



C.I.I.M.S

CAMBRIDGE INTERNATIONAL INSTITUTE FOR MEDICAL SCIENCE

Stephen Cavallino, M.D. - Founder & Chairman (Italy) • Amid Habib, M.D. • David Sim, M.D. • Robert Nemer, D.O.

THE PHYSICIAN'S CONCISE GUIDE TO:

The Cholesterol Myth

"Saturated fat and cholesterol in the diet are not the cause of coronary heart disease. That myth is the greatest 'scientific' deception of the century, and perhaps any century."

- George V. Mann, M.D.

Professor of Biochemistry and Medicine



Dedicated to advancing and publicizing breakthrough discoveries in the health sciences

There is simply no one better in the 21st century at developing practical health-related solutions based on the world's leading medical and nutritional science. **"Science – Not opinion" is Brian's trademark.** When Brian is through explaining a topic it is "case closed!" When he says it, you "can take the information to the bank!"

Unlike most of his peers' recommendations, Brian's health and nutritional recommendations have stood the test of time. **Brian has never had to reverse or significantly alter any of his medical reports—reports that have tackled everything from the dangers of soy, to the wrongly popularized need for fiber in the diet, to his warning about the potential harm of supplementing with copious amounts of omega-3.** In 1995 he published the report "Fiber Fiction" and finally, eleven years later, others in research are acknowledging the silliness of recommending fiber in the diet of a human being. Brian's latest crusade is to warn of the dangers of excess omega-3 (in particular, fish oil) and how it will lead to increased cases of skin cancer. The list goes on and on...

Brian received an appointment as an Adjunct Professor at Texas Southern University in the Department of Pharmacy and Health Sciences (1998-1999). **The former president of the University said of his discoveries: "...His nutritional discoveries and practical applications through Life-Systems Engineering are unprecedented."** Brian earned his Bachelor of Science degree in Electrical Engineering from Massachusetts Institute of Technology (MIT) in 1979. Brian founded the field of *Life-Systems Engineering Science* in 1995. This field is defined as *The New Science of Maximizing Desired Results by Working Cooperatively with the Natural Processes of Living Systems*. To many, Brian is THE MOST TRUSTED AUTHORITY ON HEALTH AND NUTRITION IN THE WORLD.

Brian continues to be a featured guest on hundreds of radio and television shows both nationally and internationally. His sheer number of accomplishments during the last decade of the 20th century and into the 21st century are unprecedented and uniquely designate him as the #1 authority in the world of what really works and why. Forget listening to the popular press or most popular so-called health magazines. Their editors simply don't understand the complicated science that they write about – they merely "parrot" what everyone else says without independent scientific verification. Their recommendations often have no basis in reality of how the body works, based on its physiology.

Brian has dedicated his life to provide the truth – which is almost always opposite to what everyone says. Here's why Brian is the #1 man in America to listen to when it comes to your health.

The Cholesterol Myth

This science-based report is a real eye-opener. You will be appalled by the great misunderstanding about cholesterol and your health. You even may be unknowingly harming yourself. Read more about the startling revelations concerning popular perscription drugs later in this report.

This special report explores the origins of The Cholesterol Myth that has become so widespread, causing a panic about cholesterol levels, and a rash of cholesterol lowering drugs and diet products. The Bottom Line is that the **cholesterol scare is completely unfounded. There has never been any direct scientific basis for it.** Actually, the reverse is true! The sciences of physiology and biochemistry prove that cholesterol is good and necessary for many vital biological processes. Before we start on the need for cholesterol in our diets, let's go back to where the Cholesterol Myth started.

Origin of The Cholesterol Myth

Where did the Cholesterol Myth come from? Believe it or not, back in approximately 1954 - 1955, a "scientist" did a study using rabbits eating high fat/high cholesterol food. The diet clogged the rabbit's arteries, so the low-fat diet was recommended to us. What's *wrong* with this picture? A rabbit is an **herbivore** - designed to eat **vegetables only**. We are omnivores, designed to eat both vegetables and animal-based foods! A rabbit's physiology is **entirely different from ours** - they would never naturally eat any animal-based foods. Cholesterol **only comes from animal-based foods**. No vegetable contains cholesterol. It's appalling that such a study was taken seriously when the physiology of the rabbit, compared to ours was not taken into account. Eating foods it was not designed to eat killed the rabbit for obvious reasons. This should have been expected, just as it

should be expected for humans to get sick not eating foods we are designed to eat, and eating foods we aren't designed to eat. There is also a general misconception that our bodies handle dietary fat exactly like the plumbing of a house; that fat automatically builds up in our "pipes" (arteries) when we eat it. This concept has absolutely NO basis in reality!

The body is a complex system with thousands of concurrent processes. When we eat fat, it doesn't just start clogging our arteries like grease down the drain will. If that were the case, we'd all die within a few days of eating anything. Our body **takes the fat** we consume and through many digestive processes, often surrounds it with a protein (this combination is termed a lipoprotein). After using what it needs for instant energy, the rest is sent to assist in building body structure like your brain (which is 60% fat), skin, nerves, hormones, and to complete the membrane structure of **each of the 100 trillion** cells in your body.

The cholesterol "problem" has not been due to eating (natural) fat in general, but due to the kinds of fats, period. Bad fats - hydrogenated oils, often found in margarine and most supermarket items, which we've been led to believe are better for us, have **replaced the good healthy ones like butter, the natural fat from meat, and unprocessed, full-fat dairy products.**

Let's take a look at the structure of our cells. The critical bi-lipid membrane cell walls are composed of half fat and half protein. **There is no structural carbohydrate in your 100 trillion cells.** Of the half fat about 25%-33% is **supposed to be from natural** polyunsaturated fats (EFAs) and from saturated fat. Saturated fat has been incorrectly termed "bad" over the past 5 decades! The saturated fat supports cellular structure, keeps out impurities, protects the delicate polyunsaturated fat (EFAs), and gives cellular support. The polyunsaturated fat allows essential nutrients, hormones, numerous biochemical processes, and vital oxygen into the cell. Fats have a particular molecular structure. But when good, natural dietary fats are altered into trans-fats and other man-made unnatural, biochemically altered structures (the kinds found in popular low-fat, highly processed foods), the molecular biochemistry and structure is changed. This is what makes them so dangerous. Our bodies use them in place of the good natural fats it needs, but the structure is all wrong; very dangerous, and malfunctioning!

Imagine what these bad trans fats do to your cell structure. Damaged fats create damaged cells. Trans fats don't work because they don't have the required structure our bodies are designed to use. What makes them so bad is that they "fit" into the cell even though they are defective.

These hydrogenated oils and other man-made modified oils¹ are known to stop the oxygen transfer of EFAs and cause cancer. Even when margarine and other hydrogenated products contain relatively few trans fats – as little as just 1%-2% – this translates to an enormous number of trans fat molecules.

In absolute numbers there will be some 1×10^{21} molecules (one followed by 21 zeros, or 100 million-trillion) in each tablespoon of oil. Therefore, the potential for them to cause damage, either integrally in the cellular structure, or in biochemical reactions, is highly significant, because only a tablespoon of defective oil provides some **100,000 defective oil molecules for each cell in our body – a tremendous overload potential.**² **Add to this defective number the huge number of defective fat molecules from other processing sources and you will be terrified** at what you and your family have been consuming for decades!

In absolute numbers there will be (an order of magnitude of) some 1×10^{21} molecules (1 followed by 21 zeros!) **per tablespoon of oil - an overload potential of 10^4 (10,000 to 1) defective EFAs/cell).**³

Damaged fats and oils ruin our bodies in a number of ways. Rather than “high” or “low” cholesterol being a problem, the real issue is not the amount of **cholesterol** or the HDL or LDL number, but rather whether your cholesterol **structure** has been damaged. An explanation of why HDL is called “good” and LDL is called “bad” is coming up later.

Would you use water to fuel your car’s engine? Of course not! Certainly it’s cheaper, but it’s the wrong kind of fuel. It would destroy your car’s engine. Food processors probably weren’t aware of the dangers of changing the essential fats in our foods. All they wanted to do was create products with a longer shelf life. But in trying to create more convenience, our

1. In addition to trans fats, there are many other unnatural chemical configurations caused by food processing that negatively impact cell function and oxygen transfer.

2. Here is how that figure of 100,000 defective oil molecules per cell is derived: The molecular weight of a triglyceride (any EFA-containing oil; good or bad) is approximately 1,000. A liter (quart) of oil contains approximately 1,000 grams (about 2 pounds), and from chemistry a mole (gm molecular weight) of any substance contains about 6×10^{23} molecules. Therefore, there is a mole of triglycerides in a liter of cooking oil. There are 64 Tablespoons per liter – let’s say it’s approximately 100 tablespoons (instead of 64) per liter to keep it easy to calculate. Therefore, there are on the order of 10^{21} (one hundred million-trillion molecules of oil) per Tablespoon (10^{23} molecules per 100 Tablespoons = 10^{21} molecules). The defective amount is about 1% (1/100) or 10^{19} molecules. The body contains about 100 trillion cells (10^{14} cells). Therefore, the overload potential of bad EFAs on body cells is $10^{19/14}$, or 100,000 bad EFAs overwhelming each of your body’s cells.

3. *ibid*

health has been devastated. Nature cannot be fooled. Our bodies need lots of unprocessed, natural fats and oils. Without them, any number of negative things can happen to our overall health because the health of our cells determines the health of our entire body.

What is Cholesterol?

Cholesterol is actually a steroid. “Chol” = bile and “Sterol” = steroid. Steroids belong to a large and varied group of chemical compounds that are naturally produced by the body. Cholesterol is the most abundant steroid and it is used as building blocks for cell membranes, maintaining healthy cells, as an aid to digestion, and in the manufacture of sexual hormones.⁴

Cholesterol is a solid waxy-substance that is naturally produced by all animals during their normal metabolic processes. **Cholesterol is associated with fats in animal derivatives but it is not a fat.** Cholesterol can be classified with the lipid family: fat-like substances that are insoluble in water but soluble in fat solvents.

Here are 13 very important facts about cholesterol in humans that you probably did not know:

- Cholesterol is produced by the body in large quantities relative to other substances.
- All cells contain it and all tissues make it.
- Cholesterol is so important that every cell regulates its own level internally.
- Cholesterol gives cell membranes their integrity and strength: without cholesterol we would be soft, flabby and worm-like.
- Cholesterol enhances the permeability-barrier properties of the lipid bi-layer.⁵ This means that nutrients get in and impurities are kept out. This is critical for proper cell nutrition.

4. Michael W. King, PhD / IU School of Medicine.

5. Bruce Alberts, Ph.D. et al. *Molecular Biology of the Cell* (3rd Edition). Garland Publishing, New York, 1994. p.481.

- Bone would be hollow and brittle if it were not for cholesterol and protein.
- Cholesterol has a major structural role in the brain, where it is found in high concentrations.
- Cholesterol enables nerve impulses.
- Vitamin D is made from the interaction between cholesterol and sunlight hitting your skin, so that calcium can be utilized. A defective cholesterol structure is at the heart of sun-cancer issues. Furthermore, ask your dermatologist to explain why there are more skin cancers on the body where sunlight doesn't hit? He likely won't like the question.
- Bile, manufactured by the liver and essential for proper fat digestion, is produced from cholesterol. A major portion of the body's cholesterol is used by the liver to produce bile salts. These salts are crucial in digestion to make sure fats get broken down and that oil-soluble vitamins (A, D, E, K) get utilized.
- Cholesterol is essential for the liver and intestines to function properly.
- Cholesterol protects the skin against absorption of water-soluble toxins.
- Cholesterol holds moisture in so that we do not dehydrate. Cholesterol will give your skin a nice, naturally moisturized feel.

Cholesterol is found only in animal products, not in plants. Even though a big deal is made of these non-animal based products containing no cholesterol, **no vegetable oil ever contains cholesterol anyway. But they can contain many other extremely harmful substances.** In particular; defective EFAs, a much more important problem. It's simply a ploy to make their products sound better for you than real butter (that contains cholesterol). You'll soon see that dietary cholesterol has an insignificant effect on blood cholesterol. If the diet doesn't contain enough cholesterol, the body manufactures it.

It has been known for years (but not widely published outside the medical journals) that consuming dietary cholesterol does not significantly influence blood cholesterol. The human body produces 3,000-4,000mg of cholesterol each and every day. This is a lot! **There is no other substance that your body produces so much of.** And it is almost completely independent of how much cholesterol you eat in your diet. Dietary cholesterol (from food) accounts for no more than an insignificant 10% of blood cholesterol.

Dietary [from food] cholesterol is *insignificant*. *Metabolism* 2001 May;50(5):594-597.

1. **“With even a 30% fat diet, increasing dietary cholesterol from 319 mg to 941 mg per day [close to a 300% increase], the blood LDL only increased a mere 6% [18 points]!”**
2. **“Even insulin resistant women did not experience a significant cholesterol increase!”**

The problem has never been with the cholesterol number. In fact, the drug manufacturers know this, but that doesn't stop the deception. They have found a way to make cholesterol “the criminal” and have created one of the world's greatest annuities in keeping the steady stream of cash. They never stop new cholesterol “studies,” do they? Once you understand the cause, you should move on to something new instead of repeating studies.

You don't keep doing “studies” to show gravity works, do we? Dr. George Mann, Professor of Medicine and Biochemistry, stated it so well in 1991: “Cholesterol in and of itself is NOT the cause of cardiovascular disease.” That's why their “studies” never end - they are trying to prove something that is wrong, which is impossible.

Cholesterol's Role in the Body

Cholesterol is essential for life. Without lots of cholesterol we would die. Cholesterol helps provide the needed variable rigidity and flexibility to every cell of our body. The walls of all cells are composed mainly of cholesterol, fat and protein. These membranes are porous (have holes) in order to let nutrients and hormones in. They are designed also to prevent toxins and

waste byproducts from our naturally occurring chemical reactions from entering. Over 90% of cholesterol is found in the tissue. If there is not enough cholesterol in the cell membrane, the walls lose their rigidity and expand outward, due to the inner pressure of the cell, leading to possible cell damage, or destruction.⁶

Cholesterol acts as the raw “food” from which the body makes a wide array of essential hormones; in particular, the sexual hormones, none of which we can live without: testosterone, estrogen, progesterone, and cortisone are among just a few.⁷ If you have hormonal problems, it could be a defective cholesterol issue.

Where do we Find Cholesterol?

Brain cells are **extremely rich in cholesterol**; they consist of about 7% (by weight) of cholesterol. I can't repeat this enough. Cholesterol is the raw material from which the body makes many important hormones – the adrenal hormones (involved in sugar metabolism, fluid balance, the maintenance of blood pressure, and the preparation of the body for stress) and the male and female sex hormones: testosterone and estrogen. In addition, cholesterol is essential for the normal growth and repair of body tissue.⁸ **Large amounts of cholesterol are also found in the skin.**

**Cholesterol gives us our shape.
Without plenty of it we would be blobs and wormlike.**

6. *Textbook of Medical Physiology*, pg. 872-873, Arthur C. Guyton, John E. Hall, W B Saunders Co., January 15, 1996, ISBN: 0721659446.

Elisabeth Schafer, Ph.D., Extension Nutrition Specialist Diane Nelson, Extension Communications Specialist Iowa State University, *The Consumer's Good Chemical Guide* by John Emsley (Science Writer in residence at Imperial College of Science, Technology and Medicine, London), ISBN 0-552-14435-5, Corgi 1996.

7. *The Consumer's Good Chemical Guide* by John Emsley (Science Writer in residence at Imperial College of Science, Technology and Medicine, London), Corgi 1996.

ISBN 0-552-14435-5. *Textbook of Medical Physiology*, page 873

8. *The Consumer's Good Chemical Guide* by John Emsley (Science Writer in residence at Imperial College of Science, Technology and Medicine, London), ISBN 0-552-14435-5, Corgi 1996.

The definition of osteoporosis has been “changed” by the drug manufacturers: Osteoporosis is the most common of all bone diseases in adults, especially in old age. It is a different disease from osteomalacia and rickets because it results from diminished organic bone matrix rather than from poor bone calcification.⁹ Given rampant misleading advertising, you should be shocked to see this fact in a major medical textbook!

The function of cholesterol in the skin is four-fold:

1. To keep the skin flexible and highly resistant to water-soluble toxins.
2. To prevent water loss from the large surface area of the outer layers of skin.
3. To protect you from some potentially harmful aspects of the sun's rays.
4. To work in conjunction with sunlight to produce vitamin D, essential for the body's utilization of calcium.¹⁰

When sunlight comes in contact with the skin, it interacts with the cholesterol to form vitamin D. This vitamin (which acts more like a very strong hormone than a vitamin) is the primary nutrient for the metabolism of phosphorous and calcium. Without this process the body cannot metabolize enough of the calcium needed for “coating” the bone matrix. **Therefore we need sunlight for our bones! As the above medical textbook quote shows, this “calcium coat” has nothing to do with the structural interior of your bones. That is made from protein and oils – requiring EFAs. Too much calcium actually makes a bone more brittle with a higher bone density – the opposite of what you have been told and not what our bones need to be strong and resist breakage.** More calcium “dumped” on a defective bone matrix causes much more harm (easier fracture) than good.

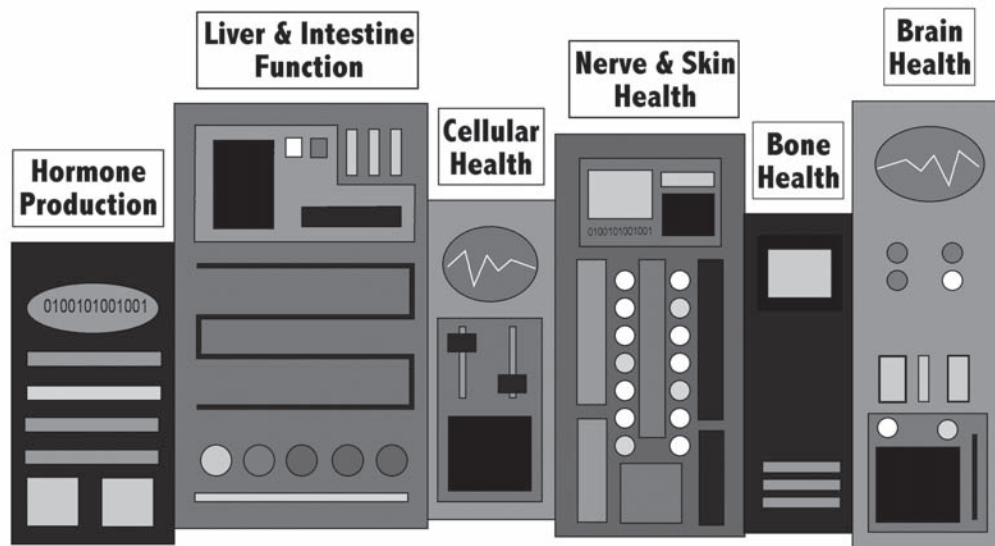
For those of you over 30 years of age, I am sure you can recall when you were young that your parents told you to “go and play outside.” They knew at that time that the sunlight was good for you. It made you less prone to blues and depression. However as the “ozone scare theory” became more prominent, our thinking changed. Ozone is protecting us as it attempts to detoxify the pollutants just as cholesterol in the interior of your arteries attempts to heal it from tears.

9. *Textbook of Medical Physiology*, pg. 998, Arthur C. Guyton, John E. Hall, W B Saunders Co., January 15, 1996, ISBN: 0721659446.

10. *ibid.*

Cholesterol's vital functions:

- Healthy Nerve Function
 - Liver Health
 - Hormone Production
 - Brain Health
 - Bone Health
 - Intestinal Health
 - Cellular Health
-



VITAL BIOLOGICAL FUNCTIONS
Cholesterol Division

The Liver

The liver produces bile salts required for digestion. Without bile salts, fats and vitamins are not properly utilized. Without bile salts we suffer serious vitamin deficiency, which could lead to possible death. In addition, the bile salts absorb many of the toxins that have accumulated in the fats we consume (toxins from pesticides, herbicides, growth hormones, pollutants, etc.) as well as the naturally occurring toxic by-products our body produces during metabolic processes.

These toxin-saturated bile salts are excreted from the body in the feces. How does the liver make bile salts? It makes them by metabolizing cholesterol! In fact, this use of cholesterol may be the most important function of cholesterol in the body: up to 70% of all cholesterol in the body is converted into bile salts. You aren't told this important fact.

NEWS FLASH:

The liver produces sixty to seventy percent of all cholesterol in the body. Very little cholesterol comes from the foods we eat. It has been shown that for every one milligram of dietary cholesterol we consume, there is only one-tenth of a milligram increase in the blood cholesterol levels (a small 10% change). Therefore, don't be misled into believing that cholesterol in food is the cause of high blood cholesterol. It isn't.

Armed with this knowledge, you have to ask yourself, when so little blood cholesterol is created through intake of dietary cholesterol, why are we told to eat a low-cholesterol diet?

The Awful Results of a Low Cholesterol Diet

The body regulates dietary sugar to 0.1%, but there is no regulator in the bloodstream or anywhere in your body for cholesterol!

What do you think this means? The answer is It ISN'T REQUIRED. However, the body does have sensors to tightly monitor blood sugar, calcium, sodium, etc. The body doesn't monitor cholesterol levels because nature doesn't care what they are because its structure would be correct. If we were eating properly and getting good, natural fats in our diet, there would be no cholesterol problem. It is the man-made, chemically altered fats, and the overly high-carbohydrate diet, that cause the problems.

You may be surprised to learn that incidents of Heart Disease have **increased steadily with the advent of these "healthy" foods and low cholesterol recommendations.**

The American Death rate from Heart Attack and Stroke was only 3% in 1900. By 1997 it increased to nearly 50% (while eating more grains, less protein, less fat, and less cholesterol)!

It is becoming far too common for young men, even those in their thirties, to be prescribed cholesterol-lowering drugs. Men in this age range, who have been "eating right" for years and taking their prescriptions faithfully, are still dying of heart attacks at an alarming rate.

Rather than seeing an improvement in the state of our nation's health, it has declined dramatically. Why, if all of the recommendations given to us for years are correct, are we getting sicker faster? Why, if we were consuming considerably higher levels of cholesterol in the past were our hearts and vascular systems healthier then than they are now? If the dietary recommendations we've been following were correct, the opposite should be true.

We were warned back in 1956 that hydrogenation from the modern food industry (margarine) would cause massive heart disease.¹¹ Unfortunately, this prediction turned out to be true.

An increasing number of doctors, given misleading information from pharmaceutical companies, are proclaiming that cholesterol is the primary cause of heart disease. This epidemic kills almost half of all North Americans. The problem with this is that the majority of people with “high cholesterol” levels don’t die of heart disease, while many with lower cholesterol do. William P. Castelli, MD, a medical director of the Framingham Cardiovascular Institute, directed a study carried out over 16 years. He reports that *twice as many people with life-long cholesterol levels in the range 150 – 200 have heart attacks as do people with cholesterol over 300!*¹² This is *Shocking!* This fact doesn’t get publicized.

A dire warning was published in a 1995 study by two physicians, Thomas B. Newman and Stephen B. Hulley, at the University of California in San Francisco. They said widespread cholesterol testing for people under twenty years old should be abandoned. They are concerned that popular cholesterol-lowering drugs are being prescribed far too frequently – and often unnecessarily – for people who are at little risk of developing heart-related problems.¹³

Cholesterol lowering drugs are prescribed ten times more often than just ten years ago! Nine million people now take cholesterol-lowering drugs in the hope of warding off heart disease. (Since this article, the number of people on cholesterol

¹¹ *Lancet*, 1:381-383, 1956.

¹² “Identifying At-Risk Population for Heart Disease,” *Energy Times*, March 1997, p 10.

¹³ “Drugs to Lower Cholesterol May Cause Cancer, Study Says,” David Perlman, *San Francisco Chronicle*, 1995; pre-pub. Ref., *JAMA*, vol. 275, pages 55-60, 1996.

lowering medication has risen 33% to 12 million people in 2004!)

An important message to the elderly: Dr. Harlan Krumholz and his co-workers at the Department of Cardiovascular Medicine at Yale University found that in the elderly, high **cholesterol even seems to be protective**. They followed 997 elderly men and women living in the Bronx, NY for four years. During that time, about **twice as many subjects with low cholesterol had a heart attack or died** from one compared to those with the highest cholesterol levels. Also, the Framingham study clearly demonstrated that: "Those whose cholesterol had decreased by itself during these 30 years ran a greater risk of dying than those whose cholesterol had increased. For each 1 mg/dl drop in cholesterol there was an 11 percent increase in coronary and total mortality."¹⁴ Don't expect the deception to end soon. The opposite effect gets reported in the popular press!

All of this information is probably shocking to you! It is **completely opposite to everything we hear**. When you're armed with the scientific truth about cholesterol, you will be able to distinguish between good and bad advice. Unfortunately, you aren't going to find good advice through television commercials and popular health publications.. You will have to dig deeper to have any hope of finding the truth.

The Good, The Bad & The Guilty LDL and HDL – What's Really to Blame?

When doctors talk about "bad" cholesterol and "good" cholesterol, those terms can be misleading. Cholesterol is neither good, nor bad. Surprise, it is the SAME cholesterol. What exactly are LDL and HDL cholesterol? LDL stands for Low Density Lipoproteins. LDL transports EFAs (vital fats that have been ignored or misunderstood by the medical community for years) into the cell. Because LDL transports fats into the cell (even though the fats it transports are vital for proper cell function), it was

¹⁴ The Framingham Heart Study," JAMA Vol. 161 No. 7, April 9, 2001.

termed “bad” simply because they are fats. With an understanding of the importance of EFAs, this assertion becomes completely ridiculous! Even though it’s been labeled as “bad,” LDL occurs naturally in the body and is essential for life.

LDL is vital because it transports essential fatty acids (EFAs) into the cells. EFAs are important nutrients in themselves providing the cell with what it needs to have a healthy structure. They also carry much needed oxygen to the cell, which protects the cell from irreparable damage that often leads to disease.

HDL stands for High Density Lipoproteins. HDL carries toxins and cholesterol out of the cell and to the liver so that it can be processed and the unused portion excreted along with the toxins. HDL is nothing more than the cholesterol not required by the cell recycled back to the liver. What is necessarily “good” about that? That’s why contrary to popular belief, a higher level of HDL is not “protective” as shown below. (see **Special Report: Landmarks in Health and Nutrition**). That amazing finding was not publicized. Structure is everything. When will they ever learn?

From the *Journal of Clinical Investigation*, 2001:¹⁵ “**Current dogma supports** a key role in reverse **cholesterol transport** and defects in the HDL-mediated process are thought to contribute to the development of atherosclerotic plaques.”

“**Contrary to expectations** ... secretion rates were not impaired.”

“Mice lacking HDL do not show impaired hepatobiliary [liver] transport, suggesting that HDL plays little or no role in the process.”

“**Although most people now think** that ABCA1 [and HDL] is a cholesterol transporter per say, there is **no evidence** for this contention.” [cholesterol transporting mechanism isn’t influenced by either of them the way we are led to believe.]

Over 90% of cholesterol is found in the cells where it gives integrity to the structure and regulates the two-way flow of nutrients and waste products.^{16, 17}

It is important to understand that cholesterol is not the cause of arterial damage. It is only there to repair and protect the arteries from further damage. The “protector” gets mistakenly blamed as the “criminal.”

The real question is what caused the damage to the arteries in the first place? Why hasn't the medical community asked the simple question; “What causes the tear in the artery that caused the body to send cholesterol to repair it?” Instead, we've been attacking the body's natural repair system. This is so elementary it's mind-bending to imagine why this issue has not been addressed! Could it be because of pharmaceutical money?

An analogy can be made between cholesterol in the blood and fibrin in the blood. When you cut yourself, fibrin (adhesive) causes quick clotting at the injury. Your blood is loaded with fibrin in its un-activated form. Imagine if fibrin acted on its own and started clotting your bloodstream! It doesn't. Only certain conditions activate fibrin.¹⁸ Like cholesterol, it's in there – but it's not a problem. Cholesterol is simply reacting to damage in an artery wall. The originator of that damage should be sought out, rather than attacking the substance that repairs the damage.

Dr. L. Maximilian Buja, dean of the University of Texas Medical School at Houston, agrees that there is more to be understood about cholesterol's function. He states, “There is no question that the inflammatory process in vessel walls is very important to the progression of arteriosclerosis. The

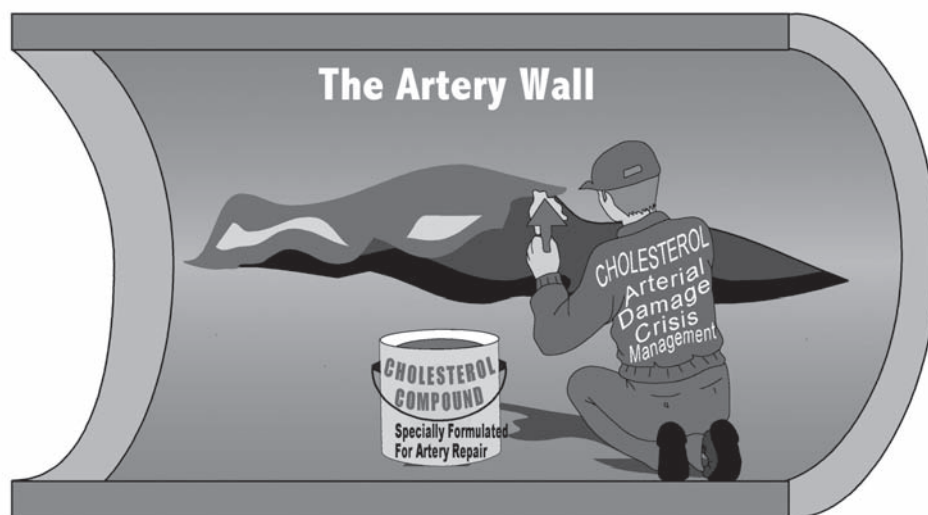
¹⁶ *The Consumer's Good Chemical Guide* by John Emsley (Science Writer in residence at Imperial College of Science, Technology and Medicine, London), ISBN 0-552-14435-5, Corgi 1996.

¹⁷ *Molecular Biology of the Cell*, pg. 481., Bruce Alberts, Dennis Bray, Julian Lewis, Martin Raff, ke Roberts, Keith Roberts, James D. Watson, Garland Pub, March, 1994,

¹⁸ *Enzymes*, pages 211-212.

question is what triggers it?"¹⁹

Innocent Until Proven Guilty...



Cholesterol didn't cause the tear, it's just trying to repair it!

The most probable causes of arterial damage are:

- High levels of insulin in the blood damages artery walls and cause blood clots. This is caused by a diet high in carbohydrates (sugar) that raise insulin levels.²⁰ You aren't told this fact.
- Insufficient EFAs compromises arterial health and integrity. We should be getting sufficient EFAs in our foods, but they have been either removed or damaged by food processors.
- Oxygen transfer is diminished (caused by EFA deficiency and high carb diets slowing down bloodstream speed).
- Xanthine Oxidase (XO) from homogenized milk damages arteries. XO is "unlocked" by the homogenization process. Prior to homogenization, the XO acid molecules are too large to bypass your digestive systems. But homogenization breaks them up, making them small enough to bypass digestion and directly enter the bloodstream

¹⁹ "Study Finds Apparent Trigger of Heart Attacks and Strokes," *New York Times*, April 3, 1997, p A13.

²⁰ *Journal of American Medical Association*; 2000; 283:221-228.

where they can burn the artery wall – just like battery acid. Again, man-made food processing causes grave damage.

- Toxins and chemicals in our foods.
- Excess calcium supplementation in the wrong form. The last stage of heart disease is termed **calconification** of the plaque. Excess **calcium** precipitates out of the bloodstream and onto the artery wall. Could consumption of “calcium supplements” be one of the reasons why women’s heart attack rates now exceed men’s heart attack rates? That question is rarely asked.

One or more of the causes listed above can cause arterial damage. Then plaque buildup occurs naturally as a part of the protective healing process. Why does this happen? If the cut was left open to the flow of blood, then damaging particles could get through the thin wall and lead to further complications. Like the scab that forms on a scraped knee, a similar thing happens inside the arteries. The “scab” is forming TO PROTECT the body from the damage that has occurred.

LDL is the mechanism which brings life-sustaining EFAs into the cell. Once we restore EFAs in our diet and EFA blood levels increase back to a normal, healthy level, it is logical that LDL cholesterol should also be expected to increase in the bloodstream, and it does. When enough EFAs have been utilized by the body, especially in your 100 trillion cell membranes, a new “balance-point” is reached. Then, cholesterol levels may decrease because the EFA-deficiency has been eliminated and less cholesterol will be required. Because EFA and mineral deficiency are so universal, few doctors and nutritionists have taken this mechanism into account when performing “cholesterol research.”

LDL and HDL contain the same cholesterol. It is only the grouping (the “tightness” of the packaging) that is different. The functions of LDL and HDL cholesterol are completely natural and necessary bodily functions. It is appallingly unscientific to separate them to opposite sides of the scale. This has occurred because of a drastic misunderstanding of how the body works. Unfortunately, bad advice is parroted constantly and doctors and nutritionists aren’t vigilant enough to double check with real scientific facts before spreading false info. That is why it is vitally important for each of us to do our own research. It is the only way to ensure that we are not misled

by false information that can seriously damage our health.

Again, HDL has never been proved “protective.” It isn’t. (See the **Special Report: Landmarks in Nutrition and Health**) This incorrect information was supported by the popular press, and even most cardiologists are not aware of it.

Some physicians are just starting to admit that cholesterol is not the cause of cardiovascular problems, but don’t expect general advice to change. In 1996 the American College of Physicians stated that regular cholesterol testing is not necessary for everyone, and that men under the age of 35 and women under 45 or people over 75 do not necessarily need testing unless they smoke or have a family history of heart disease, high blood pressure, or diabetes. They say that there is little evidence that lowering cholesterol in such individuals helps prevent illness or death²¹ and yet the media and drug companies still claim or imply that cholesterol is the major killer. The bottom line is that cholesterol in and of itself is not the issue, but rather the structure of the fat we’re consuming, and the effect it has on our EFA-containing cholesterol structure. The term “Bad” LDL cholesterol is as misleading as possible! Without the cholesterol-EFA association we’d all be dead!

Triglycerides – A Strong Warning Signal

The cholesterol “number” is not as significant a risk for heart disease compared to triglycerides. **Triglycerides pose a 70% increased risk – independent of cholesterol.**²² Did you see this published? Probably not. Triglycerides are produced predominantly from dietary carbohydrates - NOT from dietary fat!²³

A high-carbohydrate diet causes your triglyceride levels to rise. High triglycerides are a strong warning signal that something is seriously out of balance. While keeping track of cholesterol levels in general, neither LDL nor HDL numbers should be a concern. The proper cholesterol **structure** should be your #1 concern and triglycerides should be your #2 concern.

As a rule, triglycerides (fats in the blood) decrease as we lose body fat, and they definitely decrease as fewer carbohydrates are eaten. They decrease with higher EFA consumption. A low fat diet is not going to help

²¹ “Cholesterol Controversy.” *Your Health*, August 20, 1997.

²² *Circulation* 2000; 101:2777-2782

²³ *Basic Medical Biochemistry: A Clinical Approach*, pgs. 25-26, 512. Dawn B. Marks, Allan D. Marks, Colleen M. Smith, Lippincott, Williams & Wilkins, August, 1996,

reduce triglycerides. Rather, a diet with sufficient good natural fats, little to no trans-fats, and plenty of protein will bring the body back into the balance it was designed for. The most important kinds of fats to add to your diet are Essential Fatty Acids (EFAs) – parent omega 6 and parent omega 3. These important polyunsaturated, unaltered oils (from organically raised seeds, NOT fish – See the amazing special report: **The Scientific Calculation of the Optimum Omega 6/3 Ratio**).

Polyunsaturated fats naturally support healthy blood cholesterol levels.²⁴

Essential Fatty Acids are also possible mediators of the action of statins.²⁵

1. “Statins and polyunsaturated fatty acids have similar actions.”
2. “In view of **the similarity of their actions** and that **statins influence essential fatty acid metabolism**, it is suggested that EFAs and their metabolites **may serve as secondary messengers of the action of statins**”

How Your Body Uses Dietary Fat

“Saturated fat and cholesterol in the diet are not the cause of coronary heart disease. That myth is the greatest ‘scientific’ deception of the century, and perhaps any century.”²⁶

George V. Mann, M.D. - Professor of Biochemistry and Medicine
Vanderbilt University, (1991)

²⁴ *Textbook of Medical Physiology*, pg. 873.

²⁵ *Prostaglandins, Leukotrienes and Essential Fatty Acids*, Vol. 65, No.1, July 2001.

²⁶ George V. Mann, M.D. , Professor of Biochemistry and Medicine – Vanderbilt University, 1991.

I personally spoke with Professor Mann. Dr. Mann quit the practice of medicine, in part, because of his frustration with this deception. I'm sure you never saw his quote before. Most fats and oils inside the body are packaged in a form called a triglyceride for easy transportation around the body. Oils in our body are often packaged together with two saturated fatty acids outside and one EFA inside 3 fat molecules. To protect important and fragile EFAs, saturated fats are required. We rarely hear anything positive about saturated fats, yet these fats serve an important function – to protect the EFAs! And that's why your body directly manufactures many types of saturated fats on an "as needed" basis.

When most fats and oils are eaten, they are taken into the lymph system – not directly into the bloodstream as we have been led to believe! Your body makes sure that most fats do not directly enter your bloodstream. Because oil (fat) and water don't mix and because blood is mostly water, fats and oils can't typically travel unescorted in our bloodstream unless they are to be "burned" for energy immediately. First, in the lymph system, an oil or fat molecule is attached to a protein. Surrounding the fat with a protein (so it can mix with water) enables fat to travel through the bloodstream. This protein-fat molecule is called a lipoprotein. Can this substance cause blockage? No. The fat is surrounded by a protein, making it resistant to sticking. There is much more to the problem than the simplistic "eat less fat," methodology that has proved to fail time-after-time.

After digestion, many dietary fats, like butter and coconut oil, are used (burned IMMEDIATELY) for energy. Saturated fats are medium chain triglycerides (MCTs) and "burned" right away. Any excess fat is sent to the brain, skin, nerves, etc. for structure. There is no biochemical mechanism in the body to directly store dietary fat as excess body fat. The only mechanism in the body used for storing body fat originates from sugar (carbohydrate) consumption.²⁷ The little 1% of the pancreas, the beta cell portion, allows conversion of sugar (carbs) to triglyceride (bodyfat).

Adipose tissue (fat) is stored ONLY when eating carbohydrates.²⁸ From *Principles of Medical Biochemistry*, page 372, the clear quoted statement is made: "...fatty acids [from eating fat] **cannot be converted into carbohydrates**. Carbohydrates, on the other hand, can be converted into triglycerides [excess body fat]" and "...[E]xcess energy from dietary carbohydrate is stored away as triglyceride in adipose tissue [body fat]." And "Adipose [fat cells] need sugar (glucose) for the synthesis of triacylglycerols. You won't

²⁷ *Biochemistry*, Donald Voet & Judith Voet, New York, 1999, pg. 772.

²⁸ *Basic Medical Biochemistry—A Clinical Approach*, pages 476, 510-12

store more body fat without the carbs!

As you can see the statement, “eating fat makes you fat,” is WRONG scientifically! There is no mechanism in your body for storing dietary fat as excess body fat.

The High-Carbohydrate Diet

When eating a high-carbohydrate diet, it takes about 40 days of running an hour a day to burn just one pound of body fat! (Textbook of Medical Physiology) The body can't use more than 4-5 ounces of carbohydrates for energy – a mere 2 bagels – the excess goes quickly to new body fat.²⁹ Unless you're immediately exerting yourself enough to use that much carbohydrate for energy, almost all of it will be stored as body fat. **You've unknowingly completely short-circuited burning any excess body fat from the exercise, too.** Your body will choose the glucose generated from the carbohydrate before choosing your own body fat to burn for energy. So, if you want to lower your body fat percentage, you have to eat less carbohydrate-based foods. High blood sugar levels also contribute to diabetes by destroying your pancreas. This was published in the medical journals but not touched by the popular press (See your **Special Report: Landmarks in Health and Nutrition**). That's one of the reasons why your body will always use the glucose in your bloodstream FIRST from overdosing on carbs preferentially to using your own body fat stores – **the exact opposite of what we desire!**

Unaltered polyunsaturated fats (EFAs) naturally support healthy blood cholesterol levels.³⁰ They do this by ensuring that cell structure is healthy and cells are working efficiently. Without EFAs in our cells, there's no telling how many health problems could occur. Impaired cholesterol structure is one such problem that is not being treated properly. “Expert” advice tells us to treat the symptom, rather than the cause. This doesn't work at all, as evidenced by the huge failure to prevent heart disease with the popular recommendations and solely drug-based “solution.”

It isn't the “level” of cholesterol that is meaningful, that's why the body has no cholesterol sensor for “levels.” Once the cholesterol structure is corrected, you are set.

²⁹ *Basic Medical Biochemistry*, pages 24, 394. “Specific sugars are not required in the diet. Glucose can be synthesized from certain amino acids found in dietary protein.”

³⁰ *Textbook of Medical Physiology*, pg. 873, Arthur C. Guyton, John E. Hall, W B Saunders Co., January 15, 1996, ISBN: 0721659446.

You will be shocked at these important facts you need to know:³¹

- No clear correlation was found between serum [blood] cholesterol **levels and the nature and extent of arteriosclerosis** [heart] disease.
- Cholesterol levels in and of themselves are meaningless.
- 1,700 patients with heart disease analyzed clearly show more heart-related disease with cholesterol between 1 and 250 than between 300 and 400 or higher! **This is backwards to everything we're led to believe.**

Cultures around the globe that rely primarily on meat and fat for foods have very low heart attack rates. The Masai tribe of South Africa is one prime example. Dr. Mann spoke extensively of this group in his medical publications. Having herded cattle for thousands of years, their primary diet is based almost entirely upon beef, milk and blood – all high in cholesterol. Yet, their cholesterol levels are low, much lower than the “health-conscious,” cholesterol-free Western diet. (Keep in mind that even though these people’s cholesterol is low, it’s not the high or low number that counts, but the **structure** of their cholesterol. Because their diets consist of natural, unaltered foods, they have a healthy cholesterol **structure**, which accounts for their health being markedly better than ours). Before the introduction of “white man’s food” the incidence of heart disease, cancer, diabetes and other diseases were virtually nonexistent. Even crime was practically nonexistent in these cultures until they changed their diets to include grains – especially white bleached flour and processed oils.

The Inuit (Eskimo) of the north are another example: subsisting nearly completely on meat and fat, they too have a very low rate of arteriosclerosis and heart attack. This kind of *real-life* result constantly mystifies the nutritional experts as they try their best to come up with some reason (or excuse) for the results to be different from their “expected” (but incorrect) conclusions. A major (and often underestimated) finding of the Seven Countries Study was the large difference in absolute risk of CHD death at the same level of serum cholesterol in the different cohorts. At a cholesterol

³¹ *Journal of American Medical Association*: Vol. 189, No. 9, Aug. 31, 1964.

level of about 6 mmol/L, for instance, CHD mortality was 3 times as high in Northern Europe as in Mediterranean Europe (18% vs. 6%). This suggested that **factors other than cholesterol** were playing an important role. (Read **Special Report: 2001 First International Essential Fatty Acid (EFA) Conference**). Clearly, cholesterol, in and of itself, is NOT the cause of heart disease. How much clearer can this fallacy be?

The native people of the Okinawan islands off southern Japan live a very long life (the longest in the world) with few heart-related illnesses. They eat lots of natural meats (lots of GREASY pork) and lots of fats in their diet. They also have beautifully healthy skin. Could these cultures' excellent health be based on a **lack of food processing** that allows for more healthy EFAs to be consumed? One might conclude that the huge number of cholesterol-related illnesses in the west is actually associated with a LACK OF EFA intake that directly affects our cholesterol structure.

The "Indian National Rail Study" of 1967 compared Northern Indians who ate a lot of meat and clarified butter (ghee) with Southern Indians, who were vegetarians and ate no meat. The vegetarian Southern Indians also ate lots of margarine and processed oils. **Although the Southern Indians ate only one-tenth the natural fat, they had 15 times more heart disease** than their Northern neighbors. Did you see this result published? Probably not.

Here's another amazing result published in 2001 that you probably never saw:

"With even a 30% fat diet, increasing dietary cholesterol from 319 mg to 941mg per day [close to a 300% increase], the blood LDL only increased a mere 6%!"³² This is insignificant!

³² *Metabolism* 2001 May;50(5):594-597

Eat More Fat & Protein & Lower My Cholesterol?

Yes. Believe it or not, when the body receives good natural fats, including saturated fats like the fat on meat and Essential Fatty Acids (EFAs), it will balance itself and cholesterol levels will normalize. This was known back in 1956!³³ The body NEEDS both saturated and unprocessed polyunsaturated fats (EFAs) as much as it needs protein for body structure.

At least 60% of people who suffer heart attacks do NOT have elevated cholesterol levels.

This is a gross inconsistency that is often swept under the carpet. Cholesterol levels, in and of themselves, can't be the cause of heart disease **because most people (the vast majority) with heart disease have normal cholesterol levels**. How unscientific can published reports be?

The more natural, real cholesterol-rich foods you eat, the lower your serum cholesterol levels will be. The less cholesterol in your diet, the higher your serum cholesterol. Why? Because if you don't give your body the right foods, it will **ATTEMPT TO** over-compensate for what it's lacking, thereby producing more cholesterol.

The only way they get high carbohydrate dieters to have normal or even low cholesterol levels is to make them perform abnormally high levels of constant exercise. Then they credit the "lack of fat and protein." They don't

³³ *Lancet*, 1:381-383, 1956.

tell you this. Place someone on a high carbohydrate diet without massive amounts of exercise and both their blood chemistry and their weight become awful! This “experiment” was already performed in 2001 and the results were so awful the physician stopped the experiment after just a few days! The results are on the following page. Why wasn’t his experiment performed decades ago, before issuing guidelines not based on science?

Twenty years ago, Dr. W. Stanley Hartroft said in the *Condensed Chemical Dictionary* (the “bible” of scientific chemistry), “It still has not been shown that lowering the cholesterol in the blood by this amount [20%] will have any protective effect for the heart and vessels against the development of atheroma and the onset of serious complications.” Also, he stated that “There is still no conclusive proof that increase in body cholesterol as a result of high dietary intake of animal derived saturated fats or fatty acids is causatively related to atherosclerosis [clogged arteries].”³⁴ Despite the high quality of the source of these statements, it appears that too few heard and fewer have listened. The truth gets distorted again.

In 1973, research sponsored by the Food and Nutrition Board of the National Research Council (NRC) confirmed that there is no significant link between cholesterol in the diet and cholesterol in the blood. They went on to say that they did not recommend restricting fat or cholesterol. Again, this is completely opposite to what the majority of “experts” are currently saying. Truth and fact have been replaced by opinion.

Only 10% (an insignificant amount) of blood cholesterol is derived through diet. 80-90% of all blood cholesterol comes from production by the liver, not from pre-formed cholesterol in foods.³⁵

The world’s premier medical journal, the *Lancet*, stated back in 1994 that no saturated fats were found in aortic plaque!³⁶ This means that eating saturated fat does not cause heart disease. This is a SHOCKING finding rarely reported.

34 Hawley, Gessner G., *Condensed Chemical Dictionary*, 11th edition, Van Nostrand, Reinhold Company, 1977.

35 Turley, S.D. and Dietschy, J.M. “The Metabolism and Excretion of Cholesterol by the Liver,” in *The Liver: Biology*.

36 *Lancet* 1994;344:1195-96.

It is impossible for cholesterol to be the cause of cardiovascular disease for the following reasons:

- Cholesterol levels have remained relatively constant over the past 100 years while the CVD levels have increased dramatically.
- The body makes the cholesterol it needs, no matter what the amount of cholesterol in your food. Cholesterol is necessary for the proper functioning of the body. No matter how much dietary cholesterol is consumed blood cholesterol rises by no more than only 6%, which is insignificant.

The world's premier cardiac medical journal, *Journal of Cardiovascular Risk* clearly states that, "HDL/LDL ratio does not improve when saturated fat is replaced by carbohydrate. The **low-fat diet has been considerably less effective in lowering total or LDL cholesterol than predicted.**"³⁷ This news has obviously not found its way into mainstream nutritional advice.

The Framingham Heart Study found that: "The **more saturated fat one ate, the more cholesterol one ate, the more calories one ate, the lower the person's serum cholesterol.**"³⁸ Once again this is **the opposite of what we have been told.**

Here are some findings presented at American Heart Association meeting, June 2000:

- "Lowering fat intake is not effective for reducing cardiovascular risk."
- **Fats should be placed low on cancer risk list.**
- **The ideal diet for cardiovascular [CVD] prevention contains healthy essential oils.**

An experiment comparing a 60% carbohydrate/25% fat diet vs 40% carbohydrate/40% fat diet at Stanford University School of Medicine showed that:³⁹

³⁷ *Journal of Cardiovascular Risk*; No. 1, June 1994. Rapid Science Publishers, ISSN: 1350-6277, Antonio M. Gotto, Editor, Cornell University Medical College, Ithaca, NY

³⁸ William Castelli, MD, Framingham Heart Study, *Archives of Internal Medicine*; Vol. 152, July 1992.

³⁹ *American Journal of Cardiology* 2000 85:45-48 (Dr. Raven).

- “Elevated triglyceride levels persisted through high carbohydrate diet.
- “High carbohydrate diet associated with increases in both fasting [when not eating] and postprandial [after eating] triglyceride concentrations.
- “Substituting carbohydrates for saturated fat leads to higher cholesterol in the blood.
- “It is appropriate to *question the wisdom* of replacing dietary fat with carbohydrates – **carbohydrates raise the risk of heart disease.**”

Absolutely amazing, isn't it. None of this made it into the mainstream press in 2000. You were never told the truth. The *New York Times* stated back in 1997 that: Women's **coronary risk was linked to processed transfats [not to unprocessed, natural fats]**.⁴⁰

The *New England Journal of Medicine* states: “Diets high in **polyunsaturated fat (EFAs)** have been **more effective than low-fat, high-carbohydrate diets** in lowering **cholesterol** as well as the incidence of **heart disease.**”⁴¹

You're probably asking yourself why these findings have not changed popular health recommendations. The answer is simply that they don't fit into popular opinion and they are outnumbered by years of parroted wrong advice. America, and now the rest of the world is following OPINION - NOT SCIENCE. But, the science is there and it is consistent. It is simply lost in major medical textbooks rarely cited by current health writers. **Yes, the information is there for anyone to see.** Anyone who will search for themselves for the truth, but most people don't know they need to, because they wrongly trust what they hear on television and read in magazines.

An article in the *New York Times Magazine* in May 2002 boldly exposed the failings of many medical recommendations. The article was called, “What Doctors Don't Know (Almost Everything),” and written by Kevin Patterson. Here are a few startling facts Patterson's investigation discovered:

“...**The point isn't** that some medical treatments don't work as well as is thought, or even that in treating the patients doctors sometimes hurt them—this has always been true. The point is that **the conclusions doctors reach from clinical experience and day-to-day observation of patients are often not reliable** [like H.R.T. preventing heart

40 *New York Times*, Nov. 20, 1997, pg. A1.

41 *New England Journal of Medicine*, 337:1491-1499.

disease]. **The vast majority of medical therapies, it is now clear, have never been evaluated by systematic study** and are used simply because doctors have always believed that they work....

If you said to most members of the general public, 'Physicians have been trained in such a manner that **they have no idea how to read a paper from the original medical literature or how to interpret it**, that would surprise the public,' Guyatt [a physician leading the evidence-based-medicine movement] says. 'The public's image of physicians has been such that it would be shocking to them **that there hasn't always been evidence-based practice....**'"⁴² [emphasis added]

The Carbohydrate/Cholesterol Connection

It is especially interesting to note that the pharmaceutical industry is blaming our out-of-control heart attack epidemic on meat, eggs, cheese and other animal fats and telling us to decrease these foods and replace them with carbohydrates. The truth is, carbohydrates are nothing more than sugars in disguise - contributing to heart disease⁴³. While EFA deficiency is the actual #1 cause of heart disease. EFA deficiency causes defective cholesterol and phospholipid structure - the real reason for misunderstanding LDL. The CAUSE of the problem is given as its solution. What a tragedy!

**When you eat carbohydrates,
you deposit cholesterol.⁴⁴**

Numerous medical textbooks state that dietary carbohydrate actually INCREASED the triglycerides (blood fats) along with the LDL levels in our

⁴² *What Doctors Don't Know (Almost Everything)*, by Kevin Patterson, The New York Times Magazine (5 May 2002), pp. 74-79.

⁴³ *Basic Medical Biochemistry: A Clinical Approach*, pgs. 25-26, 512. Dawn B. Marks, Allan D. Marks, Colleen M. Smith, Lippincott, Williams & Wilkins, August, 1996,

⁴⁴ *Man Alive, You're Half Dead!*, Daniel Munro, M.D. Bartholomew House, New York, 1950.

body.⁴⁵ This is considered to be a “bad” thing. At the same time, carbohydrate causes the HDL levels to decrease.⁴⁶ The worst possible combination found for elevating blood cholesterol levels was that of foods, which combined high levels of carbohydrates along with chemically altered fats. As addicted to sweet desserts and snacks as Americans are, is it any wonder we are so obese and suffering from poor heart conditions? No. With excessive sugar and adulterated fats consumed on a regular basis, it is not surprising how unhealthy we have become.

Years ago, an egg was understood to be the “perfect food.” It had lots of protein and natural fats that the body needs – nothing bad. Somewhere along the way it became “in vogue” to say that eggs were dangerous due to their harmful cholesterol content. Studies were performed with an oxidized (dried) egg and the oxidation of the egg’s cholesterol was the real issue – not the natural cholesterol that the egg contains.

Here’s why this misconception came about. Years ago, a study was conducted to explore the effects of dietary cholesterol in humans. Dried egg powder (rather than fresh eggs) was used in the study for the testing. As expected, the results were quite negative. Eggs got a bad rap. The carbohydrate-based food processors were delighted. The processing the eggs underwent to turn them to powder caused chemical changes in the egg’s properties (the same as it does with turning good natural fats to trans-fats). It was a well-known fact for that *oxidized cholesterol* in the blood leads to arterial cuts, which would cause a buildup of plaque that leads to arterial blockage.

How does cholesterol become oxidized? One way is by processing. Another is slightly more insidious, but nevertheless just as potentially dangerous: it involves the auto-oxidation of glucose in the bloodstream, which affects the cholesterol. High carbohydrate intake creates the right conditions to automatically oxidize the cholesterol in our body.

The #1 way to decrease the effects of such auto-oxidation is to eat less carbohydrates.

The #2 way is to give your body minerals so it can make its own antioxidant, super oxide dismutase (SOD).

The #3: Take a natural detoxifier such as an Essiac-concept tonic. The

45 *Basic Medical Biochemistry: A Clinical Approach*, pgs. 25-26, 512. Dawn B. Marks, Allan D. Marks, Colleen M. Smith, Lippincott, Williams & Wilkins, August, 1996, ISBN: 068305595X

46 Reiser, S. Physiological Differences Between Starches and Sugars. *Medical Applications of Clinical Nutrition*. Keats Publishing New Canaan, CN, 1983, pp 133-177.

herbs used in Essiac-concept tonics contain properties that have a natural anti-inflammatory and soothing ability.

Surprise: Insulin production, a response to consuming carbohydrate, raises cholesterol levels.⁴⁷ Proteins and natural fats don't!

- Triglycerides of VLDL (a form of LDL, often labeled as “bad”) are produced mainly from dietary carbohydrates (not dietary fat!).⁴⁸
- “HDL/LDL ratio does not improve when saturated fat is replaced by carbohydrate. Low-fat diet has been considerably less effective in lowering total LDL cholesterol than predicted.”⁴⁹

Women and Cholesterol: Another Non-issue

Did you see the brief mention on the local news that “high cholesterol” is not a concern for women. Television commercials continue to show woman at risk. But the truth is that high cholesterol is not a risk factor for women (or anyone else), if the cholesterol structure is correct.

French researchers led by **Dr. Bernard Forette discovered**, and published in 1994, that women with very high cholesterol live longer. **Women who had low cholesterol had a five times higher risk of dying in comparison.** This led French doctors to warn against cholesterol lowering in elderly women.⁵⁰ This advice should be for anyone, not just the elderly nor women.

47 *Basic Medical Biochemistry: A Clinical Approach*, pgs: 475, 566. Dawn B. Marks, Allan D. Marks, Colleen M. Smith, Lippincott, Williams & Wilkins, August, 1996, ISBN: 068305595X

48 *Basic Medical Biochemistry: A Clinical Approach*, pgs: 475, 566. Dawn B. Marks, Allan D. Marks, Colleen M. Smith, Lippincott, Williams & Wilkins, August, 1996, ISBN: 068305595X

49 *Journal of Cardiovascular Risk*; No. 1, June 1994. Rapid Science Publishers, ISSN: 1350-6277, Antonio M. Gotto, Editor, Cornell University Medical College, Ithaca, NY

50 Forette B, et al., Cholesterol as risk factor for mortality in elderly women. *Lancet* 1, 868-870, 1989.

In 1992, The National Heart, Lung and Blood Institute held a workshop where researchers looked at all of the studies published about high or low cholesterol risks. They came to this conclusion: **Mortality was higher for women with low cholesterol** than for women with high cholesterol.⁵¹ Are you shocked? You never saw that published either, did you?

Misleading Misconceptions (commercials & pharmaceutical propaganda)

Every day we see on television and in popular publications, that a cereal or particular food (always carbohydrate based) “may” lower your cholesterol. There are also new drugs released constantly that state they lower cholesterol levels. These advertisements seem to make sense, so we go out and buy the products because we think we’re helping ourselves. But “low cholesterol” doesn’t translate to decreased heart attacks. Hence the reason for the ineffectiveness of cholesterol-lowering drugs above—**they simply can’t eliminate enough of the defective EFAs being transported to work well.** This is why the medical journal article titled “LDL Cholesterol: ‘Bad’ cholesterol or Bad Science,” published in *Journal of American Physicians and Surgeons*, Vol 10, No. 3, Fall 2005, by Anthony Colpo, stated:

“Among elderly Belgians, higher levels of *oxidized* LDL were accompanied by a significantly increased risk of heart attack *regardless of* total LDL levels.

“...However, there was *no association between oxidized LDL concentrations and total LDL* levels [in Japanese patients undergoing surgery to remove plaque].

“No tightly controlled clinical trial has ever conclusively demonstrated that LDL cholesterol reductions can prevent cardiovascular disease or increase longevity.” (Emphasis added.)

Established science and *real-life* results show us that the only dietary substances that actually raise cholesterol levels (or to be more accurate, damages our cholesterol structure) are carbohydrate foods and man-made chemically altered fats and oils! Also, it has been shown that **cholesterol-**

⁵¹ *Circulation* 86, 1046-60, 1992 Jacobs, D, et al., Report of the conference on low blood cholesterol.

lowering drugs do not work significantly.⁵² So if science is telling us this, why are drug manufacturers and carbohydrate-based food manufacturers, telling us the opposite? It's all about money and advertising.

Pharmaceutical companies buy editorials to influence medical care, that's why.⁵³

Health publications are full of "great" advice. They tell us what to eat and how to care for our bodies down to the finest detail. But they don't explain the how's and why's of our bodies or where they got their information. That's why we follow it and get sicker. There are rarely, if ever, any medical textbooks references given to support what they say or make up. The average person hasn't got the faintest idea how their body works. So we've trusted health writers to inform us of how to take care of ourselves. Unfortunately, health writers rarely understand human physiology any more than the average person does.

Nobel Prize-winner Richard Feynman says health writers can't be trusted, they don't understand what they are writing about! Here's why:

*"The experts who are leading you may be wrong.... We get experts on everything that sound scientific ... They're not scientific. They sit at a typewriter and they make up something ... make up all this stuff as science and become an 'expert.'... They haven't done the work necessary. There's all kinds of myths and pseudo-science all over the place."*⁵⁴

⁵² *Journal of American Medical Association*, 1994, No. 272, pgs 1335-1340

⁵³ *New England Journal of Medicine*, 331:674;1994.

⁵⁴ *The Pleasure of Finding Things Out* by Richard Feynman, 1999.

Food and drug manufacturers have found all the support they need in the pseudoscience handed to us by numerous health writers. Our doctors have jumped on the bandwagon as well; because they don't have time to verify that the info they read from these "experts" is valid and scientifically correct. Tragically, most physicians gain a nutritional understanding by reading the same incorrect literature we do.

It may surprise you to learn that most colleges don't offer nutritionist courses from medical or science departments of their school, but rather the humanities department. That's right, college-trained nutritionists often get their educations from non-scientific institutions. Because of this, you can expect gross inconsistencies between science and opinion. Significant medical textbooks, like *Essentials of Biochemistry*, *Biochemistry of Exercise and Training*, *Molecular Biology of the Cell*, *Basic Medical Biochemistry*, and *Textbook of Medical Physiology*, are not used to train nutritionists. Be careful taking their advice too seriously. Rest assured it will likely be completely incorrect.

Warning Signs – Be Careful Who You Trust

The Associated Press warns us of industry-paid physicians and influential medical groups who "make money from the very companies whose cholesterol-lowering drugs they were urging upon millions of Americans."⁵⁵:

Dr. Scott Grundy, a University of Texas Southwestern Medical Center cardiologist who headed the cholesterol panel stated, "The government is not producing drugs. All the big statin trials have been paid for by the [drug] companies."

Dr. Jerome Kassirer, former editor-in-chief of the *New England Journal of Medicine* reports in his new book, *On the Take*, "The time has come to ask whether all of the money floating around medicine has created a pattern of corruption."

New guidelines were endorsed and published by a new panel that represented the heart association and the American College of Cardiology. "A day later, the Center for Science in the Public Interest said that the advice was tainted by doctors' industry ties, which

⁵⁵ Copyright • 2004 *The Associated Press*, Groups Question Industry-Paid Doctors, Monday, October 18, 2004.

weren't disclosed. They ranged from long-ago research grants to stock ownership and deals providing thousands of dollars in income from statin makers."

An article from *Financial Times Information Limited – Europe Intelligence Wire* accuses drug companies of putting patient's lives at risk⁵⁶:

Many papers on new drugs published in respected journals... were ghost written by drug company advisors... Drug companies also bombarded doctors with gifts. The pharmaceutical industry's code of practice on free gifts was broken "on a daily basis" but neither doctors nor drug companies admitted it.

One doctor revealed he had been offered a bribe of two years' salary not to publish research on the side effects of a new heart drug, which ran "counter to the interests" of the company producing it. Drug companies used euphemisms to describe the side effects... Professor David Healy, head of psychological medicine at the University of Wales, said he had seen **suicidal tendencies labeled as "nausea"**...

Professor Healy also said, "I have had papers written for me [by drug companies] and sent to me." He refused to put his name on the articles, which eventually appeared under the name of a specialist from Vienna.

The Wall Street Journal warns us that Merck, the drug company who brought us the popular painkiller Vioxx, knew of its dangers before they released it. Here are some excerpts from that article:⁵⁷

...internal Merck e-mails and marketing materials as well as interviews with outside scientists show that the company fought forcefully for years to keep safety concerns from destroying the drug's commercial prospects.

...one e-mail suggests Merck recognized that ... something about the drug was linked to an increased heart risk. On March 9, 2000, the

56 Copyright • 2004 *Independent Newspapers (UK) Limited* Source: Financial Times Information Limited – Europe Intelligence Wire.

57 Copyright • 2004 *The Wall Street Journal*, Anna Wilde Mathews and Barbara Martinez, Monday, November 1, 2004, Page 1.

company's powerful research chief, Edward Scolnick, e-mailed colleagues that the cardiovascular events "are clearly there" and called it a "shame."

As academic researchers increasingly raised questions about Vioxx's heart safety, the company struck back hard. It even sued one Spanish pharmacologist, trying unsuccessfully to force a correction of an article he wrote. In another case, it warned that a Stanford University researcher would "flame out" unless he stopped giving "anti-Merck" lectures.

A November, 2003 article appeared in the *Houston Chronicle*, titled "Artery-Clearing Treatment Shown to Work like Drano."⁵⁸ The article reports on a drug that is supposed to reduce LDL-cholesterol. Any reasonable person would have great expectations for the treatment based on this title and the statement that the drug "reduced artery disease in just six weeks in a small study with startling big implications for treating the nation's No. 1 killer."

But here are the actual results of the study. After six weeks of using the drug, "...imaging tests showed the patients receiving the synthetic protein had only a visible **4 percent reduction** in plaque buildup in their coronary arteries." Our *Life-Systems* Engineering Science analysis says that **four percent is an insignificant decrease** in plaque buildup! If, on the other hand, the results had produced a 30% to 50% decrease, that would have been impressive—a result that would have justified the splashy article headline. Why would there be repeated attempts to mislead the public about progress if these drugs and "breakthroughs" in research were actually as important as they are being hyped to be?

How Can They Get Away With It?

The problem is that no one is doubting what they're being told or asking the proper questions. We're all just following like mice to the pied piper. When a company selling a particular product has a vested interest in making sales, and making health claims will increase their sales, truth becomes obscured by money.

Listen carefully for certain "weasel" words and phrases used by these ads. Phrases like "may help", "have been shown to", "can", "studies

⁵⁸ "Artery-Clearing Treatment Shown to Work Like Drano," by Lindsey Tanner (*Houston Chronicle*: 5 November 2003), p. 4A.

suggest", "possibly", "we think", "could", "would", "associated with", "should", etc. These terms are taking responsibility away from the company selling the product by not stating definitely that the product actually does what they say it does. Becoming aware of these phrases will help you see through their campaigns. Instead of hearing "our cereal lowers your cholesterol" you'll realize what they actually say is "our cereal MAY lower your cholesterol..." Regarding the cereal/cholesterol connection, we don't understand it because carbohydrates raise, not lower, cholesterol levels. There is no commitment or truth in that claim. In all actuality, NO cereal can lower cholesterol, since it's been proven that carbohydrate foods raise cholesterol levels.⁵⁹ Yet, they continue to mislead us, and the government doesn't to hold them accountable, either.

Until consumers discover the truth, incorrect dietary advice will prevail and we all will become ill because of it. No matter how much we may want to believe popular dietary advice, nature will not be fooled. Our bodies work in a specific way and science has already discovered everything we need to know to eat a healthy diet. You're on the right track by following the recommendations in this special scientific report.

Scientific Foundation of the Truth Further Studies & Information

The results of a study reported in 1994 relating blood cholesterol levels to either survival or hospitalization for coronary heart disease were very clear. With 1,000 subjects, men and women over age 70, during a 4-year period, **there was no reported correlation whatsoever between blood cholesterol level and hospitalization.** These people were no more and no less likely to be hospitalized with high cholesterol levels.⁶⁰ If cholesterol really was an issue it would manifest itself in the elderly very strongly. It didn't.

In 1993 the University of Leeds in England released a report titled "Cholesterol Screening and Treatment." Drugs for lowering high cholesterol levels were given to a study's participants. *The patients whose cholesterol was artificially lowered with drugs developed heart disease just as frequently as the drug-free high-cholesterol group.* The drug increased HDL and decreased LDL (**what is supposedly "ideal" among current thinking**) and yet there were more health problems among the group taking the drugs! In the conclusion of this study, the researchers stated the following:

⁵⁹ *Basic Medical Biochemistry: A Clinical Approach*, pgs: 475, 566. Dawn B. Marks, et al, August, 1996, ISBN: 068305595X

⁶⁰ *Journal of American Medical Association*: 272: pp 1335-40, 1994.

- Apart from those with extremely high cholesterol levels (top two percent), cholesterol screening cannot be connected with individual risk of heart-related disease.
- Few people identified purely on the basis of cholesterol levels will benefit from drug treatment.
- Drug treatment only benefits those with additional risk factors, such as high triglyceride level or high blood pressure.
- The study discourages general cholesterol screening.
- Overall conclusion: For the 98% with less than “lethal” (above 300) cholesterol levels, **there was no benefit from treatment, and drug therapy given to lower-risk patients was actually detrimental.**

According to this study it is not a good idea to use drugs to alter the natural process of the body. Yet the number of prescriptions for cholesterol-lowering drugs in England is increasing by 20% per year. Cholesterol-lowering drugs are prescribed ten times more often now than just ten years ago. Twelve million people now take cholesterol-lowering drugs in the hope of warding off heart disease...⁶¹ A disastrous result of a long-term study performed in Finland, where the researchers tried to artificially manipulate cholesterol and blood pressure levels follow:⁶²

One thousand male business executives aged forty to fifty-three were physically well but had risk factors for developing heart disease. Half the group was medically supervised whereas the other half wasn't. The supervised group was given a program of regular exercise, “strict” diet, and even blood pressure-lowering drugs. There were a **shocking 240% MORE deaths** from heart attacks in this supervised group (including drugs) than the unsupervised one!

This wasn't reported in your favorite magazine, was it? In spite of all of the information we have to date, the American Medical Association still wants to lower the “acceptable” cholesterol levels below what they already are. In order to do that we would all have to start to take harmful drugs. Does everyone need to be drugged now? This makes no sense.

61 Cowley, G, “The Heart Attackers”, *Newsweek*, August 11, 1997, pp 54-60.

62 T. Strandberg, et. al, *Journal of the American Medical Association*, Vol 266, 1991, pp 1225-1229.

There is no blood cholesterol sensor in your body because the absolute number doesn't matter.

However, there are sensors for blood sugar, calcium, salt, etc. When we look at these tests, one of the issues we need to consider is that the majority of the world population is currently deficient in essential fatty acids. With EFA-deficiency the body will unnaturally compensate for any stress that is placed on it. The results that we see from these tests tell us reducing fats in our diet and artificially altering our bodies with the use of cholesterol lowering drugs is wrong.

The truth was known back in 1977 and has not changed since then.

It has not been shown that lowering blood cholesterol has any positive effect on the heart.⁶³

A New Look at LDL Cholesterol, Clogged Arteries and EFAs
Statin drugs are those used to control cholesterol levels in the body. In 2001 it was determined that; "Statins and polyunsaturated fatty acids have similar actions.... In view of the similarity of their actions and that statins influence essential fatty acid metabolism, it is suggested that EFAs and their metabolites may serve as secondary messengers of the action of statins...."⁶⁴

These statements mean that **EFAs naturally accomplish what statin drugs do to decrease cholesterol levels.** While this by itself can help

⁶³ *Condensed Chemical Dictionary*, 1977.

⁶⁴ "Essential Fatty Acids as Possible Mediators of the Action of Statins," *Prostaglandins, Leukotrienes and Essential Fatty Acids*, Vol. 65, No. 1, July 2001.

speed blood flow, this is not the most important thing to know about EFAs in relation to cholesterol and clogged arteries. There is much more to understand.

Composition of Arterial Plaques

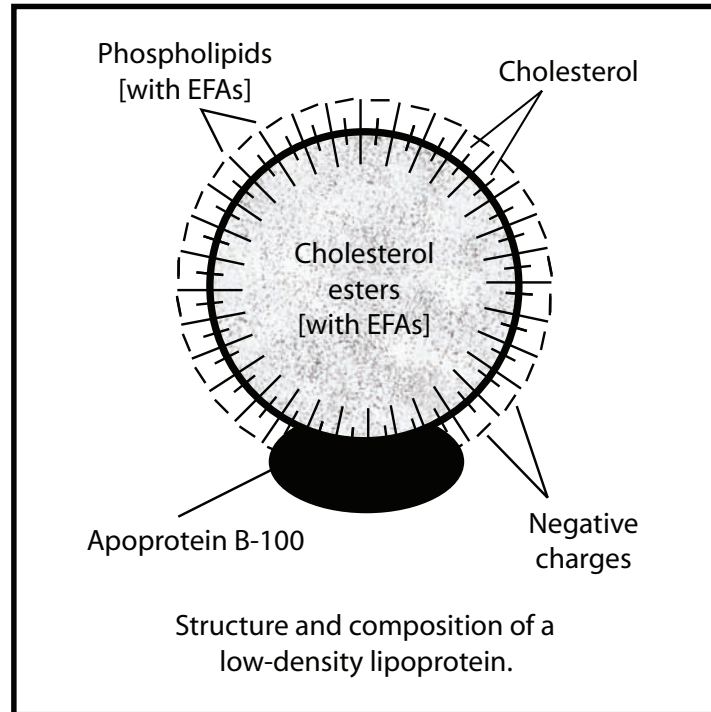
Contrary to what we have heard for decades, it is **not** the saturated fat you eat that clogs your arteries! How do we know this? A 1994 Lancet article reported measuring the components of arterial plaques. In investigating an aortic artery clog, the study found that there are over ten different compounds in arterial plaque, but NO saturated fat.⁶⁵

There was some cholesterol in the clog. This is explained by the fact that cholesterol acts as a **protective healer** for arterial cuts and bruises. So what is the predominant component of a clog? You probably guessed it—the adulterated polyunsaturated oils we have spoken about so extensively—those that start out containing good EFAs but are **ruined during commercial food processing**. These are the same damaged oils predominant in the foods we're sold constantly to help LOWER our cholesterol and prevent heart disease!! The truth is known but you aren't told that: **The solution is actually the cause of the problem.**

“LDL contains up to 80% lipid [fats and oils], including polyunsaturated fatty acids and cholesterol, mainly esters. **Linoleic acid (LA), one of the most abundant fatty acids in LDL, produces a number of products when subjected to oxidative modification...**”⁶⁶ [emphasis added]

⁶⁵ “Dietary polyunsaturated fatty acids and compositions of human aortic plaque,” Felton, CV, et al., *Lancet*; 344:1195-1196, 1994.

⁶⁶ “Postprandial Lipid Oxidation and Cardiovascular Disease Risk,” Bowen, Phyllis, et al., *Current Atherosclerosis Reports*; 6:477-484, 2004.



Textbook of Medical Physiology, pg 874

Esterified cholesterol comprises the **majority** of LDL. LDL stands for Low Density Lipoprotein. LDL is not just “cholesterol” although many people, including nutritionists and physicians, think that it is. Most important is understanding what the term cholesterol “esters” making up the majority of the LDL structure means. *Harper’s Illustrated Biochemistry* (26th edition) on page 219 answers this important question in their description: “Cholesterol is present in tissues and in plasma either as free-cholesterol or in a storage form, combined with a long-chain fatty acid [containing EFAs] as a cholesterol ester. In plasma, BOTH forms are transported in lipoproteins.” (Emphasis added). And from *Harper’s Illustrated Biochemistry*, pg 224, we discover that dietary cholesterol is tied to EFAs, too: “Of the **cholesterol absorbed, 80 - 90% is esterified [with EFAs]** with long-chain fatty acids in the intestinal musoca.” Perhaps for the first time, the cholesterol/EFA connection has now been made crystal clear. Now you understand why I say that cholesterol acts a “poison” transporter when you have defective EFAs in your diet.

Virtually everyone is missing a key point concerning “competition” in the body between ruined and good omega 6: **your body still uses the defective EFAs, even though they don’t work!** That is correct—your body will use the “next best thing” in the cells if it can’t get the parent omega 6 EFA

it needs. It will use adulterated or *transfat* parent omega 6, it will use an EFA derivative, or it will be forced to even use the non-essential oleic acid (omega 9) that your body can either manufacture on its own or can come from foods like olive oil. But these substitutes do not provide the highest level of oxygenation for the cells. They are nearly worthless for protection. You must therefore “overpower” the defective EFAs you are taking in through the diet with adequate pure, unprocessed and unadulterated omega 6 EFAs to take their place.

A further consideration showing the need for more omega 6 supplementation in relation to omega 3 is the fact that the omega 3 that you get from foods is usually *not* adulterated. Thus there is no “competition” between good omega 3 EFAs from supplements and the bad omega 3 from food, and no need to overwhelm any bad omega 3 EFAs.

All these facts show why, for maximum protection, you should take much smaller quantities of omega 3 EFAs in relation to your omega 6 supplementation than is recommended by most nutritionists, health writers and supplement manufacturers. Yet few if any in this field have worked through this analysis. Let’s continue with an examination of body tissue composition to discover what EFA ratio we require.

In nature, with the consumption of organic, unprocessed EFAs rather than adulterated oils and trans fats, LDL cholesterol is supposed to be made up of significant amounts of **properly functioning** “parent” omega 6 linoleic acid (LA) and is not *supposed* to be harmful. It is the **natural transporter of parent omega 6 and parent omega 3 into the cells**. It is thus not critical to lower LDL cholesterol, nor is the absolute LDL number as important if the diet contains sufficient unadulterated EFAs. (Recall that the body has no natural “cholesterol sensor” in the bloodstream. It would if its levels had to be maintained within exact limits.)

Huge numbers of molecules of the omega 6-based cooking oils are ruined by commercial food processing. In the body these are incorporated *into* the LDL cholesterol. With the consumption and transport of **defective**, cancer-causing processed oils, LDL cholesterol acts like a “poison delivery system,” bringing deadly trans fats and other ruined oils into the cells.

This is THE REAL REASON behind why everyone keeps telling us to “lower cholesterol at all costs” —yet the medical profession has offered us no insight into the science of why. So **LDL cholesterol is improperly blamed**.

So don’t let the pharmaceutical company scare you into believing that you should therefore minimize parent omega 6 (along with parent omega

3), because of “oxidation” concerns. This will lead you astray. It is true that fats and oils oxidize — that’s partly how they do their job. This is like saying never burn any wood for heat because it’s “oxidizing.” Oxidation occurs in the process of producing the energy. In wintry climates you would freeze to death without it. The proper answer is to keep adding *more* wood to the fire, not less, so that the fire doesn’t go out! **So the correct answer is to take a daily supply of unprocessed, properly functioning EFAs, not cut them out.**⁶⁷

Furthermore, these consequences go beyond heart disease, because (1) ruined EFAs in arterial blockages cause decreased blood speed, and even worse, (2) **Because the analysis of aortic arterial plaque is so high in oxidized and ruined polyunsaturated oils, defective polyunsaturated fats and oils are the most important reason your arteries become clogged.**

Additionally, they are also the root cause of blood clots forming in the arteries and not being able to dissolve away naturally, as they do on external cuts. Blood clots are a tremendous problem with cancer cases, estimated to be responsible for *over 80% of the cancer mortality rate* because they facilitate transport cancer throughout the body (metastasizing) when it would not have spread without blood clots.

Top German Biochemist Gets it Right! Dr. Spiteller Understands the Cholesterol / EFA Connection: The Story You Haven’t Heard...

Professor Dr. Gerhard Spiteller⁶⁸ was also right about the true cause of heart disease. The following excerpts are from his article titled “Is Atherosclerosis a Multifactorial Disease or Is It *Induced by a Sequence of Lipid Peroxidation Reactions?*”, published in the *Annals of the New York Academy of Sciences*:

⁶⁷ Further references: Waddington, E, et al., “Identification and quantification of unique fatty acid and oxidative products in human atherosclerotic plaque using high-performance lipid chromatography,” *Annals of Biochemistry*; 292:234-244, 2001; Kuhn, H., et al., “Structure elucidation of oxygenated lipids in human atherosclerotic lesions,” *Eicosanoids*; 5:17-22, 1992.

⁶⁸ Dr. Gerhard Spiteller attended Massachusetts Institute of Technology, as a postdoctoral fellow in 1960-1961. He is the Chairholder of Biochemistry, Institute of - Organic Chemistry at the University of Bayreuth. He discovered - urofuranoic acids and has published over 100 scientific papers.(footnote 1) - Since 1986 Dr. Spiteller has investigated fatty acids (EFAs) and their degradation-products, specifically, the influence of these substances in the - physiology of mammals and plants.

“Consumption of **oxidized PUFA-cholesterol esters** seems to be **responsible for the initial damage to endothelia cells**.

“It has been **recognized** that consumption of butter and other mammalian derived fats present, for example, in meat possess a strong atherogenic [heart disease causing] risk. Butter contains large amounts of saturated fatty acids. Therefore, it was **deduced that saturated fatty acids induce atherogenesis**.

“On the other hand, **a diet of fish was recognized [incorrectly] to be antiatherogenic**. Compared with other foods, fish contains higher amounts of n-3 fatty acids. Therefore, n-3 fatty **[omega-3 series]** acids have been **regarded and are still assumed to be antiatherogenic, in spite of the conflicting reports**.

“Although saturated fats can withstand oxidation, n-3 fatty acids are PUFAs and, like **all other PUFAs undergo LPO [oxidation] as shown experimentally**. The deduction that fats rich in saturated fatty acids is a risk factor in atherosclerosis is therefore in *disagreement with experiments* demonstrating that the oxidation products of LDL are derived mainly from linoleic acid and partly from arachadonic acid [omega-6 derivative]. The fact that all PUFAs undergo LPO equally well is in **disagreement with the conclusion that n-3 fatty acids are protective**.” (Emphasis added.)

■ Life-Systems Engineering Science Commentary

Dr. Spiteller makes it quite clear that oxidized EFA esters are the culprit in heart disease. He explains how it was **incorrectly** “deduced” that saturated fats were artery-clogging when an elementary understanding of biochemistry disproves that possibility. Then he shows why omega-3 oils can’t be “artery protective” like the “experts” claim. His article continues.

“**[C]holesterol is transported to cells in esterified form** by low-density lipoprotein (LDL). LDL is recognized by an endothelial cell receptor and induced into the cell by endocytosis. There, the **esters are cleaved [removed]**. The resulting free cholesterol is transferred to cell walls. The overall process is **strictly regulated**.

“**In atherosclerotic patients LDL is altered by oxidation**. This altered LDL is taken up in **unlimited amounts by microphages**. Dead microphages filled with **cholesterol esters are finally deposited in**

arteries. The fact that LDL is rendered toxic by oxidation raises the question, which constituents of LDL are prone to oxidation?....”

“Thus, atherosclerosis seems to be a multi-step sequence of LPO reactions, but not a multi-factorial disease.⁶⁹ (Emphasis added.)

► Life-Systems Engineering Science Commentary

Dr. Spiteller makes it quite clear that parent omega-6 is transferred to the cell wall in a **strictly regulated process**. However, once the cholesterol becomes oxidized, the process of removing the defective material **becomes unregulated and it ends up in large part in your arteries!** It is the parent omega-6 that is the most significant altered substance of LDL. He ends with the statement that **there is but one prime cause of heart disease, the defective parent omega-6.** His article ends with a comment that shows why olive oil cannot be very effective in human tissues:

“Phenols [certain plant compounds in olive oil], **excellent scavengers in plant tissue, are not readily incorporated into human tissues** and their strong **antioxidant properties cannot be expressed after consumption and digestion of plant-derived food.**” (Emphasis added.)

Many health “experts” claim the virtues of olive oil are due in large part to phenols. Although we find nothing wrong with the consumption of olive oil (extra-virgin organically pressed with low acidity is best), we now see that it is not beneficial because our tissues can’t make use of its antioxidant properties. Hopefully, our vital message will reach people before they are stricken with heart disease.

NOTE: Current Studies are being done to determine whether cholesterol is produced by cells at the site of damage, rather than being sent to the site by the body in the circulating blood. Since nearly every cell of the body produces cholesterol, it well may be that the cholesterol does not come from the circulating blood... but from the very cells at the point of injury to the intima (The innermost membrane of an organ or part, especially the inner lining of a lymphatic vessel, an artery, or a vein).⁷⁰ Although this report disproves that cholesterol itself is the cause of heart disease, if this is proved to be the case, claims that dietary cholesterol contributes to arterial clogs would be completely reduced to absurdity.

⁶⁹ Gerhard Spiteller, “Is Atherosclerosis a Multifactorial Disease or Is It Induced by a Sequence of Lipid Peroxidation Reactions?”, *Annals of the New York Academy of Sciences*, Volume 1043, 2005, pages 355-366.

⁷⁰ *Super-Nutrition for Healthy Hearts*, Dr. Richard Passwater. Dial Press, 1970.

The information contained in this report should convince you of the errors in nutritional and health advice that is leading everyone down a dead-end road to ill-health. The essential problem is defective parent omega 6. We have been meticulous about where we obtained our information, and diligent in how we linked it together to paint a correct picture for you in our never-ending desire to bring you the truth.