

Inflammation: The Chronic Epidemic of the Modern Age.
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In the past the main threats to life and well-being have been germ related illnesses such as influenza, typhoid fever, tuberculosis, dysentery, smallpox, infections and a variety of plagues.

Today, the illnesses we deal with are most often chronic and non-germ related. These illnesses include such non-contagious conditions as allergies, asthma, age-related debilitation, arthritis, atherosclerosis, cancer, congestive heart failure, chronic fatigue, fibromyalgia, depression, diabetes, heart attack, inflammatory bowel disease, kidney diseases, lupus, macular degeneration, osteoporosis, periodontal diseases, obesity, and stroke to name a few.

All of these so-called 'modern' health conditions have several common denominators such as the industrialized diet, and sedentary lifestyle. Each of these conditions produce varying amounts of inflammation.

There are three types of inflammation, acute (sudden onset) inflammation is most often obvious and the result of an injury of some sort such as a cut or a sprain. Second, chronic inflammation occurs in conditions such as arthritis, bursitis, carpal tunnel, and other classic inflammatory disorders. A third type of inflammation has been identified in recent years and it is now called 'silent inflammation.' This chronic inflammation is never felt physically, but over time, contributes to such conditions as atherosclerosis of the arteries, leading to heart disease, as well as diabetes, Alzheimer's, and many other chronic conditions.

Inflammation protects the tissues of the body from further injury and helps to promote healing. Once the inflammatory response is no longer needed, other factors in the body, will turn off the process and the tissues can begin to heal. If, however, there are outside influences from the diet and environment that continually stimulate the inflammatory process, inflammation can take on a 'life of its own', becoming self-perpetuating. This chronic 'silent' inflammation remains active for years and over time, becomes intimately involved in the development of obesity, insulin resistance, diabetes, cancer, heart disease, and even dementia and Alzheimer's disease.

In our so-called "modern" world there are several factors that have been identified as contributing to chronic inflammation. Obesity, insulin resistance, sleep deprivation, inactivity, mega levels of stress, improper diet, and aging are among the common promoters of chronic and silent inflammation. This means that if you suffer from the chronic inflammation of arthritis for

example, these factors can make the discomfort worse. Let's take a look at some of these more common factors that may be present in your life.

The Deadly Industrialized Diet

The Standard American Diet (SAD) that has now spread to many other industrialized nations is almost perfectly designed to promote chronic inflammation. Processed foods are rich in trans-fatty acids, vegetable oils and all the hundreds of foods cooked in them, margarines, and salad dressings produce abnormal fatty acids and free radicals shown to be inflammation stimulants.

Chemicals called Advanced Glycation End products or AGE's, are produced when foods are heated to high temperatures as in deep frying. This is accelerated when vegetable oils are used to cook these foods. In fact, a major contributor to chronic inflammation in our modern industrialized diet, is the consumption of vegetable oils, especially corn, safflower, soy, peanut, cottonseed, sunflower and canola oils. These oils are especially high in the omega-6 fatty acid linoleic acid.

Inside the body, linoleic acid (omega 6) is often metabolized into another acid called arachidonic acid, which can be used to make a broad range of highly inflammatory biochemicals. So, in addition to the free radicals formed from the oxidation of these vegetable oils, highly inflammatory acids are also formed, making these oils doubly dangerous.

The widespread use of vegetable oils has changed the delicate balance of the inflammatory and anti-inflammatory agents present within the human body. Linoleic acid from vegetable oils can metabolize into agents that have a particular affinity for damaging the arteries of the cardiovascular system, leading to heart disease, the number one cause of death.

In order to help restore the balance of omega-6 fatty acids, foods high in omega-3 fatty acids should be consumed regularly. The typical American or industrialized diet provides a ratio of omega-6 to omega-3 fatty acids at 20 or more to one! This imbalance sets the stage for ongoing the silent inflammatory response.

Obesity

A large majority of the population is now considered to be overweight or obese. Recent research establishes the link between obesity and chronic inflammation. According to leading researchers, obesity is characterized by a chronic, systemic low-grade state of silent inflammation. Two of the key inflammatory agents in the body, interleukin-6 and C-reactive protein, increase dramatically as obesity intensifies.

Sleep Deprivation

Studies involving healthy normal sleepers that have been deliberately deprived of even just one or two hours of sleep per night, showed that there was a 40 to 60 percent increase in pro-inflammatory hormone production.

Fifty or so years ago, most people slept eight to nine hours nightly. People in underdeveloped nations without access to artificial light, often sleep much longer than that. Recent surveys however, indicated that most of us now rely on just six to seven hours of sleep, often for many nights in a row. Because of this practice, we can look forward to slowly increasing our internal inflammatory condition.

Aging

As the human body ages, there are various biological changes that occur that tend to promote the increase of chronic inflammation. Hormonal changes such as a decrease of estrogens, testosterone, and DHEA as well as the increase of other hormones such as the adrenalins and cortisol, promote inflammation. In fact, excess cortisol production is one of the biggest reasons why it becomes harder to lose weight, as we grow older!

Fortunately, cortisol production can be effectively controlled through the use of key nutrients that nourish the adrenal glands, preventing the excess production of this hormone. (at The Institute, we use a combination of nutrients for adrenal support that can be found in the formula Stress Eze, available at many fitness centers)

Stress and Inflammation

As we just illustrated, as cortisol levels increase so does the inflammatory response, making obesity greater challenge. Excess stress, so common in our modern society, increases the production of adrenalin, noradrenalin and cortisol from the adrenal glands. According to a study published in 2003, "production of pro-inflammatory agents are directly stimulated by depression, anxiety and other negative emotions and stressful ongoing experiences." One way to combat the negative effects of excess stress is by using key nutrients that can protect and nourish the adrenal glands. (see Stress Eze above)

What Can We Do?

There are many things that all of us can do on a daily basis, to help reduce the amount of inflammation-producing hormones within our body. The following addition and changes to your lifestyle can go a long way in controlling this process:

Regular Exercise: This can reduce C-reactive protein and other chemicals such as insulin, which directly promote inflammation.

Key Supplements: In addition to providing your body with the Full Spectrum of vitamins, minerals, amino acids, antioxidants, and phytonutrients necessary, consider using key nutrients, in larger amounts, that have been shown to naturally lower the inflammatory response within the body. Here at The Institute of Nutritional Science, we have completed testing on a very unique combination of such nutrients that have proven to reduce and control all levels of inflammation, from the acute inflammation caused by sprains and other injuries, to the chronic inflammation present in such conditions as arthritis, bursitis etc., and even the deadly silent inflammation caused by the many factors we have outlined. The formula uses a combination of such natural nutrients as nattokinase, dl-Phynalalanine, Boswellia extract and other supportive nutrients.

While most of us would like to make all the changes necessary to promote a healthy internal biochemistry, the realities of day-to-day living often make this difficult. It is for this reason that we researched and developed our newest formulation. Unlike the many pharmaceuticals developed for this same purpose, this natural formula has no side effects and will not harm the kidneys or the heart. Also, in the doses we are using, it has no known interaction with any medications so it may be taken safely, as directed.

The formula that we developed and are currently using in our Centers around the world is made up of a specially balanced combination of dl-Phynalalanine, curcumin concentrate and natokinase.

If you are suffering from chronic pain caused by chronic inflammation or if you have or are at high risk for such inflammatory induced disorders as heart disease, diabetes, arthritis, bursitis, carpal tunnel, chronic back problems, and even Alzheimer's, you may want to consider helping support your body in its attempt to regulate the inflammatory process within your biochemistry. A company called Phoenix Nutritionals in Southern California is currently making the formula that we have developed. This formula is available in many fitness centers as well as directly from them. If you should have difficulty finding this formula, called InflammEze, you can contact Phoenix Nutritionals directly at 1-800-440-2390.

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