FIGHTING INFLAMMATION 101

The Basic Changes in Diet and Lifestyle That Help You Avoid Inflammatory Disease

by Robert S. Rister
Legal Stuff

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This book provides carefully researched information about inflammation, with suggestions regarding the relationship between inflammation and diet. This book is intended to provide background information. It does not substitute for medical diagnosis or treatment, and it cannot be used to diagnose or treat any disease. Use this book to ask the right questions to which you find your own right answers. Always work with your physicians, not against them. Neither the author nor the distributors of this book accept any liability for failure to seek and follow needed medical advice.

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What This Book Is About

Infection and injury are a normal part of life, and the human body uses inflammation to repair them. Too much inflammation because of unbalanced diets, unbalanced growth of healthy and "visiting" bacteria in the digestive trace, allergies, food reactions, and antioxidant deficiencies, however, is the force that drives many chronic diseases.

This ebook is all about helping you correct the deficiencies, avoid the sensitivities, and restore your body's balance so you can avoid the inflammation that can cause arthritis, atherosclerosis, asthma, allergies, overweight, diabetes, skin conditions, erectile dysfunction, menstrual irregularities, gum disease, wrinkles, high blood pressure, and even cancer. This book is all about evidence-driven natural healing. It's intended to be factual, and it's not written for dummies. But neither will we delve into complicated debates about the directions of inflammation research. This book is all about getting well and staying well. There are other books to help you become a fatty acid expert.

Most doctors are trained to consider inflammation to be a marker of Tylenol-, cortisol-, or maybe Celebrex-deficiency. There are times that heavy-duty pain inflammation relievers really are necessary to stop a disease process. This book is not intended to discourage from doing anything your doctor tells you. The purpose of this ebook is to help you go beyond what your doctor can do for you so you don't just stop feeling bad, you actually return to good health.

The information in this book is meant for anyone who suffers any degree of inflammation. If you have specific health concerns, you may also be interested in THE ANTI-INFLAMMATION PROTOCOLS, also by Robert Rister.
Why You Need to Know About Inflammation

There is one major disease process that causes the sneezing, wheezing, runny nose, and itchy eyes of allergies.

There is one major disease process that causes the aching, stiffness, and degeneration of arthritic joints.

There is one major disease process that causes the spread of cancer beyond the original tumor, the pains that precede women’s menstrual periods, the accumulation of fluid bloating belly fat, the gum disease that loosens teeth, and even the resistance of depression to antidepressant medications. That disease process is inflammation.

Inflammation is not just a process that causes redness, soreness, sensitivity, and pain. It is the driving force behind any kind of disease that is described as an -itis, and inflammatory processes (or an unhealthy lack of them) are involved in every kind of pathology that leads to disease.

Fighting inflammation is fundamental to good health, but as many experts fail to understand, it is actually possible to have too little inflammation. It is not a common condition, but some unfortunate individuals have taken the advice of the peddlers of nutritional supplements so literally that they actually have developed shortages of the pro-inflammatory factors that activate the immune system to fight infection and activate the clotting process to stop excessive bleeding.

Inflammation is not an inherently evil part of human physiology. It is a necessary part of human self-defense that is overactivated by modern diets and modern life. Getting the right amount of inflammation is fundamental to good health.

Just how common are diseases caused by inflammation? In the United States alone:

- Between 1 and 2 million people have chronic kidney disease.
- Between 2 and 3 million people have rheumatoid arthritis.
- Between 4 and 5 million people have cancer.
- Between 12 and 18 million people have precancerous conditions of the skin.
- Between 15 and 20 million people have asthma.
- Between 29 and 35 million people have type 2 diabetes.
- Between 48 and 56 million people have hay fever and other nasal allergies.
- Between 55 and 65 million people have high blood pressure, hardening of the arteries, or have suffered a heart attack or stroke.
- Between 95 and 110 million people are prediabetic.
between 120 and 140 million people are obese, and
between 260 and 290 million people have gingivitis or tooth decay.

Acute inflammation is something we all need to survive. Acute, short-term inflammation fights infection, stops bleeding, or gives us the energy to face danger. Chronic inflammation, on the other hand, gradually wears down healthy tissues or short-circuits healthy processes, causing chronic disease.

In this book, we'll look at fighting excessive, chronic inflammation in two different ways. First we will look at what you can do to fight inflammation with simple changes in your diet. These changes take some planning, and some willpower, but they don't cost you any money.

Then we will look at a limited number of supplements that help your body inflammation in ways that go beyond what diet, and even medication, can do for you. But let's make sure that you need the information in this book first.

A Quiz - Determining Your Risk Level

Here is a brief and easy quiz to determine if you are at risk for any of the conditions that are caused by inflammation.

Here are some questions about your exposure to food that are high in the kinds of fats that cause inflammation. Just answer each question yes or no.

- Do you eat a stir-fried dish at a Chinese restaurant more than once a week?
- Do you eat fast food (McDonald's, Taco Bell, Burger King, Dairy Queen, and similar establishments), excluding salads, oatmeal, or fruit, more than once a week?
- Do you eat pizza more than once a week?
- Do you eat breaded fried foods such as fried chicken, chicken fried steak, or batter dipped fried fish more than once a week?
- Do you like bottle barbecued sauce on your food?

If you answer yes to more than one question—or if you indulge in all of these foods just once a week—then your diet is increasing the likelihood you will develop one of the diseases caused by inflammation.

Here are some questions about your diet at home that assess your risk of inflammation. Again, just answer each question yes or no.

- Do you eat prepackaged microwaveable meals for breakfast, lunch, dinner, or snacks more than once a week?
- Is most of the food in your house prepared with corn, soybean, peanut, or canola oil, rather than olive, almond, or grapeseed oil?
• Do you use bottled salad dressings instead of making your own salad dressings?
• Do you add sugar to your coffee or tea?
• Do you dislike fresh vegetables?
• Do you dislike broiled or steamed fish?
• Do you eat bacon, sausage, or ham more than once a week?
• Do you use margarine instead of butter?
• Do you eat French fries more than once a week?
• Does more than half of your food come from boxes, cans, mixes, or jars, rather than made-from-scratch?
• Do you eat potatoes, tomatoes, or chili peppers every day (any one of the three)?
• Do you eat white bread, white bread, or white potatoes every day?

Again, answering yes to any of these questions is an indication that you have heightened risk for the diseases of inflammation.

Now let's consider symptoms of inflammation that may not yet be full-fledged diseases. Answer these questions yes or no.

• Do you bruise easily?
• Do you experience stiffness when you get up in the morning that eases as you go through the day, only to come back the next morning?
• Do you have blurred vision in the morning that improves once you get your morning coffee?
• Do you have stuffy nose or runny nose during allergy season or all year round?
• Do you get cuts, scratches, or scrapes that take a long time to heal?
• Do you have discolorations in your toenails or fingernails that take months to go away?
• Do you get colds frequently?
• Do you slip, fall, or bump into things frequently?
• Do you have frequent muscle aches?
• Do you have frequent back aches?
• Do you need to take a nap after a heavy meal?

Answering yes to these questions also indicates that inflammation may be a problem. Now let's consider medications that treat inflammation. Do you take:

Aleve
Aspirin
Celebrex
Cortisone
Ibuprofen
Pepto-Bismol
Prednisone
Prevacid
Tylenol
Willow bark
Lipitor, Zocor, Crestor, or any other cholesterol-lowering drug?

Regular use of these drugs is a strong indication of inflammation. Finally, let's take a very brief look at your medical history. Have you ever been diagnosed with or do you now have any of the following conditions?

Acid reflux
Allergies
Anxiety
Asthma
Bladder infections
Cancer
Cirrhosis of the liver
Crohn's disease
Depression
Diabetes
Duodenal ulcer disease
Eczema
Enlarged prostate
Fibromyalgia
Food addictions
GERD
Heartburn
Hepatitis
High blood pressure
High cholesterol
Multiple sclerosis
Osteoarthritis
Peptic ulcer disease
PMS
Prediabetes
Psoriasis
Rheumatoid arthritis
Sinusitis
Sjögren's syndrome
Sleep apnea
Thyroid problems
Ulcerative colitis

or are you overweight? Yes answers for these conditions are also an indication of inflammation.

The fact is, most people in the modern world suffer from inflammation. The good news about inflammation is that it is usually treatable, and the most important
interventions don’t require you to buy anything or to see any expert. Let’s start with a look at inflammation and diet.
Chapter 1. Fighting Inflammation with Diet

If you have done any reading about essential fatty acids, you have probably come across the principle that the human body turns omega-6 essential fatty acids into the hormones that cause inflammation, and it turns omega-3 essential fatty acids into the hormones that regulate inflammation. The common descriptor of both kinds of fatty acids is "essential." We have to have hormones that cause inflammation to get rid of infection-causing microbes and diseased or dead tissue, and we have to have hormones that keep the inflammatory hormones from doing more than their job. The problem is balance.

Also if you have done any reading about essential fatty acids, you have undoubtedly read that an ideal ratio of omega-6's to omega-3's in the diet is 1 to 1, that is, it is best to consume approximately equal amounts of both. The problem is that the modern diet is heavy on corn oil and soybean oil, and these fats are high in omega-6 fat with little or no omega-3 fat.

Because of the government subsidies on corn and soybeans in the United States, however, food manufacturers use enormous amounts of corn oil and soybean oil in every conceivable food product. This means that especially in the United States the modern diet can provide up to 30 times more omega-6 fat than omega-3 fat.

This makes every cell in the body churn out far more inflammatory hormones than anti-inflammatory hormones. It is not the entire or only reason that allergies, arthritis, atherosclerosis, asthma, gum disease, type 2 diabetes, cancer, and a plethora of other inflammatory diseases are so common in the modern world, especially in the parts of the world dominated by the United States, but it is a major reason for all those conditions. And the answer, we are told, is to take our omega-3 supplements to begin to bring that 30 to 1 ratio closer to 1 to 1.

If you continue eating the same old foods, however, you are going to have to take an enormous amount of fish oil or microalgae DHA or krill oil to get your essential fatty acids back in balance. And essential fatty acids are just part of the problem.
The Cause of Inflammation Experts Overlook

The frequently overlooked dietary cause of inflammation is sugar. Unless you consume your omega-6’s and omega-3’s in perfect balance, excess sugar can always tip the balance of hormone production in favor of inflammation. Sugar accelerates the creation of inflammatory hormones from omega-6 essential fatty acids and arachidonic acid, the fatty acid that is abundant in ham, sausage, bacon (do you remember a question about those foods in the last chapter?), egg yolks, processed lunch meats, and margarine.

Scientists estimate that before the year 1800, the average person consumed just 22 teaspoons of sugar per year. Now food industry experts tell us that the average person in the USA, UK, Canada, Australia, Ireland, or New Zealand consumes 22 teaspoons of sugar per day.

Moreover, in North America, nearly 2/3 of all sugar calories come from high-fructose corn syrup. Food manufacturers like to use corn syrup because it is cheap (again, because of subsidies that encouraged turning much of North America into a giant seasonal forest of corn), and they like to use high-fructose corn syrup because fructose is sweeter than sugar and it keeps products moister while they sit on the shelf. Heat and light destroy the antioxidant content of manufactured foods, but the fructose in the product keeps it from drying out so it tastes and feels fresh even if much of the nutritional value is quickly lost.

What Should You Eat Instead of Sugar?

Anyone can tell you to eat less sugar. But the one food that helps the most people overcome inflammation is an old standard that Americans simply don't have many chances to eat, rye.

It's not unusual for Americans to travel to Europe and report that they feel wonderful when they eat the food. For many, the dietary change is one they hardly notice, from eating lots of wheat to eating lots of rye. The anti-inflammatory effects of eating rye instead of wheat are so profound that a research team even organized a clinical study.

Scientists have known for a long time that wheat bread and wheat flour products raise blood sugar levels, and rye bread and rye flour products raise blood sugar levels, too. The difference between wheat and rye is that while both grains contain carbohydrates that become sugars, rye doesn't require as much additional insulin. The hormone insulin is highly inflammatory, so maybe eating rye instead of wheat would reduce inflammation. Scientists at the University of Kuopio in Finland decided to find out.
The Finnish research team recruited two groups of volunteers for a 12-week dietary intervention. Both groups were given food to take home with exactly the same amounts of protein, fat, essential fatty acids, carbohydrate, sugar, and fiber. One group got its carbs from wheat and potatoes, and the other got its carbs from rye.

At the beginning of the study, volunteers were asked to submit to a needle biopsy of their fat cells, which was repeated at the end of the twelve weeks. The scientists then did genetic testing to see if changes in diet resulted in activation, or deactivation, of genes. The researchers found that replacing wheat and potatoes with rye bread and rye pasta resulted in changes to 71 genes that decreased the production of insulin and other inflammatory hormones. They also found that eating just wheat and potatoes (most Finns eat at least some rye bread and rye pasta on a regular basis) resulted in changes to 62 genes that increased the production of insulin and other inflammatory hormones.

Even when calories were the same, essential fatty acids were the same, and sugars, protein, and fiber were the same, there was something highly inflammatory about wheat and potatoes and something highly anti-inflammatory about rye. The group that had eaten rye for 12 weeks had smaller fat cells, and lower levels of an enzyme called hormone-sensitive lipase. This is the hormone that controls how insulin works in the body, and it also controls cholesterol production. Just by replacing wheat and potatoes with rye, the rye eaters got many of the same benefits—and more—as people who take omega-3 essential fatty acid supplements and antioxidants or who go on reduced-calorie diets.

The point of this study is not that you should stop taking your omega-3’s or antioxidants. The point of this study is that you may feel even better if you cut out wheat and potatoes. If you have not been able to stop eating fatty meats, and you just can’t stop eating sweets, why not trying replacing wheat and potatoes with rye to see if that doesn't help? You might even discover you feel so good you don’t need to feed your meat and sweets addictions and you will then feel even better.

**A Special Note for Diabetics and Prediabetics**

The Finnish study also found that oatmeal causes problems for people who are prediabetic. There is something about oats, wheat, and potatoes that activates the genes associated with stress. Stress hormones create a demand for stored sugar to be released by the liver that keeps the pancreas busy churning out insulin until eventually cells "burn out." (Actually, these cells don't diet, they just start making a different hormone that raises blood sugar levels instead of lowering them.) If you know you have a "blood sugar problem" try cutting out wheat, potatoes, and oats and oatmeal to see if you don't improve.
Chapter 2. Fight Inflammation by Repairing Digestion

Have you ever been to a wildlife preserve?

As the developing world requires more and more land for farms, roads, and cities, more and more wild animals only survive by migrating (or being carried away to) wildlife preserves. Tourists pay an entry fee to the wildlife preserve for the pleasure of watching dozens or even hundreds of animals within.

All of maintain a vastly larger population of "wildlife," however, in our own bodies. Each and every one of us hosts from 10 to 50 trillion microscopic visitors in our digestive tracts. Consisting of up to 2,000 different species of bacteria, this mass of microbial life in our colons adds 1 to 3 pounds (500 to 1500 grams) to our weight and has profound effects on our health, both good and bad, depending on which bacteria predominate. The bacteria in our intestines do not just influence regularity and yeast infections. Symbiotic (friendly) and dysbiotic (unfriendly) bacteria even affect our brains.

American scientist Whitney P. Bowe and Canadian scientist Alan C. Logan explain that the friendly bacteria in the colon have the power to regulate inflammation, oxidation, fat storage, blood sugar levels, and even mood. Life stresses and dietary choices, on the other hand, regulate the bacteria that help regulate us. According to Bowe and Logan, among the key findings of probiotic science are:

Sweet foods are easier to digest, so the stomach makes less stomach acid. When the stomach makes less acid, pathogenic, inflammation-causing bacteria are free to migrate up from the colon, where they are kept in check by friendly bacteria, to the small intestines, where they are not. These bacteria make the lining of the small intestine "leaky," so any allergenic particles that weren't digested in the stomach can quickly go into the bloodstream.

A lack of stomach acid can also lead to small intestine bacterial overgrowth. These unfriendly bacteria form a matte over the lining of the small intestine so that it is harder for the bloodstream to absorb amino acids, healthy fats, and vitamins. Bitter vegetables, such as endive, radicchio, and kale, stimulate the stomach to produce more stomach acid. In fact, any bitter food eaten at the beginning of a meal stimulates the vagus nerve to trigger release of more stomach acid. Sweet foods cancel out this effect.

Probiotics, whether from supplements or yogurt, reduce the overgrowth of bacteria.
in the small intestine. Omega-3 essential fatty acids, especially from fermented cod liver oil (which is a source of both probiotics and omega-3 essential fatty acids), also reduce the overgrowth of bacteria in the small intestine.

The effects of probiotic bacteria and omega-3 essential fatty acids, however, are not limited to the intestinal tract. They are also felt in the brain. Bifidobacteria release a chemical that reduces the effects of stress hormones on the brain. They also release chemicals that help the brain maintain brain-derived neurotrophic factor, which seems to fight depression. If eating yogurt makes you smile, it is not just the taste. It is also the bacteria that send antidepressant chemicals to your brain.

And if the idea of taking a spoon of fermented cod liver oil every morning is not appealing, just imagine that you will feel great the rest of the day.

You don’t get the maximum benefit of omega-3 essential fatty acids without probiotic bacteria. And you don’t keep healthy levels of probiotic bacteria if they don’t their own food. The nutrients needed by probiotics are known as prebiotics.

One of the most important prebiotics is a substance known as inulin (not to be confused with insulin, which is entirely different). You get your inulin from Jerusalem artichokes (sunchokes), jicama, chicory, onions, and garlic. Just a little every day or two from these food sources is enough. Onions and garlic, when the right probiotics are present, can actually clear up your skin, lower your blood sugar levels, improve your mood, and help you lose weight. Stinky breath goes away when you remove any bits of onion or garlic from your tongue and between your teeth. Other vegetables contain smaller amounts of the fiber on which

So far I have told you two important ways to fight inflammation. One is to eat rye instead of wheat, potatoes, and oats for your main carbohydrate source, and the other is to make sure you get plenty of probiotics, feeding them sunchokes, jicama, onions, garlic, and fresh veggies as often as you can. But now let’s take a different look at essential fatty acids.
Chapter 3. Fighting Inflammation with Fats: Good Fats, Bad Fats, and OK Fats

Just about every website selling nutritional products boasts the virtues of good fats (which are conveniently the ones they sell) and warns of the dangers of bad fats (which are sold by someone else). But the fact is that there are no good fats or bad fats, there are only OK fats when you consume them in the right amounts.

If you would like to know how chemists distinguish omega-3 fats, omega-6 fats, and omega-9 fats, please visit the web page here. But for purposes of this discussion, let's just group them this way:

- Omega-3 essential fatty acids are converted into anti-inflammatory hormones, mostly,
- Omega-6 essential fatty acids are converted into pro-inflammatory hormones, mostly, and
- Omega-9 essential fatty acids can go either way.

The most abundant omega-3 essential acid in most people's diet is alpha-linolenic acid. This is the fatty acid that is found in flaxseed oil and in green leafy vegetables. It's not a very potent anti-inflammatory acid, but every cell can convert it into stearidonic acid (which is found in echium oil, which has recently become available as a supplement). Then the stearidonic acid becomes eicosapentaenoic acid (EPA) and decosahexanoic acid (DHA), which are much more potent inflammation fighters. A tiny amount of EPA and DHA is turned into even more potent inflammation-fighters called lipoxins, neuroprotectins, and resolvins.

Most of the omega-6 essential fatty acids we actually consume are in the form of arachidonic acid. This fatty acid is especially abundant in any kind of grain-fed meat, especially corn-fed pork. Arachidonic acid is converted through a series of steps into two potent inflammatory substances, leukotriene B4 and prostaglandin E2. The conversion goes much faster when blood sugar levels are high.

All the omega-6 essential fatty acids—and they are essential to good health—do not become agents of inflammation. Gamma-linoleic acid, also known as GLA, is actually anti-inflammatory. It works with ALA, DHA, and EPA to keep inflammation in check, even though it is technically an omega-6 essential fatty acid.

The omega-9 fatty acids are not "essential," because the body can make them from other kinds of fat. These fatty acids, which are especially abundant in olive oil, are very slightly anti-inflammatory.

Aspirin changes how the omega-6 fatty acids work, in a mostly good way. In the
presence of aspirin, some of the arachidonic acid (which we get from pork, beef, eggs, and processed meat) is converted into the lipoxins, the same anti-inflammatory substances that are made from the DHA in plant foods and the EPA from fish and fish oil. Aspirin-like compounds in fruits and vegetables also help convert this usually pro-inflammatory substance into a lipoxin that actually fights inflammation.

Is this a lot of chemistry to keep up with? Here is what is important to know:

Omega-3's and omega-6's aren't good or bad, they are essential. Whether a fatty acid causes inflammation or not is influenced by the amount of fruits and vegetables you eat. Fruits and vegetables are also anti-inflammatory. We usually get about 30 times more omega-6 essential fatty acids than omega-3 essential fatty acids, but we get even more of the omega-9's. If you want to go low-fat, start by eliminating the animal fats that are high in omega-6's, then make sure you aren't getting too much omega-9 fat from olive oil and palm oil, and finally cut back on plant oils that are rich in the omega-3 essential fatty acid ALA.

More often than not, however, people don't eliminate the other kinds of fat in their diet, so they can only fight inflammation by getting more ALA, DHA, and EPA from flaxseed oil and fish oil. It helps to take supplements, but it also helps to eat more fruit and vegetables.

Which fruits and vegetables? The plant foods that do the most to counteract the effects of arachidonic acid from grain-fed beef and pork, ham, bacon, sausage, and egg yolks are:

Curry powder (turmeric),
Dill,
Oregano,
Prunes,
Raisins,
Licorice, and
Paprika.

Don't load up on these foods and spices, however, unless you are sure you are not allergic to them. The same substances also appear in cake mix, pudding mix, artificial vanilla, and Oscar-Mayer baloney, but these are not recommended additions to your list of health foods. And there are certain fats that are always bad.

**A Special Note for Diabetics**

Diabetics especially need to avoid foods that are rich in arachidonic acid, such as corn-fed beef, corn-fed pork, eggs, wiener, and lunch meat. High insulin levels (which are common in prediabetes and the early stages of type 2 diabetes) cause the conversion of healthy di-homo-gammainolenic acid into even more arachidonic acid.
This causes even more inflammation, which can raise blood sugar levels even higher, requiring more insulin, on and on.
Chapter 4. Fighting Inflammation by Avoiding Trans- Fats and Other Fats That Are Even Worse

In the United States and many other countries, trans-fats are less and less common in ready-made food. Initiatives at local and national levels have led to the banning of trans-fats in some places. Fast food chains and other food companies are voluntarily removing them in others.

But what are trans-fats and why are they so detrimental for diabetics? And are they really the worst kind of fat? The truth is that trans-fats are bad for people who have diabetes, but interesterified fats are even worse.

The Making of a Franken-Fat

Trans-fats start out as omega-6 fatty acids. These are the essential fatty acids often deemed "bad fats," even before processing. After these omega-6 fatty acids starting out as corn oil or soybean oil have been heated to 450° C (840° F) and mixed with a nickel catalyst in a refining tower, they become twisted molecules of trans-fats that our bodies have trouble processing.

In modern food, these Franken-fats tend to lurk in "partially hydrogenated vegetable oils." As a food additive, partially hydrogenated vegetable oils are very stable in packaged products. They are used to make candies, cookies, crackers, and various kinds of mixes for soups, cakes, and instant mashed potatoes. Food products made with partially dehydrogenated vegetable oils stay on the shelf for months and even years without going bad, or at least without getting any worse.

Cooking sprays are also made with partially dehydrogenated vegetable oils. They concentrate trans-fats when they are heated in the pan. Even more kinds of trans-fats are used to fry potatoes, chicken, and fish in most fast food restaurants.

How Trans-Fats Devastate Sugar Regulation

Trans-fats do their damage by interfering with the way the body uses the anti-inflammatory, "good" omega-3 essential fatty acids. Trans-fats deactivate an enzyme called delta-6-desaturase. The body uses this enzyme to convert the healthy fats from flaxseed and vegetables into vital anti-inflammatory hormones.

And what happens to the bad fats that the body can't use to make good fats? They
get stored as belly fat. Eating foods made with trans-fat creates fat in the most dangerous location for fat, over the abdominal organs. Trans-fat also lowers HDL cholesterol and raises LDL cholesterol. But there is another kind of fat that is even worse for people who have diabetes.

**What Diabetics, Prediabetics, and Potential Diabetics (Just About All of Us) Need to Know About an Even Worse Fat**

Interesterified fats are fats that made by cooking fat with alcohol. These fats are very, very stable in long-term room temperature storage. A cookie made with interesterified fats may be edible two, three, or five years after it is baked, if it is stored in an airtight package.

These fats, however, don't just raise cholesterol levels. They also raise blood sugar levels. Eating interesterified fats for just one month can raise blood sugar levels 20 to 40 per cent, creating instant diabetes, and all the problems it causes.

If you have diabetes, it is very important for you to just say no to fake fats: trans-fats, interesterified fats, and partially dehydrogenated vegetable oils. There are no more dangerous foods than these for anyone who is at risk for diabetes. By avoiding these fake fats, you may not just lose weight and lower your cholesterol levels. You may lower your blood sugar levels, too.
Chapter 5. But Don't They Just Have a Pill for That?

Modern medicine has many treatments for inflammation. The most common of these is the artificial steroid known as prednisone. Before you decide to forget about diets and supplements and just rely on the pharmacy, consider the story of Carolyn.

In her mid-30's, Carolyn was an active and healthy person with just one nagging health problem. Every spring and then all summer long she suffered severe allergies to grass and tree pollen. Not wanting to use slow but natural methods or to take allergy shots, she asked her doctor for something that would take care of her allergy symptoms fast, overnight if possible. The doctor gave Carolyn an injection of prednisone, and her symptoms indeed disappeared overnight.

Carolyn came back once a week for additional injections of this steroid drug. As the summer passed, however, she noticed she was gaining weight. She had several summer colds, something that had never happened before, and she started feeling bloated and achy. She gained about 25 pounds (12 kilos).

The answer to those aches and pains, however, was simple. Take aspirin. The aspirin upset her stomach, however, so she got a box of Nexium for the heartburn.

After a few months, the doctor diagnosed Carolyn as having hypertension. High blood pressure is not unusual for people in their 30's, so Carolyn dutifully started taking her blood pressure medicine. And as you might have guessed, in a few months, Carolyn was needing a cholesterol drug, too. But she didn't have any problems with ragweed.

The problem with taking a pill for a problem is that it is almost never possible to stop with just one medication. Medication without changes in lifestyle never cures a chronic condition. It just controls the symptoms. There are situations when drugs are a life-saving necessity—but allergies to summer tree pollen are not one of them!

Here are just a few of the potential complications of common medications:

Aspirin and other NSAIDs (such as Advil, Ibuprofen, and Tylenol) wear down the cartilage around joints, causing more joint pain, requiring more pain medication, wearing down more cartilage.

COX-2 inhibitors, such as Celebrex, are designed to relieve inflammation without causing stomach upset. The related drug Vioxx had to be pulled off the market after an unusually large number of heart attacks occurred in users.
Short-term treatment with corticosteroids relieves inflammation. Long-term treatment with corticosteroids, as in Carolyn’s case above, leads to weight gain, hypertension, digestive upset, loss of calcium from bone, and weight gain.

Also, the justification for statin drugs that lower cholesterol is now that they lower inflammation (since studies find very little benefit from lowering cholesterol for heart health!). The problem with the statin drugs like Crestor, Zocor, Lipitor, and Mevacor is that they work by stopping an enzyme in the liver that is involved both in making cholesterol and in making ubiquinone, an antioxidant that helps the heart operate in conditions of oxygen deprivation. These drugs may slightly reduce the risk of a heart attack, at the expense of reducing the potential for surviving it!

Drugs sometimes save lives, and sometimes they shorten them. It is always best to do as much as you can on your own. Following are ten important suggestions.

**Ten Simple Steps To Easing Inflammation**

**Step 1. Know your food.**

Simply knowing what you are eating makes a huge difference in how your diet enhances or reduces inflammation. Generally speaking, it you don’t know what it is, don't eat it.

I am not too proud to admit that even as adult I love instant pudding. It’s a dietary desire I have carried over from childhood. During a particularly happy interlude in my young life, my mother had just discovered instant food. (And I am old enough that instant pudding was advertised as being made with space-age science when it came out.)

To make instant pudding, one needs instant pudding mix and cold milk. If you were take a look at the side of the Jell-O Instant Pistachio Pudding box, you could read a list of ingredients including:

- Modified cornstarch (cornstarch that has been treated with nickel catalysts in a refining tower),
- Maltodextrin (a fancy term for sugar),
- Tetrasodium pyrophosphate (for thickening),
- Pistachio nuts,
- Disodium phosphate (also for thickening),
- Artificial flavors,
The box lists ingredients in the order of concentration. There is more industrially modified cornstarch, maltodextrin, and tetrasodium phosphate in the pistachio pudding mix than pistachio nuts. (I am now taking a moment away from my writing to put the box in the trash.) It contains two artificial sweeteners and at least four different artificial dyes—but the label reminds the consumer that the milk the cook adds is a great source of calcium.

Instant pudding is a fine example of a food not to eat. Even if you were a professional food chemist, you still could not tell what was in the pudding just by reading the label. Some of the ingredients have names that are so long they could not be printed on the box.

In contrast, if you buy an apple, a lamb chop, and egg, or a green bean, and prepare it yourself, you know what you are eating. If you buy wheat berries and make your own flour to make your own bread, you know what you are eating.

But if it comes in a plastic wrapper, beware. This is a food that contains chemicals that cause inflammation. Breads, biscuits, cookies, pasta, and ready-to-eat cereals often contain chemical additives that keep them "fresh" on the shelf or make them conform to the desired texture in the serving bowl.

**Step #2. Drink water, green tea, black tea, coffee, and herbal teas without sugar.**

Water and beverages you make yourself tend to be anti-inflammatory. Water keeps us hydrated and helps the intestines carry away any toxins the liver has recycled. Green tea is fabled for its antioxidant content, which black tea almost matches. Coffee, even with a teaspoon of sugar or cream, is anti-inflammatory, and herbal teas such as chamomile are prescribed for many different kinds of inflammation.

If you drink alcoholic beverages, the more nearly pure the alcohol, the fewer
detoxification processes are activated in the liver. Vodka, for example, requires the liver to process alcohol, but beer provides sugars, bitters, yeasts, and estrogen-like compounds. Avoiding alcohol altogether may not be necessary for health, but the tastier the alcoholic beverage, the harder it is for the body to process.

**Step #3. If you must fry or saute food, use healthy oils.**

It's a rare person who avoids all fried foods. If you are going to fry or saute food, at least make it healthy.

Olive oil is rich in anti-inflammatory omega-9 fatty acids. Virgin olive oil contains more antioxidants than later pressings, but most of these antioxidants will be lost unless the food it is used to cook is cooked in a closed pan, protecting the oil from the air.

Avocado oil and macadamia oil are also anti-inflammatory, and can be used for cooking at higher temperatures. If you are cooking an Asian stir fry or an Indian dish and you don't want the taste of olive oil, try Australian MacNut oil. If you are making a salad with a combination of vegetables and fruit, try Olivado Avocado Oil. And generally you will use Greek Kalamata olive oils for making sauces and lighter California, Texas, or Australian olive oils for salad dressings.

**Step #4. Use herbs and spices instead of salt.**

Processed foods of all kinds tend to be loaded with salt. Canned foods are prepared with added salty to disguise the "tinny" taste that comes from the can. Dried foods contain large amounts of salt to keep them from spoiling during the six months, twelve months, or even 2 or 3 years they have to be stored from the time they are manufactured to the time someone buys them.

Eating lots of salty foods loads the body with sodium. Cells become bloated with sodium and fluid that they can only expel with the help of potassium from fruits and vegetables. It is a lot better for your body just to start with the potassium-rich fruits and vegetables (assuming you do not have kidney disease and you do not take a potassium-sparing diuretic) and add flavor with plant-derived seasonings.

It's OK to add dried herbs to food you are cooking, but save fresh herbs for the last step in preparing a hot dish. This preserves their essential oils and their antioxidant content. It also makes them a beautiful garnish.

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Step #5. Just say no to sugar.

Sugar has many of the same effects on the body as salt. The digestive tract breaks down both table sugar and high-fructose corn syrup (at least partially) into glucose. Every time a cell uses insulin to absorb a single molecule of glucose, it has to absorb three ions of sodium.

Eating too many sugary foods bloats the body just like eating too much salt, but in a more insidious way. When you eat too much salt, the body dilutes the excess by adding fluid between tissues and in the blood plasma. This excess water weight is easy to urinate away. When you eat too much sugar, the body puts excess fluid into cells—especially fat cells—and diuretics can't get rid of this excess fluid. Each cell has to pump out the excess water on its own with the help of potassium, which you have to get from fruits and vegetables.

Step #6. Eat organic food when you can, and when you can't, eat more fruits and vegetables.

Chances are you don’t need a lecture on why organic food is good for you.

The fact is, organic food is pricey. Many families just can’t afford it. When you can’t eat organic food, you can minimize the body’s incorporation of a wide variety of environmental toxins simply by eating more fruits and vegetables. When you eat 5 to 9 servings of plant foods every day, your kidneys do not need as much glutamate to neutralize acid urine. The body breaks down less tissue, and doesn't need to rebuild as much tissue—keeping toxins from being incorporated into cells.

Step #7. Change your dairy food habit.

You may have been told that everyone must eschew dairy foods for good health. I'm making a different suggestion. I’m suggesting that you try different dairy foods for good health if you can’t give them up altogether.

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Most experts opine that dairy foods trigger food sensitivities, and food sensitivities cause various kinds of inflammatory reactions, so everybody should stop drinking milk and eating cheese, yogurt, and ice cream. Actually, giving up dairy foods entirely may not be necessary. If you want to continue to drink milk and eat dairy, just switch to a different kind of milk.

People who grow up consuming cow's milk products tend to be sensitive to cow's milk but not goat's milk. People who growing consuming goat's milk products, on the other hand, tend to be sensitive to goat's milk but not cow's milk. To avoid milk sensitivities, just switch to a different kind of milk. Using almond milk, coconut milk, or rice milk, however, will also solve the problem. (Soy milk is a problem for most North Americans who have been fed a steady diet of soy additives.)

**Step #8. Change your consumption of refined grains and potatoes.**

Although many people will tell you just to stop eating all grains and potatoes, I suggest trying different grains and different potatoes.

As mentioned in Chapter 1, switching from wheat to rye and cutting out potatoes can make a huge difference in how many inflammatory hormones the body makes. You can also reduce your carbohydrate consumption by using rye crisps in place of bread to make open-faced sandwiches.

Rye, of course, is not the only alternative grain. You may enjoy blue rice, red rice, black rice, or wild rice for their rich, nutty flavor and high antioxidants content, or experiment with barley, quinoa, sorghum, or teff. Just don't make any grain the mainstay of your diet. Try a variety of beans; if gas is a problem, buy Appaloosa beans, which are low in the lectins that irritate the colon and cause flatulence. Just avoid making any single grain or bean the mainstay of your diet. The the greater the variety of your diet, the less the risk of sensitivities that cause inflammation.

**Step #9. Identify and eliminate food allergies.**

Nearly everyone has at least one food allergy. At it's usually something eaten every day.

Food allergy testing has become very inexpensive. For as little as $30, a mobile
testing company make take a blood sample and identify foods that cause allergy and inflammation. Modern ELISA testing has largely replaced the old elimination diets that used to take weeks to identify potentially allergy-provoking foods.

But if you don't have access to blood testing for allergies, you can always try eliminating any one of the seven most common food allergens to see how you feel. Try avoiding cow's milk (or goat's milk, if you grew up drinking it instead of cow's milk), eggs, tomatoes, chocolate, wheat, potatoes, or nuts for a week at time, and see if you feel different. If you feel better, avoid that food. You don't have eliminate all seven foods at the same time. Testing one food a time is usually enough.

**Step #10. Take supplemental essential fatty acids.**

It really is possible to get all the essential fatty acids you need from food. If you own your own farm, and you live in a climate where you can eat your own fresh produce and protein foods all year round, and you avoid "bad" fats, you probably don't need supplements. Most other people do.

There is a product for every need, but most people, except some bodybuilders, don't need more omega-9 fat. It's almost unheard of, outside of an area stricken by famine, or for people own do-it-yourself extremely low-calorie diets, to need more omega-6 fat.

If people need additional essential fatty acids, they typically need omega-3 fats, and those fats are provided best by flaxseed oil or fish oil. Flaxseed oil and other plant oils (except for marine algae oils) do not contain the DHA and EPA the body needs to fight inflammation. They contain ALA, which the body converts into DHA and EPA in the presence of estrogen. Men, obviously, don't convert as much ALA into DHA and EPA, so they need about twice as much flaxseed oil as women to get the same protective benefit for the same body mass.

For the best nutritional protection while taking the smallest number of supplement capsules, however, take fish oil. Find a product that provides at least 300 mg of DHA + EPA in a single 1,000 mg capsule (so you won't have to deal with contamination from "marine liquids") and start with one capsule a day. Up to five capsules a day may help your body avoid inflammation, and up to 15 capsules a day may help reverse it. Always discuss any supplements you use with your physician.
If you have specific health concerns, you may also be interested in THE ANTI-INFLAMMATION PROTOCOLS, also by Robert Rister.

THE ANTI-INFLAMMATION PROTOCOLS
Going Beyond FIGHTING INFLAMMATION 101

THE ANTI-INFLAMMATION PROTOCOLS ebook builds on the principles shared in FIGHTING INFLAMMATION 101 to give you a 30-day anti-inflammation diet that involves making just one simple but profound change in how you eat. Then it gives you specific protocols for dealing with the symptoms of a variety of diseases of inflammation.

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