detailed statistics on his own blood chemistry (with full lab results) at <http://www.NewsTarget.com/AdamsHealthStats.html>.

## Other books by the Health Ranger

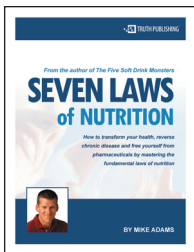


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