Healthy Ways Newsletter

The cutting edge source of information on coconut, fats and oils, diet, and nutrition.

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Does Low Cholesterol Cause Alzheimer's?

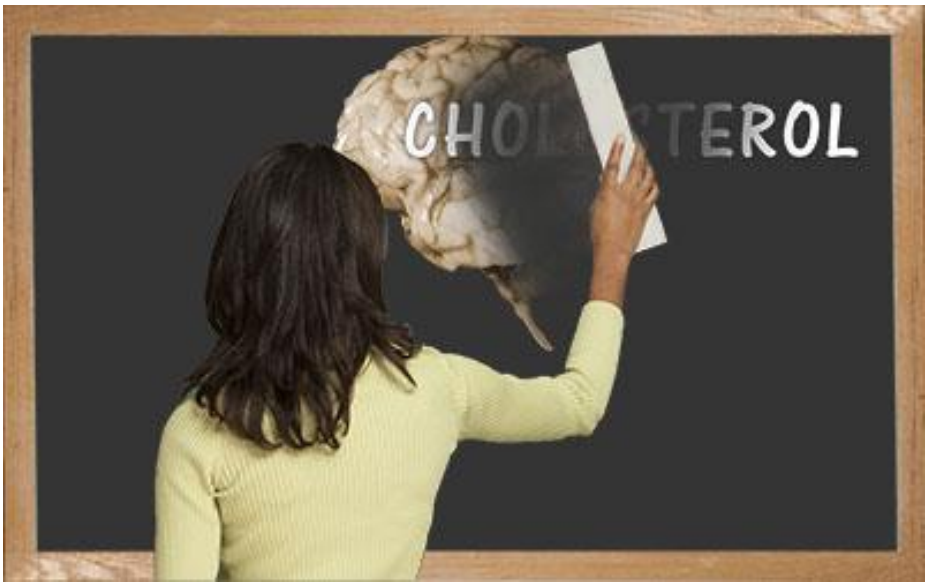
By Bruce Fife, ND

Alzheimer's disease is growing into an epidemic. Over 5 million Americans have the disease. In 1980 Alzheimer's affected less than 0.3 people for every 100,000 in the US. By 2006 that number shot up to 20 per 100,000. The number of cases is expected to double over the next couple of decades. This sharp rise in Alzheimer's is worrying doctors and researchers. "Alzheimer's is going to swamp the health care system," says Dr. John C. Morris, a neurology professor at Washington University in St. Louis and an adviser to the Alzheimer's Association. "It's frightening," says Rachel A. Whitmer, PhD, an Alzheimer's research scientist at Kaiser Permanente in Oakland, California. Currently, Alzheimer's is the seventh leading cause of death in the US.

Alzheimer's usually strikes after the age of 60. Yet, it can occur as early as the 40s and 50s. Over half a million Americans under the age of 60 have Alzheimer's. While the risk of Alzheimer's increases with age, it is not a part of the normal aging process. It is a disease. The brains of Alzheimer's patients are distinctly different from the brains of those people who age normally.

There is no known cure. Doctors don't even know what causes it. However, the sharp rise in Alzheimer's over the past few decade's points to something in the environment as the culprit. The disease is more prominent in affluent nations than in poorer countries, suggesting the cause is associated with our changing lifestyle. Diet and health care readily come to mind. Both have changed dramatically over the past few decades.

One of the biggest changes is the shift from eating foods rich in saturated fat and cholesterol to low-fat, and low-cholesterol foods. Since the 1970s we have been in a low-fat craze. Saturated fat and cholesterol have been purged from the diet. We've switched from eating whole foods rich in natural fats, to low-fat and non-fat milks and cheeses, lean cuts of meat, yolkless eggs, skinless chicken, and low-fat this and no-cholesterol that. Even restaurants offer low-fat food options. Total fat consumption has dropped from about 40 percent of total calories in the 1960s to about 30 percent now. Dietary fat has been demonized so severely that out of fear many people restrict their total fat intake to less than 20 percent. Some avoid any and all foods containing the least bit of cholesterol. As a result, we have become a fat deficient society.



What has been the result? Obesity is at an all-time high. Over 60 percent of Americans are overweight and one-third of the population is obese. While saturated fat and cholesterol intake have dropped dramatically, heart disease is still our number one killer. Other diseases such as diabetes and Alzheimer's are on the rise. Low-fat, low-cholesterol diets are not working.

It is interesting that as we have moved away from eating fat and cholesterol, the incidence of Alzheimer's has skyrocketed. Is there a connection?

Fat is an essential element of the human brain. Sixty percent of the brain consists of fat and cholesterol. While the brain accounts for only 2 percent of the mass of the body, it contains almost 25 percent of the body's cholesterol.[1]

Although cholesterol has been demonized by the pharmaceutical industry, in truth it is vital for good health and for life itself. Cholesterol performs many vital functions in the body. It is needed to maintain healthy cell membranes, to form hormones (such as estrogen and testosterone), produce vitamin D, and make bile acids, which are necessary for proper fat digestion and nutrient absorption.

The cells of our body are encased in a lipid (fat and cholesterol) membrane. Even the individual organelles (cell organs) inside the cells are encased in a lipid coat. Cholesterol is a vital element of

the cell and organelle membranes. Cholesterol is uniquely able to influence the structure, thickness, permeability, deformation, and other characteristics of the cell membranes. Cholesterol is needed to regulate the entry and exit of certain hormones, fats, and proteins. Cholesterol typically makes up about 20 percent of the membrane. Nerve cells and especially the neurons or brain cells, may contain two or three times this amount.

Cholesterol is constantly being formed to maintain, replace, and repair the cells and tissues, especially in the brain. Cholesterol is absolutely essential for the transmission of nerve impulses and for the storing and retrieving of memories. The synapses—the highly specialized junctions between the brain cells—depend on cholesterol in order to transmit signals from one neuron to another.[2] Any interference with normal cholesterol synthesis can impair nerve tissue maintenance and repair, leading to neuron degeneration.[3] Even a small depletion of cholesterol—less than 10 percent—has been shown to be enough to inhibit nerve transmission.[4] When this happens memory and cognitive skills decline.[5]

Studies have shown that those people who have higher blood cholesterol levels are at lower risk of developing Alzheimer's disease. For instance, researchers from Boston University examined the relationship between total cholesterol and cognitive performance.[6] In this study, 1,894 men and women who were free of dementia were given cognitive tests and cholesterol screenings. The researchers found a significant association between blood cholesterol levels and cognitive skills. Participants with so-called "desirable" cholesterol levels of less than 200 mg/dl performed significantly poorer than participants with cholesterol levels higher than 240 mg/dl (a level at which cholesterol-lowering drugs are recommended).

A study at Johns Hopkins University had similar results. A group of 392 subjects were followed for 18 years. All of the subjects were 70 years of age at the beginning of the study. Every few years the investigators measured their cholesterol levels and conducted cognitive tests. At the end of the study those with the highest blood cholesterol levels scored highest on cognitive tests.[7]

These results were supported by another study from Mount Sinai School of Medicine, in New York. In this study 185 subjects over the age of 84 and without dementia were assessed. Higher cholesterol was associated with higher memory scores on tests. The researchers' conclusion: "high cholesterol is associated with better memory function."[8]

Researchers at Seoul National University in South Korea came to similar conclusions. For three years they followed 106 elderly subjects with possible dementia. As with the other studies, those with the highest cholesterol readings performed the best on neuropsychologic tests. Those who eventually digressed into Alzheimer's disease had lower blood cholesterol readings.[9]

A number of studies have shown that Alzheimer's patients tend to have lower total blood cholesterol, lower HDL cholesterol, lower LDL cholesterol, and lower triglyceride levels than age matched people with normal mental function.[10-11] Brain cholesterol levels are also below normal. An examination of brain tissues from deceased Alzheimer's patients shows that the areas of the brain associated with memory are cholesterol deficient.[12-13]

As far back as 1991, researchers suggested that increasing delivery of cholesterol to the brain may help Alzheimer's patients and recommended increasing fat consumption.[14] More recently, a study published in the Journal of Biological Chemistry showed that dietary cholesterol, the type found in foods such as eggs and meat, can protect the brain from the physiological changes that are associated with Alzheimer's disease. This study provided evidence that dietary cholesterol improves brain cholesterol status and helps protect against the formation of amyloid plaque, a feature found in the brains of Alzheimer's sufferers.[15] This study demonstrated that dietary measures can be taken to help protect against developing neurodegenerative disease. It also suggests that the wrong type of diet (i.e., low-fat, low-cholesterol) can promote neurodegeneration.

Cholesterol levels, for the most part, are set by genetics. Some people naturally have what is generally considered to be low cholesterol, while others have higher cholesterol. Higher cholesterol isn't bad if it is the level that has been set by your genetic blueprint and is not a consequence of some rare inherited defect or illness. Forcing your cholesterol level down with drugs will only cause problems. Reducing cholesterol by extreme low-fat dieting or drug therapy is known to cause changes in the brain similar to those found in Alzheimer's patients.[16]

When blood cholesterol is lowered by any means, cognitive ability declines, increasing the risk of Alzheimer's. The adverse effects of cholesterol-lowering statin drugs on brain health have been reported for years.[17-19]

Not everyone who takes statins complains of memory loss. However, everyone who uses statins is adversely affected to some degree. This was demonstrated by researchers at the University of Pittsburgh School of Medicine. The investigators took 209 healthy adults and randomly split them into two groups, one being the treatment group and the other the control group. The treatment group was placed on statins and the control group on placebos. At the beginning of the study cognitive performance and psychological well-being of each participant was carefully assessed. After six months, all of the patients on placebos showed a measurable increase in cognitive function, while every subject in the statin group showed a measurable decrease in cognitive function in one or more areas.[20] So apparently, everyone who takes cholesterol-lowering drugs is adversely affected to some degree.

…every subject in the statin group showed a measurable decrease in cognitive function…

Researchers have also found that depriving the brain of cholesterol sets into motion chemical changes that lead to the formation of abnormal proteins and neurofibrillatory tangles which are characteristic of the damage seen in Alzheimer's and other neurodegenerative diseases.[21]

Ironically, drug companies have tried to portray high cholesterol as a cause of Alzheimer's and have touted statins as a novel means to lower the risk of the disease. One pharmaceutical industry sponsored study reported that people who have high cholesterol in their 40s appear to have an increased risk of Alzheimer's disease decades later.[22] The problem with this study, however, was that most of those people who had high cholesterol and developed Alzheimer's later in life were also taking statins. It was not the cholesterol that was causing the problem but the drugs they were taking

to lower the cholesterol. Those people who naturally had lower cholesterol and were not on the drugs were less likely to develop dementia. The drug industry points to this study as another reason why people should be taking cholesterol-lowering drugs.

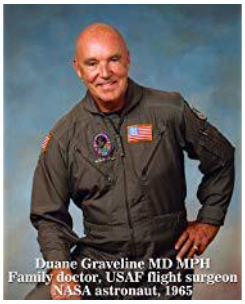
In a couple of short term studies cholesterol-lowering drugs have appeared to slow down the cognitive decline of individuals with Alzheimer's. The pharmaceutical industry has used these studies to justify their stance that statins protect against Alzheimer's. But again the studies are misleading. In the short run statins may provide some benefit but over time they accelerate the rate of cognitive decline, making the condition worse.

For example, in one study with elderly African Americans, researchers stated that "Initial use of statins resulted in less cognitive decline in individuals, but continued use of a statin resulted in more cognitive decline."[23] It is believed that the initial improvement was due to the anti-inflammatory effect of the drug, which may have helped reduce chronic brain inflammation—a characteristic of Alzheimer's. But in the long run the damaging effects of cholesterol depletion overshadowed this positive effect. A study like this can be made to appear to support statins if the long term effects are ignored. This doesn't stop the drug companies from pointing to the short term effects as proof that we need to add drugs to our diet.

More recent studies, however, have completely refuted the drug makers' claims. They have demonstrated that statins provide absolutely no protection against Alzheimer's disease or dementia in general.[24] Autopsy studies—the most definitive in regards to the changes occurring in the brain—have shown no protective benefit whatsoever in taking statins.[25] Unfortunately, drug companies continue to promote and perpetuate these falsehoods.

Autopsy studies…have shown no protective benefit whatsoever in taking statins.

Perhaps the most vocal advocate for educating people about the dangers of statins on brain health was Duane Graveline, MD, MPH. His passion stemed from his own experience using these drugs. Dr. Graveline was a former United States Air Force Flight Surgeon and Astronaut.



As a NASA astronaut he was required to be in tip-top shape both mentally and physically. During a routine medical exam, Graveline was told his cholesterol was too high, so he began taking 10 mg of Lipitor daily. Six weeks later he began to lose his memory.

One day Graveline seemed fine, but then his wife spotted him walking aimlessly about their driveway and yard. When she confronted him, he acted confused and gave no evidence of recognizing her. He refused to come into the house or get into the car to see the doctor. She had to call an old friend of his to convince him to go see the doctor. A neurological examination that included an MRI found no abnormalities.

He remembers nothing of this incident. About six hours after his wife first noticed his condition be slowly began to come to his senses. He was completely bewildered by the experience. Over the next few days his mind began to function normally again. He questioned neighbors and asked them if they saw him walking about on that day. One of them said he saw Graveline walk past his house and that he stopped to talk to another neighbor for a few minutes. Graveline had no memory of it.

During this recovery period he had neglected to take the medication. He experienced no further memory problems. He began to wonder whether the cholesterol medication was at the bottom of all it all. In researching statin side effects he found only slight references to possible cognitive problems. He questioned several doctors and pharmacists if Lipitor could cause memory loss. They all assured him it didn't. He was not so sure.

A year later at his next astronaut physical, he was again advised to take cholesterol-lowering medication. When he expressed concern about the drug's effect on his memory the doctor replied, "Statins don't do that." The doctor convinced him to get back on the drug but reduced his dose to only 5 mg a day. Six weeks later he experienced a second episode of amnesia, this time more severe than the first. He lost all memory of his wife and children, his career as an astronaut, his medical school training, and his college life. He could recall his early teenage years and before, but nothing of his entire adult life. He remained in this stupor for 12 hours.

Again the examining doctors chorused "Statins don't do that" but he was convinced they do. No one seemed to believe him. Desperate to find out more about the connection between statins and memory loss, he sent an email describing his problem to the People's Pharmacy, a newspaper column that is syndicated throughout the country. His letter was printed in the column. The authors of the column were immediately bombarded with hundreds of letters from readers reporting similar experiences.

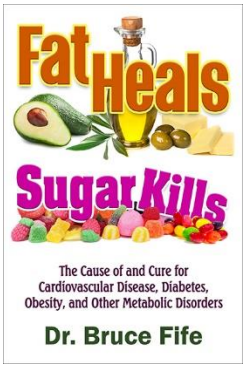
After receiving hundreds of reports similar to these and uncovering studies linking cognitive problems with statin use, Dr. Graveline wrote a book titled Lipitor Thief of Memory. He also set up a website at spacedoc.com to further explain the dangers of statins.

Cholesterol is an important building block for our cells, particularly for our nerve and brain cells. If you are going to build a brick house, you will need an ample supply of bricks and mortar for the job. If the supply company delivers only half the bricks needed, your house cannot be completed and will not function as designed. The same is true with your brain. When you reduce your cholesterol with extreme dieting or drugs, the brain is deprived of the building blocks it needs to function properly.

If you want your brain to be healthy, you should make sure to get plenty of good fats in your diet and eat good sources of cholesterol such as organic meats, poultry, fish, dairy, and eggs. The best fats are traditional fats that have been used safely for thousands of years by cultures around the world. These foods provide the basic building blocks the body needs to manufacture and maintain proper cholesterol levels. If you eat healthy natural foods you do not have to worry about your cholesterol.

Low cholesterol may or may not be the primary cause of Alzheimer's. However, what is evident is that reducing your cholesterol levels with drugs or strict low-fat dieting defiantly increases the risk and can cause neurological problems. Some investigators are even suggesting that a time may come

when doctors will be prescribing cholesterol-raising medications to patients to improve memory and ward off Alzheimer's.[26]



My new book *Fat Heals, Sugar Kills* describes why dietary fats are important to both your mental and overall health.

Available from Piccadilly Books, here

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Keto Cycling: How to Optimize the Ketogenic Diet and Avoid Common Mistakes

By Bruce Fife

In recent years, the ketogenic diet has gained a great deal of attention and for good reason. The diet has proven highly successful as a weight loss aid and as a means for reversing chronic degenerative disease.

So-called weight loss diets are viewed as temporary restrictions on food and calorie consumption that are designed to starve you into losing weight. Once your weight loss goal has been achieved, the diet is abandoned and old eating habits resumed. In time, the weight and poor health come right back. The weight gain may only take a few months or may take a few years, but eventually you will regain all your lost weight and pick up a few extra pounds to boot. The diet was a complete bust.

Typical low-fat, weight loss diets are agonizing because they are accompanied by constant hunger pangs, food cravings, low energy, feelings of deprivation, and guilt because it is hard to stick to these diets without cheating. In order for the weight loss to be permanent, the diet would need to be maintained for life. Yet, few if any can remain on a low-fat, calorie-restricted diet for long without succumbing to temptation or suffering from malnutrition. This is why 95 percent of people who go on weight loss diets fail to keep the weight off.

In contrast, the ketogenic diet can be followed without all the negative effects associated with low-fat dieting. You eat delicious, satisfying foods until you're satisfied. You lose excess weight relatively easily and gain better overall health. The ketogenic diet improves all of the common health markers that doctors measure when evaluating a patient's health, such as body mass index (BMI), body fat, blood pressure, blood sugar, triglycerides, HDL, systemic inflammation, and such. It is like hitting the reset button on your computer—all of the garbage is deleted and you are returned to the original properly working starting position before the errors began to creep in. Health problems are wiped away and you get a fresh start. Hormones are rebalanced, proper digestive function is restored, energy levels improve, and blood chemistry improves; you sleep better, think better, and function better. It is literally an anti-aging diet. All of these results have been documented in published medical and nutritional studies and have been experienced by numerous people following the diet.

However, there are those people who claim that when they tried the ketogenic diet they were not successful in achieving their weight loss goals or improving other health markers. Why the discrepancy?

Unfortunately, information about how to do the ketogenic diet is awash in myths, misinformation, and misconceptions that are perpetuated on the internet, in books, and in the news media. Many people are confused, and consequently, do not follow the diet properly, leading to unsatisfactory results.

One of the most common misconceptions is the belief that for permanent results you need to remain on the ketogenic diet long-term or even for life. Low-fat weight loss diets have generally proven to be a dismal failure because as soon as the dieter comes off the diet, the weight comes right back. The same thing can happen with a ketogenic diet as well if the dieter goes back to eating unhealthy foods. So, the reasoning is that if you remain on the ketogenic diet you will retain all of the benefits. The foods are nutrient dense so that they provide all the nutrition you need to achieve and maintain good health indefinitely. You could live on a ketogenic diet for life, but it is not the most effective way to use the diet.

The ketogenic diet shifts the body into a natural, healthy metabolic state known as nutritional ketosis. In nutritional ketosis the body uses fat as its primary source of energy in place of glucose (sugar). Some of this fat is converted into ketones—high-potency fuel that boosts energy and cellular efficiency. As good as the ketogenic diet is, its effects can be greatly enhanced through the process of keto cycling—a method of repeatedly going in and out of ketosis.

When a person is in nutritional ketosis, special enzymes and genes that regulate cell survival and internal cleansing are activated. When the body shifts back to burning glucose, a different set of enzymes and genes are activated or "switched on" that stimulate growth and healing. Shifting between fat burning and sugar burning continually activates these switches upregulating or downregulating enzymes and genes stimulating healing and repair. As a consequence, blood pressure normalizes, blood cholesterol levels improve, excess weight and body fat melt off, energy levels increase, blood sugar and insulin levels normalize, memory and cognitive skills improve, and hormone levels improve, the entire body feels the positive effects.

Keto cycling enhances the power of the ketogenic diet and makes it more user friendly by allowing periods of time with higher carbohydrate intake and a greater variety of food choices. Many people feel the ketogenic diet is too restrictive being very low in carbohydrate and high in fat, with only moderate protein consumption. Keto cycling allows a more varied diet, with restrictions limited for only certain periods of time.

Many people who have experienced only limited success with the ketogenic diet are seeing incredible improvement with keto cycling. For example, Brenda had struggled with weight problems for most of her life, even as a child. She was diagnosed with insulin resistance in her twenties and was told she would become diabetic by age 30. She followed her doctor's instruction and ate a low-fat, calorie-restricted diet and exercised daily. With a great deal of effort, she managed to lose some weight. Eventually, she gave up the struggle and decided to eat "normally" like everyone else, but with healthy, whole foods. Although she still worked out over an hour daily she gained 75 pounds (34 kg) in eight months. She was eventually diagnosed with diabetes and put on Metformin and Byetta, which made her nauseas and often caused her to vomit. After two years, she stopped taking the medication. Over the next few years she gained more weight, reaching a total of 256 pounds (116 kg).

The dietary advice from her physician wasn't helpful, it was the same old low-fat, calorie-restricted diet with regular exercise she had struggled with before. She decided to follow some of the current dietary fads by dropping gluten and dairy, but that didn't help. A friend of hers told her about the success people were having with the ketogenic diet. "I decided to try it," says Brenda. "I lost almost 40 pounds (18 kg) over 18 months, putting me at 217 (98 kg). I loved starting keto; I ate fats for the first time!"

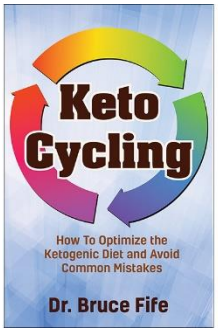
She remained on the ketogenic diet for about two years. Although she did well initially and lost weight, over time her progress stalled and her weight wouldn't budge. She then learned about keto cycling and began cycling in and out of ketosis. This method allowed her to alternate between a ketogenic diet and a healthy, but higher carb diet, which greatly expanded her dietary choices.

As a result, she began to lose weight again, her blood sugar dropped, and her A1C fell from 9 to 5.8, indicating that she was no longer diabetic. Her large belly, that previously never seemed to budge no matter how much weight she lost, was shrinking.

If done properly, the keto cycling is the most powerful, most effective, most efficient tool for overcoming chronic disease and restoring health. It is absolutely the easiest and most efficient method of losing excess body fat and eliminating belly fat.

Most people who fail to see the results they expected from the ketogenic diet were given faulty advice or had some misconceptions that affected their outcome. Simply doing the ketogenic diet in cycles can have a remarkable impact. However, there are many other things that can seriously affect the results of the ketogenic diet and keto cycling. It is easy to be confused. Myths and misinformation about the ketogenic diet are everywhere—on the internet and books, some of which are written by celebrity authors. Journalists often perpetuate these myths when they write about the diet in magazine articles. Many people seeing the growing popularity of the keto craze have jumped on the bandwagon and churned out recipe and weight loss books without really understanding what the diet is really all about. Many of these recipes are not actually ketogenic. A common misconception is that the keto diet is simply a low-carb diet with a little more fat—typical low-carb recipes often contain too much protein, not enough fat, or too much carbohydrate. In addition, how much should or could you eat when doing keto; what types of foods should your eat; which foods should you avoid; which fats are best and which should be avoided; how do you tell when you are in ketosis; do you even need to be in ketosis; how much protein should you eat; can sweeteners be used and if so what types; how long should you be on the diet, is it a lifelong diet or something you can do until you reach a goal; and how is the best way to do keto cycling? These are very important questions and concerns that need to be answered to be successful with the ketogenic diet, but can be confusing because of conflicting information. For this reason, I've compiled the answers to all these questions into a book titled *Keto Cycling: How to Optimize the Ketogenic Diet and Avoid Common Mistakes*.

If you have tried the ketogenic diet without experiencing the results you anticipated, or would like to improve your results, this book will be your guide. It will help you track down potential problems and, with the aid of keto cycling, give you the information you need to make the diet amazingly successful.



Keto Cycling: How to Optimize the Ketogenic Diet and Avoid Common Mistakes
by Dr. Bruce Fife
Available from Piccadilly Books, Ltd. here

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Consumer Alert: Do You Know Where Your Foods and Supplements Come From?

Is it Really Organic?

Do you know where the foods you purchase at the store come from? Most people don't give the origin of their groceries a second thought. This could be a big mistake, especially if it comes from China. China's food industry standards for safety and quality are notoriously substandard. Imported products from that country are often tagged for food standard violations.

As more and more people learn about the importance of eating healthfully and about the dangers of pesticides and other chemicals in their foods, the demand for "organic" products has skyrocketed. In the US alone, organic food sales have grown by 20 percent annually. Sales have been increasing so fast, food suppliers are bringing in organic foods from other countries. The organic standards in some of these countries, however, are far less stringent than in the US. In many cases, products are grown by conventional means but labeled "organic" to yield a higher price. Forged and faked organic certification documents are not uncommon. In no country is this fraud more pronounced than in China. It is bad enough that conventionally raised foods are given an organic labeled, but for some foods from China it is even worse because they are often more highly contaminated than non-organic foods grown in the US. Much of this so-called organic produce is so contaminated, that the farmers who grow it won't eat it themselves.

China has a reputation of shipping substandard foods to other countries and US customs agents often reject entire shipments of food. These foods are rejected for a variety of reasons: spoiled or poor quality produce, dangerous additives, chemical contamination, drug residues, and mislabeling, In an effort to circumvent the inspectors and avoid these rejections, some Chinese food exporters have taken to labeling their poor quality products as "organic," especially if it appears dirty, blotchy, or insect damaged, as organic produce doesn't always look as pretty as those that are conventionally grown and can pass the customs agents. To make matters worse, China has no established system for determining what is or is not organic, which has led to rampant mislabeling.

Even if the food was grown without pesticides and chemical fertilizers, it is unlikely to pass as organic. Much of the water used in the production of the food intended for export is so contaminated that a person could fall ill just from touching it. Much of China's industrial-scale agriculture is found along the Yellow and Yangtze rivers, both of which are extremely polluted. This is because thousands of Chinese factories also line these same rivers, adding their chemical waste to the same water used to irrigate the country's food supply. In one such recent case, a chemical fertilizer plant dumped such excessive amounts of ammonia into the Fu river, a tributary of the Yangtze, that an estimated 110 tons of dead fish had to be removed. However, the chemical-laden river continued to be tapped for industrial and agricultural use.[1]

Other chemicals and heavy metals have been found in very high and unsafe amounts in these rivers, as well as the food produced with that water. Perchlorate, an oxidizing agent used in food packaging and rocket fuel, has been found in China's sewage as well as its rice, bottled drinking water, and milk. It is throughout the entire water supply and contaminates any would-be organic produce. Perchlorate is a highly toxic pollutant that can disrupt thyroid function, raise blood pressure, damage lung tissue, interfere with the production of red blood cells, and cause developmental problems in children.

That "organic" melon or that sweet potato you purchased at the store last summer could have been a product from these polluted fields in China. Did you read the label from where the food came from? Probably not.

Fake Honey

It is not just foods labeled as organic that you need to be cautious about. Fish, chicken, apples, rice, mushrooms, green peas, black pepper, and garlic are among the most contaminated foods from China, but any produce is suspect. Even honey may be contaminated with pesticides, antibiotics, and industrial chemicals and may not actually be honey at all, but a highly diluted product containing sugar, fructose, corn syrup, and water.

According to recent testing commissioned by Food Safety News, three-fourths of the honey sold in US grocery stores isn't pure honey, but a combination of honey and syrup. Their tests reveal that there is no trace of pollen in many of the products labeled as "honey." The absence of these microscopic particles that are always found in natural honey would make it flunk the quality standards set by most of the world's food safety agencies.

Pollen is like a fingerprint, it can tell you where in the world the honey came from. The food safety divisions of the World Health Organization, the European Commission and dozens of others also have ruled that without pollen there is no way to determine whether or not the honey came from legitimate and safe sources.

A high-tech procedure known as ultra-filtering is sometimes used in processing honey. The honey is heated, sometimes watered down and then forced at high pressure through extremely small filters, removing all of the pollen, dirt, and other contaminants. Without the pollen there is no way inspectors can determine the source of the honey. Did it come from a highly polluted or heavily sprayed region in China or an organic farm in Vermont? The pollen provides the answer.

Ultra-filtering is a process refined by the Chinese, who have illegally dumped tons of their honey—some containing illegal and dangerous antibiotics and other contaminants—on the US market for years. To avoid tariffs, the Chinese began transshipping honey to other countries, then laundering it by switching the color of the shipping drums, the documents, and labels, to indicate a bogus but

tariff-free country of origin for the honey. Consequently, much of the Chinese honey in the US is labeled as a product of Brazil or some other country. The tell-tale sign is the absence of pollen.

Ultra-filtering is considered undesirable and lowers the quality of the honey. It requires an additional step and additional expense in getting honey to market that is not incurred when processing regular honey. The only reason to remove the pollen through ultra processing is to hide its source, and allow the processor to add water, sugar, and corn syrup, producing a far cheaper, and inferior product that is really just a honey flavored syrup. It is even likely that there is no honey at all in some of these products, being made solely of corn syrup and chemical flavorings, which would be one of the reasons why honey from China is so much cheaper than anywhere else. Much of the honey sold in the US under various brand names come from China. Even the organic brands are no guarantee of purity as China has a long history of passing off inferior products as organic.

"I don't know of any US producer that would want to do that," says Mark Jensen, president of the American Honey Producers Association. "Elimination of all pollen can only be achieved by ultra-filtering and this filtration process does nothing but cost money and diminish the quality of the honey. In my judgment, it is pretty safe to assume that any ultra-filtered honey on store shelves is Chinese honey and it's even safer to assume that it entered the country uninspected and in violation of federal law."

Food Safety News purchased more than 60 jars of honey in 10 states and the District of Columbia and had them analyzed for pollen. The majority of the samples contained no pollen. Most of these were store brands, like Safeway and Kroger, that are purchased in bulk from China and relabeled. Notice that some on this list are labeled organic. Samples purchased from health food stores, like Trader Joe's, all had the full, anticipated, amount of pollen.

Honey without Pollen

Honey products tested by Foods Safety News that showed no traces of pollen.

- American Choice Clover Honey
- Archer Farms Orange Blossom Honey
- Archer Farms Organic Classic Honey
- Busy Bee Organic Honey
- Busy Bee, Pure Clover Honey
- CVS Honey
- Fred Meyer Clover Honey
- Full Circle Pure Honey
- Giant Eagle Clover Honey
- GE Clover Honey
- Great Value, Clover Honey
- Haggen Honey, Natural & Pure
- HT Traders Tupelo Honey
- Kroger Pure Clover Honey
- Market Pantry Pure Honey

- Mel-o 100% Pure Honey
- Natural Sue Bee Clover Honey
- Naturally Preferred Fireweed Honey
- Rite Aid Honey
- Safeway Clover Honey
- Silver Bow Pure Honey
- Stop and Shop Clover Honey
- Sue Bee Clover Honey
- Thrifty Bee Honey
- Valutime Honey
- Walgreen MEL-O Honey
- Western Family Clover Honey
- Wegman Clover Honey
- Winnie the Pooh, Pure Clover

Source: https://www.foodsafetynews.com/2011/11/tests-show-most-store-honey-isnt-honey/#.VDwykufA478

Gutter Oil

When you thought it couldn't get any worse, it does. It is not uncommon for food producers in China to use gutter oil in preparing their products. Gutter oil is just what the name implies—recycled rancid cooking oil and kitchen waste that has been discarded in the trash or gutter. Although illegal, gutter oil has been used by unscrupulous food venders in China for decades. One account in 2000 from mainland China reports a street vender selling food cooked in gutter oil obtained from restaurant garbage disposals. Gutter oil has been found being used in Chinese pharmaceutical industry in the production of medications.[2] A scandal involving 240 tons of gutter oil in Taiwan affecting hundreds of companies and thousands of restaurants, some of which exported food overseas, broke in September 2014.

Gutter oil is recycled waste. The processing involves boiling and filtering the rancid cooking oil to remove adulterants, mix in alkali additives to neutralize the abnormal pH, then bleaching to remove the oil's characteristic darkened color, making it look more like ordinary cooking oil. The oil is then packaged and sold as cooking oil to individuals, restaurants, food producers, and in some cases, pharmaceutical companies. This illegal oil shows no difference in appearance and texture and buyers may be unaware they are purchasing gutter oil.

Gutter oil is far cheaper than vegetable oil or animal fat. It is collected from restaurant fryers, grease traps, slaughterhouse waste, and sewage from sewer drains. It also comes from animal fats, pig skins, internal organs, and decaying or otherwise poor-quality meat scraps, which is then cooked in large vats to extract the oil. It is estimated that up to one in ten lower-market restaurant meals consumed in China are prepared with gutter oil.

In Germany it is mandatory for all restaurants to sign a contract with the government and keep an accurate record of every drum of kitchen garbage they produce, thus preventing waste cooking oil from returning to the dinner table. In the US and Japan, it is mandatory for restaurants to give or sell

garbage containing used cooking oil to only certain collectors so that it can be dealt with in a environmentally friendly way. Japanese collectors even add inedible castor oil to the waste oil they sell to prevent it from being reused as cooking oil, yet can still be processed as biodiesel.

The Chinese use a lot of cooking oil creating a lot of waste—about 2 to 3 million tons of waste cooking oil is generated every year. They have no regulations on disposal, so it is easy for collectors to take it off restaurant's hands at minimal or no cost.

So much gutter oil is used in China that it invariably is used in foods produced for export as well a medications in some cases.

Caption: Barrels of gutter oil.

Gutter oil, even after it has been filtered, bleached, and deodorized, is toxic. The fatty acids in the oil have been seriously degraded and oxidized creating a variety of harmful free-radical byproducts in addition to unknown quantities of industrial and environmental contaminants as well as residual chemicals used in processing. Makes you wonder what were in the frozen wontons you cooked and ate last week.

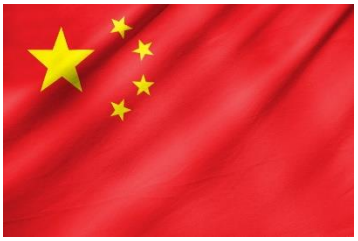
Pet Food

Not only is the food quality from China often poor, but it may also be adulterated or contaminated with toxic chemicals that have led to serious health problems.

One well publicized example is the Menu Foods fiasco of 2007. Commercial pet foods are required to have a certain amount of protein and other nutrients to meet the standards of the American Association of Food Control Organization. When checking compliance of food products, the protein content is not measured directly but is calculated based on nitrogen content. Protein is roughly 16 percent nitrogen by weight, so the nitrogen levels in pet foods are measured to estimate the quantity

of protein present. Unfortunately, there are other substances that contain nitrogen that can mimic protein.

Menu Foods, a company that produces dog food for most of the name brand pet food companies in the US, imported wheat protein (gluten) from China that was tainted with the chemical melamine. Melamine contains 67 percent nitrogen. Visually, wheat flour is indistinguishable from wheat gluten, and one could easily be mistaken for the other. The Chinese supplier mixed inexpensive and low-protein wheat flour with melamine to produce a nitrogen reading consistent with that of gluten. A nitrogen analysis would not have shown anything wrong. Wheat flour is much cheaper than wheat gluten. If it weren't for one oversight by the Chinese supplier, nobody would have been the wiser. The problem was that melamine is poisonous. The adulterated wheat flour was used in the manufacture of hundreds of pet food products. These tainted pet foods were then sold across the country, resulting in massive illness and numerous deaths of dogs and cats. Over 260 dog and cat food products were recalled, including foods for horses, fish, and reptiles. If it weren't for the deaths, probably no one would have known that these tainted pet foods were protein deficient, and they would have continued to be sold to unsuspecting pet owners for years. The lack of protein would eventually contribute to protein deficiency in the animals and over time they would become sick and die. Cases like this make you wonder what other ingredients or products have come out of China that have been made with cheaper and potentially toxic ingredients.



The Deception Continues

Organic labeled foods that are not organic, sugary syrup passed off as honey, gutter oil used in food production, and toxic chemicals in pet food, are just the tip of the iceberg. News stories in recent years also reveal baby formula tainted with potentially lethal melamine (the same chemical used in the pet food) to deceive inspectors on the protein content; plastic pellets passed off as rice; rat meat sold as beef; noodles made using rotting grain; pork stuffed dumplings with chemically treated cardboard used in place of the pork, sick cats and dogs slaughtered and sold as lamb, rabbit, or other types of meat [3]…the fraud and abuse in China's food, supplement, and drug industries goes on and on. It is absolutely horrendous. You cannot trust any consumable product from that country as being safe.

Even non-food items produced in China can be a health hazard. Drywall imported from China, which was manufactured using toxic chemicals, has sickened hundreds of people throughout the US and their homes declared health hazards and uninhabitable.[4]

Many food products print the country of origin on the label so you can tell where they came from. Some products are purchased in bulk and shipped to the US where they are repackaged. Even though the product may be grown in Brazil, processed in China, but packaged in the US, it can say on the label "Produced in the USA." In order to avoid US laws, China ships certain foods into the US through other countries. Many food products don't list any country of origin, so you cannot always tell where they come from.

Although more conventional grocery and big box stores are carrying organic and natural foods, these foods, if produced in China, may not be your best choice. Health food stores still seem to be the safest place to buy organic and natural foods.

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Why Scientists Are Opposing 5G Networks

Scientists are speaking up and demanding we examine the health risks more closely before blanketing our neighborhoods, homes, and businesses with 5G technology radiation.

The controversy about the potential dangers of electromagnetic frequencies from cell phones, household electronics, and power lines has raged for many years. Studies do show an increased risk for certain health issues, most notably cancer. With the introduction of 5G technology the threat to our health has greatly increased, so much so that many people, including physicians and scientists are speaking up and demanding we examine the risks more closely before blanketing our neighborhoods, homes, and businesses with more electromagnetic energy.

5G, or 5th Generation, wireless network is the latest development of mobile technologies promoted as a means to achieve faster internet and streaming services, provide better cell phone coverage, and reduce commute times and energy usage with improved public safety due to smart grid efficiencies. The telecom industry is touting 5G as a necessity for modern life—something that will take us out the "stone age" of technology and into a new frontier of self-driving cars and washing machines that can order their own soap.

Unlike the 4G technology currently in use, which relies on huge 90-foot cell towers with a dozen or so antenna ports on each, the 5G system uses numerous small cell bases, each with about 100 antenna ports. It is expected to be up to 100 times faster than 4G technology and capable of supporting at least 100 billion devices.

5G will utilize multiple frequencies from those currently in use for cell phones and wireless to higher millimeter frequencies. Today's cellular and Wi-Fi networks rely on microwaves—a type of electromagnetic radiation utilizing frequencies up to 6 gigahertz (GHz) in order to wirelessly transmit voice or data. However, 5G applications will require unlocking a new spectrum of bands in higher frequency ranges above 6 GHz to 100 GHz and beyond, utilizing submillimeter and millimeter waves to allow ultra-high rates of data to be transmitted in the same amount of time as compared with previous uses of microwave radiation. Each telecom company will use a different set of frequencies.

The higher frequencies used in 5G do not travel as far as the frequencies currently in use. They also do not travel well though buildings, and tend to be absorbed by rain and plants, which interferes with the signal quality. To solve these problems 5G will require the build-out of literally hundreds of thousands of new wireless mini cell towers in neighborhoods, cities, and towns. This could mean wireless antennas on every lamp post, utility pole, home, and business, essentially drowning us into a sea of antennas buzzing with electromagnetic radiation (EMR). 5G transmitters will be set up in front of homes and businesses without consent of the property owners, so you will have no say in the

matter. As a consequence, many communities are already protesting as they do not want these transmitters built in front of their homes, and want a say in their placement on right of ways.

This massive build-out of wireless infrastructure is not a necessity and does not improve cell phone reception, its purpose is to give a marketing advantage to telecom companies and enable then to better compete with cable companies. Yes, it is all about money.

What is so troubling about 5G technology is that it greatly enhances our exposure to electromagnetic radiation and especially the potentially more troublesome smaller millimeter size microwaves. Millimeter and submillimeter waves are biologically active, meaning they can interfere with and alter the function of our cells. Scientists are cautioning that before rolling out 5G, research on human health effects urgently needs to be done first to ensure the public and environment are protected. However, instead of prudent public health measures to ensure the public's safety, governments including the United States are quickly rolling out 5G networks and are enacting various state and federal regulations to fast-track the rollout. These regulations will end the ability of communities to halt and be a part of the decision making process in this massive 5G infrastructure build-out.

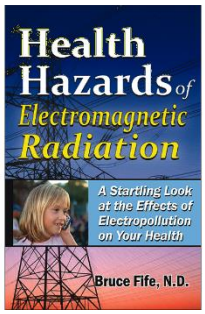
Current investigations of wireless frequencies in the millimeter and submillimeter range confirm that these waves interact directly with human skin, specifically the sweat glands. The sweat ducts in our skin act as antennas when they come into contact with millimeter electrometric waves and absorb much of the energy. Human skin contains from 2 to 4 million sweat ducts, all of which can act as receivers for 5G microwave energy. These waves penetrate 1 to 2 millimeters into our skin and eyes. Published peer reviewed studies have shown that the current wireless technologies of 2G, 3G and 4G—in use today with our cell phones, computers and wearable tech—creates radiofrequency exposures which poses a serious health risk to humans, animals and the environment. Numerous studies have linked EMR to increased cancer risk. In 2011 the World Health Organization (WHO) declared that EMR from cell phones to be a Group 2B "possible carcinogen," meaning a possible cancer-causing agent.

Research conducted by the National Toxicology Program of the US Department of Health and Human Services has revealed exposure to the type of radiation emitted by 2G and 3G cell phones could cause DNA damage and tumors in the heart, brain, prostate, liver, and pancreas. Animal research has shown that EMR can cause cataracts, increase stress, alter the heart rate, and depress immune function. The threat from 5G radiation could be much worse.

The proliferation of 5G infrastructure could become a health disaster because it will greatly increase our exposure to EMR that will affect everyone, not just cell phone or device users, but babies, pregnant women, the elderly, the sick, and anyone standing in the path of a transmitter—essentially all of us. With 5G technology we will be living in a sea of EMR and avoiding exposure will be virtually impossible. Because EMR cannot be felt and does not cause any immediate pain or symptoms, people will be lulled into a false sense of security, totally unaware of the damage that could be occurring in their bodies.

You will be exposed to increased levels of EMR in the near future. You need to be aware of the potential dangers and what you can do to protect yourself. If you would like to learn more about electromagnetic radiation and the potential dangers it poses, you might find my book *Health*

Hazards of Electromagnetic Radiation: A Startling Look at the Effects of Electropollution on Your Health to be of interest.



Health Hazards of Electromagnetic Radiation
by Bruce Fife, N.D.
Available at Amazon.com here

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