

Inflammation

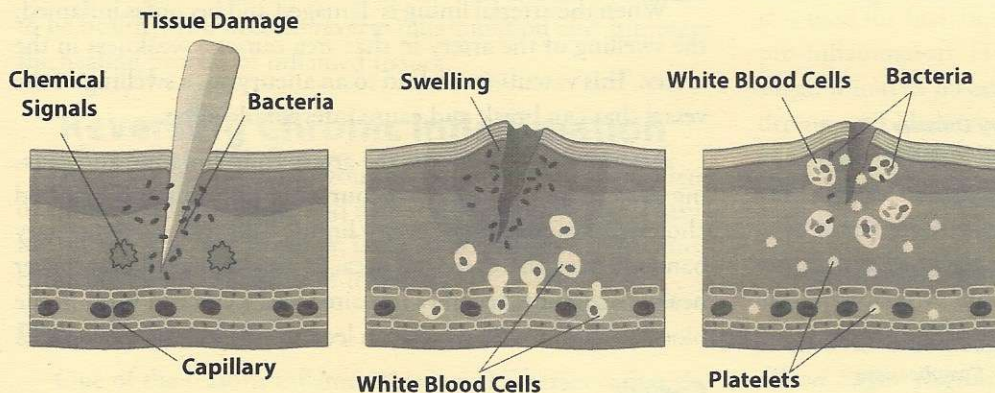
The Flame That Lights All Disease

Every time your body is injured, it responds to the damage with inflammation. It doesn't matter how the injury happened, whether it got cut, punctured, twisted, banged, smashed, scraped, burned, frozen, infected or poisoned, the response is the same. This means that all disease begins with an inflammatory process, which must be reversed before healing can take place.

The classic signs of inflammation, recognized from ancient times, are heat, swelling, redness and pain. In Latin the appearance of these four symptoms was called "itis," which is why many traditional names for diseases end with this suffix. The disease name simply tells you the part of the body that has been damaged and is now inflamed.

Thus, when the appendix is inflamed you have appendicitis; when the tonsils are inflamed, you have tonsillitis, and so forth. When you consider all the "itises" there are—arthritis, bronchitis, tendinitis, colitis, dermatitis, gingivitis, conjunctivitis, diverticulitis, sinusitis, to name a few—it's already clear that inflammation is involved in a lot of diseases.

However, what isn't widely recognized is that if the inflammatory process is never reversed it leads to other states of disease. In fact, many researchers now believe that all chronic and degenerative diseases begin with inflammation.



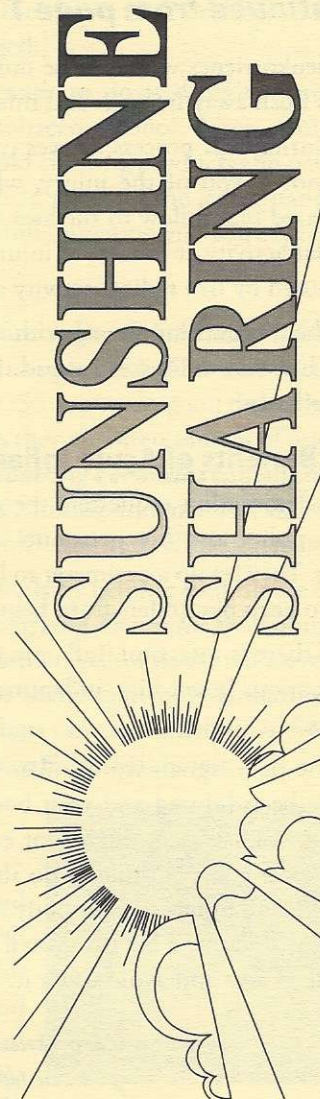
What is Inflammation?

As shown in the illustration above, when the tissues are damaged, chemical messengers are released at the site of injury. The first is histamine, which is followed by bradykinin, serotonin and various prostaglandins. These substances dilate capillary pores which allows plasma proteins like albumin and fibrinogen to enter the tissue spaces. These proteins attract large amounts of plasma (the liquid portion of the blood) into the tissue spaces, which creates swelling at the site of injury.

These chemical messengers attract white blood cells into the area to look for bacteria or other organisms that may have entered the tissues through the injury. They are also there to gobble up debris from damaged cells. You can think of them as the police, fire and other emergency workers who arrive at the scene of a crime or accident to render assistance.

If the injury is on the skin, platelets may enter the area to form blood clots and stop bleeding. If the damage occurs in the mucus membranes of the respiratory system, histamine

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Your guide to better health the natural way.

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Important Notice

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and leukotrienes will increase mucus production. This mucus helps flush away irritants and infection.

During this process, nerves carry the signal to your brain and notify you of the injury, which is experienced as pain. Increased blood flow to the area causes redness and increased cellular activity at the site of injury creates heat. Heat can also be caused by free radical activity at the site of injury.

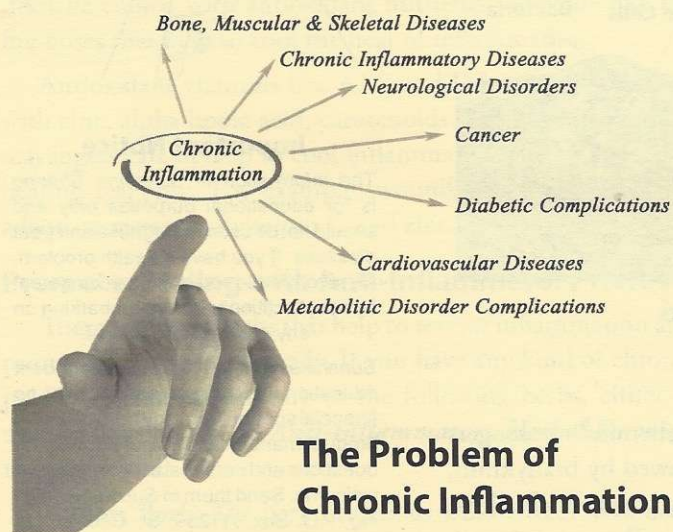
There is nothing wrong with this acute inflammatory process. It is not a disease. Instead, it is a protective mechanism of the body.

The Benefits of Acute Inflammation

Inflammation sequesters the damaged area. It's the same thing police and fire personnel do when they arrive on the scene. They set up a perimeter to keep criminals from escaping and to keep bystanders from being injured.

If there is infection, inflammation helps contain it. If it is a poisonous insect bite, inflammation slows the spread of the toxins.

The pain signals from inflammation alert you to the fact you've been injured and your body needs help. If there were no pain signals, you might not even realize you were injured and you might continue to do things that cause even greater damage and injury to your body. Feeling pain helps you avoid additional damage because you'll be motivated to protect the damaged area and avoid using it.



The Problem of Chronic Inflammation

While acute inflammation is a good thing, chronic inflammation is not. Once white blood cells have completed their clean-up of the area, a healing phase is supposed to be initiated. A new set of chemical messengers are released that tighten the capillary pores. The excess fluid and plasma proteins are removed from the area via the lymphatic system and a regenerative cycle begins as these new chemical messengers stimulate tissue growth and repair.

In chronic inflammation, the body has been unsuccessful in reversing the process and initiating healing. This is bad because the accumulation of plasma proteins in the tissue spaces slows down circulation of blood and lymph, which means that the tissues in this area receive less oxygen and nourishment from the blood stream. It also means that cellular waste and toxic material more readily accumulate in the stagnant fluid around the cells.

As energy production in the stagnant area diminishes, it causes clotting of the fibrinogen from the blood stream, which leads to fibrosis or other tissue breakdown. Thus, inflammation of the liver (*hepatitis*) can eventually lead to scarring or *cirrhosis* of the liver. In other words, the "itis" becomes an "osis," a morbid or degenerative condition.

Here are some additional examples of how inflammation leads to more serious chronic diseases.



Arthritis

Joints may suffer mechanical damage from injury, poor posture or repetitive movements, coupled with a lack of nutrients for joint health. Initially, the joint becomes inflamed, but over time, the poor circulation in the joint leads to a deterioration of the

tissues in the joint causing osteoarthritis.

Cardiovascular Disease

When the arterial lining is damaged and becomes inflamed, the swelling of the artery in that area causes a weakness in the artery. This *vasculitis* can lead to an aneurysm, a swelling of the vessel that can break and cause internal bleeding.

Arteriosclerosis prevents the artery from bursting and causing even more damage by encouraging minerals and oxidized cholesterol to invade the artery lining. This forms a temporary bandage over the damaged area. If this damaged area never heals, circulation becomes impaired and a clot can form in the blood (a *thrombosis*) which can lead to a heart attack or stroke.

Cancer

There is also a link between cancer and inflammation. Cancer cells are normal cells that have mutated in response to a toxic environment, one that is low in oxygen, overly acidic and laced with low grade infection or contaminants like heavy metals. This is exactly the kind of environment created in areas of chronic inflammation. In order to survive these conditions, cells revert to a more primitive metabolism and become cancerous.

Obesity

There is also an interesting link between obesity and inflammation. When fat stores increase in the body, they stimulate production of a hormone called leptin. Leptin decreases appetite and increases metabolism, so you are motivated to eat less and exercise more. Unfortunately, the chemicals released by inflamed tissues block the action of leptin, so you keep eating and your

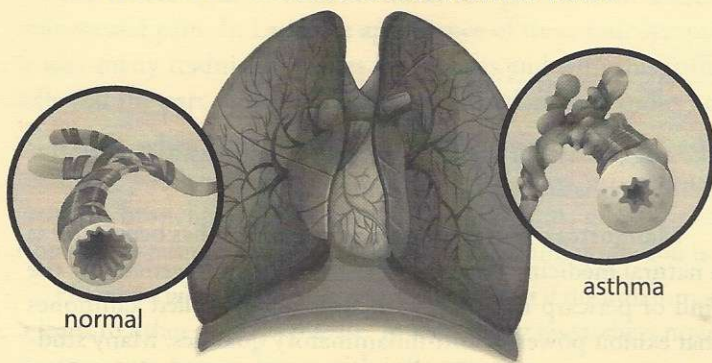
metabolism stays low. Thus chronic inflammation makes it difficult to lose weight.

And Much, Much More

Inflammation can also affect the brain. Recent research suggests that depression may involve inflammation in the brain. Inflammation is also what eventually causes brain diseases like Alzheimer's, Parkinson's and dementia.

Inflammation in the intestines causes leaky gut syndrome, which adversely affects the immune system and is connected with many other chronic diseases. Chronic pain may be due to inflammation of the nerves. COPD and asthma are the result of chronic inflammation in the lungs and bronchials as shown in the illustration below.

Asthma - Inflamed Bronchial Tube



The list goes on and on, but the bottom line is, if you want to be healthy, you need to reverse inflammation and stimulate the healing process of inflamed tissues.

Reversing Chronic Inflammation

There are several things you can do to reverse the problem of chronic inflammation, and help the body move into a healing phase. The first, however, is the most important. You must eliminate ongoing sources of irritation.

Detoxify Your Life

One of the reasons inflammation never reverses is that the irritant that caused the damage in the first place is never removed. It's like having a splinter that isn't pulled out. A prime example of this is smoking. Cigarettes are constantly irritating and inflaming the lung tissue, which is why smoking is the number one cause of chronic obstructive pulmonary disorder

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Additional Help and Information

For more information about the problem of chronic inflammation and how to reverse it, contact the person who gave you this newsletter. You can also consult the following resources:

The Anti-Inflammation Zone by Barry Sears

Inflammation Nation by Floyd H. Chilton, Ph.D.

The Golden Seven Plus One by Dr. C. Samuel West

(COPD) and lung cancer. The tissues can't heal because they are continually being damaged.

So, the first thing you want to do is detoxify your life. Minimize your exposure to tobacco, alcohol, drugs, pesticides, food additives, toxic household cleaning products and personal care products, and chemicals in general. The less irritants you expose your body to, the less inflammation you will experience.

Detoxify Your Body

This also includes taking care of chronic infections. Infections in the teeth and gums for example are linked with increased risk of cardiovascular disease. So, maintain good dental health. Be careful with root canals as they are often sources of ongoing infection. Taking *Immune Boosting Formulas* containing medicinal mushrooms like reishi, shiitake and maitake, along with immune boosters like vitamin C, zinc and echinacea, may help.

You can also purify your body by helping it eliminate toxins like heavy metals. Use *Detoxifying Formulas* containing ingredients like burdock, dandelion, yellow dock, red clover and milk thistle. Nutrients like n-acetyl-cysteine, l-glutamine and the probiotic *Bacillus coagulans* can also be helpful in flushing toxins from the body to reduce tissue irritation.

Control Your Blood Sugar

Sugar is a two-edged sword in the body. On the one hand, it is used for fuel, but it is also pro-inflammatory. High blood sugar, found in metabolic syndrome and diabetes, directly contributes to increased inflammatory processes in the cardiovascular system, brain and other tissues. This is why the body tries to maintain sugar levels within a very narrow range. It's also why high blood sugar is a big risk factor for other chronic and degenerative diseases, including cancer and heart disease.



If your blood sugar is high, try bringing it down with a *Blood Sugar Regulating Formula* containing any of the following ingredients: cinnamon, nopal, fenugreek, bitter melon, gymnema and chromium.

Make an Oil Change

A major dietary problem that increases inflammatory responses and prevents healing is an over abundance of omega-6 essential fatty acids coupled with a deficiency of omega-3 fatty acids. Many of the chemical messengers that mediate inflammation and healing are made from these fatty acids.

In the absence of sufficient omega-3 fatty acids, there is a tendency to have too many pro-inflammatory chemical messengers. Higher levels of omega-3 help the body produce the chemical messengers that reverse the inflammatory process and start the healing process.

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Many people have discovered they have less pain, clearer thinking, better mood and increased overall health by reducing vegetable oils and processed fats in their diet, while taking a high quality *Omega-3 Essential Fatty Acid Supplement*.

Get Out the Fire Hose with Antioxidants

Inflammation and oxidative stress are closely linked. There is a great deal of free radical activity at inflammatory sites which must be cooled with antioxidant nutrients. They are like the fire hoses that help to cool the heat of inflammation.

Antioxidant vitamins like A, C and D3 are helpful, along with zinc, alpha lipoic acid, carotenoids and other free radical scavengers can all help to cool inflammation and promote the healing response. For example, wounds won't heal without adequate reserves of vitamin C and zinc.

Promote Healing with Anti-Inflammatory Herbs

There are many herbs that help to reverse inflammation and promote healing in the body. If you have any kind of chronic pain or inflammation, any of the following herbs, either as singles, or as part of an *Anti-Inflammatory Herbal Formula* may be helpful.

Willow Bark: The bark of various willow trees have been used as remedies for inflammation and pain since ancient times. White or black willow bark contain salicylic acid, the forerunner of modern aspirin. Salicylic acid affects the chemical messengers that mediate inflammation (prostaglandins) in the same manner as aspirin, but with less risk of side effects.

Boswellia Gum: Native to India, the boswellia tree produces a resin similar to frankincense, which is anti-inflammatory and aids tissue healing. Clinical trials have noted significant improvements in rheumatoid arthritis, osteoarthritis, bursitis and tendonitis when patients took boswellia. The herb is also used in Ayurvedic medicine for acute inflammatory conditions

like sore throats, laryngitis, canker sores, gum disease, ulcerative colitis, psoriasis, asthma and hay fever.

Mangosteen Pericarp: This native of Asia has been used as a natural medicine for centuries. The fruit and particularly the rind or pericarp is loaded with antioxidants called xanthones that exhibit powerful anti-inflammatory qualities. Many studies have shown the ability of xanthones to inhibit free radical damage, ease pain, balance the immune system, relieve allergic reactions and relieve inflammation.

Turmeric and Curcumin: Also native to India and southern Asia, turmeric is generally known for its yellow coloring and spicy flavor in Indian food, but also has valuable medicinal properties. The rhizome is antioxidant, antibacterial and anti-inflammatory, partly due to the presence of the compound curcumin.

The antioxidant and anti-inflammatory properties of both turmeric and its constituent curcumin have been well researched. Studies suggest their anti-inflammatory action is even stronger than hydrocortisone. Both can be used for all types of chronic conditions arising from chronic inflammation, including arthritis, cardiovascular disease, cancer, depression, gastritis, asthma, eczema (dermatitis), bronchitis, uritius, headaches and much more.

Keep Cool by Managing Stress

The brain is involved in mediating inflammation and pain, as well as healing. Inflammation and pain increase under the influence of the sympathetic nervous system, which is activated under stress. Healing is activated under the parasympathetic nervous system, which is why rest has always been associated with healing. If you don't allow for down time when you need to heal the inflammatory process will continue. This is why managing stress, making time for rest and relaxation, and adequate sleep are all essential to controlling chronic inflammation.