Inflammation is the body’s normal response to injury or infection. It works like this: when you cut yourself, tissues become inflamed, resulting in redness, swelling, heat and pain. At the sites of tissue injury, immune cells create inflammation in an effort to heal the injury. When immune cells get “turned on” to produce inflammation and inflammatory messenger molecules, the eicosanoids, the principle fatty acid in the cell envelope, arachidonic acid catalyzes this transformation and can be metabolized into activated eicosanoids such as prostaglandins and leukotrienes.

Simply put, white blood cells react by releasing chemicals to kill bacteria, protecting you from infection or illness. However, these white blood cells can get confused. They may identify normal body tissues as being infected or abnormal, and attack them. The result is unwarranted inflammation that may compromise the function of a tissue, joint or organ. If it persists, serious damage to the affected body part, along with discomfort, pain and loss of function can occur.

While poor joint health is most commonly associated with inflammation, research suggests many other areas of health may be affected by this misdirected immune response. Poor upper respiratory health, blood sugar health and even cardiovascular health have all been linked to inflammation.

What causes Chronic Inflammation?

Stress (#1 factor), Environmental Toxins, Dehydration, and Sleep/Rest deficiencies are just a few factors that promote chronic inflammation. There’s also a strong link between diet, water intake (hydration) and the inflammatory process. For example:

Refined sugar and foods with high glycemic values trigger the release of insulin. Excess insulin increases production of arachidonic acid, a building block for prostaglandins and other pro-inflammatory mediators.

Overcooked foods & hi-temperature cooking (i.e., fried or barbecued) create advanced glycation end products (AGES), substances the body views as invaders, triggers inflammatory responses.
Foods high in Trans fats increase levels of low-density lipoprotein (LDL, a cholesterol) which feeds inflammation in the arteries. Trans fats also generate free radicals, which are unstable molecules that attack healthy cells and contribute to inflammation.

Being overweight contributes to inflammation as fat cells secrete chemicals such as C-reactive protein and interleukin-6 that promote inflammation.

Natural Dietary Protection

Increase consumption of fresh fruits and vegetables

Increase low –glycemic (slow digesting carbs) foods like nuts, seeds, beans and whole grains.

Increase omega-3 essential fatty acids such as fish, flax, and borage oil. Herbal turmeric and ginger are also helpful. Omega 3 has been shown in clinical trials to suppress the production of specific prostaglandins and leukotrienes, which are the agents of inflammation. If the cell is exposed to omega-3 and omega-6 fatty acids, they displace some of the arachidonic acid in the cell envelope. Then if the cell is exposed to tissue injury, signaling to the cell interior via the alternative fatty acids does not lead to transformation of the cell to an “armed” cell – rather it remains “neutral.” Furthermore, the prostaglandins and leukotrienes derived from these alternative fatty acids are not inflammatory in nature. The end result is a “dampening-down” of the inflammatory process, with less pain, swelling, and other signs of inflammation, but without impairment of normal tissue repair.

Decrease pro-inflammatory foods such as: red meats, fried foods, partially hydrogenated oils (trans fats) and excess sugars.

Inflammation Control Recommendations

Daily Supplement Amounts:
- Curcumin 400 mg
- Quercetin 500 mg
- Sam-e (s-adenosylmethionine) 800 mg
- Willow Bark 1,600 mg
- GLA (Gamma Linolenic Acid) 250 mg
- Flaxseed 2,000 mg
- Resveratrol

Condiments:
- Hot Chile Peppers, Ginger, Curry Powder, Black Pepper, Rosemary, Basil Cloves, Garlic, Parsley, Onion.